CONTACTBABEL

The UK Contact Centre Decision-Maker's Guide 2022

(19th edition)

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Customer experience as it was meant to be

Convenience keeps customers happy but personalisation creates the connection that keeps them coming back

Today, there is an increasing awareness that, especially with distance, human connection is crucial.

Contact centre technology is now the foundation for elevating agents so they can demonstrate the empathy and understanding customers sometimes need.

Blend convenience, automation and self-service with agents' expertise and soft skills. Always be there to help and personalise the experience. Isn't that what customer service is really about?

- √ Omnichannel
- √ Automation
- √ Routing
- √ AI with sentiment analysis
- √ Unified console

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Odigo is a leading Contact Centre as a Service (CCaaS) solutions provider, helping brands connect with individuals anytime and anywhere with easy-to-integrate, cloud-based solutions tailored to the needs of large organisations. Odigo serves more than 400,000 agents and business users globally. With a 35-year history of industry firsts, Odigo has more than 250 clients around the world.

Today, more is expected of contact centres than ever before. Customers expect convenience and personalisation across a range of channels. This creates opportunity at every touchpoint, both for meaningful, personalised contact and data collection. Omnichannel services integrated into a channel-less approach can transform a series of disjointed interactions into a seamless conversation.

Personalisation is now the name of the game. With the right contextual and behavioural information, routing can be improved and contact centre agents, humans or bots, can more easily identify recent relevant events, and provide the best answers faster.

Skill matching for live calls through automated call distribution helps direct customer queries to the right agent, offering the best-possible first step in contact. This, alongside efficiency boosters like VIP response and callback functions, can reduce handling time and improve productivity in the contact centre.

Well-thought-out automation can bring instant results. Callbacks, notifications and IVR payments contribute to self-service and digital deflection strategies. This importantly diverts simple, repetitive tasks away from agents who can then specialise to provide deeper understanding and quicker solutions to complex queries.

With a strong belief that each and every touchpoint brings value to your customer relationship, Odigo provides agents with 360-degree customer views on a unified console. Supported by artificial intelligence, automation and integrated analytics tools, organisations can develop reliable, personalised and future-proof customer experience strategies.

Click here to contact an Odigo expert

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INTRODUCTION AND METHODOLOGY

The "UK Contact Centre Decision-Makers' Guide (2022 - 19th edition)" is the major annual report studying the performance, operations, technology and HR aspects of UK contact centre operations.

Taking a random sample of the industry, a detailed structured questionnaire was answered by 208 contact centre managers and directors in September – November 2021. Analysis of the results was carried out in November 2021. The result is the 19th edition of the largest and most comprehensive study of all aspects of the UK contact centre industry.

HOW TO USE THE REPORT

“The UK Contact Centre Decision-Makers' Guide” identifies seven of the major pain points and issues that affect the contact centre industry:

- Improving Quality and Performance
- Maximising Efficiency and Agent Optimisation
- Digital, Cloud and the Customer of the Future
- Outbound, Call Blending and Proactive Customer Service
- The Customer Experience
- HR Management
- Strategic Directions.

Within each section, specific solutions are identified that can be used to solve these issues, along with the analysis of the primary research data that are relevant to this area, including a comprehensive statistical analysis in graphical and tabular form.

Third-party White Papers, case studies and thought leadership pieces may also be used to assist readers who may wish to look more in-depth at specific areas or gain another viewpoint.

SEGMENTATIONS

Looking at industry averages for contact centre statistics is only so useful. Only with a clear understanding of how and why metrics differ between operations can readers see where they stand compared to their competitors. As such, key statistics have been segmented in many different ways where relevant and possible:

- by vertical market (industry sector)
- by contact centre size (agent positions)
- by contact centre type (e.g. inbound/outbound).

We may also segment data along other lines (e.g. sales / service) where possible and relevant.

VERTICAL MARKETS

Where possible, we have segmented and analysed data along vertical market (business sector) lines, to highlight the specific issues and environments particular to that vertical industry. Below are the nine vertical markets studied within this report which had sufficient respondents to justify inclusion.

Figure 1: Vertical market definitions

Vertical market	Example of sub-sectors which may be included
Finance	Banks, credit cards, loans, debt collection, credit checking, corporate
Housing	Housing associations
Insurance	Insurance for life, motor, house, corporate, reinsurance, etc.
Manufacturing	Mainly B2B sales and support, along with customer helplines
Outsourcing	Large full-service outsourcers and smaller telemarketing firms
Public Sector	Government, central and local, agencies, emergency services, NHS
Retail & Distribution	Retailers, home shopping, catalogue, parcel carriers, logistics
Services	Non-physical service offerings to public and business, charities / non-profits, private healthcare services
Technology, Media and Telecoms (TMT)	Technology sales and service; Mobile and fixed line operators, TV and cable providers; Broadband
Transport & Travel	Transport information, booking, travel agents, airlines, hotels
Utilities	Gas, water, electricity

SIZE BAND

Almost every survey question is considered from the size aspect, as differences in resources, management techniques and technology vary greatly between size bands.

Contact centres surveyed fit into one of three categories:

- Small - 10 to 50 agent positions
- Medium - 51 to 200 agent positions
- Large - over 200 agent positions.

CONTACT CENTRE TYPE

Whether a contact centre is predominantly inbound or outbound can fundamentally determine how the contact centre is run. Therefore, we sometimes analyse data by contact centre type:

- Inbound: at least 75% of activity is inbound
- Outbound: at least 75% of activity is outbound
- Mixed: less than 75% of activity is either inbound or outbound.

THE STRUCTURE OF THE DATASETS

The data provided by the 208 contact centres interviewed in this study were broken down into discrete segments:

Vertical markets

- Finance – 26
- Housing – 11
- Insurance - 16
- Manufacturing – 10
- Outsourcing – 25
- Public Sector – 26
- Retail & Distribution – 27
- Services – 27
- Technology, Media and Telecoms (TMT) – 19
- Transport & Travel – 10
- Utilities – 11.

Size bands

- Small (10 to 50 agent positions) - 64
- Medium (51 to 200 agent positions) - 73
- Large (200+ agent positions) - 71.

Inbound / outbound

- Mostly inbound (75%+ inbound) – 165
- Mixed (between 26% and 74% inbound and outbound) – 30
- Mostly outbound (75%+ outbound) – 13

Sales / service

- Mostly service (75%+ service) – 150
- Mixed (between 26% and 74% service and sales) – 38
- Mostly sales (75%+ sales) – 20.

DISTRIBUTION AND USE OF THIS REPORT

This report is written for the community of people interested in the present and future performance of the UK contact centre industry. Amongst others, these may include:

- Contact centre managers and directors
- HR managers and directors
- Operations managers and directors
- Customer service directors and those involved in contact centre strategy
- IT managers and directors
- Contact centre solution providers: hardware, software & services
- Outsourcers
- Consultants
- Training providers
- New entrants to the UK contact centre industry
- Government bodies
- Academic institutions
- Contact centre industry organisations
- Regional & national development/inward investment agencies.

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IMPROVING QUALITY AND PERFORMANCE

Within this section, methods and solutions are discussed that support and improve the quality and performance of agents.

Many of the solutions operate as part of a broad set of workforce optimisation technologies and practices which measure and encourage agents to align their behaviours and actions closely with the requirements of the business.

Topics include:

- Contact Centre Performance Benchmarks
- Multichannel Workforce Management
- Headsets
- Quality Call Recording, Performance and QA
- Interaction Analytics.

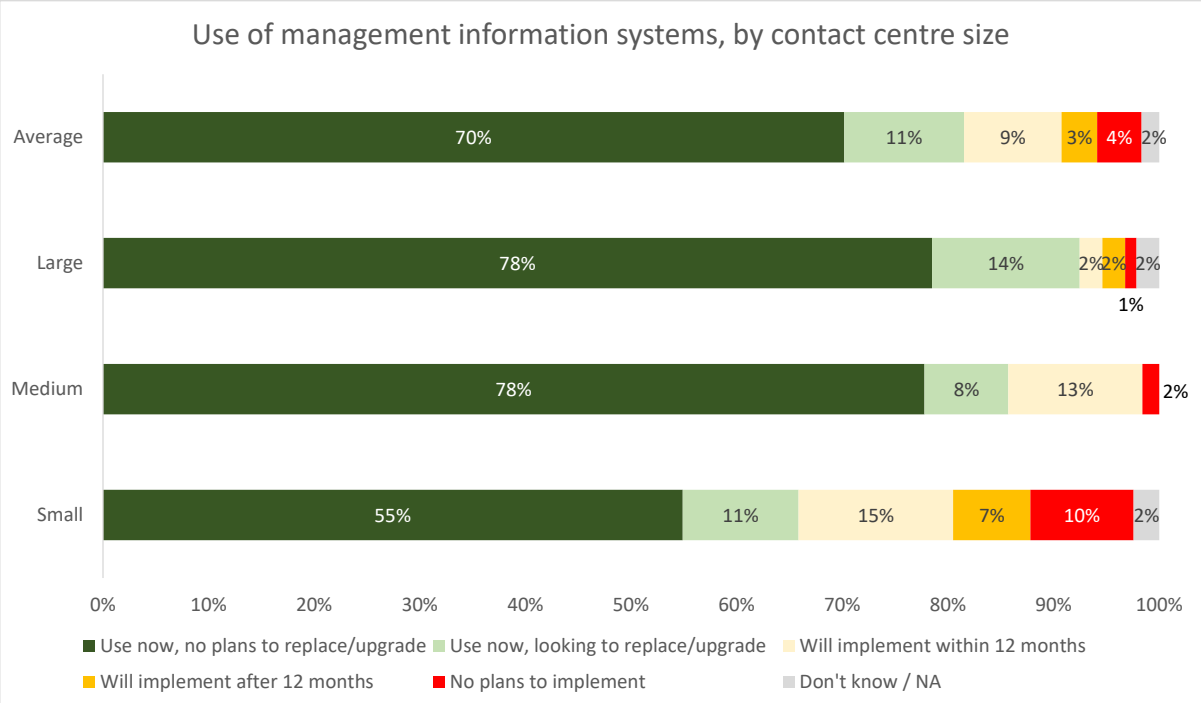
MANAGEMENT INFORMATION

The success or otherwise of contact centres has traditionally been measured by observation of key metrics, usually related to cost and efficiency: average call length, average speed to answer, % of calls answered within a certain time, etc. While these figures are a useful and still widely acknowledged and understood benchmark, times have changed. Many contact centres now try to measure the effectiveness of their operation by tracking metrics such as first-time call resolution and customer satisfaction levels, although there are no standard measures or agreements on what constitutes a satisfied customer or fully resolved call. This does tend to strengthen the hand of those who believe that because the contact centre can provide detailed data on call volumes and handling times, then that is what it should primarily be measured against, and ContactBabel research shows that agents are far more likely to be rewarded for meeting required operational metrics rather than customer-focused service metrics.

Management information systems are the contact centre management's eyes and ears, providing them with the tools and information to judge the effectiveness and efficiency of the operation. The results of its reporting capabilities may be output to wallboards, desktop displays (at management, supervisor and agent levels as appropriate), batch reporting and fed into real-time scheduling and forecasting functionality.

It is noticeable that a significant proportion of larger contact centres are actively looking to upgrade or replace their current MIS, suggesting that in many cases it is not quite giving management what they need in terms of actionable information.

Figure 2: Use of management information systems, by contact centre size



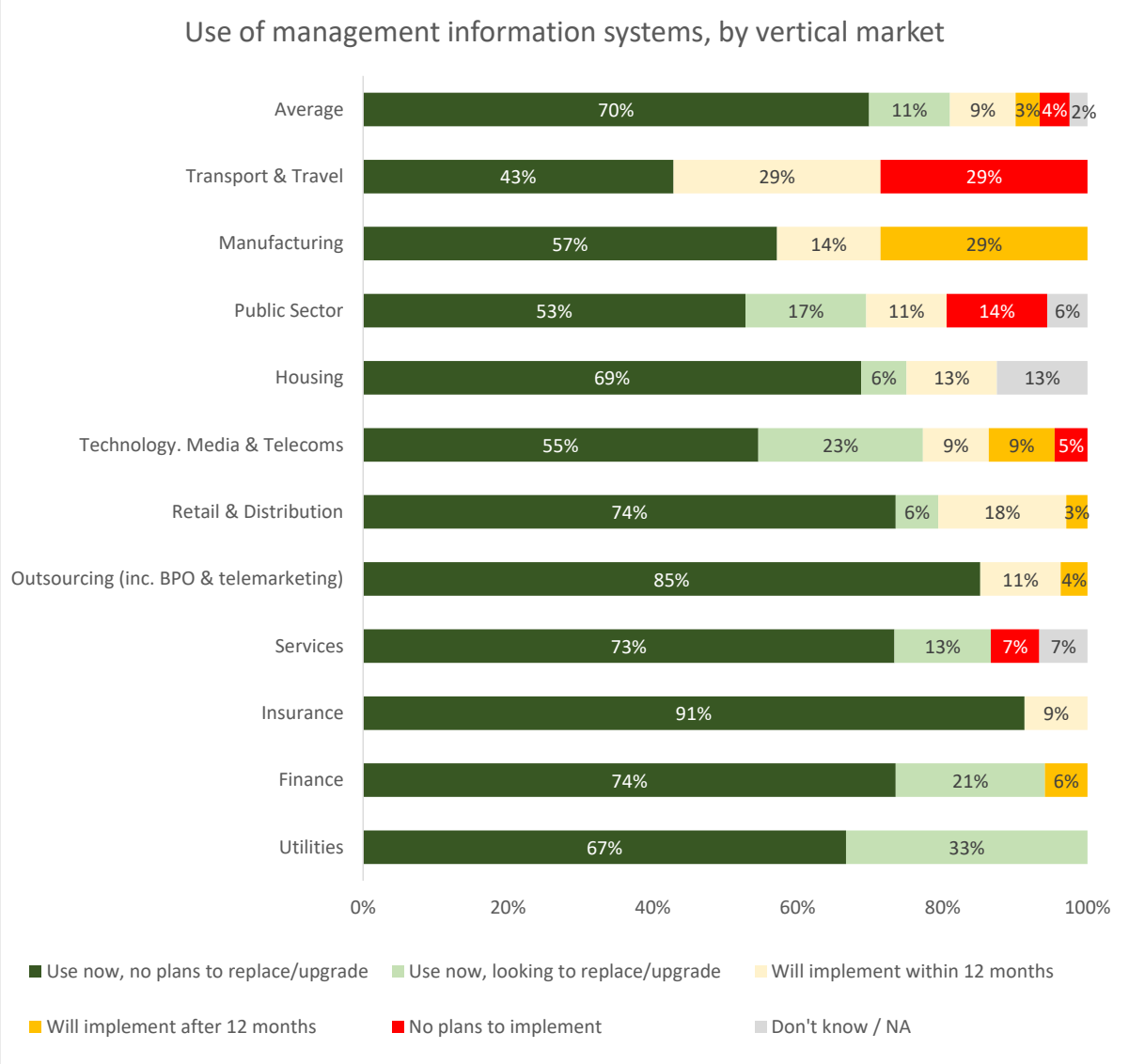
Management information systems are present in the majority of all respondents' sectors except transport & travel (43%), with utilities, finance and insurance respondents reporting the greatest usage.

Those in manufacturing and transport & travel, which are generally amongst the smallest contact centres, report lower then average usage of MIS.

There is very significant interest in replacing or upgrading MIS being shown by several vertical markets, including utilities & finance.

While the majority of contact centres in most vertical markets have already implemented MIS, there is strong interest by transport & travel respondents for a first implementation within 12 months.

Figure 3: Use of management information systems, by vertical market



Depending on the type of work that they do, contact centres may consider focusing upon various measurements:

Internal metrics

Call duration / Average Handle Time: A typical 'old-fashioned' metric, which is generally going out of favour due to the acceptance that each call is different and should take as long as is needed. However, it is one of the easiest statistics to measure, and useful to use to work out cost per call.

Agent occupancy rate: The agent occupancy rate is calculated as the proportion of time in a given period that is call-time plus wrap-up, (that is, the proportion of time that each agent spends on dealing with the call itself and the actions deriving from it. A laborious wrap-up time caused by slow back-office systems or lack of familiarity from the agent's perspective can go some way to producing high occupancy rates, which looks as though the agent is constantly active, but which is actually negative for both business and customer.

Call throughput and abandonment rates: Understanding the types of call being received as well as tracking the number that are dropped can be translated into lost revenue within a sales environment, making a pitch for greater investment easier. With the use of callback, calls that would otherwise be abandoned can be kept alive, although at the cost of an additional outbound call.

Revenue per call / promise to pay: As many contact centres are now profit centres, understanding the effectiveness of the sales or debt collection efforts is vital to judging the success of the contact centre itself.

Call transfer rate: This metric can indicate training needs at the individual agent level, a failure in the initial IVR routing or a need to update FAQs or other information on a website (for example, a spike in this metric might be driven by a recent marketing campaign which has confused some customers, creating a high level of calls about the same issue). Tracking and analysis of call recordings in cases of high transfers should identify the issue.

Schedule adherence: Schedule adherence is a metric that looks to help with the fine-tuning of a contact centre's labour force, so that calls are answered swiftly, but that agents are not sitting idly waiting for calls. It is a metric that is of more importance to schedulers than to customers, although the impact of getting schedules wrong can be catastrophic for efficiency, cost and performance. The importance of adherence to schedule has only been included in this survey for the past three years, in a question later in this chapter which asked respondents which were the most important contact centre metrics. Surprisingly, it has been said to be more important than key customer-facing metrics such as first-contact resolution.

Staff attrition rates: A well-publicised cost that senior management are very aware of, high levels of staff attrition are poisonous to the effective running of the majority of contact centres, causing excessive recruitment and training costs, lower average call handling quality and longer queue times due to inexperienced staff, as well as the vicious circle of lower staff morale.

Average speed to answer / longest call waiting etc.: This metric has a strong and demonstrable effect on customer satisfaction or frustration, as well as impacting on call abandonment, lost revenues and high staff attrition rates caused by excessive pressure. Average speed to answer is a metric which is easily measured, and forms a vital view of the contact centre's staffing levels as well as impacting directly upon the customer experience. As such, it is similar in nature to the call abandonment rate. Contact centres should of course consider the amount of time that a customer spends in the IVR segment of the call when considering the 'speed to answer' metric - as the customers themselves surely do so.

Cost per call: Although this is an attractive and easily-understood metric for senior management to view, there is a real danger that calls are closed too quickly and revenue and loyalty-building opportunities are lost. If a contact centre has many short calls (which may be better off being dealt with by self-service), this will produce a lower cost-per-call figure, which makes it look as though the contact centre is doing well, when the opposite may be the case. The same logic applies to first-call resolution rates.

Cost per call is a very complicated metric that is difficult to get correct. However, senior non-contact centre management understand how cost figures impact the business more than occupancy or call abandonment rates, although these have an impact on all parts of the business. At the most basic level, cost per call can be calculated by dividing the overall spent budget of the contact centre by the number of calls, although this does not take into account abandoned calls or situations where the customer has had to call multiple times to get a resolution (a situation which in fact brings cost per call down, although being negative to both business and customer). Neither does it take into account the effect of failure demand - where the contact centre cleans up after processes elsewhere in the business go wrong, leaving the contact centre to sort them out. As such, it should be viewed with caution.

Customer metrics

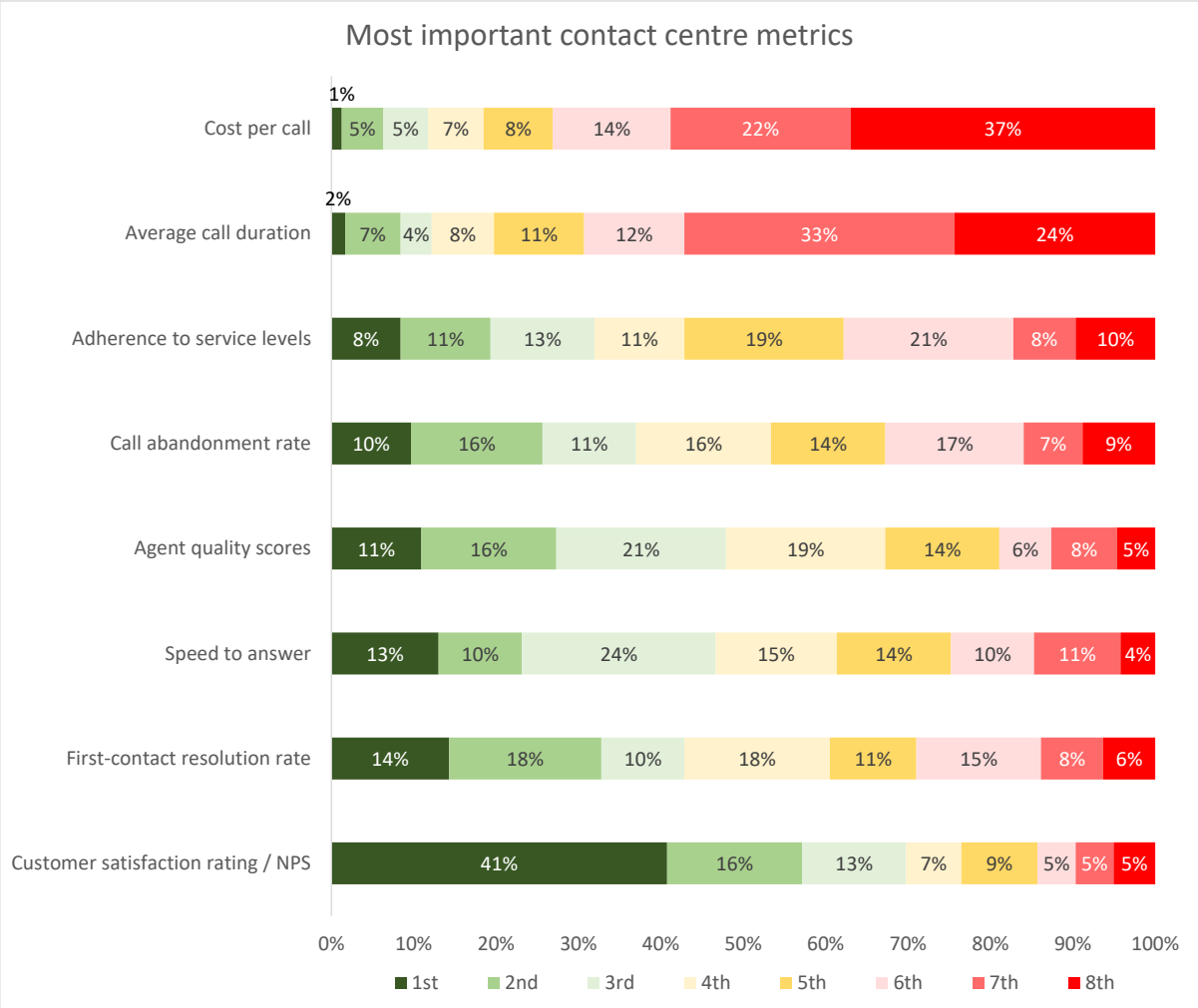
Customer satisfaction ratings: Customer satisfaction is seen to be directly linked to profitability through increased loyalty, share of wallet and customer advocacy. There is considerable debate about how satisfied (or delighted) customers have to be before it starts making a noticeable difference to the bottom-line (i.e. how happy does a customer have to be before they accept premium pricing strategies, and how unhappy do they have to be before they go elsewhere?). There's no easy answer, but high customer satisfaction ratings - at a reasonable cost for the business - are surely good for everyone. The Customer Experience Measurement and Improvement chapter elsewhere in this report should be read into order to understand the various methods of measuring customer satisfaction scores.

Customer loyalty / lifetime value / churn rates: A central thought of CRM is that a business should focus upon keeping profitable customers, and growing unprofitable ones. A single figure for customer retention is not effective, as it does not include the types of customer churn, or the undesirability (or otherwise of losing such customers).

First-contact resolution: Improving first call/contact resolution (FCR) benefits customers (who are more happy / loyal / profitable / etc.); agents (higher morale; fewer frustrating calls); and business (lower cost of repeated calls; higher profitability): everyone wins. This can be hard to measure, as it is the customer, and not the contact centre that should be stating whether the issue has been resolved successfully. The "Customer Effort, Engagement and First-Contact Resolution" chapter elsewhere in the report looks at these issues in-depth.

Over the years, the importance of contact centre metrics has changed considerably. 15 years ago, average call duration and cost-per-call were considered to be the most important metrics, but respondents to recent reports consider them of minor importance compared to more customer-focused measurements.

Figure 4: Most important contact centre metrics



41% of respondents chose customer satisfaction rating as being the most important measurement that a contact centre tracks. Customer satisfaction is in large part driven by the other metrics shown here, and can be seen as a consequence of how these other elements perform.

In past surveys, first call resolution has been extremely important, with speed to answer often also chosen as a top 3 metric by more than half of respondents: both of these metrics are of huge importance to customer satisfaction (or the lack of it), and handling more calls effectively first-time is key to improving customer satisfaction and reducing repeat calls, which will impact positively upon queue lengths.

Agent quality scores are of course important to the customer, as the quality of interaction is a vital part of customer satisfaction. However, most agent quality scores are marked against scorecards that are created inside the organisation which are not always closely aligned with what the customer wants from an interaction.

Similarly, adherence to service levels and schedule is important to the smooth running of the contact centre, without which high-quality customer experience cannot exist, yet from the customer's perspective, the effectiveness of the interaction is driven by its result rather than on whether the agent is meeting internally-set metrics.

Looking at the results of this year's contact centre performance metrics:

- average speed to answer has again increased, from a mean of 82 seconds to 106 seconds, fuelled by the difficulties some contact centres are still having related to the pandemic and its aftereffects. The median has risen by less, suggesting that this rise is driven by a relatively small proportion of operations
- call abandonment rates have risen again from 6.5% to 8.2%
- mean first-contact resolution rates remain quite steady
- mean service call duration rises once again to its highest recorded level
- mean sales call duration rises slightly, from 441 seconds to 457 seconds
- mean call transfer rate rises once more, although the median is close to the historically typical level
- the mean and median costs of an inbound call are considerably higher than the historical average
- outbound call costs are a little lower than usual, but have hardly changed since 2017.

Figure 5: Contact centre performance metrics

Metric	Mean average	Median average
Average speed to answer	106 seconds	40 seconds
Call abandonment rate	8.2%	5.0%
First-call resolution rate	73%	78%
Call duration (service)	393 seconds (6m 33s)	367 seconds (6m 7s)
Call duration (sales)	457 seconds (7m 37s)	400 seconds (6m 40s)
Call transfer rate (excl. receptionists)	9.6%	7.5%
Cost of inbound call	£5.42	£4.30
Cost of outbound call	£3.89	£3.18

NB: as a few respondents may show extreme results, data are not distributed symmetrically. Median values show the midpoint and may demonstrate the truer picture of a 'typical' operation. If calculating an industry-wide amount (e.g. total cost of calls, or total time spent waiting to answer), the mean average is more appropriate.

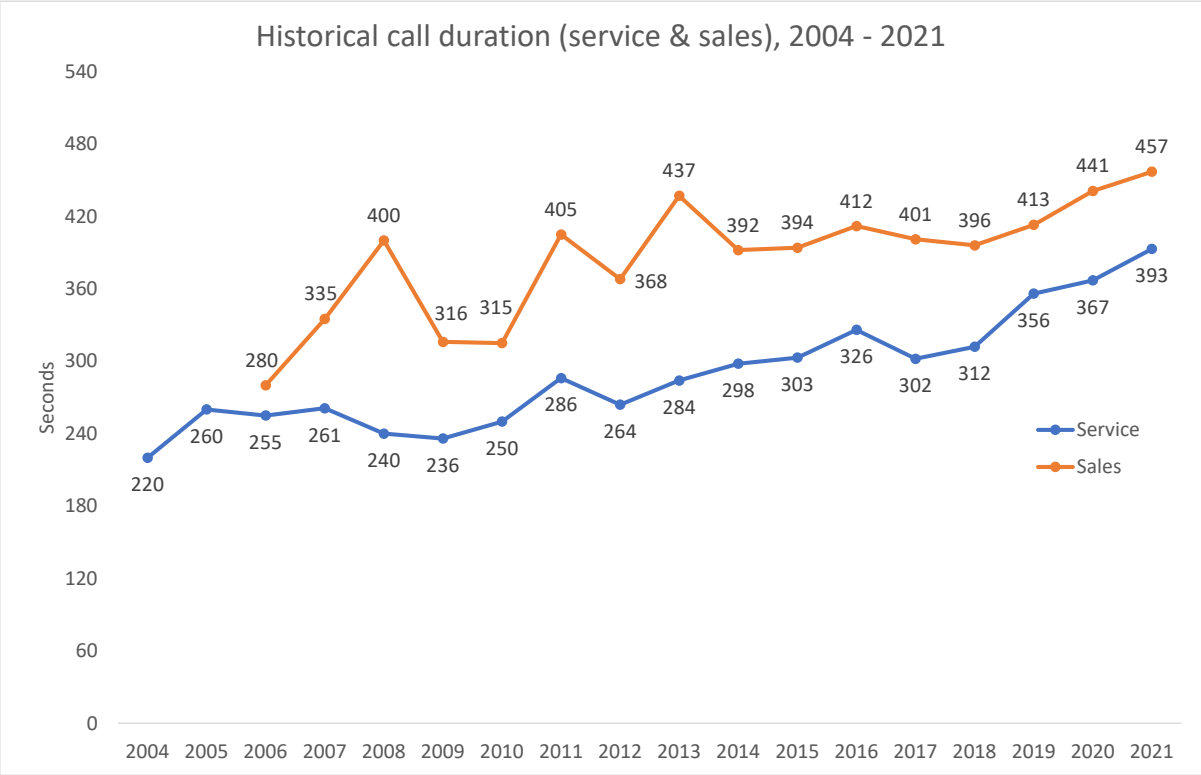
The next charts show how key metrics have changed over the past 17 years.

Average service call duration varied little between 2005 and 2010, being around the 240-260 second range. After a significant jump in 2011, 2012 onwards saw a progressive rise to a peak of 326 seconds in 2016. Although the figure dropped to 302 seconds in 2017, there has been upward movement since.

Sales call durations follow a more varied trajectory, probably because the sample sizes for sales calls are smaller than those for service calls. However, 2021 sees the highest recorded duration for sales calls.

These findings support the results shown elsewhere that show call duration to be a far less important metric in recent times than it has historically been in the contact centre industry, as contact centres have allowed call times to increase as customer experience becomes more important, and self-service now takes up a greater proportion of the easier short calls. It may also be the case that as customers now wait longer to speak with an agent, they may feel the need to have greater reassurance and may want to speak about multiple issues. It may also be the case that remote working does not provide full and easy access to all of the systems agents are used to working with, which may increase the length of the call. The previous chapter on the pandemic looks at some of the verbatim reasons given by contact centres for this.

Figure 6: Historical call duration (service & sales), 2004 - 2021



The following chart shows historical figures for average speed to answer and call abandonment rate.

From 2009 onwards there has been a gradual increase in average speed to answer, with a spike to 36 seconds in 2014 which remained quite steady until 2018's jump to 41 seconds. There has been a huge uptick in 2020 and 2021 caused by pandemic-related working practices and an increase in demand experienced by some businesses.

Call abandonment rate did not show any upward trend, with all but three of the 14 survey results showing data between 5% and 6%. 2020's abandonment rate was up by 20% and is almost certainly linked to the changes in speed to answer, with 2021 being the highest yet recorded.

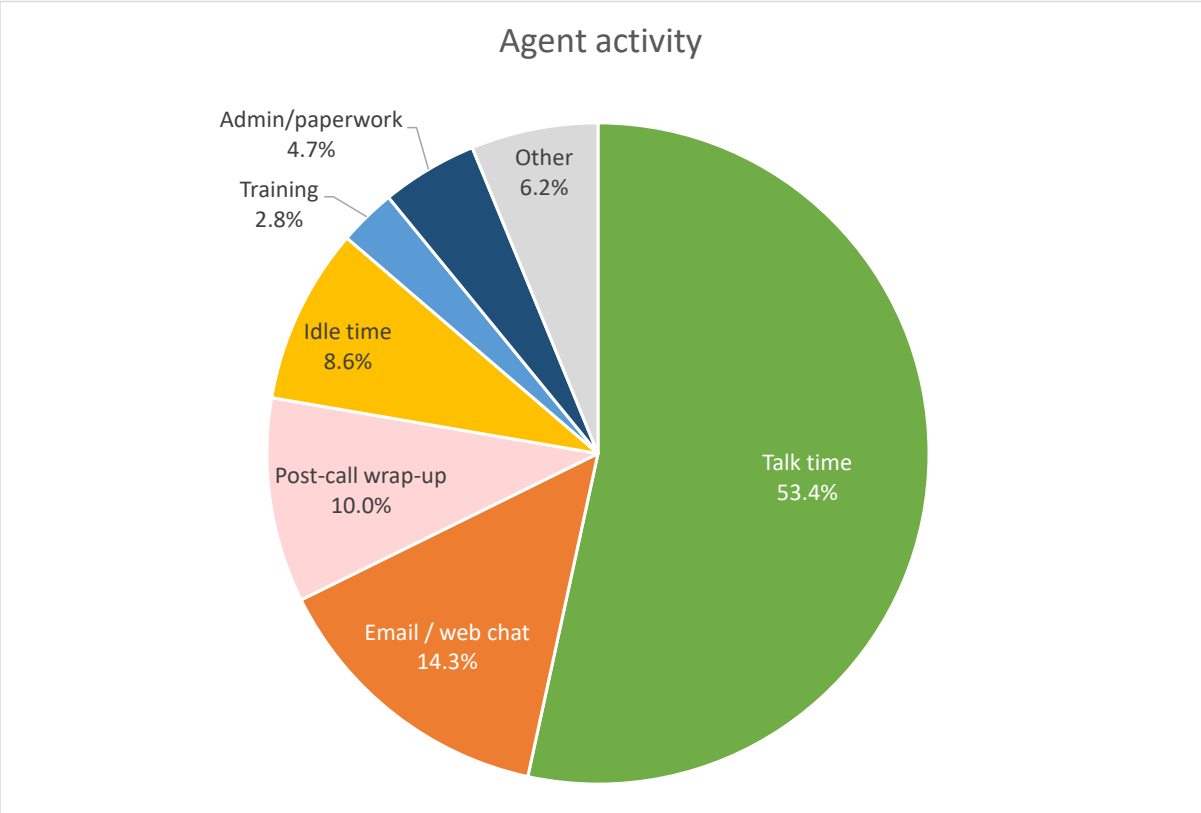
Figure 7: Historical average speed to answer & call abandonment rate, 2004 - 2021

AGENT ACTIVITY

Agent activity per hour is a key structural metric aimed at helping contact centre management understand how the agent's time is being spent. It is segmented into seven parts:

- Talk time: amount of time actually spent on the inbound call
- Post-call wrap-up: after-call data input and actions driven specifically by that call
- Email / web chat: text-based communication with customers
- Training: whether desk-based or lecture-type
- Administration / paperwork: general administration and keyboard- or paper-driven work which may be for internal purposes only (e.g. timesheets) or for external work as well (e.g. sending faxes).
- Idle time: time spent not taking calls or doing other work, usually waiting for the next call
- Other: anything not covered by the previous activities.

Figure 8: Agent activity



Talk time is slightly above 53%, with post-call wrap-up at 10% and idle time at around 9%.

Email and web chat handling time is a little more than 14%, making the overall agent/customer communication time around 68%.

Being able to identify idle time is one thing: being able to recover unproductive time in the agent's daily routine and use this otherwise-lost capacity is quite another. A workforce management solution that has intraday capabilities can recover these small pockets of fragmented agent idle time as the day goes on, aggregating this time into larger blocks that can be allocated to other productive activities such as training, coaching, back office tasks or administration, which goes a long way towards using the agent time that businesses necessarily pay for already, but which could not previously be accessed.

There is also a significant opportunity for reducing the non-productive call time at the beginning of the call, where an agent is authenticating the caller's identity. By doing this automatically, either through IVR or more securely, through biometric identification, the business can free up 30 seconds or more of agent time, which makes a big difference to call and queue lengths. This element is investigated in-depth in the 'Customer Identity Verification & Fraud Reduction' section later in this report.

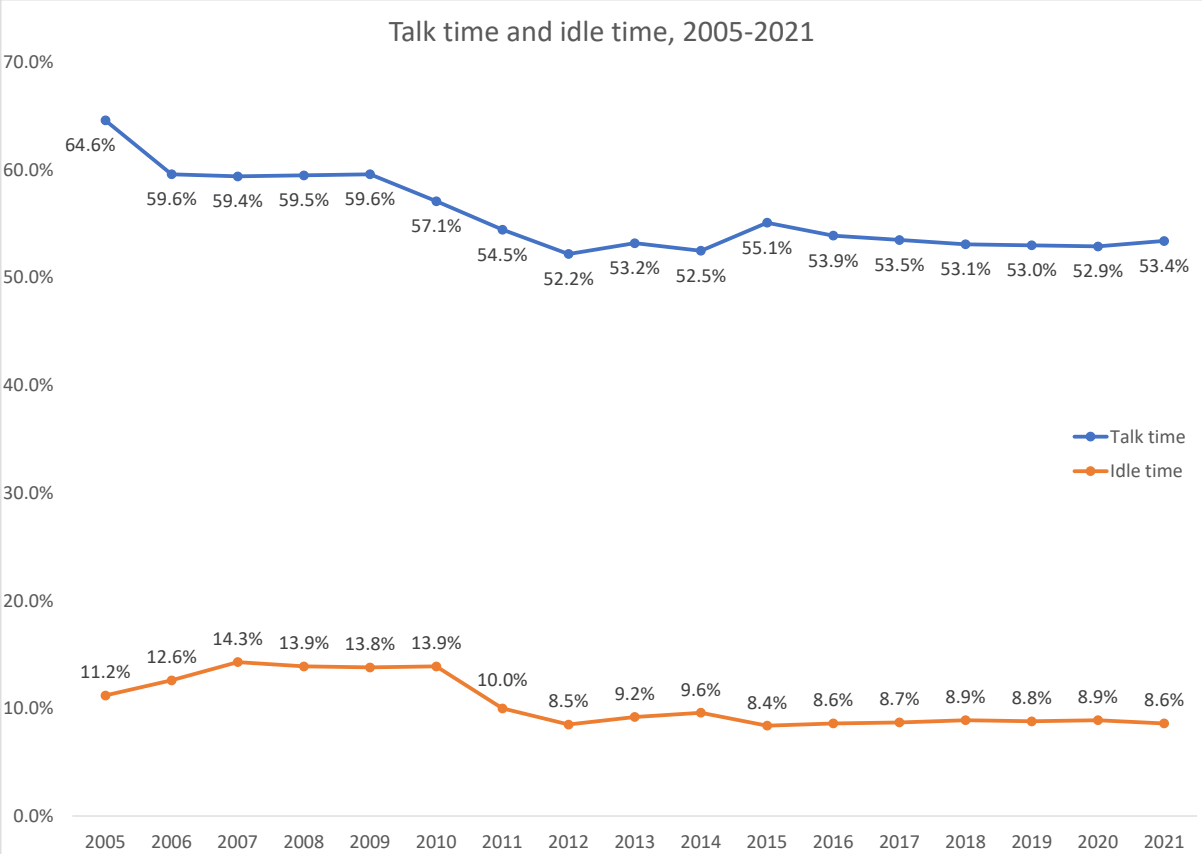
Post-call wrap-up time is also an area which could further be reduced in many contact centres. There are many applications in the market which are capable of reducing the amount of after-call work that an agent has to do by bringing together all of the systems and applications the agent needs on that specific call into a single virtual application and then updating the relevant databases accordingly. This removes the need for a specialist knowledge of legacy system navigation, reducing keying errors and dramatically shortening wrap-time through kicking off relevant back-office processes automatically. Most of these agent desktop optimisers do not touch the logic of the existing systems, but act as a user interface that picks up and presents the relevant fields and business processes at the right time. The "Agent Desktop Automation" chapter looks at this in more depth.

Looking historically at how talk time and idle time has changed, it can be seen that the average amount of time an agent spends talking to customers has dropped to the low 50%s. Certainly, the agent today has more tasks than previously: the job will tend to be more varied and require greater depth of knowledge, meaning that increased training and administration tasks will need to take place, and of course many agents now handle significant amounts of multichannel work in addition to their traditional telephony role.

We would also expect to find that the overall amount of agent time spent idle has reduced very significantly as a result of agents having so much more to do and the focus that the economic downturn placed on efficiency and cost-cutting. However, although idle time has indeed decreased from a historical average of almost 14%, there has been little improvement since 2012.

One of the main problems with idle time is that it is mainly comprised of small chunks of a few seconds or a couple of minutes at most between calls, which are too short a time for an agent to do an alternative task. As such, unless these fragments rolled up into a larger, schedulable amount of time, keeping idle time much below 9% will be difficult.

Figure 9: Talk time and idle time, 2005-2021



Detailed analysis of all of the above performance metrics, including historical changes and segmentations by vertical market, contact centre size and type of activity are available in the "2022 UK Contact Centre HR & Operational Benchmarking Report".

Workforce management solutions (WFM) can perhaps be seen as the core element to the workforce optimisation suite, and has developed over time into a sophisticated tool for forecasting interactions across multiple channels and scheduling based on agent skill-sets and diverse locations, reacting automatically in near-real-time to allocate resource to where it is needed most.

Recent years have seen a resurgence in investment in workforce management solutions, often driven by the increasing requirement to handle ever-growing volumes of digital interactions, as well as a rise in remote working and managing employees' greater expectations of flexible working patterns.

The acknowledgement that the customer journey is not only restricted to the boundaries of the contact centre has encouraged vendors and organisations to look at extending workforce management capabilities into the back office, branches and the mobile workforce as well.

Workforce management solutions have to deal with environments which have become much more complex, in order to cope with the reality of the work that is being presented to agents.

For example, all agents require good listening ability, familiarity with keyboard and IT skills and a knowledge of the business they are working in, but more now need a pool of in-depth and specific skills to be available in order to satisfy customers fully, including:

- Familiarity with either specific customers (e.g. account management) or customer sub-sets (e.g. commercial vs. domestic products)
- Specific product or technical knowledge
- Right level of experience and empowerment for the customer (e.g. "gold-card" customers may demand single-call resolution, meaning senior agents should be available to take the call)
- Language skills (both in domestic and international markets)
- Ability to deal with multichannel interactions (either in real-time - such as web chats - or offline, such as emails).

Fulfilling service levels while managing costs is an iterative cycle, requiring several key processes to be completed. Feedback from each stage means that the enterprise can continually improve its efficiency and become more confident in future predictions.

The modern contact centre not only requires the basics of having enough people to answer interactions in a reasonable amount of time, but is increasingly demanding more sophisticated functionality such as the ability to forecast and schedule agents in near-real time, handle virtual contact centre, mobile and homeworking resource, accurately allocate staff resource across both digital and voice interactions, consider how the use of voicebots and chatbots will impact on interactions requiring a live agent, and increasingly include back office activities within scheduling as well where relevant.

Before any staff planning can be done, an enterprise first needs to understand what has happened in the past. A solution which provides historical data from entire customer contacts including those across multiple channels means that scheduling can take place in a more realistic way. Enterprises should also be able to factor in exceptions such as advertising campaigns, training and public holidays, view when the best time for a meeting or training session will be, and measure the impact on the rest of the contact centre. Running regular hypothetical 'what-if' scenarios can show a scheduler how alterations to shift-patterns would impact performance.

A great deal of unnecessary agent work can be removed by identifying the types of calls that are being received, and determining whether these could be reduced further up the line, in the departments whose work actively affects the volume and type of calls received, e.g. marketing or IT (for the website), or through the use of bots to handle relatively simple enquiries. As such, workforce management is often used as part of an overall workforce optimisation suite, which can include quality monitoring, interaction analytics, HR management and training as well as the traditional workforce management roles of forecasting and scheduling, as all of these factors affect each other.

For example, understanding when and how other departments will be operating means that workforce management tools can be used to forecast and schedule accordingly (e.g. a new TV advert may trigger a wave of specific calls). Additionally, contact centre management is able to brief agents – via a desktop broadcast or smartphone alert at short notice – about the correct responses and issues, as well as changing IVR prompts and messages to provide answers to the simpler questions and managing agent skill-sets for relevant call groups.

Businesses should look for flexibility in forecasting functionality: situations can develop very quickly which mean that forecasts can become useless without the ability to alter schedules dynamically at an intraday level to reflect reality. (Intraday is considered in more depth later in this report). As around 25% of a typical contact centre's activity is now through digital channels, a demonstrable and sophisticated understanding of email, chat and social media volumes is critical in a solution.

Resource planning applications, which typically look at requirements over a longer term than the typical WFM solution, should also be considered within the forecasting functionality. Understanding how the business will change some months in advance – perhaps for seasonal reasons, or with the launch of a new product – will certainly impact on resourcing, and close communication and integration between resource planning and day-to-day WFM is desirable.

Scheduling has moved far away from the traditional approach of simply making sure that approximately the right number of agents are available based on forecasts.

While the correct resource allocation is obviously still key to successful scheduling, the enlightened enterprise takes agent preferences and skill-sets into account. The “standard agent” approach to solving resource issues (i.e. treating one agent the same as any other) will cause problems with both agent satisfaction and customer service levels. Most companies using advanced workforce management software will have between six and nine skill-sets to work with, although a few contact centres use as many as 50.

A scheduler will have to find the best way to match the company’s requirements with those of its employees, and agent self-scheduling functionality – which allows an agent to bid for and choose specific shifts and vacations – is not only helpful in terms of forecasting but has a demonstratively positive effect on agent morale and attrition rates as well.

Scheduling can get particularly complicated in an omnichannel environment which usually has agents with multiple media-handling skills (e.g. voice, email, web chat etc.) and multiple business abilities (e.g. sales, service, product knowledge, languages etc.), and which may well be operating within a blended inbound/outbound environment, possibly spread across various locations.

An increasing number of contact centre operations no longer work on strict shift patterns of a fixed length, as flexibility can be of benefit both to the organisation and the agent: the organisation can resource peak hours without risking high levels of idle time outside of this, and shorter shifts may fit in better with the work-life balance of the agent. The recent enforced rise of remote working gives an opportunity for agents to work more of the hours that suit them (for example, in the evenings, or split-shifts around childcare), flexibility which contact centres can then use to extend their opening hours without paying excessively for anti-social hours or full shifts in times of lower volumes.

Many WFM solutions now offer a self-service function to allow agents to state their preferred shift patterns, request time off, swap shifts and request overtime, leading to more engaged and empowered agents and much less manual work for the scheduler. The advent of cloud-based solutions and mobile smartphone apps means that agents can make requests wherever they are, improving employee satisfaction and keeping the WFM system more up-to-date than if they were restricted to doing this within the physical contact centre within their own working hours.

ADHERENCE AND REPORTING

Adherence is the ability to compare forecasts with reality and learn from mistakes, and “adherence to schedule” is one of the most valued metrics within the contact centre environment. Sophisticated scheduling and forecasting is useless without the opportunity for improvement brought about by adherence monitoring. Real-time adherence allows managers to see exactly what is happening, and can alert them to deviations from the expected activity, allowing them to make changes before problems occur, or even for the WFM system to do so automatically. Adherence allows a business to fine-tune its contact centre activity, and the more it is used, the more accurate forecasts and schedules become.

This is another area where the cerebral activity of traditional workforce management has become more dynamic. Real-time reporting on schedule adherence, and the ability to access this information through a web browser or smartphone app means that dynamic changes can be made to the system, with automated intraday changes being used increasingly, taking away the need for human intervention.

WFM solutions enable contact centre managers to monitor and manage agent performance in real time by monitoring the status of an agent's activity (for example, time spent logged on, against planned work schedules), even if the agent is working remotely. Agent adherence and non-adherence can then be acted upon quickly, and used to support performance appraisals.

INTRADAY

In older versions of WFM, once the forecasts and schedules were set based on historical data and expectation, the opportunity for change was extremely limited and restricted to moving agents between queues and tasks manually: more of an art than a science. Today, many WFM solutions support rapid changes driven by actual interaction volumes. This is often known as ‘intraday’, a near-real time scheduling system based on actual demand for service and supply of agent availability, and relies upon flexibility from the agent and the enterprise, working together for the benefit of all .

For example:

- the WFM system forecasts the likely volume of interactions through each channel
- resource requirements are forecasted, based on the agent skills required
- agents submit their preferences for working hours (they have contracted to work a certain number of hours each month)
- shift patterns are scheduled and communicated to agents, who have the opportunity to arrange shift swaps with other agents. Businesses may wish agents to be contactable outside of their shift, possibly through SMS or an app, so that any requested schedule alterations or short-notice requests to login can be implemented in a timely fashion
- the WFM system alters schedules accordingly throughout the day, based on real volumes and service levels.

Intraday goes some way to resolving the underlying tension between employee and organisation concerning workforce scheduling, and as such can be seen as part of the broader move towards agent-centric WEM. It is in the enterprise's interest to have strictly calculated forecasts and exact allocation of resource, regardless of how this impacts upon the employee. Unsurprisingly, this leads to resentment amongst the workforce, increasing attrition and absence rates. Intraday goes some way to empowering the employee, without putting the enterprise at a disadvantage. WFM solutions that are built with a flexible architecture capable of scheduling in small time-increments (e.g. minutes rather than hours) will support employees' needs without damaging service levels.

It is important to understand that greater empowerment of agents over their working patterns is greatly beneficial to morale: rather than have to ask a supervisor or manager, they are to a great extent choosing their own hours, with the resulting benefit that they have greater buy-in to the process and are less likely to be absent, as well as reducing the time spent by supervisors in changing schedules manually.

There are a number of workforce management solutions that use their forecasting and scheduling functionality to identify periods in the working day where agents are likely to be underutilised and experience high levels of idle time. The identification of idle time is one thing: being able to recover unproductive time in the agent's daily routine and use this otherwise-lost capacity is quite another. A workforce management solution that has intraday capabilities can recover these small pockets of fragmented agent idle time as the day goes on, aggregating this time into larger blocks that can be allocated to other productive activities such as training, coaching, back-office tasks, answering asynchronous communications such as email, or catching up on administration. This can go a long way towards using the agent time that businesses already pay for, but which could not previously be accessed.

Having a more flexible WFM system should also widen the available pool of labour: whereas in the past, the nature of scheduling meant that full-time employees were preferred, being able to schedule in shorter time periods in near-real-time supports part-time workers, homeworkers, employees based elsewhere in the enterprise and seasonal workers.

REMOTE WORKING

Homeworking provides companies with the opportunity to add greater flexibility into planning and scheduling, such as split-shifts (over the course of a day), 'micro-shifts' (where agents come online for an hour or less at peak times) and in the evening when children are in bed (potentially allowing longer opening hours for the contact centre).

'What-if?' scenario planning can help contact centres model and predict scenarios where for example the absence rate quadruples, enabling the organisation to see what would happen with service levels and scheduling, and potentially lining up business continuity solutions such as overflow to outsourcers. Workforce planners can also use this to model the likely effects of increased call lengths caused by queries that are outside the norm, a new agent's lack of familiarity with systems or other factors that may be being faced by contact centres being affected by the coronavirus crisis.

Some key WFM action points for remote workers and their managers:

- make sure that agents' contact information is up-to-date and available to management in both online and offline modes
- ensure agents understand how they clock on / clock off their shifts, as well as how management will supervise that they are doing so
- agents should check their schedule for the next day before they log off for the evening
- any WFM tools should be flexible enough to handle agent absences at very short notice without having to recreate the schedule manually.

Any workforce management system needs to be able to take full advantage of the flexibility of remote working agents, while providing the same level of real time management and support available to the centralised contact centre model. Remote working necessarily encourages agents to develop independence and take control of their work, and businesses should consider implementing the tools to support this.

It can be beneficial for everyone to allow agents to change their breaks themselves, bid for shifts and choose their own vacation period through an app without having to run everything through the workforce planning team first. Of course, the service level must be protected and any changes only ratified if this is the case. Giving remote working agents access to these sorts of tool will promote trust and do away with any issues such as perceived favouritism, as well as protecting the performance of the contact centre.

Contact centre management is often concerned that visibility into what agents are actually doing will be decreased in remote working environment. This does not necessarily have to be the case: tools exist that can check adherence to schedule (including breaks) and which can nudge agents into adherence by giving them reminders that a break is almost ending or that they are a little late logging back on. Key to this is that any change impacting upon the performance of the contact centre is immediately taken into account by the workforce management system which can then react accordingly, rather than there being delays of some hours before schedules can be changed.

The flexibility, agility and granularity of such automated tools can allow agents who work even a couple of minutes longer than their shift to group these minutes into a 'time bank' which can then be taken as flexitime: the opposite also exists for those agents who may be late logging onto their shift as they can work the time back later when it's needed by the business.

CURRENT AND FUTURE USE OF WORKFORCE MANAGEMENT SYSTEMS

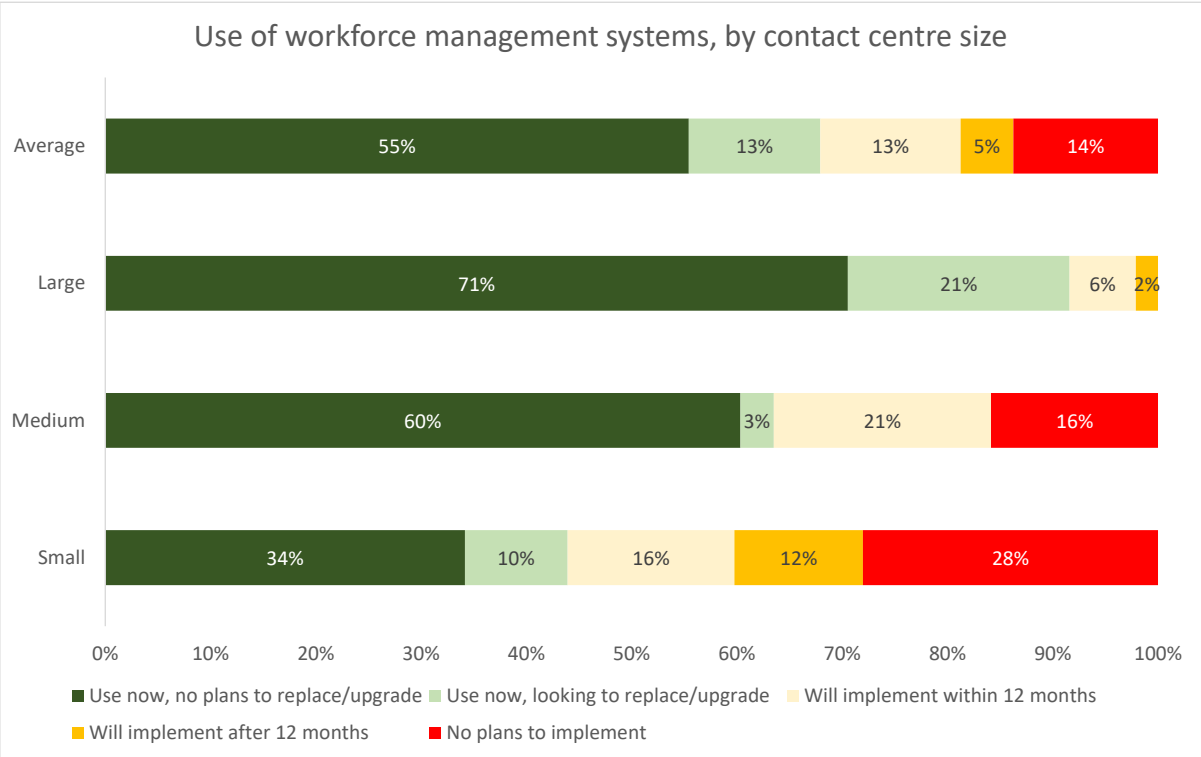
Until relatively recently, small contact centres were still very heavily involved in manual workforce management, which offers extremely limited opportunities for doing anything other than a static schedule that cannot easily be changed. In fact, forecasting and scheduling in this scenario is more of an art than a science. The low take-up of third-party workforce management tools was almost certainly down to cost, the fact that the time taken to create a manual schedule for 10 agents is far less than for 100 agents, and that the manager of a small contact centre does not need the flexibility or capabilities that a large operation can benefit by, as their labour and skills pool is so much more shallow to begin with.

However, there has recently been a significant uplift in the use of workforce management solutions in small contact centre sector, probably as a result of the increasing number of solutions – usually offered through a cloud-based deployment – aimed at the smaller end of the market by solution providers. These solutions offer relatively simple functionality, but will also have an easy-to-use interface for non-specialist users.

Workforce management systems are now common in contact centres, with a penetration rate of 68% amongst our survey respondents.

Of the current WFM users, 19% are actively looking to replace their WFM solution, and 13% of respondents indicate that they are likely to implement a system for the first time in the next 12 months.

Figure 10: Use of workforce management systems, by contact centre size

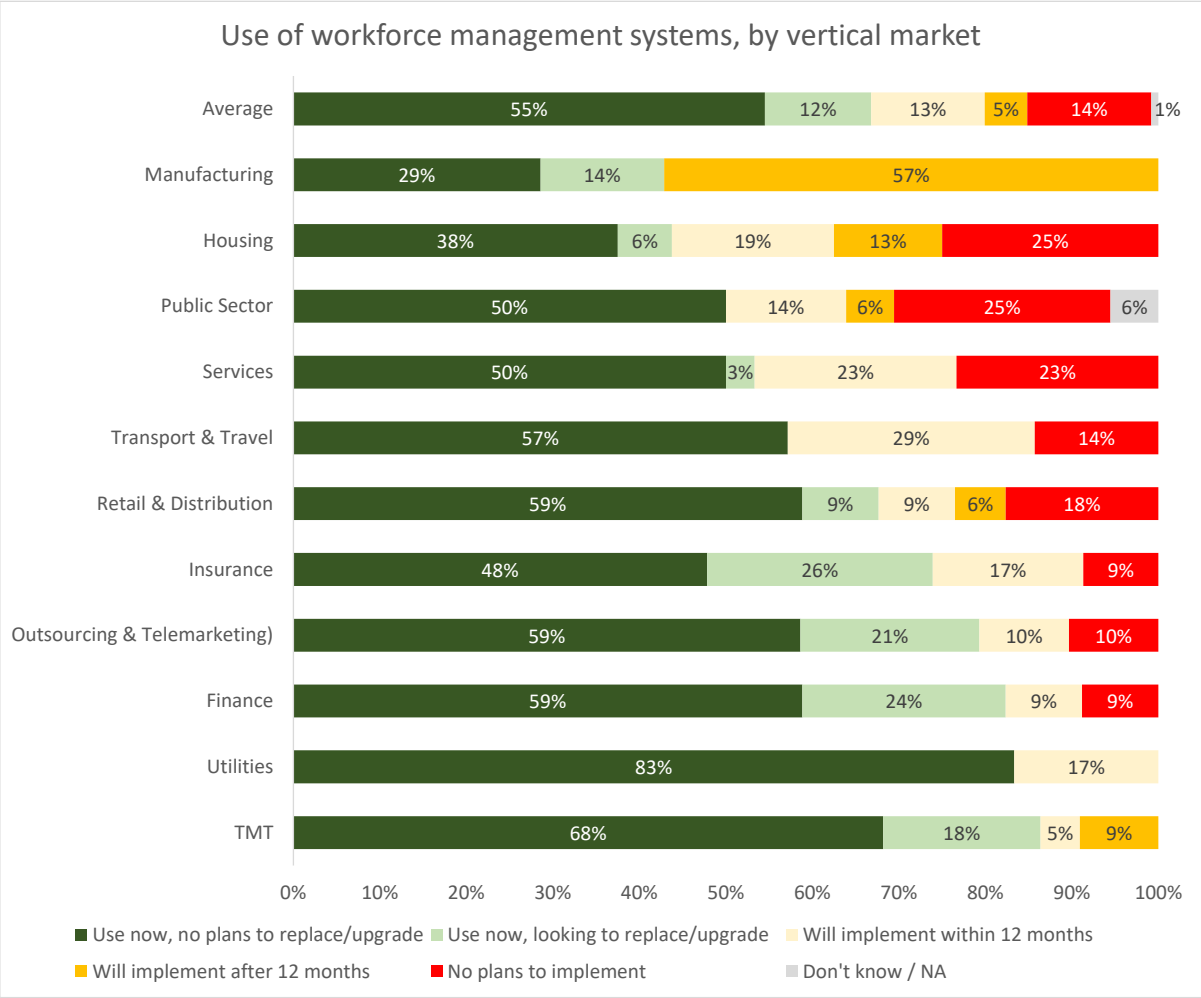


Large operations are far more likely to use dedicated third-party workforce management applications into which historical data can be fed to provide a far more accurate schedule. Small contact centres have traditionally been less likely to have implemented workforce management, due to issues over cost, complexity and whether it was even necessary in small operations. Recent years have seen opportunities via the cloud model, as well as subscription-based pricing alternatives, which enable accurate forecasting and scheduling options for smaller contact centres.

As the likelihood of workforce management system usage is far more of a factor of size and call volume, rather than the business type, care should be taken with the following chart which shows respondents' WFM penetration rates by vertical market.

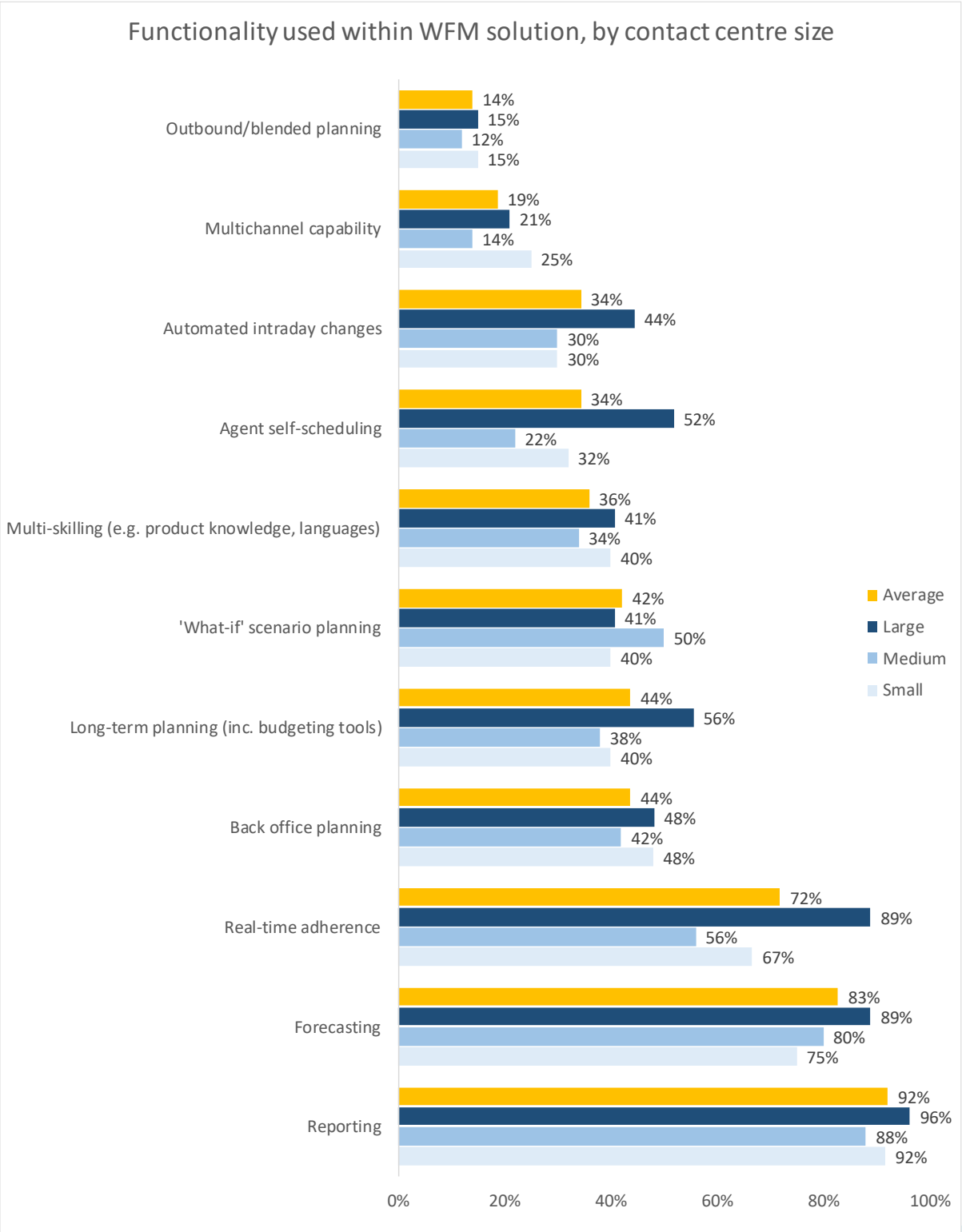
Those respondents in the outsourcing, insurance and finance sectors seem most likely to be looking to upgrade their WFM systems, with those in the transport & travel sector most likely to implement the solution within the next 12 months.

Figure 11: Use of workforce management systems, by vertical market



Respondents who said that they used workforce management solutions were asked which functionality they actually used (as opposed to what was bundled in with the solution, but which was not used).

Figure 12: Functionality used within WFM solution, by contact centre size



As would be expected, forecasting and reporting scored very highly, with real-time adherence to schedule and agent self-scheduling also seen as being very useful in larger contact centres: functionality which can be seen as a potential win-win for both agent and scheduler, in that it provides a more realistic schedule as well as giving the agent an element of control over when they wish to work.

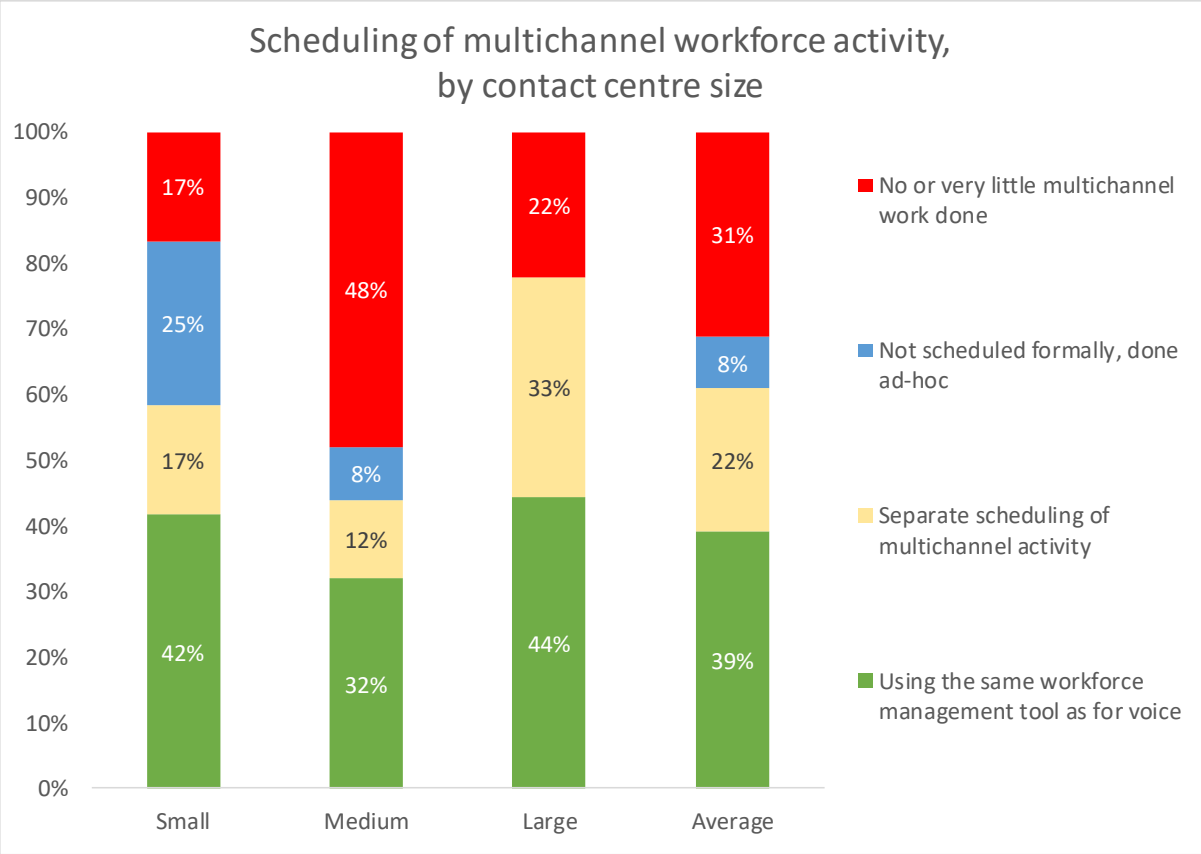
Somewhat less than half of respondents used workforce management solutions for more strategic aims including 'what-if' scenario planning and longer term forecasting. Only a minority used more recent forms of functionality such as multichannel scheduling and automated intraday changes, and 1 in 7 respondents use WFM for outbound / blended planning.

Back-office scheduling has grown greatly in recent times, functionality which supports businesses to deliver what the front office has promised, with 44% of respondents using this.

39% of respondents – especially those in larger contact centres – use a combined voice and multimedia workforce management application, with 8% using an ad-hoc approach.

There was a noticeable use of standalone forecasting and scheduling for multichannel activity, mainly in larger operations which may run their non-voice operation as a separate part of the customer contact environment. Smaller operations are most likely to use ad-hoc multichannel scheduling.

Figure 13: Scheduling of multichannel workforce activity, by contact centre size



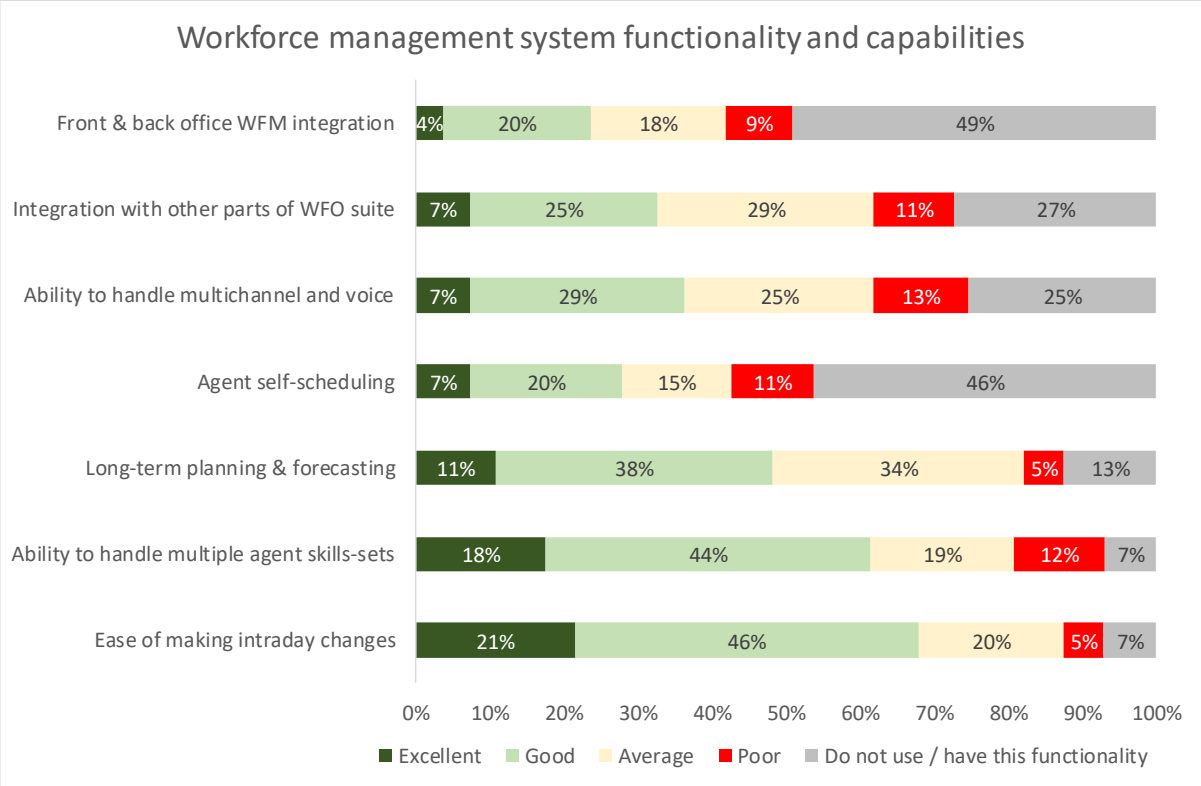
Respondents were asked to comment upon their opinion of the functionality and capabilities of their workforce management system as it stands.

Relatively few respondents commented negatively about any functionality (i.e. actively rating it as 'poor'): multichannel capabilities in particular are seen as having improved greatly in recent years.

However, it can be viewed that functionality graded as being 'average' could be seen in a similar context to 'poor', in that no organisation or business should be satisfied if their products or services are merely rated as average by their customers, in which case there is still significant room for improvement in long-term planning, integration with other parts of the WFO suite and multichannel capabilities.

Only the ease of making intraday changes is generally seen as delivering what is needed by most respondents.

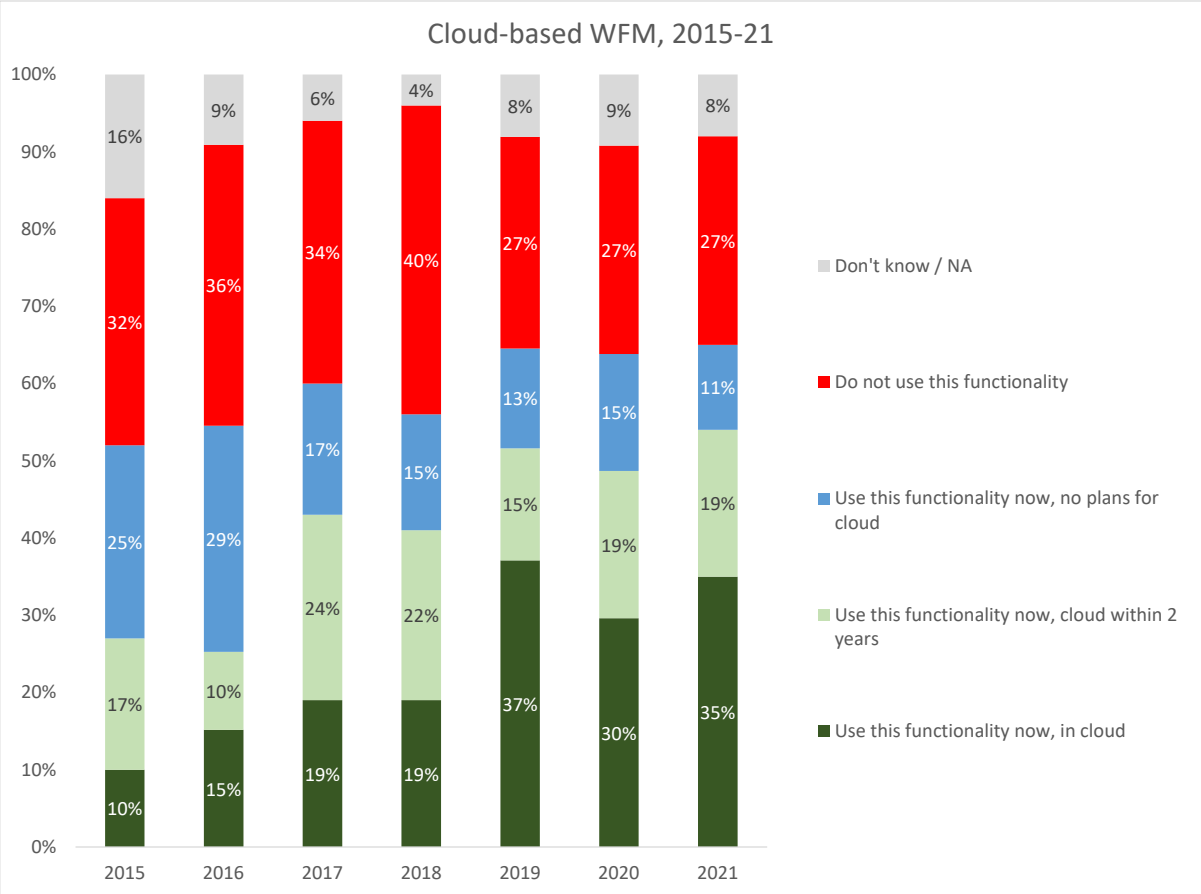
Figure 14: Workforce management system functionality and capabilities



Agents account for around 75% of contact centre costs, and as effective workforce management solutions have such an impact on efficiency, productivity and expense of the operation, workforce management will continue to be the amongst the most important tools of the contact centre's disposal. This is a very interesting time for those involved in WFM, as many disruptive influences – cloud, flexible working, analytics, multichannel / omnichannel and back office WFM – are coalescing simultaneously, driving vendors to expand and develop their functionality.

Cloud-based solutions don't just offer financial benefits: as the time taken to roll out new releases is so much less than the traditional CPE model, vendors can bring out new versions much more frequently, and experiment with offering cutting-edge functionality far sooner than they would in a traditional premise-based deployment environment. The continued rise in homeworking, virtualisation, and mobility in general will be a major driver for the uptake of cloud-based solutions. This model also encourages smaller operations to implement WFM, or experiment with functionality that was previously out of their price range. The chart below shows the significant movement towards cloud-based WFM in the past five years, with a major jump in 2019 that has been sustained in the past two years.

Figure 15: Cloud-based WFM, 2015-21



Workforce management solution providers are keen to expand out of the traditional contact centre, with the **back offices and branches** of large organisations being seen as potential goldmines. Far more employees work in these spaces than in the contact centre, although many back offices lack the same focus upon efficiency and the tools to improve it. With the increased focus on the entire customer journey – and the understanding that this is where many processes fail, making more work for the contact centre in terms of call-backs – back-office processes are starting to fall within the remit of customer experience professionals, who are likely to take their knowledge of contact centre workforce management and apply it in these new areas. The industry is likely to see back office and contact centre workforce management systems will see ever-closer integration, or even to work as a single centralised function that can track and analyse the effect of different departments and processes on others throughout the customer journey. It is certainly noticeable that the use of back-office WFM functionality had grown greatly in the past few years, and elements such as intraday are often included within this.

This is not to say that selling back-office workforce management solutions is a simple matter of repackaging existing contact centre functionality, as the back office has somewhat different requirements to the contact centre – for example:

- lack of automation for tracking inbound/outbound work
- handling deferred workloads
- the assumption that forecasts built on contact centre events and volumes are similar to the back office
- longer service levels
- different resource requirement calculations
- manual and complex tasks
- more likely to be based at multiple sites
- adherence to schedule without data from an ACD
- identification of bottleneck processes.

Yet the opportunity exists and contact centre workforce management vendors are in a prime position to make the most of it.

Omnichannel/multichannel forecasting and scheduling will become even more important, not just as overall digital interactions grow generally across the industry, but also as those operations that have been struggling to handle a small proportion of emails recognise that the problem is not going to go away, and look to invest in new workforce management solutions. The recent issues around moving contact centres to a remote working scenario meant that some businesses decided on a digital-first strategy, and the huge increase in voice calls seen by some businesses meant that call queues were intolerable for many customers who then tried digital channels instead: digital channels have seen a major increase in volumes as a result, and this is unlikely to sink back to pre-pandemic levels, so businesses will certainly need to factor this into any forecasts and schedules. Additionally, the rise of chatbots and voicebots means that the interactions that AI carries out instead of agents should be considered in longer-term planning at the least.

While a considerable proportion of organisations still have dedicated digital teams, many small and mid-size operations have a much more flexible approach to omnichannel, and the ability to move agents between channels in the near-real-time capacity will be highly prized. It is noticeable in previous charts in the chapter that the majority of operations are less than happy with current omnichannel WFM functionality, so we can expect to see further efforts from solution providers into improving this.

It's important to understand that the number of channels will continue to increase: even traditional media such as letters and faxes still have their place in many contact centre operations, and next-generation social media such as WhatsApp and Messenger are positioning themselves in the customer contact space, and the recent wave of new video users (e.g. through Zoom) means that customers will be familiar with this channel if businesses decide to use it. Next-generation WFM solutions need to be flexible enough to handle any number of new channels, taking into account their nature and customers' expectations of service level when using them. It is also likely that more sophisticated workforce management systems will be able to predict with a reasonable level of accuracy those interaction types which are likely to require more than one channel in order to handle them successfully, and forecast and schedule appropriately.

It is not only the changing mix of channels that should be considered, but also the type of interactions coming through each. It is fair to say that easier work will continue to move to self-service and AI-enabled digital channels, and it should also be noted that in the pandemic crisis, call lengths went up considerably: queries were more difficult; agents had less familiarity with these issues; remote agents often did not have the same access to their usual knowledge bases or support systems; customers who had waited a long time in a queue may want to ask more questions or receive greater reassurance so that they won't have to call back. When the dust has settled, WFM planners should consider what interactions look like in pandemic or other emergency situations, and use this to model future resourcing.

There has been significant investment made in recent years to improve the **WFM user interface** without sacrificing the sophistication of the solution, in order to offer the benefits and capabilities to a wider audience than dedicated technical WFM professionals. This will accelerate, as it is in the interests of both the vendor and the business to be able to use more advanced functionality: on the one hand to justify the extra expense of the solution compared to basic workforce management; on the other to gain competitive advantage without having to employ more WFM specialists.

Contact centres as a whole are now certainly less centralised than in the past: **virtualisation and homeworking** have recently become well-entrenched in many organisations, with knowledge workers also being used more frequently. Users of WFM may also need to consider how any crowdsourced customer support resources will affect the demand for agents' services. The power and ubiquity of smartphones and tablets have led to an increase in mobile working – no longer do supervisors or managers have to be at their desks in order to monitor performance and react accordingly – and the new generation of workers have an expectation, both culturally and supported through regulation, that their employment will be treated as flexible by the business as well as themselves. This attitude towards work, and the increased empowerment of individuals will mean WFM functionality that allows shift-swapping, vacation bidding and short-notice shift changes are now required, with smartphone apps supporting this. The term 'intraday' – referring to dynamic scheduling and resourcing in response to rapidly changing conditions – is so useful and necessary that intraday capability has become standard functionality in many WFM solutions.

It is also likely that increased agent self-responsibility will lead to a situation where they are more empowered and aware of their own performance and skills gaps, allowing them to take control of their education and training rather than waiting for a team leader or trainer to tell them what to do.

The technological strides being made in **analytics** are leading to advances in data modelling and analysis that are finding their way into current and future workforce management offerings, including the use of artificial intelligence to improve forecasting and scheduling in difficult-to-optimise areas such as call blending. Customer journey analytics, which includes looking at workload necessary in back office operations to fulfil the overall transaction, will be supported through the use of artificial intelligence which will be able to use data from multiple sources throughout the enterprise in near-real-time to predict demand, forecasting and scheduling resource based upon far deeper data than simply historical ACD statistics.

WFM will continue to **integrate** more deeply with other elements of the WFO suite: analytics is an obvious area where business intelligence and contact centre performance meet closely, but also the performance management and QA modules, identifying best practices and singling-out agents skilled in particular types of interaction or channel. This will enable contact centres not just to have enough agents at the right place at the right time, but enough of the **right** agents. This insight will also feed into coaching and eLearning functionality, sharing best practice and identifying training opportunities. This focus on putting the right agents in the right place at the right time can go a step further by looking at agent personas, which are based on past performance and biodata, as well as their personalities, behaviour and motivations in order to match agents with the predicted type of work and customers that they would be best at handling.

HEADSETS

There are various factors to consider when deciding which headset to purchase for your contact centre workforce. If you have many hundreds or even thousands of employees, headset purchase is a large ongoing expenditure that is important to get right. There are many things to consider:

- Compliance with health and safety legislation
- Total cost of ownership
- Durability
- Performance
- Comfort
- Contact centre telephony infrastructure
- Sound quality.

Most contact centre employees wear headsets for hours every day, and the cost of replacing or repairing headsets should be considered in the total cost of ownership, requiring good levels of after-sales support and guarantees.

Some contact centre employees like having the freedom to move around while on calls, especially in a high-pressure sales environment. Some contact centres may decide they don't want employees wandering around, but that the supervisor needs to be able to be mobile. Employees with wireless headsets can spend less time putting callers on hold as they can walk to where the information they need is held, taking the caller with them. This in turn can reduce the time taken on each call, improving customer satisfaction.

Headsets and the Connected Enterprise

Many modern headsets support the 'enterprise as contact centre' model by allowing the employee to involve knowledge workers in a three-way conversation with the employee via team collaboration tools, allowing a 2nd-line technical support worker to help immediately with a difficult part of a query without a formal, long-winded escalation process taking place.

With more than a third of businesses using non-contact centre-based employees to take calls, it makes sense to support these knowledge workers with the tools they need. For more information, please read the "Virtual Contact Centres & the Connected Enterprise" chapter of this report.

In large operations particularly, headset management, updates and roll-out of firmware may require significant effort, including the physical presence of the IT staff to make the changes. Cloud-based headset management solutions can configure settings and schedule and carry out remote firmware updates, as well as showing which headsets are being used in near real-time, remote troubleshooting and assistance with inventory status. This assists the agent with their job, and also helps reduce the workload for the IT helpdesk and maintenance team. Such solutions do not exclude the agents' ability to carry out some permitted configuration and customisation of their headsets.

The great majority of contact centres have implemented Internet protocol (IP) telephony as part of their technology environment. Employees will make and take calls via their PC, so choosing a headset that can adapt to future technology infrastructures is key.

The weight, sound quality, amount of background noise allowed in and out, comfort and the length of time the headset will be worn should also be considered. Having sound in both ears (binaural) allows noise levels to be lower than is the case with single-ear sound (monaural), although some employees can feel isolated if they cannot hear the world around them.

In addition, noise-cancelling microphones filter out the unwanted background noise which can otherwise make the conversation harder for a caller to hear. This may be especially relevant for homeworkers, where the background noise (traffic, children, dogs, etc.) may be less easily managed or predictable, but many large open-plan contact centres may have even higher levels of ambient noise. Voice tubes can also allow more flexible positioning of the microphone, with attendant improvements in sound quality. Wideband audio (HD voice), which gives a clearer sound, should be considered.

The effect of headsets upon productivity

There are examples of how improving audio and speech quality can positively impact upon call handling time and overall contact centre performance. A Spanish contact centre gave some sets of employees headsets with digital audio processors, and some used the more traditional headset. The first group's technology had the effect of 'cleaning up' unwanted noise at either end of the line, allowing the customer and employee to communicate more effectively. Calls were handled more quickly, fewer mistakes were made with data collection (with the attendant knock-on effect that fewer repeat calls were required), and overall, employees handled an average of 10% more calls per day than did the control group.

In many countries, there has been legislation put in place around noise at work, which detail maximum average and peak noise levels that a worker may undergo, and the maximum amount of time that it is permissible for the worker to experience these sounds. Surveys have seen that only 6% of contact centre managers are aware of the level of ambient noise within their contact centres, and only 9% regularly measure it[1].

[1] Source: CCF magazine

ACOUSTIC SHOCK

'Acoustic shock' is a phrase coined to describe a sudden, unexpected noise, often delivered at a very intense frequency. It may be caused by feedback from telephone equipment, faulty telephone lines, non-compliant switchboards and headsets. Other sources of acoustic damage include caller abuse (shouting, screaming, blowing whistles etc. - most often found in the outbound environment) or background noise on the call. Acoustic shock also refers to the damage done by long-term exposure to noise in excess of healthy limits. It can lead to permanent hearing damage and cases of psychological trauma. The CCMA (http://www.ccma.org.uk) has stated that tens of millions of pounds have been spent in the UK alone on settlements related to acoustic shock.

Contact centres may like to implement a traceable reporting system for headset users who may have been exposed to acoustic shock incidents. The following information should be reported:

- Date and time of the incident;
- Details of the source of the exposure;
- Description of the noise;
- Duration of the exposure;
- Details of the headset and telephone equipment used;
- Whether the incident was electronically recorded (a copy should be kept for future reference);
- Symptoms experienced by the operator directly related to the acoustic shock incident.

Operators should be trained to recognise such incidents and how to report them. Organisations that operate call centres are further advised that they should keep up to date with developments in this field through their professional associations and other representative bodies, as well as through their enforcing authority if applicable.

In the UK, "The Acoustic Safety Programme" developed some simple advice for contact centres to help them meet or exceed legislation and make working life safer and more comfortable for their employees:

- Measure contact centre noise regularly and record it
- Fully understand legislation and create a formal policy so that staff at all levels of a business are aware of it
- Make sure that the headsets used are compliant with current legislation, and test them throughout their life
- Provide employees with a choice of headsets - monaural or binaural - the latter can help to absorb background noise, but may make the employee feel more cut-off from their environment
- Be aware that excessively long shifts may cause damage to employees' hearing, even if within nominally-safe limits
- Use sound-absorbing materials as much as possible to absorb unnecessary echoes and reverberation
- Educate employees on how to use their headset and phone correctly, including volume and ergonomic adjustments
- Test staff's hearing throughout their contact centre career.

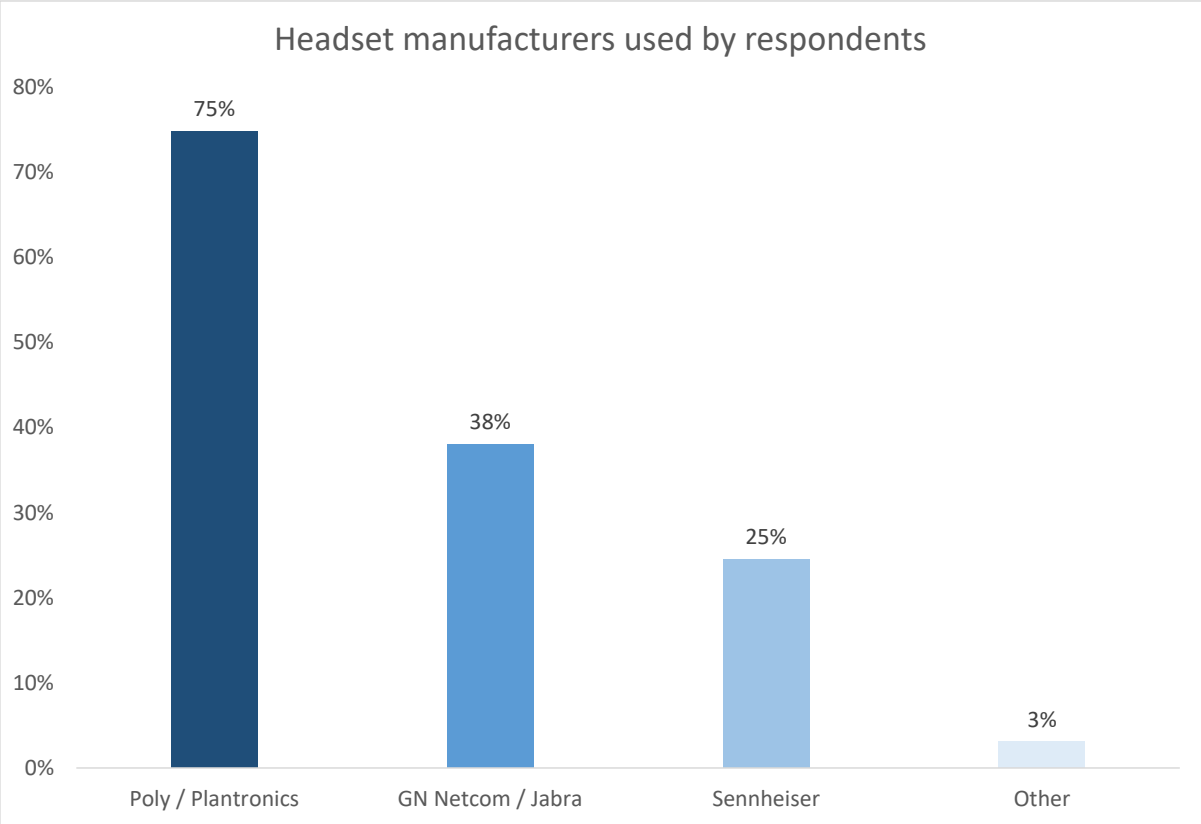
HEADSET MANUFACTURERS

Around 20% of respondents' headsets are replaced in a given year, meaning that the average headset will have a useful life of around 5 years.

Historically, headsets were replaced every 3-4 years, so the decrease in recent years in the rate of headset replacement may be due to the improvement in the overall quality and durability of headsets.

As usual, Poly / Plantronics headsets are used by a clear majority of survey respondents.

Figure 16: Headset manufacturers used by respondents (NB: total is greater than 100% as multiple headset manufacturers may be used)



One of the main advantages of wireless headsets is that employees may leave their desks to consult colleagues or refer to information resources elsewhere in the contact centre without having to put the caller on hold. Supervisors particularly benefit from the ability to move around a team, helping employees as required. Wireless headsets allow more collaboration with experts, knowledge workers and back-office staff based away from the agent's immediate environment, improving first-contact resolution rates, improving customer experience and agent morale.

More sophisticated wireless headsets may also be IP-enabled, integrating with softphone software on a PC, as well as taking calls delivered through regular desk phones if required. The enterprise standard known as Digital Enhanced Cordless Telecommunications (DECT) supports communication at up to 110 metres, which is obviously more than enough for a normal contact centre environment, although buildings change the way radio signals operate, thus affecting the range of these headsets.

The issue of density also has to be considered: the DECT standard enables wireless headsets to work without interference in high density environments, as each headset-base pair continuously monitors the channels available to them, changing to the best available channel depending on the interference encountered. However, there is a trade-off between density and the roaming range of headsets: as the number of conversations in a given area increases beyond the number of channels available, headsets start to share channels, which will reduce the roaming range. A possible alleviation is provided by some advanced wireless headsets, which take into account how close the employee is to the base station, and use less transmission power when the employee is near, but boost it when the employee is further away, increasing the potential roaming distance when required and increasing battery life when the employee is close to the base station.

DECT also incorporates security technologies between headset and base to block any eavesdropping which can occur on analogue transmissions, and these digital transmissions are coded and encrypted.

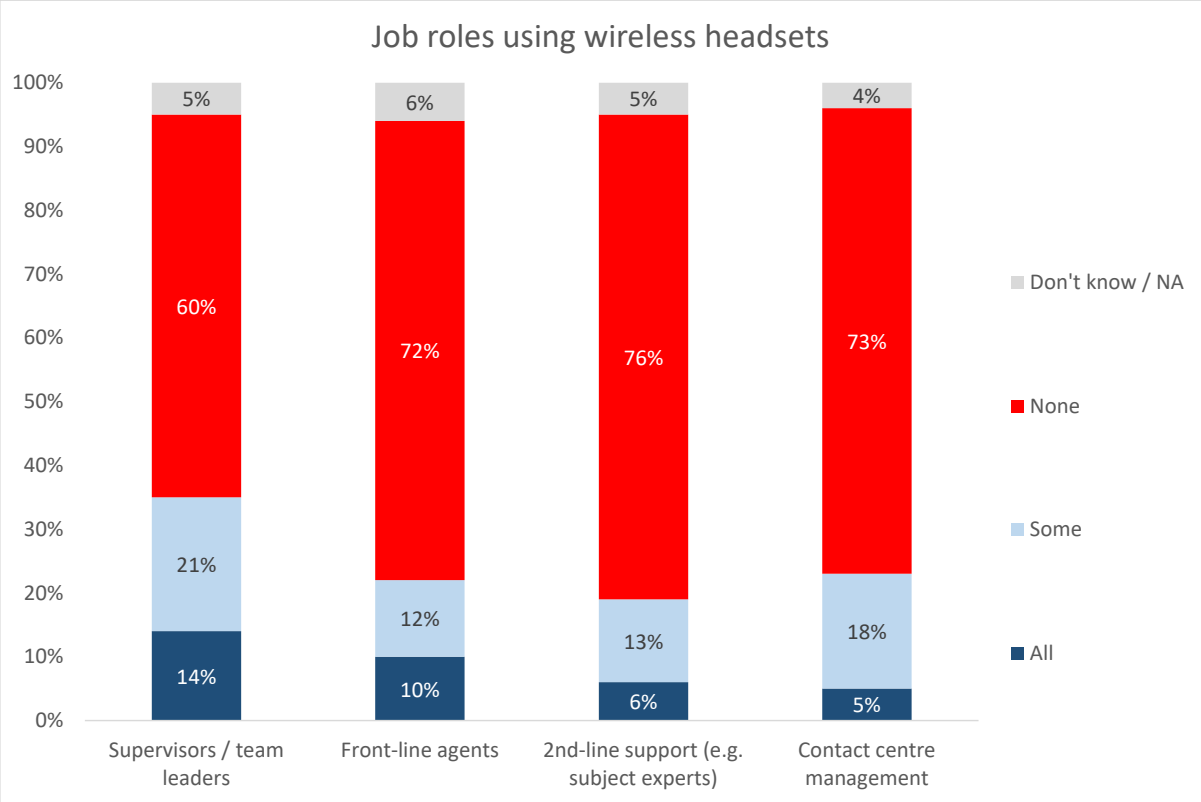
Possible benefits to wireless headsets include:

- Improved employee productivity due to increased mobility and reduced hold time, as the employees can move across the centre to consult a colleague or obtain the necessary resource
- Increased customer satisfaction due to reduced time on-hold
- Improved quality, as supervisors can move freely within their team, not are being held back by the physical limitations of wired headsets
- Improved training, as small groups of new employees can listen in to a live conversation by pairing their headsets to the employee's base
- Improved employee morale, as a high-quality headset is seen as a perk of the job, and wireless headsets tend to be more physically comfortable. Not having a wire hanging over the desktop also makes the workstation a neater and more pleasant place to work.

Historically, there has been a strong negative correlation between the contact centre's size and its use of wireless headsets (i.e. large contact centres were less likely to use them), but recently this pattern has all but disappeared.

In terms of the job roles that are more likely to use wireless headsets, supervisors will use these more frequently, with a growth in their use this year amongst front-line agents too.

Figure 17: Job roles using wireless headsets



As VoIP is a digital signal and human speech is analogue, converting between the two takes a certain amount of time. IP was not initially designed to transfer speech and so does not guarantee a time between the signal leaving one point and arriving at the next. These two points mean that there may be more of a delay in speech being transmitted from one point to it being heard at another on a VoIP system than with a conventional system, although performance and delivery has improved immeasurably over recent years.

As with all telephone systems, the person speaking will hear some of their own speech in their ear. This is referred to as 'sidetone', and when the delay levels are low it is an important part of the telephone system. When delays are excessive, the sidetone becomes echo, which is distracting for the people on both ends of the call. Excessive delays are more common in VoIP systems than with standard telephony, meaning that echo cancellation is a critical component in improving call quality.

Some headsets are able to alleviate or even remove the impact of sub-optimal network performance on the conversation:

- Echo - how the earpiece fits to the ear and the positioning of the microphone relative to user's mouth helps prevent echo, and digital signal processing (DSP) alleviates echo management when it is unavoidable. DSP can help with unequal call levels, and manage sudden increases in amplitude and/or volume, and prevent acoustic shock
- Distortion - clipping the voice signal by taking away the highest and lowest voice registers can mean that the voice sounds distorted, an unpleasant sound for both employee and caller
- Latency - often viewed as one of the major bugbears of IP, latency is experienced as a lag, due to information being sent and received across the network in a sub-optimal manner. This can cause broken conversations, and can be extremely frustrating for both customer and employee, particularly when experienced as poor sound quality, such as missing pieces of sound, as well as the lag itself.

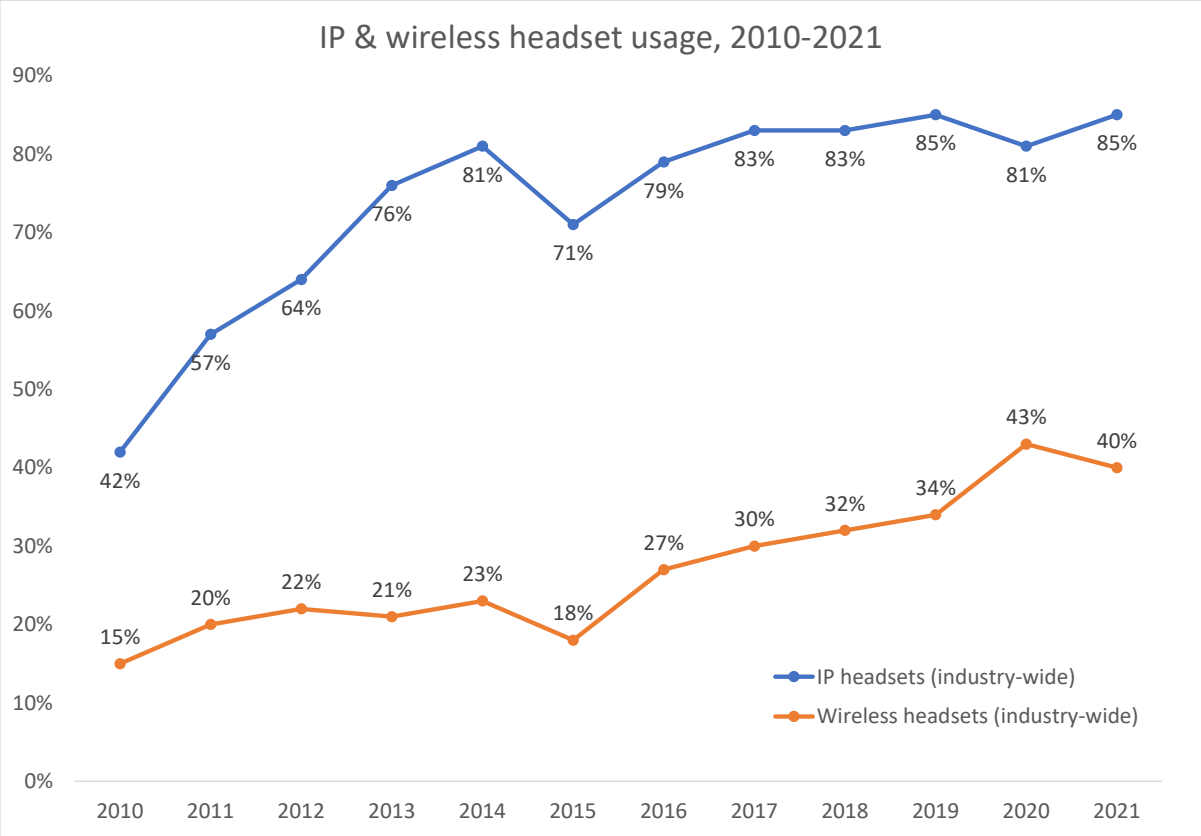
IP headsets and homeworkers

The remote working model can be supported by using a headset and IP audio processor (that links the headset and PC), rather than an IP phone. This method is cheaper than an IP phone, is simpler to support, and has the added advantage that if the PC locks up, the employee can continue to speak and be heard.

Looking at historical data from 2010 onwards, it can be seen that the use of IP headsets has grown very significantly, from a 2010 base of 42% to 85% in 2021, more than doubling.

Wireless uptake has been slower initially, with a gradual increase from 15% in 2010 to 2019's high of 34%. There has been a significant uptake in penetration rate in the last couple of years, and it will be interesting to see if this is a data anomaly, or part of a trend.

Figure 18: IP & wireless headset usage, 2010-2021

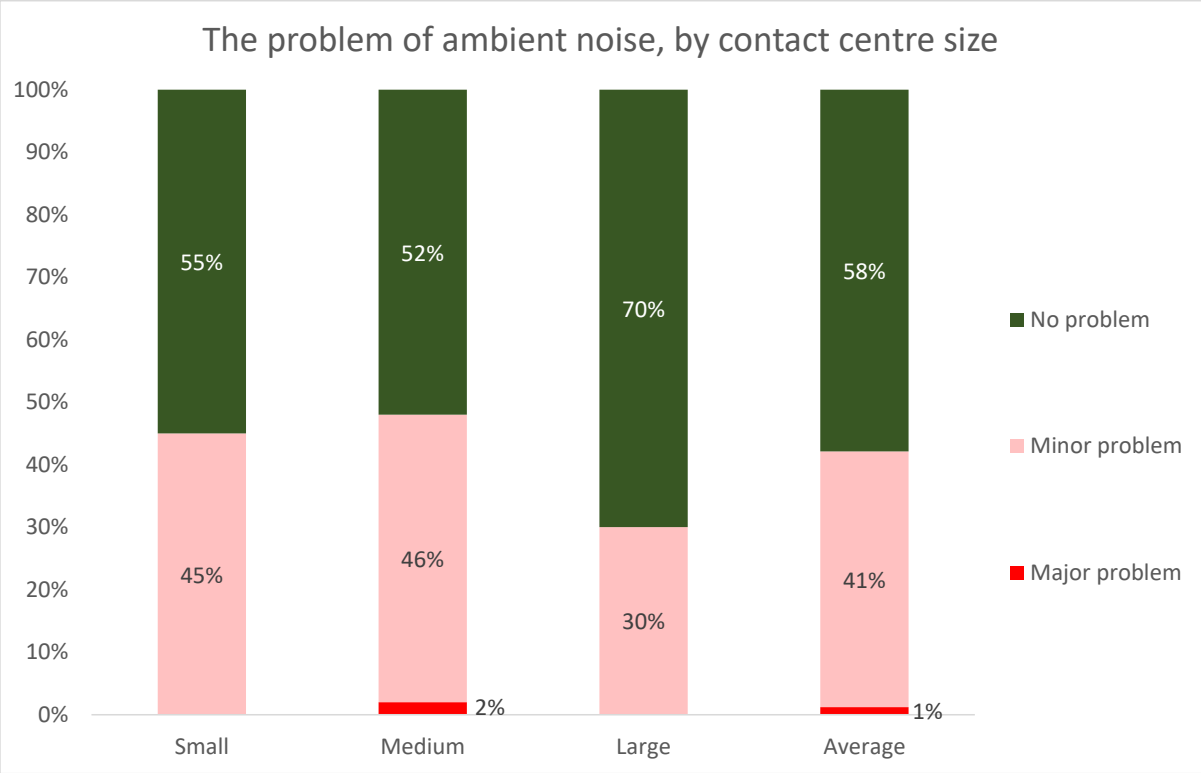


NOISE-CANCELLING HEADSETS

While excessive ambient noise in the contact centre does not seem to be a major problem for many of our respondents, 64% consider that it is an issue for them in some form, particularly in small and medium operations where sound management has not been a design priority.

In a remote working environment like a busy home, this can certainly become an issue for many agents and their customers.

Figure 19: The problem of ambient noise, by contact centre size



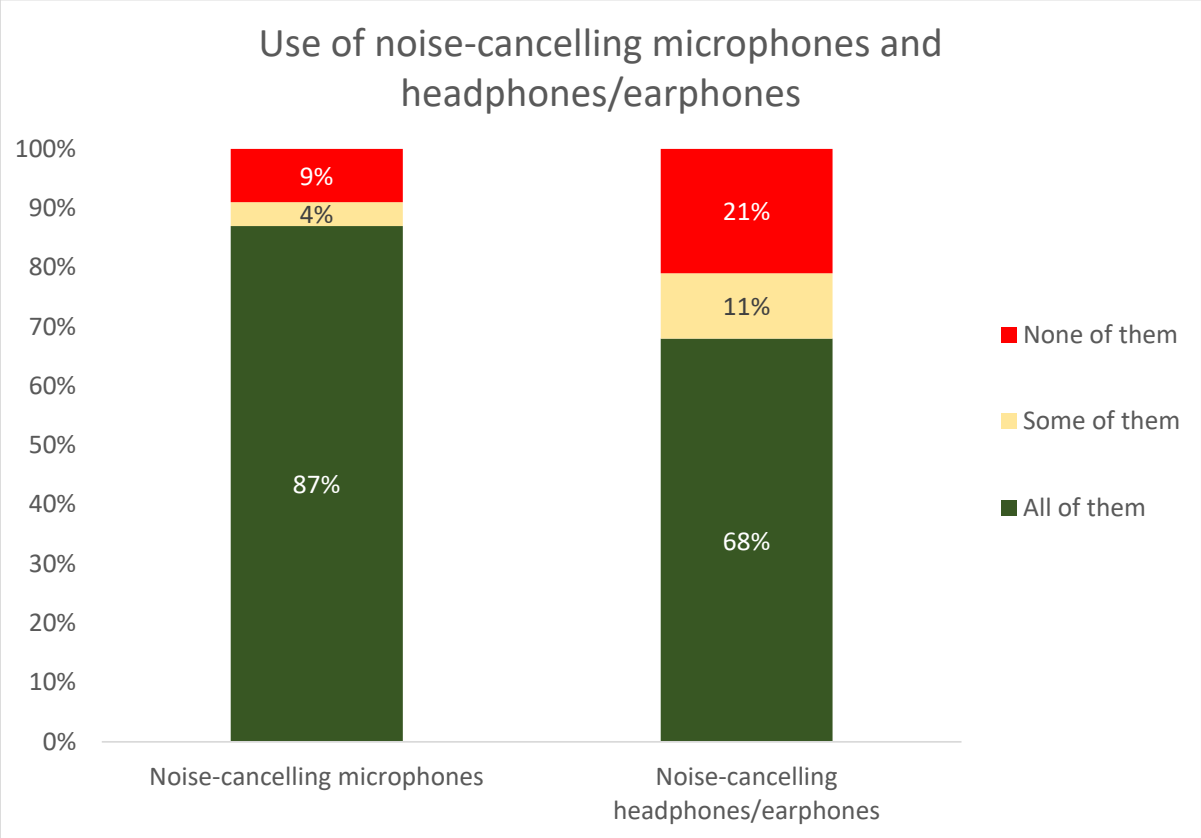
In such cases, the use of noise-cancelling microphones and headphones can play a significant part in improving the customer and agent experience, while reducing the necessity for repetition and the chances of mishearing which can lead to downstream business process failures.

87% of respondents report that all of their headsets have noise-cancelling microphones, which cut out the background noise that can be distracting for the caller. 4% report partial use of these types of headset. Some headsets use a multiple microphone array within each headset to improve noise cancellation. The ability to alter the positioning of the microphone will also improve voice clarity.

68% have noise-cancelling headphones / earphones for all of their headsets, which means that some employees are still prone to noisy environments which can affect their concentration, accuracy and performance. 11% of respondents partially use this type of headset.

Headsets should also provide the right level of audio safety agents from acoustic shocks and loud noises.

Figure 20: Use of noise-cancelling microphones and headphones/earphones



The unnecessary cost of mishearing

Using figures from this report and other ContactBabel research, it is possible to estimate the industry-wide cost of mishearing.

Inbound calls per year (handled by agents): 6.75bn[2]

If 10% of calls require a sentence repetition: 675m calls

Assume increased length of call due to repetition is 15 seconds

Average call duration: 6m 33s (393 seconds), therefore 3.8% of the call is repetition

Mean average cost per inbound call: £5.42

Cost of time spent on repetition: 20.7p per call

Therefore, theoretical industry-wide cost of repetition: £140m per year

Using a typical 250-seat contact centre with sub-standard headsets as a worked example:

Average calls per agent position per year: 12,688

If 50% of calls require a sentence repetition: 6,344 calls per agent position per year

Assume increased length of call due to repetition is 15 seconds

Average call duration: 6m 33s (393 seconds), therefore 3.8% of the call is repetition

Mean average cost per inbound call: £5.42

Cost of time spent on repetition: 20.7p per call

Cost of repetition per year for 250-seat contact centre with sub-standard headsets: £382,302.

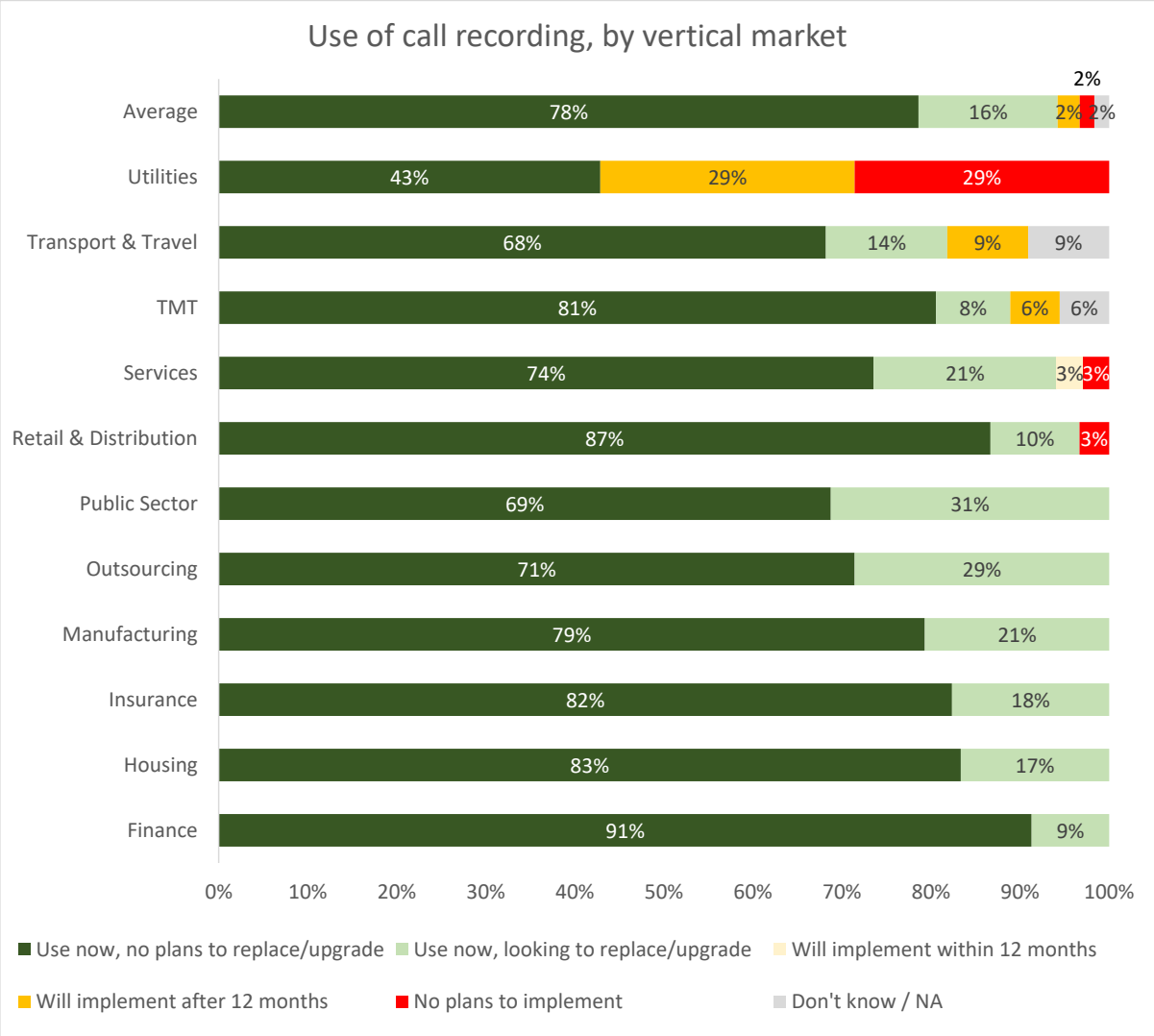
NB – using speech analytics, contact centres could analyse the proportion of calls requiring repetition and the actual extra time that this takes in order to calculate the unnecessary cost of repetition in their own operations.

[2] ContactBabel, "UK Contact Centres 2021-2025: The State of the Industry"

CURRENT & FUTURE USE OF CALL RECORDING

Consistently one of the most widely-used contact centre technologies, call recording is used by 94% of this year's respondents, 17% of whom state that they wish to replace or upgrade their current system. Only 2% of respondents have no intention of using call recording.

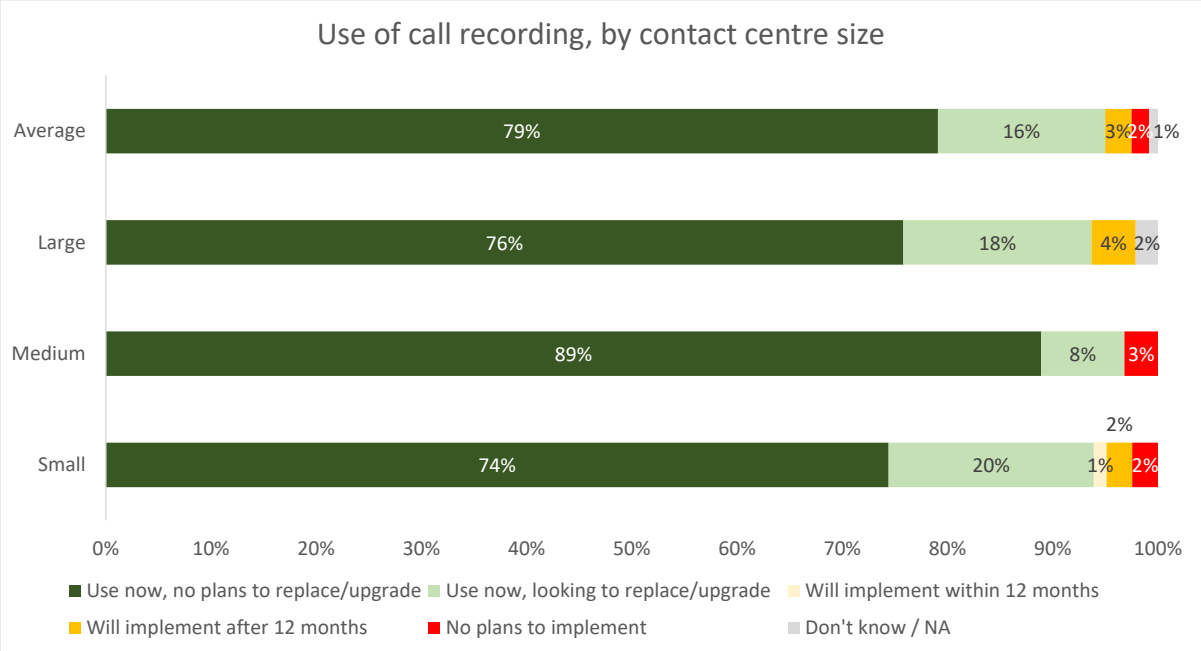
Figure 21: Use of call recording, by vertical market



A considerable proportion of respondents in the public sector, outsourcing, manufacturing and services sectors report that they are looking to update their call recording solutions. Taken in the context of data from elsewhere in this report, this is almost certainly connected with adding speech analytics capabilities to the recording functionality in order to improve the QA process, increase compliance and gather new business insight from their customer interaction records.

The use of call recording has in the past been influenced by the size of the contact centre operation, although the current figure of 94% penetration in respondents from small operations shows that vendors have been able to offer solutions successfully at various price points and deployment methods.

Figure 22: Use of call recording, by contact centre size



SITUATIONAL CALL RECORDING

Call recording may be used in three modes:

- 100% call recording: often used for compliance, recording the entirety of every call
- Random / Scheduled Call Recording: priority-based call recording schedules can be defined based on business rules, using multiple criteria on each schedule
- On-Demand Call Recording: on-demand recording can be customised to support agent-initiated call recording through a desktop interface, or automated through call recording triggers sent from third-party software.

42% of respondents that use call recording do so for all calls, with 58% having the option to record only a part of their overall voice interactions. 75% of these respondents state that they can choose to record based on the call profile (i.e. business rules based on the nature of the call), and 45% will do so based on the inbound number called. Only 25% identify the inbound caller's number and decide whether to record or not based on that.

Figure 23: Situational recording choices

Situation	% respondents choosing to record or not record
Call profile (e.g. do not record calls made to HR; outbound calls to states with 2-party recording regulations; etc.)	75%
Based on CLI (calling-line identity, i.e. the number calling in)	25%
Based on DNIS (dialled number identification service, i.e. the number being called)	45%

As with any form of recorded and potentially sensitive customer data, the secure storage of recorded calls must be taken into account. More than half of respondents choose to store their recorded calls offsite, either as part of a cloud-based call recording solution, or through a dedicated backup facility as part of a wider disaster recovery plan, a figure that grows each year.

The majority of respondents in all sizes of operation state that they have dedicated secure hardware on-site in which to store their call recordings, and some choose both on-site and offsite duplication of storage. A small proportion of respondents from smaller operations state that the call recordings are stored onsite on standard hardware (e.g. in hardware that is also be used for other purposes).

HOW IS RECORDING USED BY THE BUSINESS?

Call recording and monitoring may have been around for a long time, and it remains at the forefront of the battle to improve quality and thus customer satisfaction and loyalty. The new generation of interaction recording solutions brings the whole contact centre into play, supporting agent best practice and improvement, ensuring compliance with regulation as well as improving the organisation's insight into the customer experience through analytics.

Recording solutions have moved on from the days of simple bulk recording, and the phrase 'call recording' is no longer an accurate description of the solution, and it is certainly more realistic to talk of 'interaction recording', which captures and synchronizes what is happening on the agent's screen with what is happening in the audio channel, and allows recording of after-call work, email and web chat, and can be used to identify areas of workflow improvement.

The traditional user of interaction recording solutions has been the contact centre supervisor or team leader. The **supervisor** deals heavily with quality monitoring at the agent and team level, using the recording facility along with data about the call (e.g. call outcome) to provide examples of best practice to other team members. This means the supervisor does not have to listen in live to the call, but can choose which to listen to, considerably reducing cost and improving focus.

The challenge has been that it is impossible to listen to every call. It's also difficult to know which calls are worthy of further evaluation based on the presence or absence of poor or good performance behaviours or other risk factors. Interaction analytics transcribes and analyses all call recordings, consistently and objectively. Supervisors no longer have to listen in live on calls. Instead, based on KPIs established by the company, they can search for calls that meet a certain criteria and listen to only those that have significant coaching value. This not only helps improve agent performance, it also reduces the time and cost of manual call monitoring.

The supervisor may also be responsible for the initial stages of customer dispute resolution, and can find out exactly what has been said by customer and agent in order to deal with the matter accurately. In industries where recording may be a legal requirement - an increasing trend - businesses may have compliance officers to deal with disputes. Even in areas which do not require bulk recording, many companies look upon this solution as a tool to protect against litigation.

With some of the more sophisticated interaction recording solutions available, the supervisor can move into a more analytical role, understanding not only what has happened, but the reasons for it as well. Taking a top-level view of team performance, a supervisor may see that certain types of call have been dealt with very quickly by a specific agent. Standard management information systems may show this as a positive situation, but the use of interaction recording capabilities may find that the agent is unable to help the customers, and is simply passing the calls through to colleagues. Now the supervisor has a chance to improve the situation, rather than missing the problem altogether.

Agents can be given the chance to add to the value which interaction recording can provide. By using agent-initiated tagging of calls, your front-line team can add to the store of useful information which can be acted upon by the company as a whole. For example, if customers talk about the competition and what they are offering specifically, these agent-tagged calls can be reviewed for possible action by a business's commercial team. This has the added benefit of making agents feel a key part of the overall business. This is increasingly done automatically through the use of analytics.

A strategic use of call recording may occur at the **management or executive** level. When all interactions are recorded and analysed, a complete performance management programme may be put in place. Agent performance can be viewed by supervisors, team performances can be analysed by the operational manager, and contact centre performance can be evaluated by executives. Analysis of interactions is also vital as part of a wider process optimisation strategy, to identify good and bad business practices and business process bottle-necks. Analysis of interaction recording is also vital to gaining a thorough understanding of the customer experience across channels and interactions, as part of a customer journey / Voice of the Customer project.

Using interaction recording, the performance of the contact centre as a whole can be viewed in terms of quality, not just quantity. Key performance indicators can be set and reviewed (such as average revenue per call), which are directly relevant to the needs of a business as a whole. Contrast this with the traditional efficiency measures of a contact centre's success: average speed to answer, average call duration and occupancy rate. Measurement and improvement in key performance indicators, due to interaction recording analysis, will help to prove the contact centre capable of making a real impact on a company's profit.

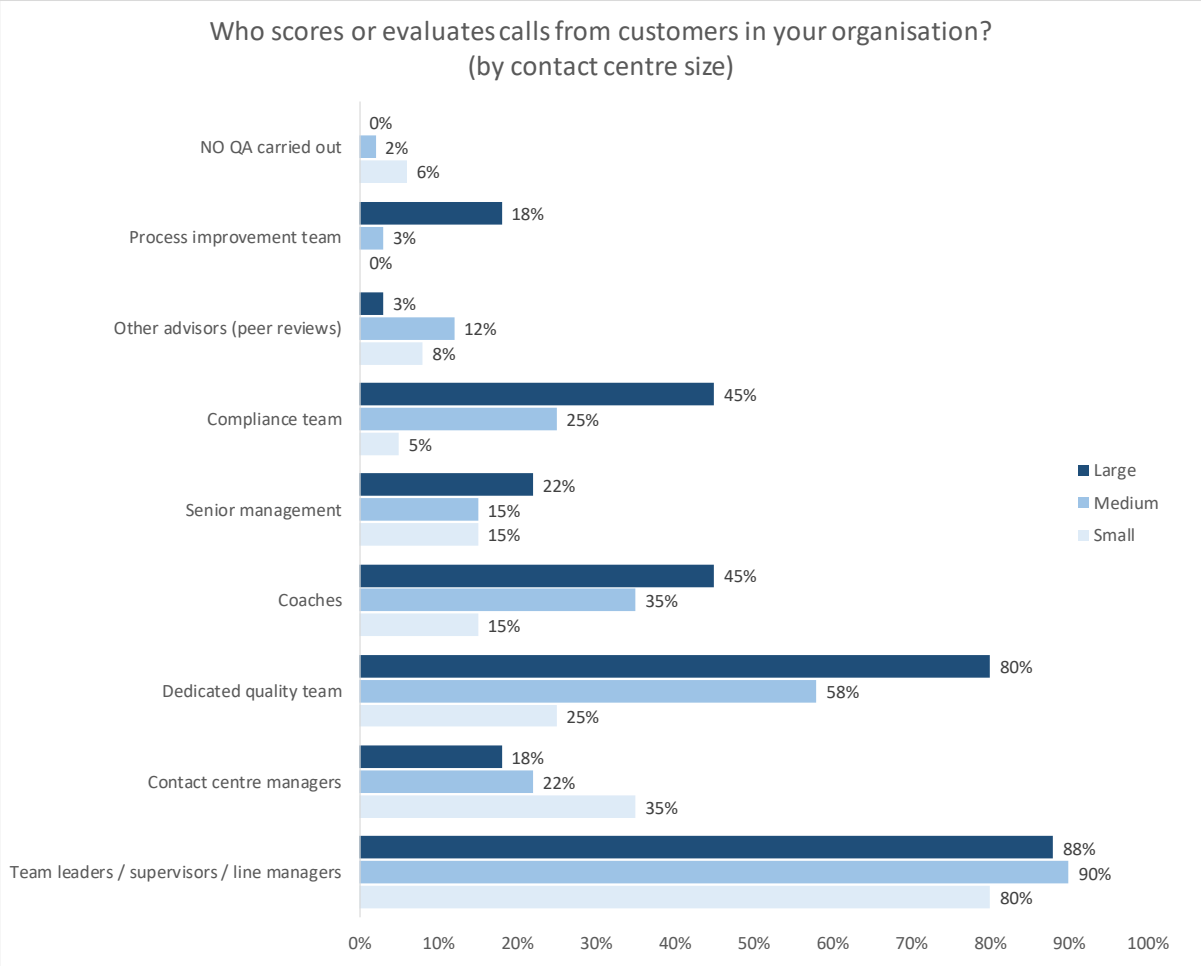
Of those contact centres which use interaction recording, the majority use it for both quality assurance and training purposes, so that the supervisor and the agent can both learn from it. Many of those using interaction recording solutions are trying to get their senior management involved in what goes on within the contact centre. Compliance has also been a major reason to implement call recording.

The majority of UK contact centres have team leaders and line managers involved in scoring agent calls manually, with 80% of respondents from large operations having a specific, dedicated quality team involved as well.

Large and medium operations are also more likely to have coaches evaluating calls, which will also feed into the process of understanding each individuals' need for specific improvement, as well as developing the wider training program. A significant minority of operations have the contact centre manager involved in evaluating calls as well, although especially in the case of larger contact centres, these may well have gone through an initial process of identifying calls relevant to the specific business or operational issue.

45% of respondents from large operations have a compliance team evaluating calls, and are much more likely to use a business process improvement team as well to learn from the QA output.

Figure 24: Who scores or evaluates calls from customers in your organisation? (by contact centre size)



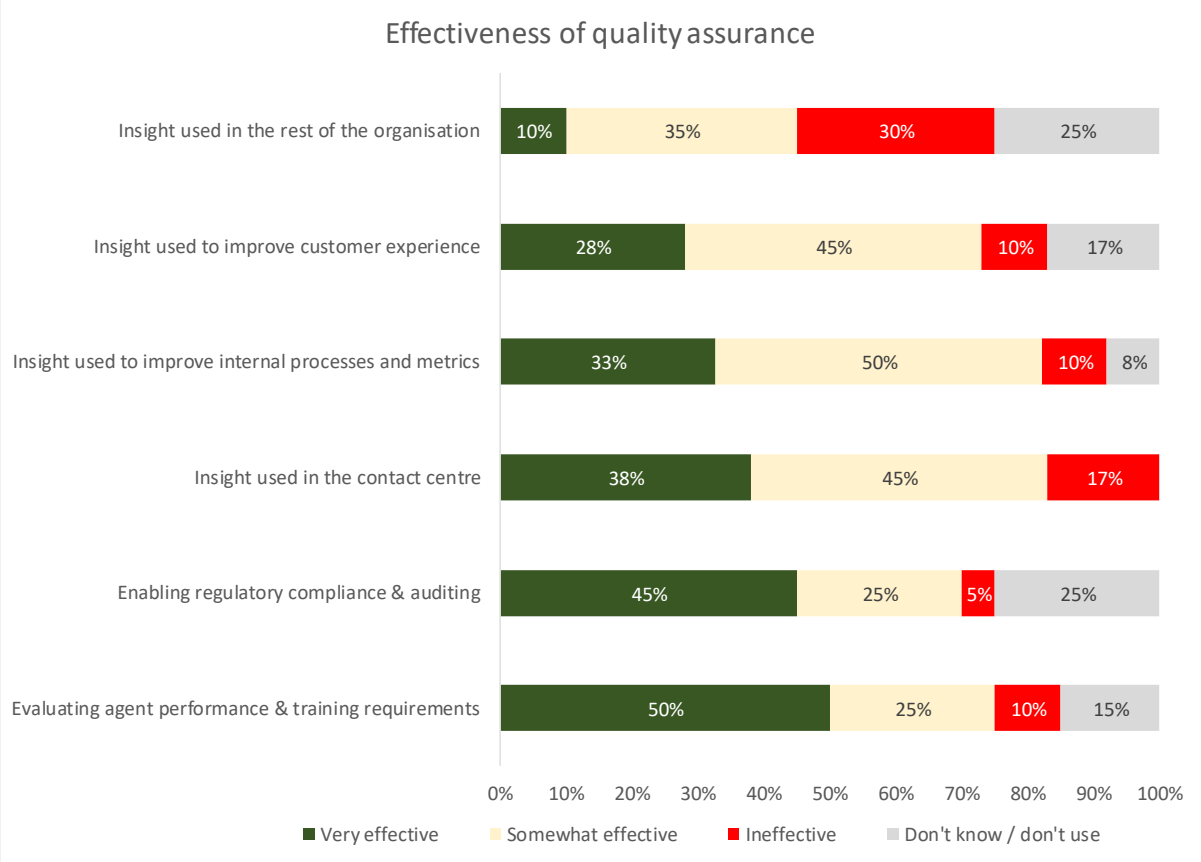
EFFECTIVENESS OF QA

When respondents were asked about how effective their QA processes are, it is noticeable that more of these respondents are lukewarm about the results of their QA processes than are actively enthusiastic: only “enabling regulatory compliance and auditing” and “evaluating agent performance & training requirements” had more respondents judging the QA process as ‘very effective’ rather than merely ‘fairly effective’ for these purposes, showing that there is still a need for improved functionality.

28% feel that QA drives customer experience improvements significantly, which shows that there is still quite a way to go. Customer insight gained from the quality assurance process stands a very significant risk of not being used effectively within the wider organisation, although the feeling is that it does generally help the outcome at agent level.

As such, it seems fair to comment that QA is currently used far more effectively and widely as a tool for improving compliance, agent productivity and skills, rather than as input into strategic business improvements.

Figure 25: Effectiveness of quality assurance

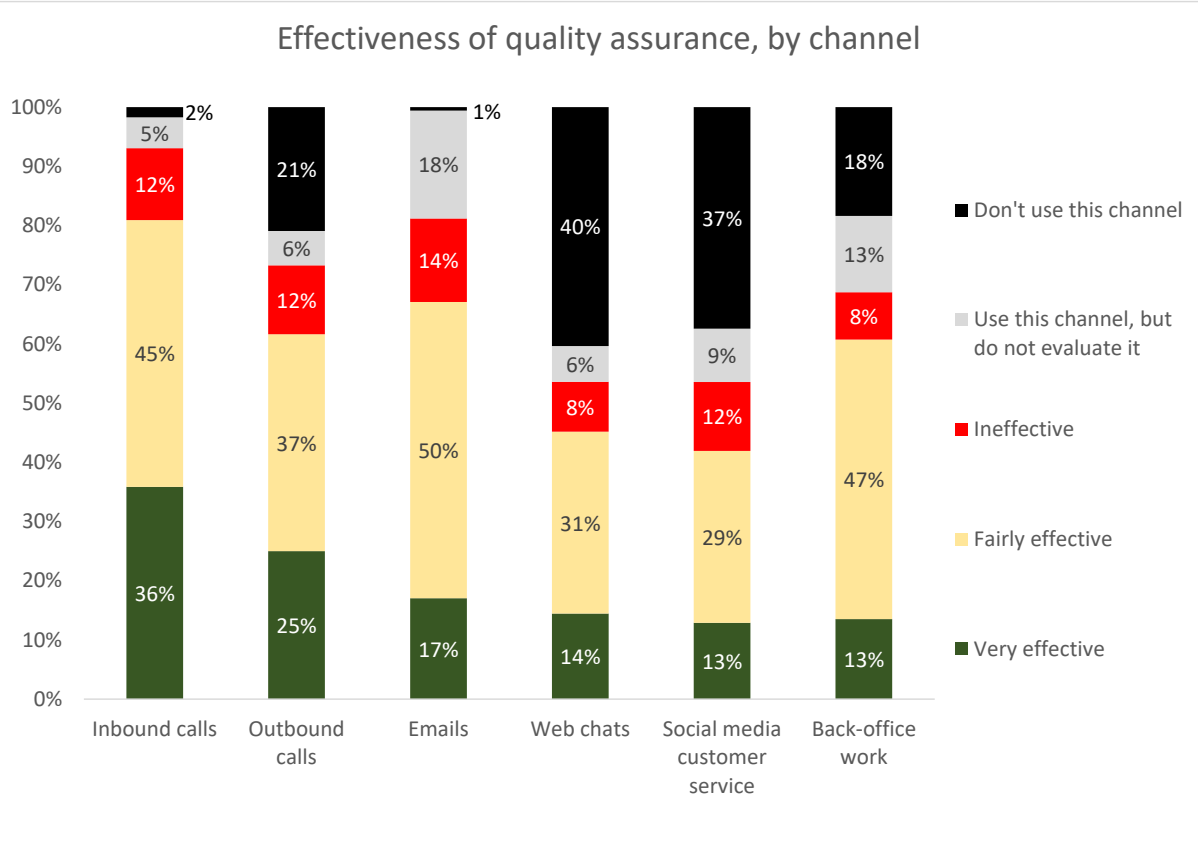


Survey respondents were asked their opinion on how effective they felt their quality evaluation was for specific contact centre activities, including inbound and outbound activity, and multichannel work. As might be expected from the activity that has been around the longest, inbound telephony was judged to have the most effective quality evaluation, although only 36% of respondents stated that it was very effective. Although evaluation of outbound calling was a little less positive, with 12% of respondents feeling that it was ineffective and 25% very effective, these figures show continuing improvement.

For back-office work evaluation, more respondents believed their QA to be very effective than ineffective, although 13% did not use quality evaluation for back office processes. Again, these figures are an improvement on past results. As workforce optimisation solutions continue to evolve, and processes get tracked throughout the enterprise – not just in the contact centre – the back office will have considerably more attention drawn to it.

Multichannel quality evaluation still has some way to go to reach the standard of telephony QA. While 17% of respondents stated that quality evaluation on emails was very effective, 14% believed it ineffective. For a channel that has been offered to customers for well over a decade by most businesses, this is not very impressive. The social media channel had similar results, although web chat QA increases its net positive outcome again this year.

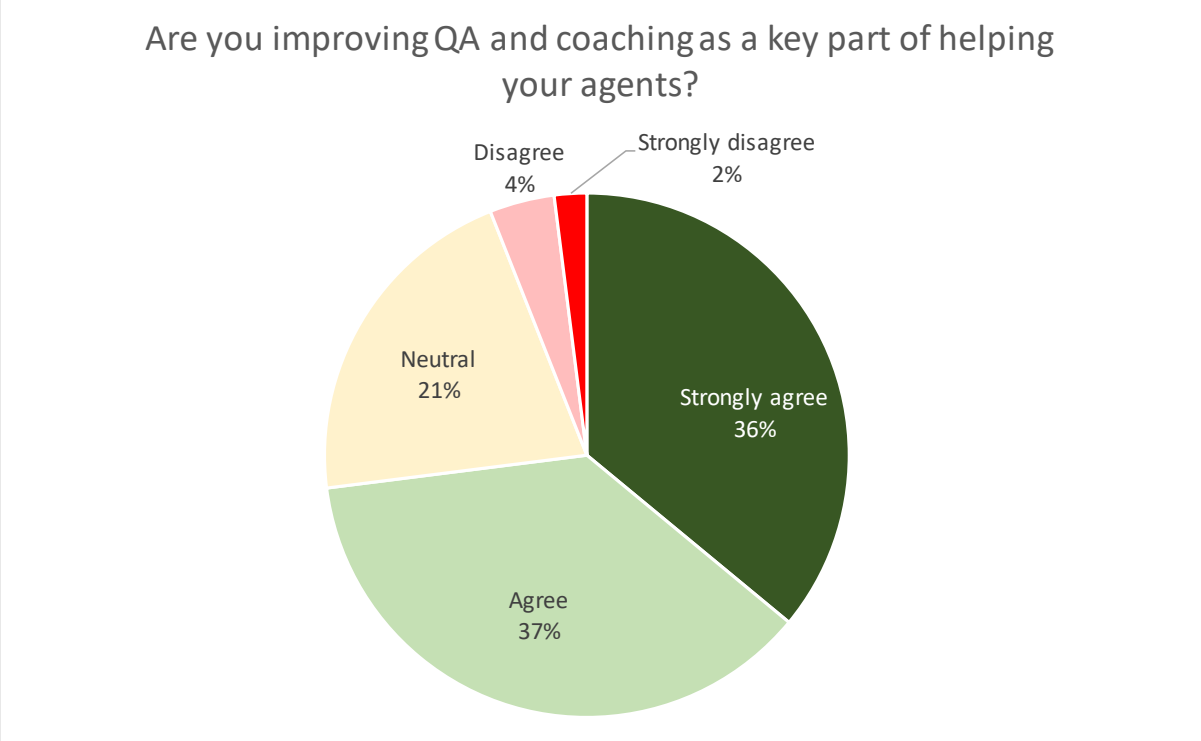
Figure 26: Effectiveness of quality assurance, by channel



One positive finding was that QA has not been overlooked or dismissed in importance.

73% of respondents stated that improved QA was seen as a key part of helping agents adjust to the new challenges that a customer-centric, omnichannel contact centre brings.

Figure 27: Are you improving QA and coaching as a key part of helping your agents?

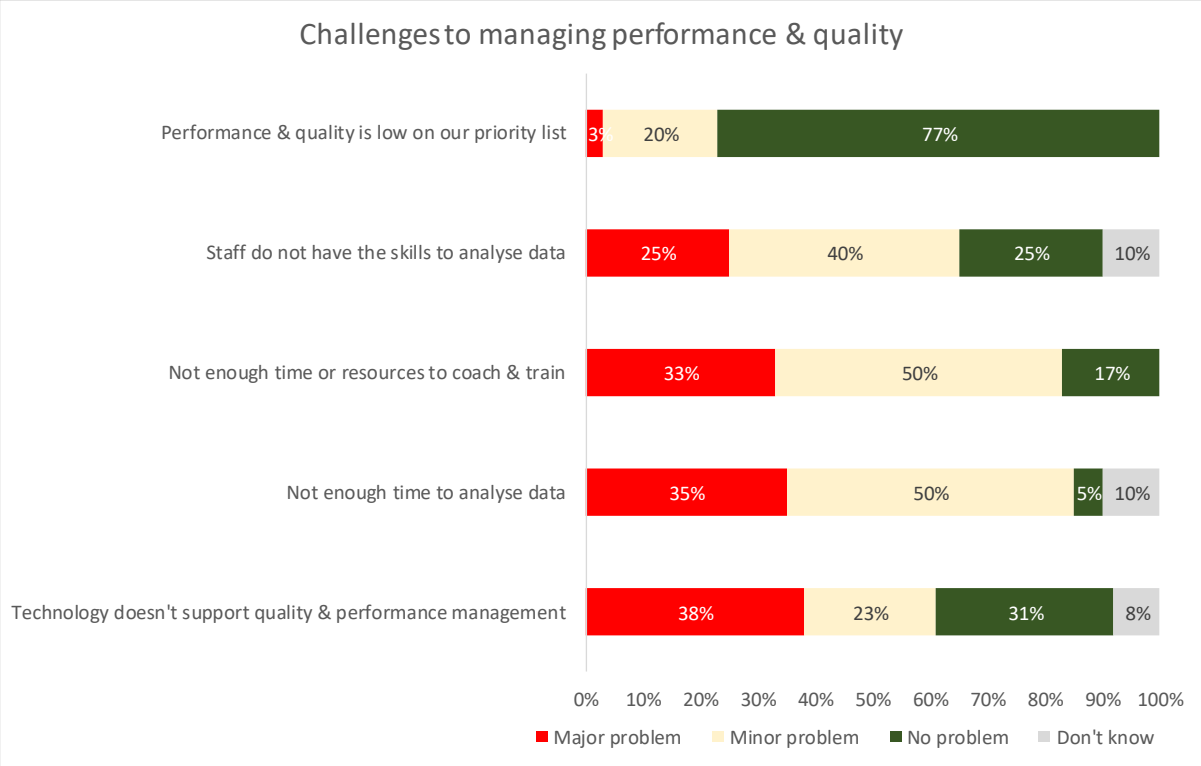


CHALLENGES TO EFFECTIVE QA

The greatest challenge to managing performance and quality is reported to be caused by not having sufficient time to analyse and use data, with 85% of respondents stating that this was a problem in some form, and 35% stating that it is a major problem for them: this is particularly the case in medium and large operations. 25% of respondents also stated that it was a major problem for them that staff using the QA solution did not have the necessary skills to get the most out of the solution.

This suggests a greater level of automated analysis and insight is required from quality and performance solutions, a hypothesis which may be seen to be further supported by noting that 38% of respondents strongly believe that that their current performance and quality technology simply does not support what they would like to do.

Figure 28: Challenges to managing performance & quality



The challenge of greatest concern to mid-sized operations is also related to training and coaching: a lack of personnel to deliver this, even assuming that the QA process has successfully identified training requirements at an individual level. Once again, increased automation could be the answer here: e-learning has grown greatly in importance and popularity over the years, and in many cases has taken over from the traditional lecture-based forms of mass coaching, without requiring the one-to-one dedicated time and effort which places even greater strain on resources.

It is positive to say that very few of our respondents believe that performance and quality is low on the priority list: just that their systems and personnel are having difficulty achieving their goals.

Operations driving their performance and quality forward often carry out many of the same types of improvement:

- Assessment: changing QA assessment frameworks (the scorecard), not just in the contact centre but in some cases across back office functions as well as for emails and other contact types
- Freedom: giving advisors the freedom to do what is needed to meet the customers' needs; stepping away from the standard process where this is not appropriate and taking steps to improve processes for the future
- Development: creating a cultural change supported by a new coaching and development framework – for example, how the evaluation process is used for performance management and enabling the advisors to make suggestions for improvement
- Learning: linking quality into a wider continuous improvement framework, gaining insight about the drivers for customer satisfaction and loyalty which can be shared throughout the organisation in a quality-focused 'Voice of the Customer' programme.

There are also some clear critical success factors:

- Organisations need to distinguish compliance from customer satisfaction. Adherence to process and risk management are vital in most industry sectors but they don't necessarily drive customer satisfaction, so there has to be a balance that doesn't impact the customer negatively
- Organisations have to put the customer first: learning from customer feedback mechanisms is essential to driving success
- There has to be a strategic use of quality – aligning QA to strategic goals is extremely important, if businesses are measuring something that doesn't impact upon their strategic aims, then it's a pointless exercise that takes focus away from what's really important.

The process of quality management - which includes quality assurance and quality monitoring (QA/QM) - tends to look at several specific steps in an iterative cycle:

1. interaction recording
2. monitoring and scoring interactions, whether through manual or automated analytical processes
3. identification of issues and subsequent feedback, coaching, training and e-learning
4. reporting at an integrated level
5. identification of areas for improvement, which are then acted upon and measured.

It is the responsibility of contact centre management to identify required agent behaviours and characteristics that are most closely aligned to the operational requirements of the contact centre, which should themselves be driven by the strategic requirements of the entire organisation. The time is long since passed when agents' performance was focused on call duration or number of calls handled per hour: in fairness, this focus upon the production line method of handling interactions may have been more to do with the lack of tools available to look at metrics that impacted the customer experience. Nowadays, there is no excuse for focusing on efficiency to the detriment of quality and customer satisfaction, nor are there now many examples of contact centre operations that continue to pursue this way of working.

Voice of the Customer (VoC) programmes help to identify the characteristics and outcomes of interactions that customers most value, rather than simply ensuring compliance. ContactBabel research has consistently found that first-contact resolution is most highly prized by the majority of customers, placing traditional contact centre metrics such as call duration or even average wait time into the background. Many contact centres are still measuring and rewarding agents based upon metrics and behaviours that are not aligned with the more modern customer-centric outlook. Quality scoring tools and processes must be flexible enough to encourage and reward the agent characteristics and skills that support the overall organisation's aims, rather than seeing the contact centre existing in a vacuum where productivity is all that counts. The scoring criteria should be re-evaluated a regular basis, and to make sure that scores are fair and consistent across the contact centre, there should be regular re-checks of calls already scored by other supervisors or QA staff.

As the focus of contact centre's success moves away from the individual interaction, and more into understanding the entire customer journey, no matter how long that takes, quality management should look to do the same. Many customer interactions require more than a single interaction or channel, and to understand quality from the customer's viewpoint, all of the interactions between the customer and business should be monitored and understood.

In operations which are using manual quality processes, listening to 100% of calls is clearly impossible. The majority of benefits from quality monitoring come from understanding the best and the worst calls, so as to propagate best practice and to retrain agents where needed. However, listening to a small random sample of calls is unlikely to show either the highs or the lows, so this is an opportunity missed for many operations. The use of speech analytics for quality purposes has taken off significantly, especially in larger operations. This allows the analysis of all calls, allowing supervisors and QA teams to focus upon the areas in most urgent need of attention, and to provide training and coaching to those agents in greatest need. The next chapter considers analytics in more depth.

Quality management outputs can be used by the HR division in order to track the success or otherwise of recruits, and feed this back into their recruitment practices so as to attract more candidates with the skills that prove successful in the contact centre environment. The training department can see where the greatest needs for improved training courses are: for example, if a large proportion of new agents receive low scores for similar attributes or characteristics, improvements to the induction course should be considered.

As quality-focused call recording is used by the vast majority of the industry, contact centres have a clear understanding of what works for them and what doesn't.

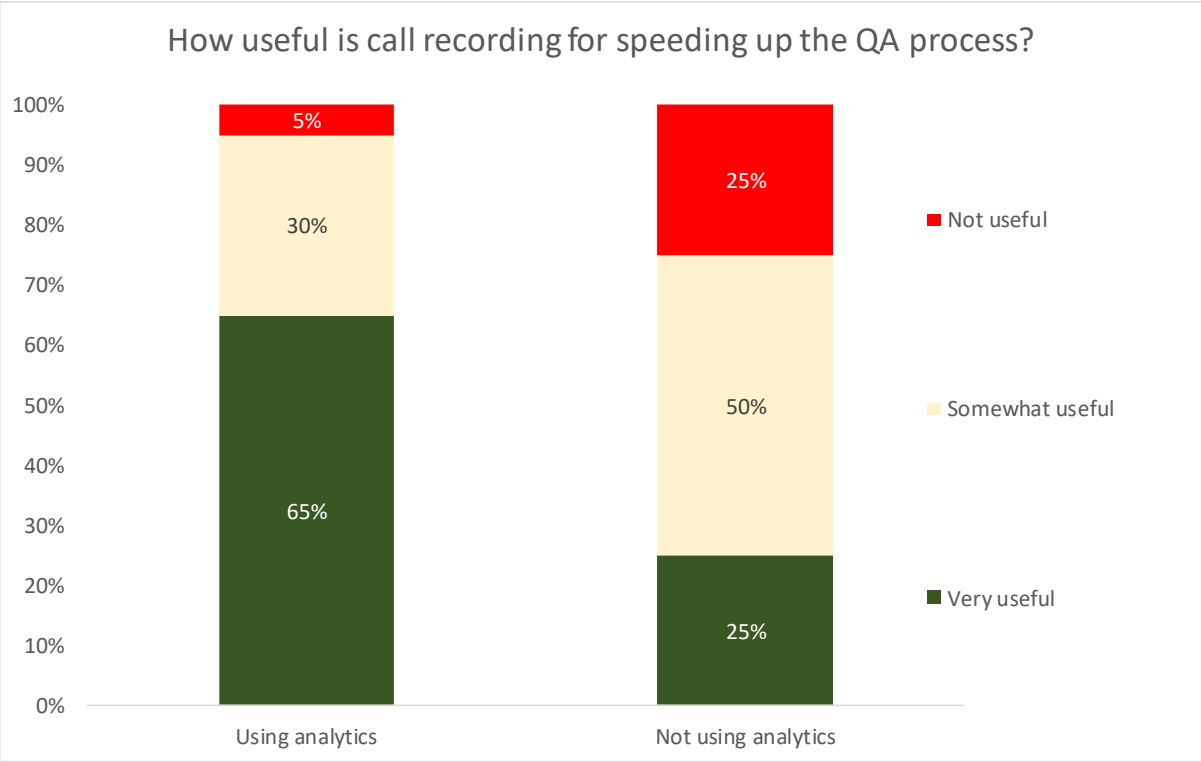
Respondents to recent ContactBabel surveys were asked which interaction recording functionality they would most like to add or improve. Of the seven choices provided, three stood out as the most popular. In order:

- providing better data management information systems and reporting
- adding and improving multichannel capabilities.
- improving the ease of use for supervisors and trainers.

The most frequently-stated addition to recording functionality is a demand for higher quality of data to feed into the management information and reporting process (and also into the supporting wider analytical processes). Many respondents also acknowledge that recording is moving out of the voice-only territory, and will need to be able to handle multichannel with similarly rich functionality.

It is likely that the major change to quality management in contact centres will come from the continued growth in the use of analytics, which allows organisations to take 100% of calls and interactions into account within the quality process. This easily and quickly identifies the outliers - both good and bad - as well as being able to provide analysis of all of an agent's calls so as to assess them more accurately. Currently, analytics is a useful tool for identifying where to look, but is not yet a substitute for the knowledge and experience of quality management professionals. The chart below shows the difference in usefulness of call recording for QA when it is used in conjunction with analytics.

Figure 29: How useful is call recording for speeding up the QA process?



Based on results from quality management professionals who state that they do not have sufficient time to do everything that they would like to, we would also expect future quality management tools to focus on further automating manual processes. Furthermore, significant proportions of survey respondents indicate that outside the traditional practice of ensuring the quality of inbound calls, QA is far less effective in handling digital channels. As the relative and absolute importance of non-voice interactions will continue to grow throughout the industry, this is a challenge to which solution providers must rise.

Customer interaction analytics solutions offer huge opportunities to gain business insight, improve operational efficiency and develop agent performance. In fact, the list of potential applications for this technology is so high that businesses could be forgiven for being confused about how to target and quantify the potential business gains.

Depending on the type of business, the issues being faced and even the type of technology being implemented, drivers, inhibitors and return on investment can differ greatly. While an analytics solution will be implemented to look at one particular pressing issue, such as automating the QA process, it will further develop over time into looking at business intelligence and process optimisation.

Interaction analytics can be used in many different ways to address various business issues. This is an advantage – it is hugely flexible – but it can also make its message to the market more complicated. However, depending upon how interaction analytics is used, it can assist in:

- agent improvement and quality assurance
- business process optimisation
- avoidance of litigation and fines
- customer satisfaction and experience improvements
- increases in revenue and profitability
- improvements in contact centre operational performance, and cost reduction.

Like most contact centre applications, analytics can be used to cut costs, but its promise goes far beyond this. No other contact centre technology provides the business with this level of potential insight that goes far beyond the boundaries of the contact centre, and can offer genuine and quantifiable ways in which sub-optimal business processes can be improved.

This is not to say that the science of customer contact analytics is at its zenith. Significant improvements are still being made to the accuracy and speed of the speech engines, the sophistication of analytical capabilities, the integration of various data inputs and the usability of reports. Some of the actionable findings from analytics may seem very simple - the recommendation to change a few words in a script, for example - but the overall potential impact upon the cost, revenue, agent capability and customer experience that is possible through analytics is perhaps unprecedented.

There are various elements to customer contact analytics solutions, including::

- Speech engine: a software program that recognises speech and converts it into data (either phonemes - the sounds that go to make up words - or as a text transcription, although there are solutions which directly recognise entire spoken phrases and categorise calls based upon the occurrence of those phrases)
- Indexing layer: a software layer that improves and indexes the output from the speech engine in order to make it searchable
- Query-and-search user interface: the desktop application where users interact with the analytics software, defining their requirements and carrying out searches on the indexed data

- Reporting applications: the presentation layer of analytics, often in graphical format
- Business applications: provided by vendors, these pre-defined modules look at specific issues such as adherence to script, debt collections etc., and provide suggestions on what to look for
- Text analytics: this solution combines the transcription of customer calls with other forms of text interactions such as email and web chat. It then uses natural language processing models along with statistical models to find patterns
- Desktop data analytics: a solution that gathers metadata from agent desktop and CRM applications – for example, account ID, product order history and order value – and tags them to call recordings or digital records, enabling deeper insight.

Like any technology, customer contact analytics has its own descriptive language, and some of the more common words or phrases someone researching this industry would find include:

- Categorisation: the activity of grouping conversations according to user-defined topics, such as complaints, billing issues, discussions of specific products, etc. Agent capability can be viewed by these categories, suggesting specific training needs as well as identifying any required changes to processes
- Discovery: requiring a transcription-based solution, analytics will dig out phrases and words that are showing up in noteworthy patterns, showing how they fit together and how they relate to each other, discovering trends automatically
- Metadata: non-audio data, which may be taken from CRM, ACD or agent desktop applications, which is tied to audio recordings or other interactions, improving the ability to correlate, discover patterns and pinpoint specific types of interaction
- Search: if the analytics user knows what they want to find, the search function can return a list of calls with these words or phrases within them. Speech-to-text / transcription applications return the sentence or whole interaction so that the user can see the context as to how this has been used, offering the opportunity to run text analytics on top of this as well
- Closed-loop analytics: where also known as “closed-loop marketing”, this activity involves tracking the entire customer lifecycle (i.e. connecting the initial contact all the way to the sale, and into ongoing support and post-sale activity), in order to draw actionable insights about how elements of the customer lifecycle impact upon sales success and marketing effectiveness. From a perspective more closely focused upon the customer experience, “closed-loop” refers to the continued, iterative use of automated alerts, follow-up of issues (e.g. through call-back) to support root cause analysis, and the identification and resolution of suboptimal processes.

Most contact centre solutions have a specific, easily-communicated reason for purchase, usually around cost savings. The most popular and widespread solutions, such as IVR, workforce management, CTI and outbound dialling, have all had a clear and quantifiable route to cost savings and improved efficiency.

Customer interaction analytics has a different appeal to contact centres, and can be used in many different ways to address various business issues. This is an advantage - it is hugely flexible - but it can also make its message to the market more complicated, and to the cynical, it can seem as though analytics is claiming to solve every problem that a contact centre could possibly have.

While many businesses initially implement customer interaction analytics to solve a specific problem, successful usage of analytics solutions often encourage a more strategic approach to the technology later on. While there are various ways to segment the uses of analytics, it may therefore be useful to divide them into one of two groups: those that are around solving a specific known problem, and those which are of a more strategic, long-term nature, although there is some crossover between the two groups.

Figure 30: Uses of customer contact analytics

Problem-solving/issue resolution	Strategic/long-term
Compliance with regulations	Gathering competitive intelligence
Verbal contracts/repudiation	Feedback on campaign effectiveness and pricing information
Redaction of card information for PCI purposes	Understanding the customer journey
Adherence to script	Understanding why customers are calling
Identifying agent training requirements	Improving contact centre performance metrics
Reducing the cost of QA	Optimising multichannel/inter-department communication
Identifying and handling problem calls	Deepening the power and functionality of the workforce optimisation suite
Estimating customer satisfaction and first call resolution rates	Identification and dissemination of best practice
Predictive routing	Identification and handling of dissatisfied customers, and those at high risk of churn
Real-time monitoring and in-call feedback	Maximising profitability by managing customer incentives
One-off discovery/analysis via cloud	'Tell-me-why'/root cause analysis

USE OF INTERACTION ANALYTICS

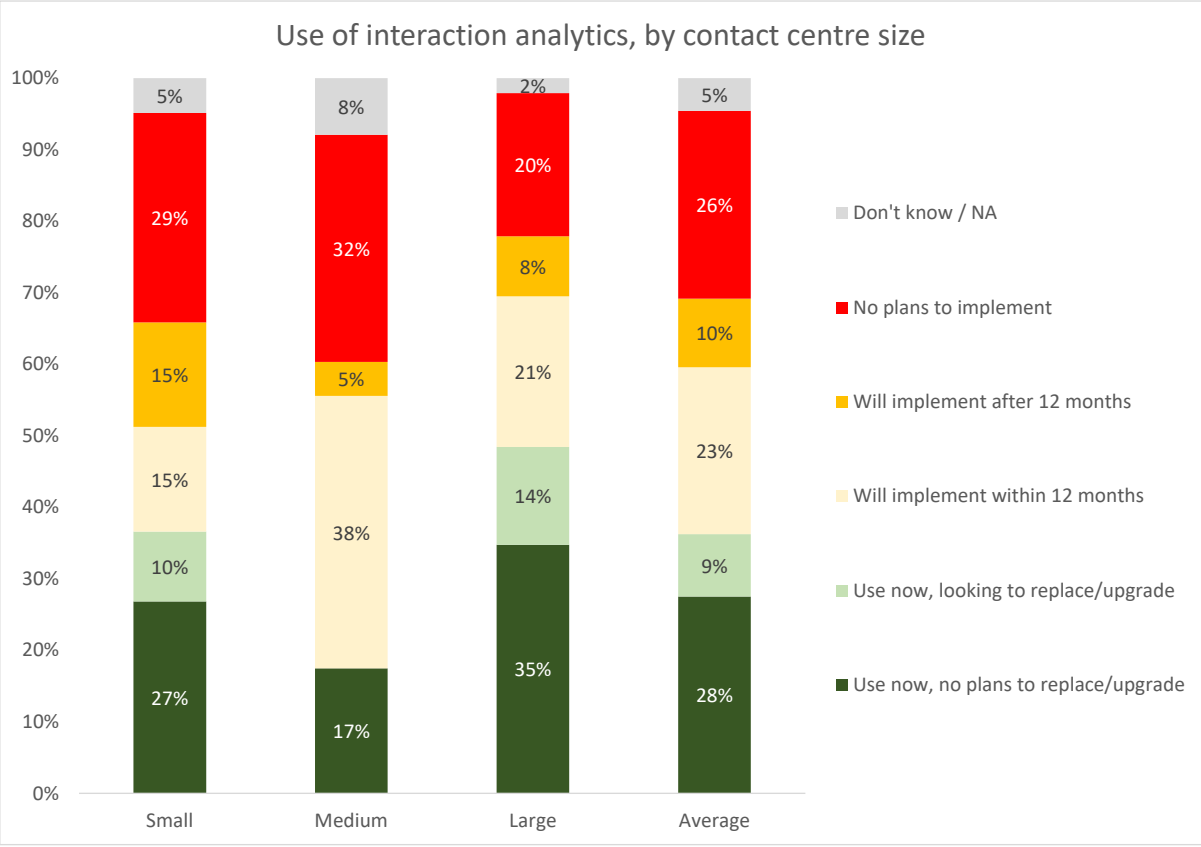
Compared to recording-based functionality which has penetration rates of over 90% in most sectors, interaction analytics (especially of the omnichannel variety) is still to reach its full maturity, although the general long-term increase in penetration rates and the enthusiasm shown by contact centres to learn more about the subject is very positive.

The positive correlation between size and penetration rate is less noticeable than usual for interaction analytics, which in the past has required significant investments. As importantly, having huge volumes of recorded interactions and a large customer base to learn from means that business patterns can be identified more accurately, and any improvements reap correspondingly higher rewards, but many respondents from smaller operations also seem to be using analytics, often for QA.

Readers should note that there seems to be an statistical anomaly in the mid-size sector, where implementation is far lower than usual, and short-term plans for analytics are very high: it is very unlikely that this particular data point reflects the industry in reality, so care should be taken here.

Large operations are also more likely to have the budget and resource to use analytics to its potential, although there is also a significant level of long-term interest in implementing analytics in the small and especially the medium contact centre sectors.

Figure 31: Use of interaction analytics, by contact centre size

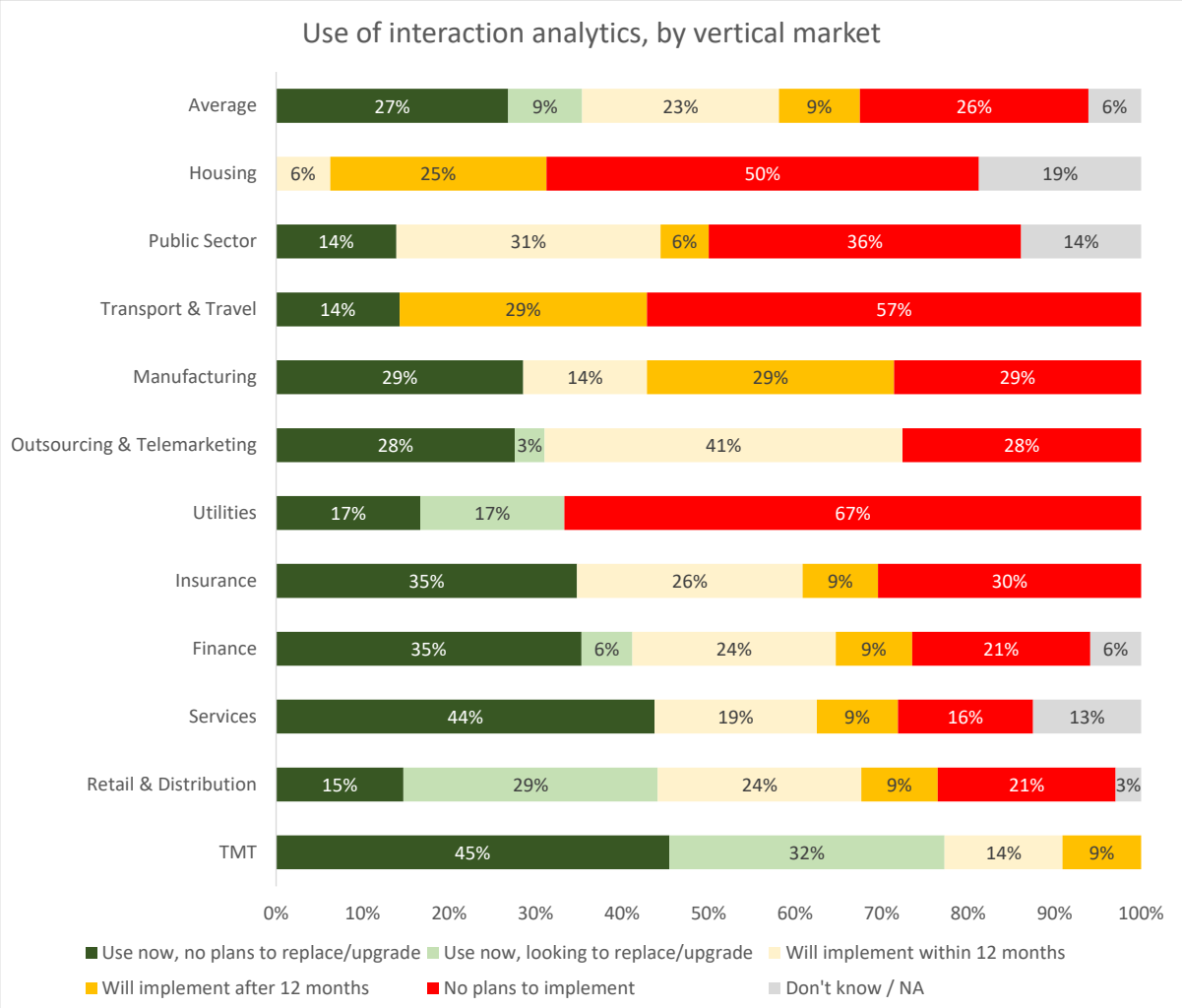


Against a virtual ubiquity of call recording, the penetration rates of interaction analytics are lower, although are generally increasing: 36% of this year's respondents use it now (compared to 29% last year), with 32% stating that they have plans for implementation at some point.

Respondents from the TMT, retail, services, finance and insurance sectors report the greatest use of analytics this year, with those in housing, transport & travel and the public sector least likely to be doing so once again.

It is probable that the use of interaction analytics is driven more by contact centre size in call volumes than through the requirements of specific types of business: housing, transport & travel and public sector contact centres are usually smaller than the industry average, whereas those in finance, outsourcing, utilities and TMT are amongst the largest.

Figure 32: Use of interaction analytics, by vertical market



As we might expect, the use of historical post-call speech analytics – the bulk analysis of call recordings – is the most widely used type of interaction analytics functionality. 49% of analytics users have also implemented functionality which can analyse the agent desktop activity which is linked to these calls.

Real-time (or near real-time, i.e. within the call) speech analytics is used by 31% of interaction analytics users, with 32% stating that they use multichannel analytics. The rise in non-voice interaction volumes has meant that there is an increased requirement to understand and analyse the customer journey.

Figure 33: Use of various interaction analytics functionality (from only those respondents who use analytics)

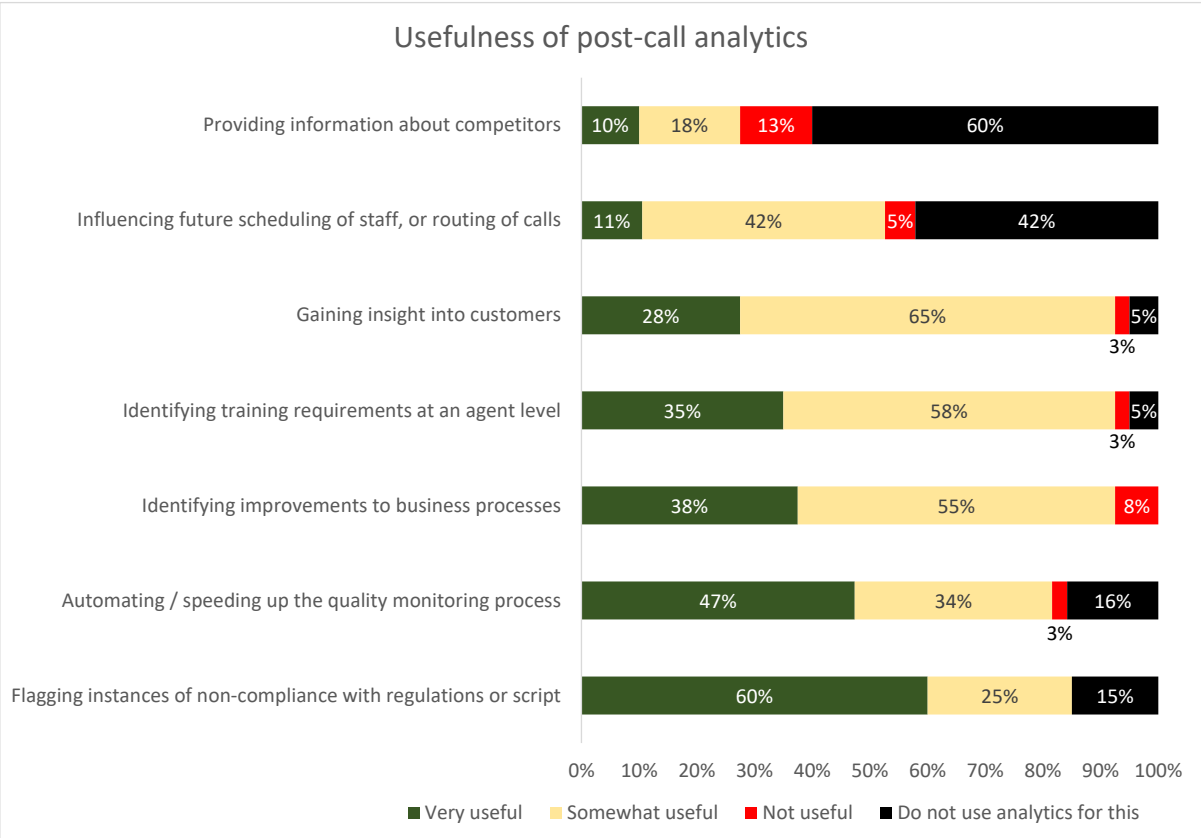
Interaction analytics type	% respondents using this functionality
Historical post-call speech analytics	65%
Desktop analytics	49%
Customer journey analytics	41%
Multichannel analytics (i.e. email, web chat, social media, etc.)	32%
Real-time speech analytics	31%
Back office analytics	21%

Initial implementations of speech analytics solutions were focused upon analysing large numbers of recorded calls, often a long time after the actual event. Many of the original users purchased these solutions to assist them with compliance and as part of a larger quality assurance system, and these benefits have not decreased over time. Being able to analyse 100% of calls automatically can provide high quality information for the QA process, giving a fair and accurate reflection of the agent's performance.

While there is real and growing interest in real-time analytics, post-call speech analytics is still vital for business intelligence, performance improvement, QA and compliance. As the majority of contact centres have call recording in place, the raw material is already available. In fact, the amount of recorded voice data available to most businesses can be overwhelming, and post-call speech analytics that analyse 100% of recorded calls is proving hugely valuable.

It should be noted that some recording environments are still mono rather than stereo, meaning that there is no distinction between the caller and the agent except through context. This is a clear disadvantage for effective post-call speech analytics, as in order to learn from customer feedback and experience, clearly a business needs to know whether it is the customer talking about products, processes or competitors, rather than the agent. More recording systems are moving to stereo, and this will further improve the accuracy and potential benefit of speech analytics, and some vendors have restructured their solution to offer software-based speaker separation for analytics.

Figure 34: Usefulness of post-call analytics



The use of analytics for compliance is seen by all respondents using analytics for this purpose as either very or somewhat useful.

Using analytics to automate and accelerate the quality monitoring process is one of the most important outputs for interaction analytics, with 96% respondents using analytics for this purpose stating that it is either very or somewhat useful for this purpose.

Analytics users also state that it is very useful identifying improvements to business processes. Optimising processes and gaining actionable insight that can be applied to the customer journey will become one of the most important uses of analytics, as users' sophistication increases and solutions' capabilities are explored more fully.

There is little enthusiasm for the use of analytics to provide information about competitors. This is a very underused area of analytical usage at the moment, and one which we would again expect to see growing significantly in future years.

Historically, few respondents found that analytics particularly helps influence scheduling or routing strategies, but as more tightly integrated WFO suites are being used, many respondents are starting to see some benefit from this.

The chart above does not provide an exhaustive list of the purposes of interaction analytics: specific business requirements and original considerations about customer contact can provide numerous ways in which greater insight can be extracted from the mass of interactions stored, for example, understanding fully why customers have called, rather than relying on agent call disposition codes.

Some solution providers suggest that 'real-time analytics' should perhaps be more accurately referred to as 'real-time monitoring and action'. Analysis ("a detailed examination of the elements or structure of something[3]"), refers to the discovery and understanding of patterns in data, and is currently something that by definition only happens post-call when all data are fully present. Real-time monitoring on the other hand, looks for and recognises predefined words, phrases and sometimes context, within a handful of seconds, giving the business the opportunity to act.

AI can be trained to understand intent and recognise patterns through immersion in vast quantities of historical data, so that when a call is taking place it can draw upon this knowledge and provide advice or action that has proven successful previously, moving towards the actual provision of real-time analytics.

AI assists in real-time speech analytics through applying the results of machine learning that have been carried out on large quantities of previously recorded conversations, providing:

- agents with the understanding of where their conversational behaviour is falling outside of acceptable and previously successful norms (such as speaking to quickly or slowly, or in a monotonous fashion)
- an assessment of the meaning of non-verbal cues such as intonation, stress patterns, pauses, fluctuations in volume, pitch, timing and tone in order to support sentiment analysis
- understanding the actions and information that have been seen to provide successful outcomes in previous similar interactions, and relaying this to the agent within the call.

For some businesses, real-time is an important and growing part of the armoury that they have to improve their efficiency and effectiveness. There is potentially a great deal of benefit to be gained from understanding automatically what is happening on the call, and in being able to act while improvements are still possible, rather than being made aware some time after the call of what has happened.

Real-time analytics can be used in many ways:

- monitoring calls for key words and phrases, which can either be acted upon within the conversation, or passed to another department (e.g. Marketing, if the customer indicates something relevant to other products or services sold by the company)
- alerting the agent or supervisor if pre-specified words or phrases occur
- offering guidance to the agent on the next best action for them to take, bringing in CRM data and knowledge bases to suggest answers to the question being asked, or advice on whether to change the tone or speed of the conversation
- escalating calls to a supervisor as appropriate
- detecting negative sentiment through instances of talk-over, negative language, obscenities, increased speaking volume etc., that can be escalated to a supervisor

[3] http://www.oxforddictionaries.com/definition/english/analysis

- triggering back-office processes and opening agent desktop screens depending on call events. For example, the statement of a product name or serial number within the conversation can open an agent assistant screen that is relevant to that product
- making sure that all required words and phrases have been used, e.g. in the case of compliance or forming a phone-based contract
- suggesting cross-selling or upselling opportunities.

Many solution providers have worked hard to bring to market new or improved solutions to assist with real-time monitoring and alerts, and recognition of key words, phrases, instances of talk-over, emotion and sentiment detection, pitch, tone, speed and audibility of language and many other important variables can be presented on the agent desktop within the call, triggering business-driven alerts and processes if required.

The speed of real-time analytics is crucial to its success: long delays can mean missed, inappropriate or sub-optimal sales opportunities being presented; cancellation alerts can show up too late; compliance violations over parts of the script missed-out may occur as the call has already ended. However, it is important not to get carried away with real-time, as there is a danger that businesses can get too enthusiastic and set alert thresholds far too low. This can result in agents being constantly bombarded with cross-selling and upselling offers and/or warnings about customer sentiment or their own communication style, so that it becomes a distraction rather than a help.

The effectiveness of real-time analytics may be boosted by post-call analytics taking place as well. For example, by assessing the outcomes of calls where specific cross-selling and upselling approaches were identified and presented to agents in real time, analysis can show the most successful approaches including the use of specific language, customer type, the order of presented offers and many other variables (including metadata from agent desktop applications) in order to fine-tune the approach in the future. Additionally, getting calls right first-time obviously impacts positively upon first-call resolution rates, and through picking up phrases such as "speak to your supervisor", can escalate calls automatically or flag them for further QA.

Real-time analysis offers a big step up from the traditional, manual call monitoring process, and should be particularly useful for compliance, debt collection, and for forming legally-binding contracts on the phone where specific terms and phrases must be used and any deviation or absence can be flagged to the agent's screen within the call.

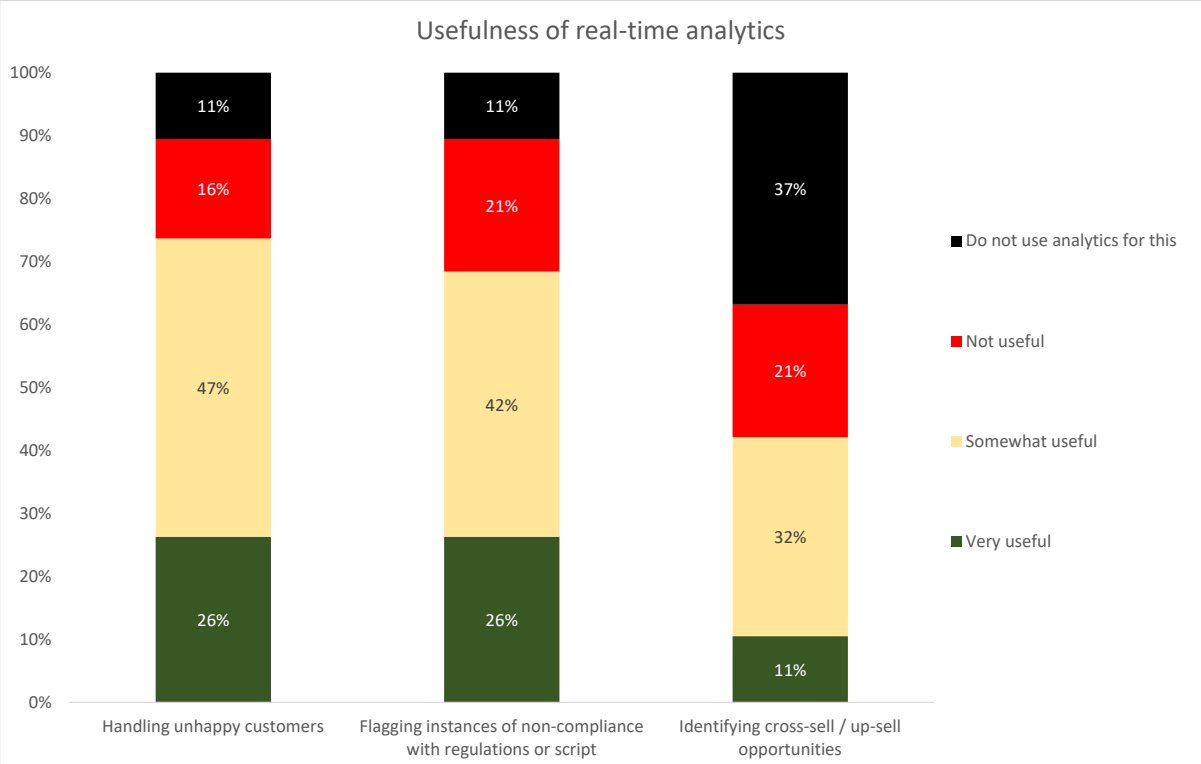
Finance, telecoms and utilities companies – and indeed, any business where telephone-based contracts are important – are particularly interested in this.

Respondents using real-time analytics report that it is quite valuable for handling unhappy customers and to some extent, identifying non-compliance.

The solution's ability to identify cross-selling and upselling opportunities has usually been less highly rated.

Compared to post-call analytics, users of real-time analytics seem to be having more trouble in extracting value from the solution.

Figure 35: Usefulness of real-time analytics



As with speech analytics, text analytics can be applied historically or in real time. It can be applied to interactions between customers and agents (as in the case of email, web chat or social media contact), or by looking at customer feedback, whether on the business's own website or on third-party sites. Unlike speech analytics, text analytics does not require a speech recognition engine to identify the words being used, but the general principles and opportunities are similar.

Historical text analysis is useful for business intelligence, whether about how the company and its products are perceived, or the effectiveness of the customer contact operation. It is important to note that many uses of historical text analysis work best when they are used shortly after the comment is made, rather than weeks or months afterward: an issue that is commented upon by many customers may need to be acted upon rapidly. For example, confusion about a marketing message, complaints about phone queues, or a case of system failure which prevents customers from buying on a website need to be identified and handled as quickly as possible. For longer-term issues, such as gathering suggestions on new functionality for a product release, such urgency is less important.

Most large companies will have formal customer satisfaction and feedback programmes, and also will monitor third-parties such as TripAdvisor or Yelp, which provide structured data in the form of scores, and efforts should be made to identify the most important data sources. Text analytics helps to dig deeper into the actual unstructured comments left by customers, which are otherwise very difficult and time-consuming to categorise and act upon, especially where there are many thousands of comments. Industry-specific vocabularies can be used to identify and understand more of the relevant comments, and place them into the correct context. Solutions should also be more sophisticated than simply to identify key words or phrases: the sentiment of the whole comment should be considered (for example, "loud music" in a shop may be exciting to one customer, but irritating to another). Many comments are mixed-sentiment, and may also mix a 5-star review with some more critical comments, which the analytics solution will have to take into account: the comments are where the real value is found, with both positive and negative insights available to be understood.

Perhaps the most obvious potential contact centre use of AI-enabled text analytics is in handling digital enquiries, where web chats generally take far longer than phone calls (due to agent multitasking, and typing time) and some email response rates can still be measured in days. As the cost of web chat is broadly similar to other channels such as email, voice and social media, there is considerable room for increasing efficiencies and lowering costs. Real-time text analytics can be used to assist agents when answering emails or handling web chats, or to identify customers at risk based on feedback comments they have left, initiating an action aimed at alleviating their problem immediately.

PREDICTIVE ANALYTICS

Predictive analytics is a branch of analysis that looks at the nature and characteristics of past interactions, either with a specific customer or more widely, in order to identify indicators about the nature of a current interaction so as to make recommendations in real-time about how to handle the customer.

For example, a business can retrospectively analyse interactions in order to identify where customers have defected from the company or not renewed their contract. Typical indicators may include use of the words “unhappy” or “dissatisfied“; customers may have a larger-than-usual volume of calls into the contact centre; use multiple channels in a very short space of time (if they grow impatient with one channel, customers may use another); and mention competitors’ names. After analysing this, and applying it to the customer base, a “propensity to defect” score may be placed against each customer, identifying those customers most at risk. Specific routing and scripting strategies may be put in place so that when the customer next calls, the chances of a high-quality customer experience using a top agent are greater and effective retention strategies are applied.

A sub-branch of predictive analytics, predictive behavioural routing uses insights gathered from historical calls and the analysis of customer communication types in order to choose the agent whose skills and characteristics are most likely to achieve a positive response from the next caller in the queue.

AI can be applied across the entire customer journey, including sales, marketing and service, helping organisations understand customer behaviour, intent and anticipating their next action. For example, an AI solution may find a pattern amongst previous customers that they are likely to search for specific information at a particular point in their presales journey, and proactively provide this information (or an incentive) to the customer before they have even asked for it. AI can also help with customer onboarding through predicting which customers are likely to require specific assistance.

Machine learning will allow AI to go beyond simply what they have been programmed to do, seeking out new opportunities and delivering service beyond what has simply been asked of them. Through understanding multiple historical customer journeys, AIs will be able to predict the next most-likely action of a customer in a particular situation, and proactively engage with them so as to avoid an unnecessary inbound interaction, providing a higher level of customer experience and reducing cost to serve.

SCREEN/DESKTOP ANALYTICS

Screen analytics (also known as desktop analytics) allow businesses to record an agent's desktop in order to assist with quality assessments at an agent level, and also to identify areas within systems and processes that cause delays within customer interactions.

Additionally, management can search for examples where agents skipped compulsory screens or ignored guidelines around how best to close the sale, in order to maximise future compliance with regulation and company procedure.

Average call duration is a metric that has been measured in contact centres since their very first inception. However, businesses have had to rely upon anecdotal information in order to decide whether excessively lengthy calls are a factor of agent inexperience or inability to answer the customer's question, or if there is a particular step within the procedure when delays are occurring in an otherwise competently-handled call (for example, from a lack of training about a particular area, or a badly designed screen layout).

Desktop analytics can provide information about exactly how long each step with an interaction takes, providing management with the insight as to which processes could potentially be automated, and how much time (and thus, cost) would be saved. Businesses would also gain insight into how agents actually research issues that they cannot immediately answer (for example, do they research the company website, a knowledge base or the wider Internet - and if so, which method is the most successful?).

BACK-OFFICE ANALYTICS

The back office is the part of the organisation that processes activities supporting the rest of the business, such as order processing and fulfilment, payment and billing, and account creation and maintenance. Much of what the back office does is driven by interactions in the contact centre which trigger the relevant processes, which the back office then have to deliver upon. Was found elsewhere in this report that around 4 in 5 complaints are actually about failures occurring within back-office processes rather than within the contact centre itself.

WFO solution providers are developing applications that can be used in the back offices and branches of large organisations as well as their contact centres. Far more employees work in these spaces than in the contact centre, although many back offices lack the same focus upon efficiency and the tools to improve it. With the increased focus on the entire customer journey, back office processes are starting to fall within the remit of customer experience professionals, who have the remit to alter and optimise any area of the organisation that impact upon the customer experience, no longer being restricted to the physical environment of the contact centre. The industry is likely to see back office and contact centre workforce management systems being closely integrated, or even working as a single centralised function that can track and analyse the effect of different departments and processes on others throughout the customer journey.

The back office has somewhat different requirements to the contact centre, and will require different functionality, including:

- supporting different metrics and deadlines to those of the contact centre
- presence management, needed where there are multiple steps within a process that must be carried out by different individuals
- deferred workload and backlog management
- workload allocation based on large batches of work arriving at once, rather than be distributed throughout the day such as is found within the contact centre
- forecasts built on contact centre events and volumes
- different service levels and resource requirement calculations: many back office processes take considerably longer than a contact centre interaction
- adherence to schedule without data from an ACD and capacity modelling (which includes employee skills and resource availability)
- the identification of bottleneck processes.

The use of desktop analytics and screen recording in the back office means that even non-customer-facing employees to have their performance measured and optimised in the same way as their front office colleagues.

In the long-term, the use of customer contact analytics will improve the customer journey as many business process improvements will be enabled by the complete understanding of what is happening each step of the way, whether within the customer interaction cycle, or in one of the other processes occurring elsewhere within the organisation.

Businesses that understand the reasons that customers are contacting them are able to staff and train agents appropriately, provide feedback on company products and services to relevant departments, and identify suitable self-service opportunities. They are also able to understand the various levels of customer effort required at each stage within the interaction process.

While it is impossible to quantify ROI upfront, there is a strong argument that "you don't know what you don't know". An individual agent may not notice that a new trend is happening until they receive several calls about it, but even if they are proactive, they may not receive that type of call again for several hours or even days. Analytics and closed-loop feedback identifies trends across the entire operation as they happen, instead of waiting on agents to realise something out of the ordinary is happening.

However, there is no guarantee what will be found, and few businesses will initially implement analytics in the hope that optimising the customer journey and hopefully gaining insight will save costs and increase revenue. Many solution providers comment that early adopters of analytics – who often started with compliance and agent quality assurance – are now looking at how they understand sales effectiveness, marketing campaigns and process improvements. Longer term, understanding and optimising each part of the customer journey will be a key use of analytics.

Customer journey analytics aims to gather together the various data sources, channels, triggered processes and customer touchpoints involved in the customer interaction in order to optimise the overall customer journey. By fully understanding the customer experience, businesses can identify and rectify inefficiencies, helping to break down the boundaries and siloes between channels and between the front office and the back office.

Customer journey analytics goes beyond the measurement of individual interactions and touchpoints. Sophisticated analytics solutions use data inputs from multiple sources, both structured and unstructured, in association with journey maps, which are produced by employees in multiple roles within the organisation who document how various processes currently work and how they could be optimised.

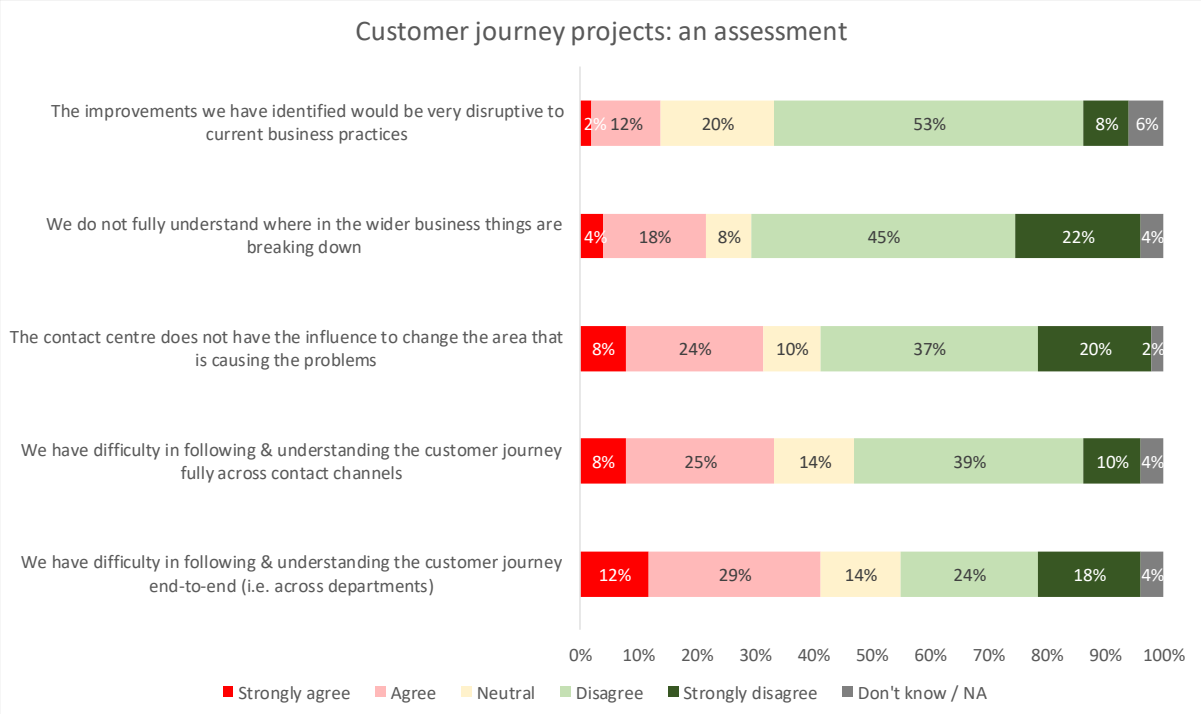
This is particularly the case in larger businesses which are increasingly looking at the effectiveness of back office processes that can impact upon whether the customer has to contact the business multiple times.

Customer effort and engagement is very dependent upon the effectiveness with which channels work together, as well as the level of first-contact resolution. Proactively engaging the customer at the appropriate time within the customer journey has an opportunity to reduce the effort required for the customer to fulfil their interaction completely. As part of a wider omnichannel engagement, businesses must seek to understand how and why customers prefer to engage with them, optimising the flow of information throughout any connected processes and channels so that the organisation becomes easy to do business with.

Respondents using a customer journey project reported generally positive outcomes. 57% either disagreed or strongly disagreed that the contact centre does not have the influence to change the area that is causing the problems.

Although only 22% of respondents state that they do not fully understand where in the wider business things are breaking down, 41% find that they have difficulty in following and understanding the customer journey across departments, with 33% struggling to follow it across channels.

Figure 36: Customer journey projects: an assessment



There is an increasing requirement for multichannel analytics, including email, text chat, IVR and web browsing sessions, to get the full picture of the customer's real journey in a single interaction and identify and improve any sub-optimal channels. Improving self-service optimisation is often a quick win that can provide immediate economic benefit to businesses: in the UK, a mean average of 10% of calls that go into an IVR system are 'zeroed-out' - rejected by the customer in favour of an operator - and in the US, 17% fail the self-service test.

Businesses using customer interaction analytics to review these failed self-service sessions and any customer comments made about them can categorise them into groups in order to improve the processes at a macro-level. Common findings from the analysis of these calls is that the IVR system was poorly worded, menu choices were not intuitive, or did not match current service choices. Other failures occur through mistakes in IVR routing, and there may also be problems with a lack of customer awareness that various activities can be carried out by self-service.

Integrating desktop data analytics into speech analytics allows businesses to tag valuable data automatically - such as account ID, product name and order value - from CRM, helpdesk and other servicing applications to recorded interactions. This additional desktop data can be used to enhance automated classification, which allows more targeted and efficient analysis centred on key business issues, such as customer churn, differences in call handling patterns between employees, frequency of holds/transfers associated with order cancellations and upselling and cross-selling success rates.

The use of desktop data analytics also allows the business to see what the agent is doing on the desktop (for example, are they spending too much time in particular applications, are they navigating the screens in the most efficient way, etc.), and for them to understand how much time is being spent in each section of the call.

The next step is to get rid of the silos between channels, allowing the customer to be identified at the beginning of their 'journey', and for the business to be able to analyse the efficiency and effectiveness at each stage, whether mobile app, website, self-service application or live call. The end goal is for businesses to understand where customers make their choice, where they drop out, and where the profit is within the multiple processes along the customer journey.

Many solution providers refer to 'the customer journey' as one of the major places where analytics will surely go in the longer term, once businesses have used analytics to handle shorter-term, more operational issues. Longer-term, future customer contact is likely to become along polarised lines: for everyday, mundane tasks, the customer will choose the website or mobile app for self-service, leaving the contact centre to deal with those interactions which are complex or emotive for the customer (as well as there being demographics for whom the contact centre will continue to be primary). With the website becoming the first port-of-call for many customers, the analysis and understanding of the success (or otherwise) of pre-call web activity is a valuable source of knowledge about how effective the main portal to the business is being, as well as being able to give businesses greater insight into why people are calling.

Customer surveys have been an integral part of most businesses since time immemorial. Recently, there has been a great increase in the number of organisations implementing "Voice of the Customer" (VoC) programs, increasingly based around large-scale analysis of call recordings, as well as using formal surveys of customer experience to offer the customer a chance to feed-back, and the business to learn.

VoC programmes strive to capture customer feedback across multiple channels of engagement (IVR, live agent, email, etc.), while enabling closed-loop strategies to support customer retention, employee development and omnichannel experience optimisation. VoC programs typically trigger alerts with role-based delivery via the use of text and speech analytics, offer statistical modelling services to pinpoint root causes, and digitally track progress and results with case management.

The definition of what a VoC program includes runs the gamut across vendors from simply sending alerts based on key words derived from a survey, to more complete solutions that directly contribute to contact centre optimisation and overall CX improvement. Examples of more complete VoC programme features include:

Closed Loop

- Automated Alerts: as surveys are completed, real-time alerting capabilities will immediately identify and inform teams of customers in need, while assigning ownership for follow-up
- Callback Manager: an interactive system that enables callback teams to conduct detailed case reviews and disposition follow-up activities for eventual root-cause analysis
- Case Management: root-cause exploration tools enable back-end analysis of the customer's initial concern, enabling operational support teams to proactively uncover, track and mitigate systemic problems.

Coaching

- In-The-Moment Coaching Tools: as surveys are completed, real-time alerting capabilities will identify when a frontline employee is in need of immediate coaching intervention
- Performance Ranker: the performance ranker helps managers develop weekly and monthly coaching plans by outlining strengths and weaknesses for each employee, while identifying opportunities for peer-based knowledge sharing
- Behaviour Playbooks: playbooks with scorecards help managers coach to specific behaviours by outlining how to best demonstrate each behaviour, showcasing best-practice examples and suggesting sample role-plays.

Reporting

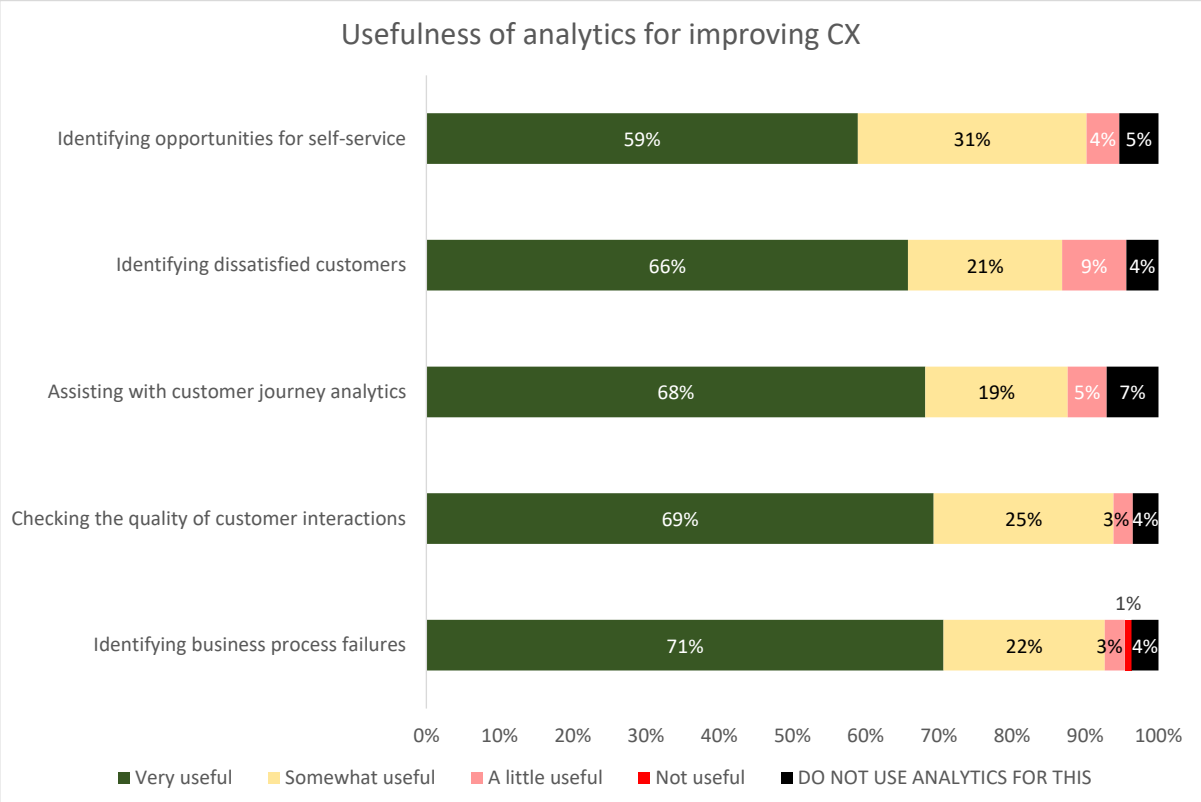
- Real-time Insight – text analytics zeros in on key issues from multichannel survey feedback
- Role-based Reporting – define type and frequency of report delivery based on responsibility, title, geography and more
- Call Recording – drill-down detail can include IVR & live call recording for additional insight.

VoC programs are frequently ongoing engagements with result measured by internal CSAT scores, NPS benchmarks and efficiency improvements.

Alongside direct customer surveys, VoC analytics solutions can also gather insight from recorded digital and voice channels. Aggregation of customer surveys and analytical results can identify the root cause of any issues identified, and provide actionable insight for changing processes and/or agent handling techniques. VoC should be seen as a continuous process, rather than a one-off project, and ongoing analysis allows the use of a closed-loop system, whereby identified issues can be actioned and continuously checked to make sure that the problem does not reoccur.

Organisations using analytics were asked how useful the solution was for improving various aspects of the customer experience, either directly, or through improving internal processes which then had a impact upon the overall customer experience. The overall conclusions were surprisingly consistent: in most analytics use cases, well over half of respondents stated that it was 'very useful' with a most of the remainder saying that it was 'somewhat useful'.

Figure 37: Usefulness of analytics for improving customer experience



Contact centre professionals were asked for their views on what would hold them back from implementing interaction analytics. By far the most important issue raised was how to build a strong enough return-on-investment (ROI) case to get the required corporate buy-in.

Return on investment for customer interaction analytics can come from numerous sources, depending upon how the solution is used. Generally, it will come from the avoidance of a specific cost, (including the reduction of a risk in the case of compliance), or the increase in revenue.

The return on investment of customer interaction analytics used for compliance can at first glance be difficult to prove, but it is the avoidance or reduction in litigation and regulatory fines which can be placed against the cost of the solution. Large banks will have funds put away running into the tens of millions of pounds each year against the possibility of paying out, and any significant reduction in fines would pay for a speech analytics solution very quickly. In the UK, the banking industry had put aside several billion pounds to pay compensation for the mis-selling of PPI (payment protection insurance), and having the ability to prove that no regulations had been broken would have been of great use.

Most vendors have tools which can be used to estimate return on investment, often based on what they have seen in similar operations elsewhere, and they are keen to share them with potential customers. Vendors' own estimates of the time taken for the solution to pay for itself vary between 6 and 18 months.

Variables to be considered for ROI measurements include:

Cost reduction:

- Reduction in headcount from automation of call monitoring and compliance checking
- Understanding and minimising the parts of the call which do not add value
- Avoidance of fines and damages for non-compliance
- Reduction in cost of unnecessary callbacks after improving first-call resolution rates through root cause analysis
- Avoidance of live calls that can be handled by better IVR or website self-service
- Reduced cost of QA and QM
- Understand customer intent. For example, an insurance company received a lot of calls after customers had bought policies from their website. Analysis was able to show that customers were ringing for reassurance that the policy had been started, meaning the company could immediately send an email to new customers with their policy details on it, avoiding the majority of these calls
- Lower cost per call through shortened handle times and fewer transfers
- Lower new staff attrition rates and recruitment costs through early identification of specific training requirements
- Identifying non-optimised business processes (e.g. a confusing website or a high number of callers ringing about delivery) and fix these, avoiding calls and improving revenue.

Revenue increase:

- Increase in sales conversion rates and values based on dissemination of best practice across agents, monitored by script compliance
- Increase in promise-to-pay ratios (debt collection)
- Optimised marketing messages through instant customer evaluation
- Reduced customer churn through dynamic screen-pop and real-time analytics
- Quicker response to new competitor and pricing information
- Increase sales revenue by automating manual, non-revenue generating activity by identifying and improving self-service options
- Route specific customer types to the best available agents to optimise empathy by matching communication styles
- Some businesses assign a revenue value to an improvement in customer satisfaction ratings or Net Promoter Score®
- Understand and correlate call outcomes, using metadata and call analysis to see what works and what doesn't.

Also, the improved quality of agents, better complaints handling and improved business processes outside the contact centre should be considered.

It is important for the CFO to see the customer data and brand loyalty as assets, and to consider the effect that complaints and general dissatisfaction have upon those assets. Analytics helps businesses to understand why these assets (i.e. the customer base) may be shrinking over time, and to put actions in place to turn that around. In order to get sign off on an analytics project, these benefits must be monetised.

Against these potential positives, costs to consider include:

- Licence fees or cost per call analysed
- IT costs to implement (internal and external)
- Upgrade to call recording environment if required
- Bandwidth if hosted offsite: the recording of calls is usually done on a customer's site, so if the speech analytics solution is to be hosted, it will involve of lot of bandwidth, which will be an additional cost, especially when considering any redundancy
- Maintenance and support agreements, which may be 15-20% annually of the original licencing cost
- Additional users - headcount cost - decide who will own and use it, do you need a speech analyst, etc.
- Extra hardware e.g. servers
- Ongoing and additional training costs if not included
- Extra work generated by findings
- May need extra software to extract data from the call recording production environment.

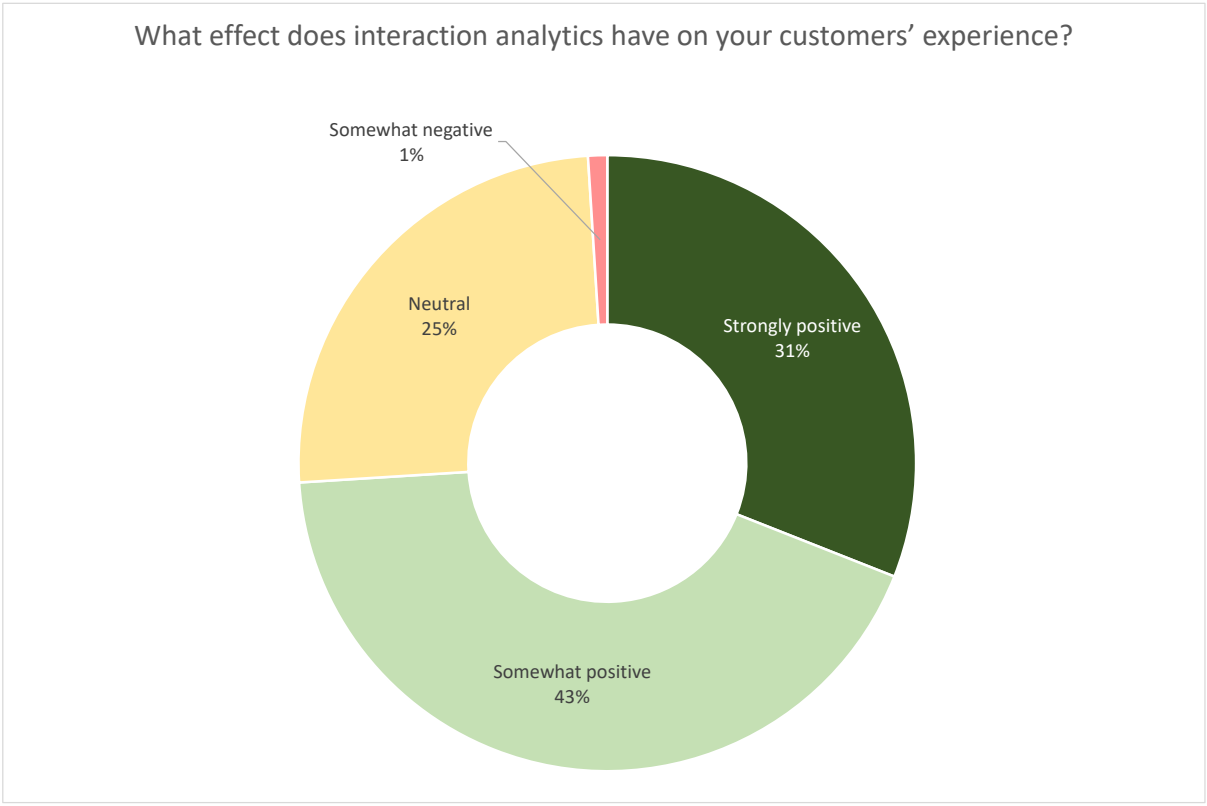
Any business case needs to be built with support from the potential end-users, understanding the specific key performance indicators that are important to them, rather than focusing on IT specific issues. Whatever the variables and factors that businesses choose to build the ROI and business case, it is important to gather benchmark data before the solution is deployed, so as to be able to quantify any change accurately. If possible, use a 'control and experiment' approach - for example, one sales team carries on as they were, while the other may have their scripts changed or receive tailored training based on analytical insights. It is also important to get business users involved early in the process, giving them a key part in defining the right business case and the desired ROI.

Throughout this report, most respondents state that one of their main business focuses is to improve the customer experience, and while this is laudable, the real question is perhaps "How can analytics achieve this aim?".

It is reported elsewhere in this report that first-contact resolution (FCR) is seen as being key to customer satisfaction. Interaction analytics can assist with this goal through automatically grouping and assessing the nature of the enquiries that required multiple customer callbacks, and through identifying whether the call should be classed as a callback in the first place (e.g. by searching for relevant words or phrases, such as "I've called about this before", or "this is the second time I've called"), which would further assist in the notoriously difficult process of accurately calculating first-contact resolution rates. As FCR and customer satisfaction ratings are closely linked – being consistently stated to be the no.1 method of achieving high customer satisfaction ratings – the use of analytics to identify FCR accuracy and improvements is a very positive finding.

Amongst the survey respondents which use interaction analytics, there is a general feeling that it impacts directly and positively upon the customer experience although as a large amount of interaction analytics is done historically, the immediate benefits to the customer may not be as apparent.

Figure 38: What effect does interaction analytics have on your customers' experience?



Once the implementation has been made, businesses then need to make sure the solution delivers what was promised, and hopefully this initial success will provide a platform for the analytics solution to be directed elsewhere.

Vendors strongly recommend that businesses put baseline measurements in place before any implementation takes place, such as how many calls are tagged with a particular issue. The vendor and customer implementation team monitor and suggest changes to processes and approaches based on findings of the initial analysis, and measurement post-implementation will quantify the cost savings or alteration to other key metrics.

If the initial use of analytics is successful, the business can seize the opportunity to use this enthusiasm and positivity to roll analytics into other areas. Analytics can deliver insight which is of use to other parts of the business as well as the contact centre, and is an opportunity to demonstrate to the rest of the business that there is a wealth of information that can be mined to support the decisions that other departments have to make. Pointing to examples where customers are changing supplier due to superior products from a competitor, or where another business's marketing campaign is creating a high turnover in your customer base will grab the attention of senior decision-makers elsewhere in the enterprise.

To be successful, analytics must be integrated into the existing systems, processes and structure. Embedding it within the overall culture of the wider business is perhaps the surest way of ensuring success. At a contact centre level, connecting analytics output with the quality management process means that the operation can find a place for analytics within their world, which will encourage them to consider it for business intelligence purposes later on. Businesses may also wish to consider solutions where analytics output is shown automatically across the organisation, offering dynamic and emailed reports on a regular or exceptional basis to business owners elsewhere in the enterprise.

Although every user's requirements from analytics will be different in some way, it may be useful to consider looking for some of the following key words and phrases:

- names of competitors
- obscenity or profanity
- names of your specific products or services
- references to management (e.g. "supervisor" or "manager") as this may indicate the customer is dissatisfied with the agent
- active opinion (e.g. "it would be good if", "I would like", "I want")
- key commercial words (e.g. "buy", "purchase", "interested in")
- phrases which indicate compliance, such as those found in the terms and conditions
- customer dissatisfaction (e.g. "I'm not happy", "I want to close my account")
- references to the agent's performance (e.g. "you've been really helpful", "rude").

For more information about interaction analytics, please download ContactBabel's free "Inner Circle Guide to Customer Interaction Analytics".

MAXIMISING EFFICIENCY AND OPTIMISATION

Improving call throughput and decreasing costs has been a focus of most contact centres since the industry started, and few solutions or processes are considered without understanding how they will affect productivity. Many of the efficiency-enhancing solutions available to today's contact centre serve a dual purpose of decreasing customer effort as well,

This section looks at ways in which contact centres improve their efficiency without damaging the customer experience, through increasing automation, offering alternatives to making inbound calls, or benefiting from economies of scale.

Solutions and issues include:

- Self-Service
- Robotic Process Automation and the Back-Office
- Customer Identity Verification
- PCI Compliance
- Queue Management & Call-Back
- The Connected Enterprise.

TELEPHONY SELF-SERVICE

Despite the rapid growth in the use of web-based services, the importance of the voice channel has not diminished to the extent predicted by some commentators:

- Customers still find voice the most convenient, flexible and quickest communication channel in many instances, especially in older demographics and for complex and high-emotion enquiries
- Customers' expectations continue to rise. Not only do they seek out competitively-priced goods and services, but they require quick, efficient service as well
- The general level of awareness of identity theft as a real issue has also grown, and the voice channel still provides customers with the greatest level of confidence.

The challenge for businesses is to improve the customer experience, protect their customers' private and personal information and control their own costs. As such, the use of automated voice-based solutions has become widespread and offers a rapid service option to customers while keeping contact centre costs down.

Voice self-service is usually delivered either by touchtone (known as DTMF: dual tone, multi-frequency) IVR, which allows customers with a touchtone phone to access and provide information in a numerical format. Some businesses, often with large contact centres and high call volumes, use automated speech recognition (ASR), which allows customers to speak their requirements to the system, allowing greater flexibility and functionality. The emergence of visual IVR – a front-end developed for smartphones which bridges the gap between digital and voice – has the potential to give self-service a significant boost although current usage is low.

IVR (interactive voice response) - whether through DTMF or speech recognition - has four main functions:

1. to route calls to the right person or department (e.g. "Press 1 for sales, or 2 for service…") in auto-attendant mode
2. to identify who's calling via either caller-line identity (where the caller's number is recognised, and their records brought up immediately), or through inputted information, such as account number. The caller's information is then "popped" onto the screen of an agent who then understands who the customer is and what they are likely to want
3. to segment and differentiate between customers, prioritising against business rules in order to deliver a premium standard of service to them (e.g. minimising time on-hold, spending longer on the phone with them, offering high-value services, etc.)
4. to deliver a total customer service interaction without having to use a human agent, saving the business money - historically, it has been calculated that 6 or 7 self-service IVR calls cost about the same as a single person-to-person call.

This section of the report considers the role of IVR and speech recognition as part of a full telephony self-service solution, i.e. one that takes the place of an agent to handle the **whole** interaction.

To learn more about IVR as a call routing solution (i.e. options 1, 2 and 3), please see the chapter on 'Queue Management & Call-Back' elsewhere in the report.

Figure 39: Advantages and disadvantages of telephony self-service

Advantages	Disadvantages
Cost avoidance: 6 or 7 IVR calls cost less than a single person-to-person call	Can be inflexible to change IVR options, due to proprietary nature of many legacy IVR solutions
Captured customer data from an IVR enables key CTI (computer-telephony integration) solutions, such as screen popping and skills-based routing to take place	IVR menus difficult to visualise for customers, leading to stress and dissatisfaction. Users may feel "there is no end in sight" and become frustrated.
Frees agents from boring and repetitive work, reducing staff attrition and improving morale	Long-winded menus annoy customers, where shorter ones can reduce the options available, and thus, the functionality. Visual IVR can alleviate these issues
Allows agents to spend more time doing high value-add work, like cross- and up-selling, and complex customer care and loyalty work	When overdone, self-service can be seen as a low-cost option aimed at helping the business, not the customer. Overuse of IVR makes customers feel as though the company does not value them
Reduces queue times and call abandonment rates, improving customer satisfaction for those needing live agent help	Expensive, proprietary hardware has kept businesses locked into existing suppliers in the past, although open standards and cloud-based delivery has alleviated this issue somewhat

Customers need to be persuaded to use IVR self-service, and success can be measured in two ways: through the "play" rate (the proportion of customers that try to use IVR), and the "completion" rate (how many can successfully interact with the company without having to involve a human agent by "zeroing-out", i.e. pressing the 'zero' key to try to connect to an agent). Customers need to be motivated to use IVR (i.e. there's something in it for them), and the business needs to design, maintain and promote the self-service application to get them to keep using it.

Simply making IVR self-service available without too much thought or effort results in perhaps fewer than 20% of possible calls being completed without human interaction. Designing the IVR self-service experience with customers' needs in mind, marketing it as an aid for customers, rewarding the customer for using it and tuning the application to make it even better can mean up to 90% of relevant calls are dealt with automatically: a massive cost saving, an improvement in the customer service experience and a boost for the company's reputation with its customers.

Self-service is found across most industries - there is often at least one function that self-service is suitable for, regardless of what a company actually does - but some sectors use it more than others. Many businesses are finding that web self-service is increasingly popular with their customers, especially with the uptake of smartphones which allow web browsing on the move.

Figure 40: Some functions for self-service, by vertical market

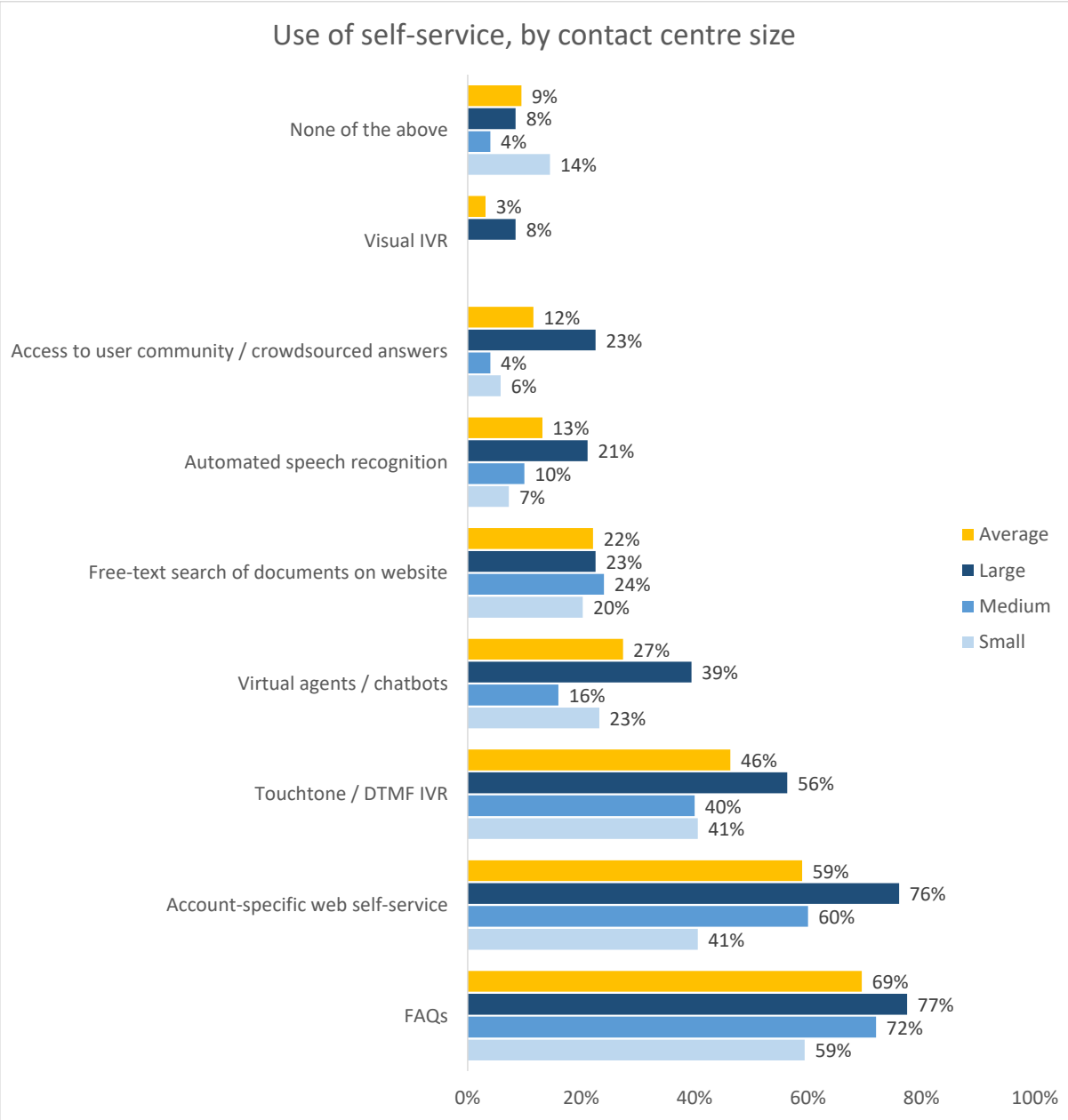
Self-service activity	Typical sector offering this form of self-service
Problem reporting and resolution	IT helpdesk
Account access & card payments	Banking
Product information & registration	Retail
Online registration	Any
Order entry	Retail, travel
Balance enquiry	Banking, credit cards
Dealer or store location enquiries	Car sales, retail
Ticket booking	Cinemas, other entertainment
Real-time punctuality checks	Airlines, trains
Order status and delivery checks	Telecoms, Retail (esp. online), IT helpdesk
Address changes	Subscription services, utilities
Form filling	Any
Brochure request	Travel, retail
Password reset	Finance, IT

91% of respondents use offer some form of self-service to customers, with FAQs / general search being available to 69%, and account-specific web self-service to 59%. The former allows a search of the site as a whole, perhaps using FAQs or text search, whereas the account-specific variety requires a customer login in order to access functionality and information specific to that customer.

Touchtone (DTMF) IVR is used widely across size bands, whereas amongst those using automated speech recognition, those in the largest operations are more likely to use it. A small proportion of respondents in large operations use visual IVR.

Crowdsourcing is used by 23% of respondents in large contact centres.

Figure 41: Use of self-service, by contact centre size



DTMF IVR has been a notable success for many businesses, and many businesses have added to this, leveraging both the added flexibility and power of speech recognition as well as being able to share the functionality that businesses have recently developed with their web self-service applications. Of course, this is likely to come at an additional cost, and trying to find capital budget to invest in these solutions may be difficult. In such cases, businesses should consider alternative application delivery methods, such as a cloud-based solution.

One of the most consistently strong inhibitors against the uptake of speech recognition is the initial cost involved, as well as the expected ongoing support costs, and cloud has a particular appeal to organisations who don't wish to invest or tie-up large sums of up-front capital investment on their own systems or software, or pay for the in-house IT resource to run them. One advantage of cloud is that the need for significant upfront technology investment is lessened, providing on-tap access to extensive telephony resource, albeit of a third-party nature. Additionally, the use of cloud-based solutions means that businesses don't need continual ongoing investment to upgrade their own systems.

Like other self-service applications, automated speech has of course been more attractive for organisations with high volumes, where the cost of handling the call can even exceed the business value it represents. In this scenario, the need to reduce cost is imperative, but for speech-based self-service to work well, the technology infrastructure on which it depends must be robust enough, and the number of phone lines linked to it large enough to accommodate the maximum number of callers ever likely to contact the service, or run the risk of turning callers away, a cost which can be very high. Cloud-based speech services, where the telephony and technology infrastructure is centrally-owned and managed by a third party overcomes this capital investment hurdle, and the pay-as-you-go model adopted by most cloud suppliers means that ongoing operating costs are directly pegged to transaction volume, providing valuable operational flexibility.

More information can be found in the **‘Cloud-based Solutions’** chapter of this report.

Of those contact centres offering telephony self-service, a mean average of 22% were handled entirely by self-service without requiring an agent.

Figure 42: Overall proportion of calls handled entirely through self-service (only in respondents which offer telephony self-service)

	Proportion of calls handled entirely through self-service if offered
1st quartile	30%
Median	15%
3rd quartile	10%
Mean	**22%**

Many calls are not suitable for self-service, as they may require multiple requests within the same call, be of a complex nature or be from a caller who feels that they need to speak with a person. Additionally, some small businesses may have such a low volume of calls that it is not cost-effective to implement self-service.

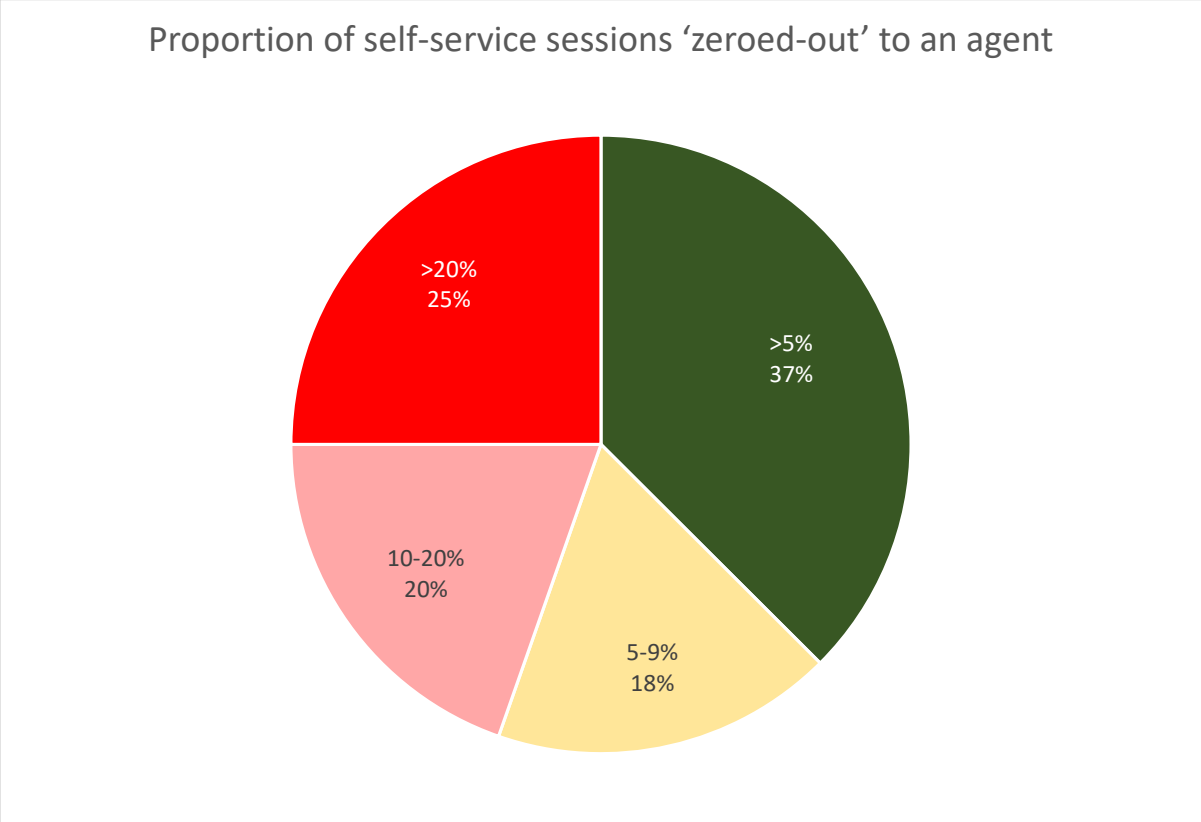
Even amongst those respondents for whom telephony self-service is a vital part of the customer contact strategy, it's no use trying to shift every customer service interaction onto telephony self-service, as if customers don't want to use IVR, they will "zero-out" (press 0 for a live agent, or try to find a similar shortcut). And if businesses don't offer a live agent option to an irate and frustrated caller, they won't need to worry about providing customer service to them in the future, as they'll go elsewhere.

It is worth reiterating that if callers agree to try a company's self-service system rather than insisting upon talking to an agent, there is an implied contract that if the self-service session is unsuitable, the caller should be allowed to speak with an agent. Few things can frustrate callers more than being hectored into using an unhelpful and irrelevant self-service system.

Overall, a mean average of 16% of calls that go into the self-service option are “zeroed-out”: instances where the customer decides that they in fact wish to speak with an operator, which is similar to the historical norm.

NB, 1st quartile performance for 'zeroing-out' is 2%, the median is 5% and the 3rd quartile is 21%.

Figure 43: Proportion of self-service sessions ‘zeroed-out’ to an agent



There is a broadly positive correlation between the size of the contact centre and the proportion of self-service sessions that are abandoned in favour of speaking to an agent: the larger the contact centre, the more often customers ‘zero out’. One possible reason for this might be that larger operations are trying to do too much with their self-service. There is some evidence to suggest that this is the case, as it is very noticeable that respondents from larger organisations tend to have far more options in the auto-attendant functionality of their IVR solution, and this tendency to offer a great deal of functionality and options may well also apply to IVR’s self-service functionality as well. Overly complex or long-winded IVR functionality will tend to encourage session abandonment, and this may well be what we see here.

The chapter in this report on **Customer Effort, Engagement & First-Contact Resolution** has more detail on IVR menu structures and the length of initial announcements.

Due to the potential additional flexibility and functionality offered by automated speech recognition over DTMF IVR, we would expect the zeroing-out rate (which can be viewed as connected to customers' rejection of the self-service option) to be lower for speech recognition than DTMF IVR, but once again, this is not the case:

- In contact centres where the majority of self-service is offered through speech recognition, the mean zero-out rate is 18%.
- In contact centres where the majority of self-service is offered through DTMF IVR, the mean zero-out rate is 11%.

It may be that customers are simply more used to DTMF IVR; that speech recognition often offers an option to speak to an agent early in the script (which is taken as the easy way out); or that customers did not know what to say to an automated system to make it work, so look to speak with a live agent. That many customers may actually currently prefer to choose from a finite group of options is an interesting idea.

Cost differentials in self-service and live voice support

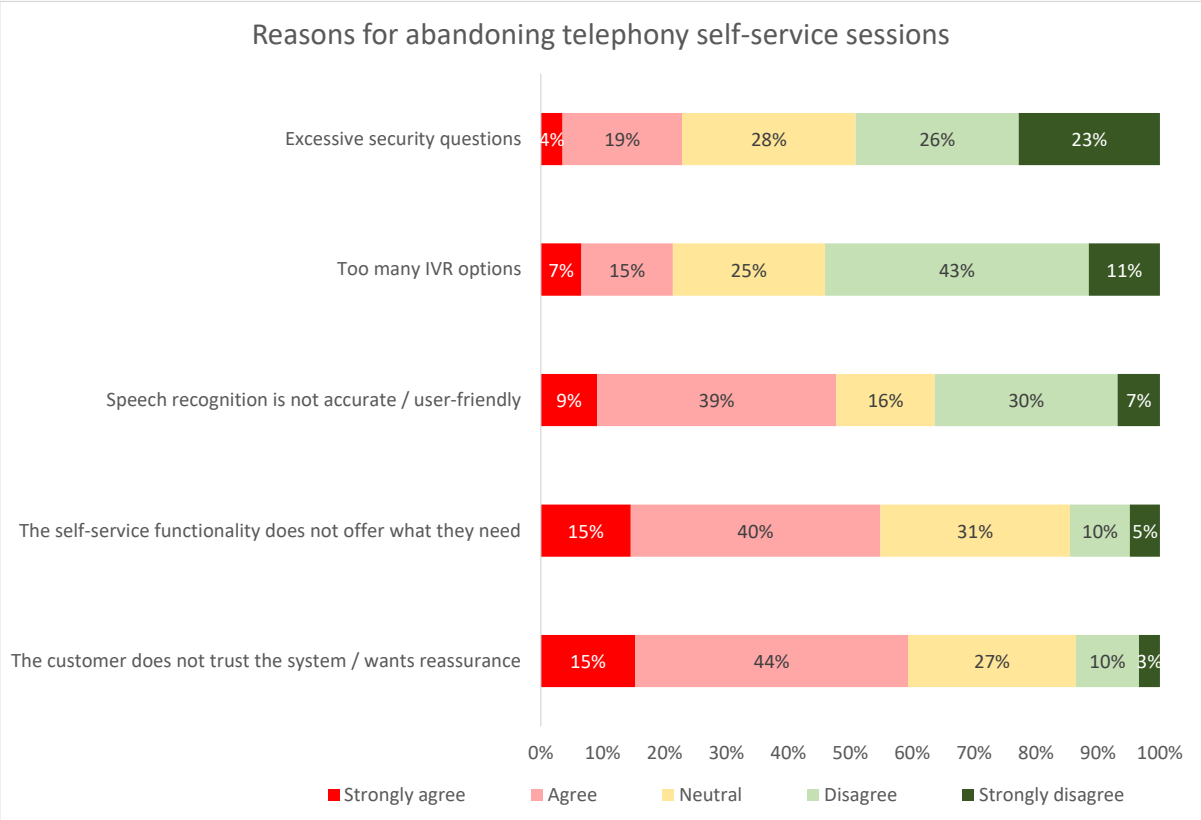
- The cost of a live service telephone call varies considerably, but has a mean average of £5.42
- Historically, the average cost of a telephony self-service session is estimated to be around 30-70p.

55% of respondents agreed that customers abandoned self-service sessions because the self-service function simply does not offer what the customers want. While this at first glance may appear negative, it is the case that even in the most commoditised and transaction-driven environments a substantial proportion of customers will want to speak to a person, either because the system does not allow them to do what they want, there is a complicating factor involved, or simply that they wish reassurance or have multiple questions. In such circumstances, it is the customer's choice to abandon the session, and this does not have to be a particularly negative experience as long as a clear exit path that leads to a live agent is marked early in the process. Situations where businesses hide their agents from customers, making them go around in IVR loops are the ones that give all telephony self-service a bad name.

Only 7% of respondents strongly agree that having too many options presented to customers is a major reason for them seeking human assistance. It is noticeable that 59% of respondents agree to some extent that the customer simply does not trust the system, preferring to have human reassurance that the request they have made has been carried out, or the information they are looking for is actually correct.

Of those using automated speech recognition, 48% of respondents agree that speech recognition is unpopular with customers due to lack of accuracy and user-friendliness. While this is high, it is an improvement on past years and it may be that customers are gaining confidence in how to use the system after many years of struggling. As customers continue to be encouraged to use natural language (both by successful interactions with corporate self-service applications, but perhaps more importantly through digital virtual assistants such as Siri and Alexa), this issue should further decline.

Figure 44: Reasons for abandoning telephony self-service sessions



The rise in VoIP and SIP (session initiation protocol) has allowed IVR to run on standard servers, rather than more expensive and proprietary telephony cards or specialist hardware, with media gateways and IP PBXs being supported within an open standard, commoditized telephony environment.

The pure software IVR platforms used today run on standard servers, reducing the restrictions that proprietary hardware placed upon functionality, scalability and flexibility, as well as the cost of purchasing and maintaining dedicated hardware. Companies increasingly prefer to adopt the cloud-based method of providing IVR options to the customers, and more information on the take-up of this deployment method is available in the 'Cloud' chapter elsewhere in the report.

Speech-enabling IVR increases the features available to the caller. Standards-based languages such as CCXML and VoiceXML support speech recognition and improved access to relevant corporate data, the integration of which into the IVR experience supports text-to-speech and the use of caller profiling to enable personalised IVR sessions based on who the caller is, their history, their contact preferences and any other relevant information that would further assist the self-service session.

With PCI compliance so much to the fore for many businesses, we would expect to see an increased use of IVR to take card payments, whether within a call or at the end of it (more information on this can be found within the '**PCI DSS Compliance'** chapter of this report). With the focus of many solution providers on achieving the relevant ISO security standards, it can be seen that the vendor community is very aware of what the market requires. DTMF has the advantage of extreme simplicity, which means that it may well have an important role to play on a sector-specific basis, even with the advent of newer and more sophisticated solutions. In situations where callers need the same piece of information on a recurring basis - such as checking the balance of prepaid credit cards - customers can access the information within a few seconds by typing in the DTMF digit sequence that they have learnt off-by-heart, and it may well be that this method of accessing information is the most convenient and quickest for customers. In addition, interactions that require a simple list of digits, such as e-parking, may be more suited to the unambiguous nature of DTMF (which, unlike speech recognition, is unaffected by background noise). Of course, by far the most common application for delivering long sequences of numbers is through making a payment via credit card, and placing a customer call into an automated DTMF session in order to do this has numerous advantages for businesses and customers in terms of convenience, familiarity and security.

The take-up of cloud-based IVR solutions, particularly by small-medium sized companies, is driving growth within this sector. The ability to personalise IVR sessions, as well as the low initial start-up costs and limited in-house maintenance required, means that businesses that traditionally were unable or unwilling to see the benefits of IVR for their own company are now revisiting this.

Many solution providers state that they are actively increasing the power and range of the analytics solutions not just within live contact channels such as chat and voice, but also within automated IVR environments as well. This can be used to adapt and personalise the IVR experience in real-time to suit the customer's behaviour and preferences, and also to detect and manage fraud.

Despite the wider and more powerful functionality that speech recognition gives to an IVR system, significant inhibitors are present. It is generally acknowledged that speech recognition can be considerably more expensive to implement than DTMF IVR, and is also likely to require significant, highly paid in-house resource to fine-tune and operate it going forward. Some solution providers note that the majority of businesses' interest in moving from DTMF to speech recognition comes when the existing telephony self-service legacy system is approaching end-of-life.

The success or otherwise of speech-based IVRs is very affected by how callers are encouraged to use the service. It has been the case that some speech implementations have actually made life more difficult for the customer, who may not have the confidence that the system will understand their natural language request and provide very short, one-word answers; if nothing is given in the way of prompts or examples, callers may give too little or too much information as they are unsure of the sophistication or capabilities of the system, and this may be a reason for high self-service abandonment rates. Using prompts such as "describe in a few words why you are calling us, for example 'to start a new mortgage application'" can be extremely useful in setting ground rules for the successful use of the system.

Some solution providers offer a semi-automated option for their speech recognition-driven IVR, whereby the agent has a chance to hear one or two pertinent words from within the speech recognition session before the live call is taken, giving the agent an initial insight into the context, mind-set and intent of the customer before the conversation actually begins.

The biggest inhibitor to the implementation of self-service is the initial investment, which could be alleviated through a cloud-based model. As DTMF IVR, when badly implemented, is a major bugbear for customers, replacing it with a quicker and more powerful alternative (ASR) could be seen as a benefit.

In all, there is still a great deal of work to be done by solution providers to deliver ASR solutions – either as a replacement for DTMF IVR, or as a new solution – through offering innovative payment and service delivery methods, and to create a greater market awareness of the success stories in this area. Against a background of potential inhibitors, there is some positivity coming from the consumer base. Because there are so many speech recognition applications now in use in daily life – for example Siri, PC-based voice recognition software, and voice-enabled hands-free dialling – consumers are now becoming more comfortable giving voice commands to an automated system and are also beginning to trust the system to understand natural language rather than keywords.

With every successful speech interaction, customers' confidence increases and speech-enabled self-service becomes a little more firmly embedded in the customer base's psyche.

The audio-only nature of DTMF IVR places limitations upon how user-friendly the experience can be for a customer. There has always been a trade-off required between functionality and usability, which manifests itself in the number of menu options and levels that made available within the IVR system.

The rapid growth in smartphones has meant that it is now possible to offer a visual representation of IVR menus on a device which will then be used to call the business. Because it is far quicker to read text than to listen to text being spoken - some studies show that a caller can navigate a visual IVR menu between four and five times quicker than a DTMF IVR menu - the customer experience is improved without sacrificing any functionality or options. Furthermore, visual IVR can be used to send video presentations while waiting for an agent, for educational or marketing purposes, or to answer the self-service requirement (for example, pushing the relevant YouTube clip in order to show the caller how to do something).

Many businesses that use DTMF IVR have made long-term investments in this technology, and retiring the system entirely is not desirable. Giving existing IVR functionality a visual interface simply means that the IVR's path can be shown as a picture on a website or smartphone, with callers touching the selection that they require without having to listen to all of the options or to go up and down levels or branches. This has the dual benefit for the customer of being far quicker than listening to IVR menu options, and of being significantly more likely to get them the correct information or to be routed to the department most appropriate to their needs. Visual IVR menu systems integrate with existing DTMF structures and reuse the same VoiceXML scripts, meaning that any changes made to the existing DTMF IVR system will be automatically replicated regardless of channel or device.

Visual IVR offers companies the ability to develop value-added applications for their customers, rather than simply providing a visual representation of existing IVR menus. For example, in cases where very specific expertise is required, visual IVR can be used to help the caller self-diagnose where in the organisation they need to be going, rather than having to speak to a front-line agent who will then have to ask them the same questions in order to route the call to the appropriate resource.

It is worth noting that despite the huge uptake in smartphones and mobile apps, it is very unlikely that customers will find it convenient to have an app for every company with which they deal. Like apps, a visual IVR option provides businesses with an opportunity to display corporate branding and deliver an improved customer interaction experience.

Figure 45: Visual IVR: benefits for businesses and customers

Business	Customer
Cost reduction through improved call avoidance and more accurate routing, improving first-contact resolution and decreasing call transfer rates	Greater granularity of routing, and improved functionality means that callers are more likely to arrive at the place where they need to be. Consistent functionality shared across IVR channels and customer devices means that customer engagement and confidence in using the system will be improved
Leveraged existing IVR investments, without having to rip and replace	Significant decrease in customer effort to access self-service or call routing capabilities
Reusability of existing scripts lowers development costs	If the agent has contextual information, there is less likelihood of the caller having to repeat information
Contextual information gathered within the visual IVR session can be popped to agents, giving an improved understanding of the customer's journey, reducing agent handle time and customer frustration	As more customers are finding the correct information without having to call the contact centre, this means lower wait times for the customer base in general

Building a business case for visual IVR may involve looking at the self-service 'zero-out' rate for your specific industry compared to your own statistics, considering your call transfer rate and listening to the 'Voice of the Customer' via call recording or speech analytics as they comment upon their IVR experience.

Carrying out a specific IVR customer experience survey is also a good way of gaining accurate insight into what might turn out to be a significantly negative experience for some of your customer base.

WEB SELF-SERVICE

For businesses, by far the major advantage to having customers use web self-service is the fact that the cost per automated support session is estimated to be between 40 and 100 times cheaper than a live call to an agent.

Research has found that around 50-60% of calls to the contact centre result from bad website service or a failure in another channel. Quite apart from the current importance of this application, research shows that as customers become more educated and experience many different qualities of online self-service, their expectations increase across the board which puts pressure on other organisations to keep up or even exceed the current benchmark performance.

Put basically, most customers will visit a website first; if they cannot find what they're looking for immediately they will try self-service; if the self-service experience does not give them what they want immediately and accurately, they will either call the business or go elsewhere. In cases where the customer is tied into an existing business, this will result (merely) in a higher cost of service and decreased customer satisfaction. In cases where the web visitor is only a potential customer, a failure in the self-service process on a website will mean the almost-certain loss of a sale. In all cases, providing effective web self-service options - with a clear path to escalation to a live agent, along with any contextual customer specific information - is in the best interests of the business.

In terms of pure self-service, the website can provide various options for the customer, ranging from the most basic search and static FAQ functionality, to personalised virtual agents and dynamic FAQs.

By far the most prevalent form of web self-service is that of the FAQ (frequently-asked question), which is used by 67% of respondents. The free text search of the document library is somewhat less well supported, at 22%. Virtual agents are employed by 23% of respondents (up from 13% last year), more often those within large enterprises.

SEARCH

Since corporate websites first came into being, businesses have offered search tools for customers to look through indexed information, based on keywords found in these documents, in order to answer their questions without the need to call the business. While such functionality has the advantage of at least being familiar, indices grow, documents get old and out-of-date, and customers become educated that there are more sophisticated and effective self-service solutions available, with customers' opinions of standard search functionality suffering as a result.

With only a blank text entry box to guide them, the onus to search successfully is with the customer, who has to try to 'get into the mind of the business' and phrase the question or search terms in a way that fits the business and its internal jargon. However, this is not always possible, and customers have a limit to the maximum number of times that they will attempt to search, or how many pages they will read from the numerous documents that a wide keyword search can bring back, claiming that it has answered the query. The customer then has two possibilities: to engage the business through a high cost channel such as telephony or email, or worse, to find an alternative supplier that can help them without going through this high effort process.

Search functionality does have its place: for example, if a customer wanted to find out very specific information about a product that had an unambiguous name (for example, 'SDK36479 installation'), a search on this particular term would at least bring back documents that had a high level of relevance to this product and how to set it up. However, if the customer had a query that used keywords that were very popular and widely found elsewhere (for example, "What are your delivery times?"), typical search functionality might return every document that contains the word 'delivery', relying upon the customer's patience and goodwill to find the correct answer for themselves. In the case of very large companies, this could bring back potentially hundreds or thousands of documents, many of which could be out-of-date and have been superseded. The major problem with search functionality is that it pays close attention to the answers, but very little to understanding the question or the customer's thought processes.

It is one thing to be presented with a long list of documents while sitting in front of a large screen of a PC, where scrolling up and down the page is not an issue. For the same flawed search functionality to be placed onto a mobile website, expecting the user to zoom in and out, scrolling up and down, and then to potentially scan through numerous documents whose text is too small to read properly is probably a step too far even for the most enthusiastic and loyal of your customers. Some self-service solutions alleviate this issue by using customer feedback to judge the success of the search results provided so as to increase future customers' chances of being given the correct information.

FAQs

FAQs – frequently asked questions – are one of the most popular forms of Web self-service. At its simplest, an FAQ list can simply be a group of static documents and/or text, categorised under wider thematic headings, and kept up-to-date manually. Solution providers state that perhaps 80% of questions can be answered by 20% of documents, however for most businesses, customer requirements change on an ongoing basis so it is unlikely to be the same 20% of documents that are most useful as time progresses.

More complex applications can use techniques such as text mining and fuzzy search (approximate string matching) to return documents that are not just an exact or very close match to the search terms entered by the user. Sophisticated FAQ technology will leverage natural language processing to deliver more accuracy than standard search functionality.

It is possible to minimise the use of manual updates and supervision by making the FAQ list more dynamic and self-learning through using responses taken from emails to customers who have asked specific questions, which will then dynamically enter the FAQ list at an appropriately high level. Being able to restructure the knowledge base on a regular and ongoing basis through automation is key to maintaining the usefulness and relevance of the FAQs. Unlike the virtual agent (below), FAQs by their nature provide the user with a list of alternatives, asking them to judge and choose the correct most relevant answer for themselves. While this process takes longer for the customer than the provision of a single answer, it is currently more closely aligned with the typical user experience, and thus has the advantage of familiarity. Providers of FAQ technology report that the typical reduction seen by customers in inbound live contact (such as email or telephony) is in the region of 25%.

VIRTUAL AGENTS

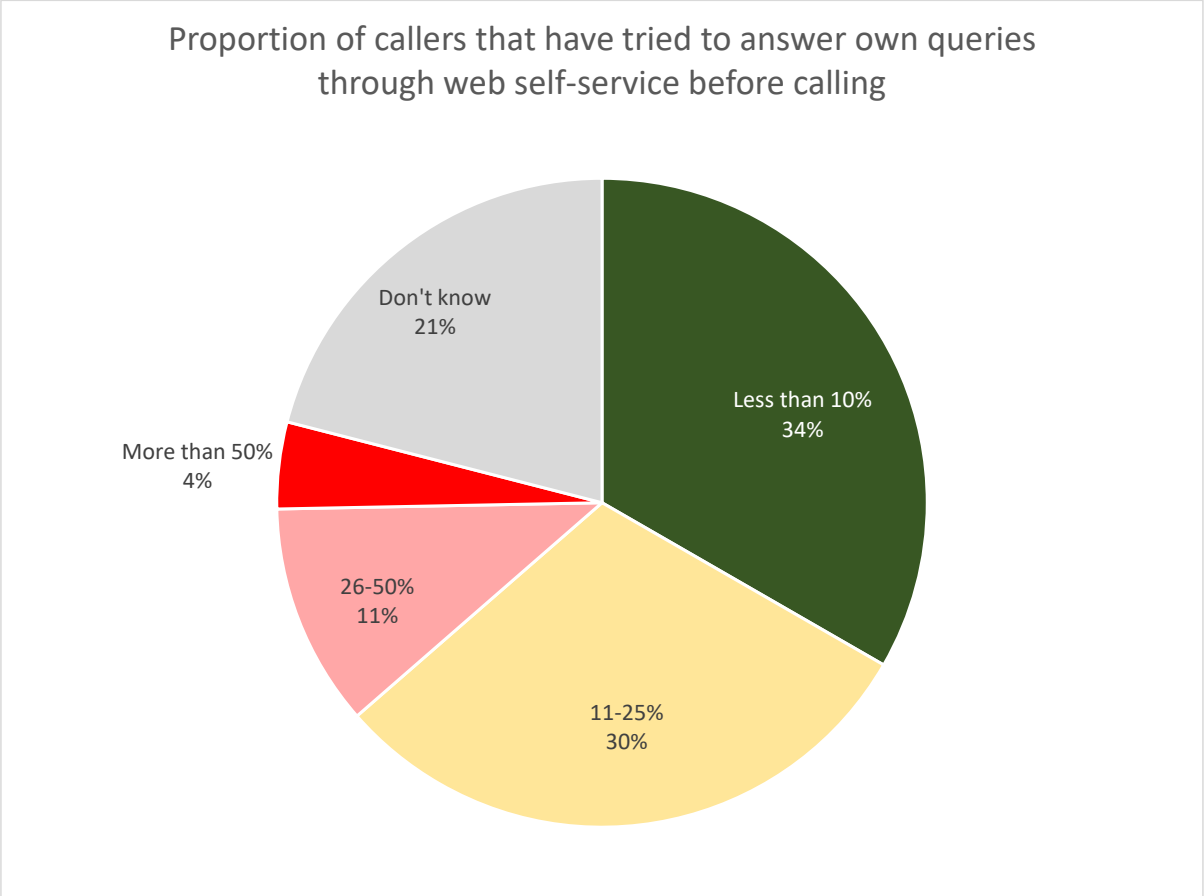
Virtual agents, increasingly referred to as conversational AI, are software applications that engage customers in conversations in order to provide them with an answer to their queries. They may be personalised to reflect the company's branding, and often act as the first point of contact between the website visitor and the business. The ContactBabel report, "The Inner Circle Guide to AI, Chatbots & Machine Learning" looks at this application in depth.

Some solutions offer chat agents the opportunity to see what the customer is typing in real time, and enabling the agent to get a head start, while at the same time linking to the contact centre knowledge base in order to provide a list of most likely answers, which will increase the accuracy of response and decrease the overall time to serve.

Virtual agent functionality is of interest to most sectors, however the commercial reasoning and business drivers differ greatly. Banks have an appreciation that they need to understand their customers to keep them loyal in a highly commoditized and competitive environment, and as such there is considerable interest in using virtual agent functionality within Voice of the Customer initiatives. For example, using real-time analytics, such organisations can learn that customers are talking about a specific issue, which can feed into wider commercial decisions in business areas unconnected to customer service. Sector such as utilities (which may be virtual monopolies) may be less concerned about competitiveness, instead being heavily focused on cost reduction, and these business cases will focus on contact avoidance. Online retailers, which want to cross-sell and reduce their shopping cart abandonment rates, will have yet another strategy.

Although around one-third of respondents state that fewer than 10% of their customers have tried to resolve issues online before calling the contact centre, 15% state that more than 1 in 4 of their inbound calls come from people who have failed to complete their objective on the website first, and who may approach the call in a state of frustration.

Figure 46: Proportion of callers that have tried to answer own queries through web self-service before calling



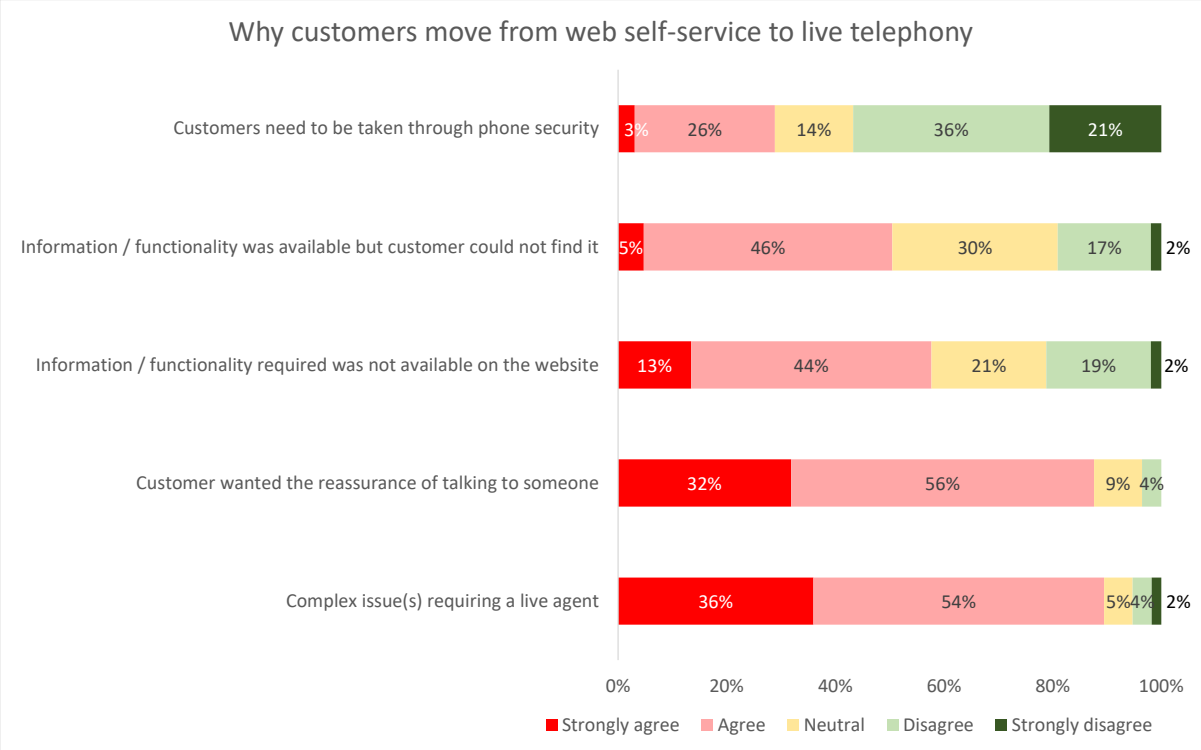
One of the two most important reasons for moving from web self-service to live telephony was that the escalation involved a complex issue requiring a live agent to complete successfully.

88% of respondents also felt that customers wanted the reassurance that a live agent brings to a conversation.

57% stated that the functionality that the customer calling in required was not available online, but interestingly, 51% stated that they received calls about issues that could in theory be resolved online, but customers were unable or unwilling to do so. As such, businesses may consider that time spent educating customers in how to use self-service would pay benefits in the long term.

Relatively few respondents believed that website security authentication was an issue causing unnecessary inbound calls.

Figure 47: Why customers move from web self-service to live telephony



RPA & THE UNIFIED DESKTOP

Throughout this report, a consistent message is the survey respondents' need to integrate processes and systems, providing up-to-date and accurate view of performance and issues. Yet the tools provided for the agent and their management have often been added piecemeal, requiring bespoke or partial integration at each step, growing the level of complexity to such an extent that the full potential of the solution is never fully realised.

In recent years, Robotic Process Automation (RPA) has been used to simulate end-user behaviour and hence streamline processes. While organisations have benefited from this approach, there are many processes which are poorly suited to the use of RPA. Other technologies are now entering the market (e.g. Desktop Integration Platforms), in which the user interfaces of existing applications are integrated to optimise the agent experience and automate workflows.

Only with a truly integrated solution – from the customer, through the agent, into the back office processes and back again as required – can an accurate level of performance and identification of requirements be truly achieved.

A subset of agent desktop automation, robotic process automation (RPA) consists of digital software agents / bots that handle repetitive, rules-based tasks at high speed, with great consistency and accuracy. The RPA workforce acts in the same way as human agents, working at the presentation layer level rather than requiring deep integration with systems, replicating the work that live agents would be doing, but more quickly, consistently and without requiring any rest. RPA agents can input data, trigger processes, pass work onto other bots or humans as rules dictate and replicate data across multiple applications without making any copying mistakes.

RPA does not replace existing systems, it simply sits on top of existing logic and applications, using them in the same way that human contact centre agents or back-office workers would do. Processes and the necessary steps to perform a task are defined, put into a queue and the controller assigns various tasks to the robots. These robots can be monitored for speed and accuracy in the same way that a human workforce would be managed, with exceptions being flagged to human supervisors who can investigate why a particular task could not be completed as designed.

RPA can assist contact centres and back offices in numerous ways, including:

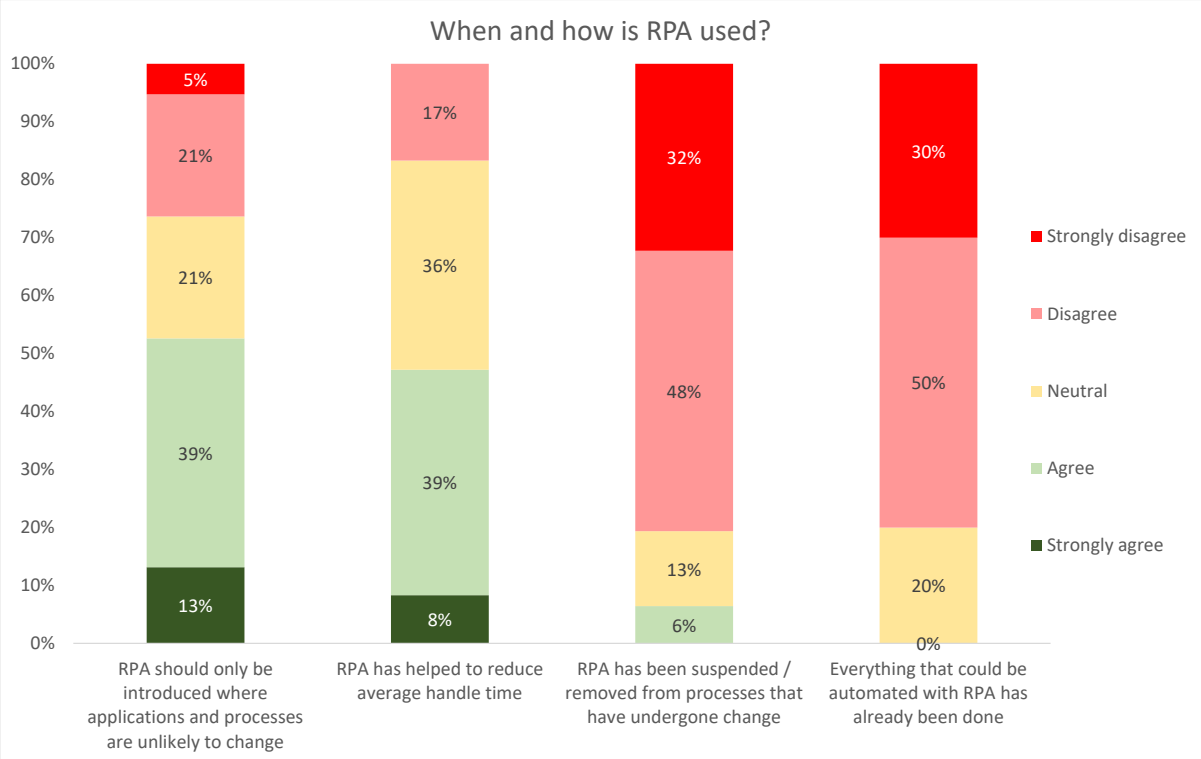
- Handling routine activities, such as the actions associated with a particular task such as change of address, including automated login to specific systems, field completion, screen navigation, copy and paste after a single entry is placed by a human agent in one application
- Triggering of processes based on call or digital interaction outcomes
- Record processes in ticketing systems
- Review documents and pass them onto the next stage in the workflow
- Validating customer account information
- Proactively sending updates to customers depending on the stage of the process.

However, RPA requires relatively static and repeatable business processes to act upon, and many businesses are wary of assigning large chunks of their customer support to robotic processes which will not be supervised or otherwise have the human touch. In such cases, Desktop Integration Platforms (DIP) can provide businesses with increased speed and accuracy through the creation of agent desktops that provide all (and only) the functionality required by the agent to carry out the task in hand.

The following chart shows when and how RPA is currently used by contact centres. There is general agreement that it has helped to reduce average handle time, and that it is more suited to circumstances where changes to applications and processes are unlikely. For many contact centres, which can be very dynamic, this recommended requirement to remain static will not always be appropriate.

Having said that, most respondents believe that RPA has not yet automated every process that could in theory be automated. Respondents have not generally stopped using RPA for processes that have changed, with most altering their RPA functionality accordingly.

Figure 48: When and how is RPA used?



RPA is a scalable, non-disruptive way of making existing processes run more smoothly, quickly and accurately. However, it cannot improve sub-optimal or broken processes, so businesses looking to assist their agents and back office should consider whether this implementation provides them with the opportunity to take stock and consider whether the processes in place are as efficient and effective as they could possibly be, rather than simply automating them regardless.

LEGACY APPLICATIONS

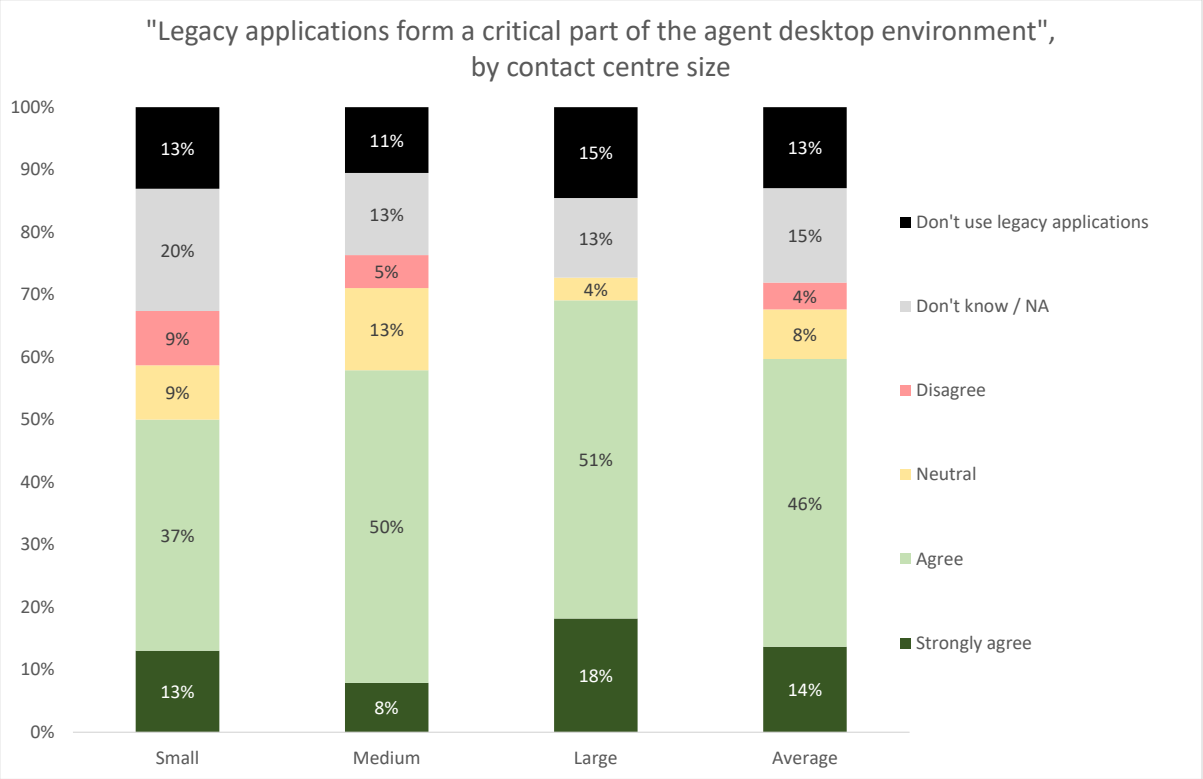
The next series of questions looks at the use and importance of legacy systems and whether they are actually needed in the contact centre environment.

As a general rule, legacy applications are expensive to maintain, rewrite or replace. Additionally, without the right kind of technology, they are difficult to integrate with other desktop applications.

Of those that use legacy systems and who gave a definite response to this questions, 83% of survey respondents agree that legacy applications still form a critical part of the agent desktop environment, which suggests that for most businesses, replacing them could be a risky proposition.

Large contact centres were more likely to place great value on their existing legacy systems.

Figure 49: Agreement with statement: "Legacy applications form a critical part of the agent desktop environment", by contact centre size

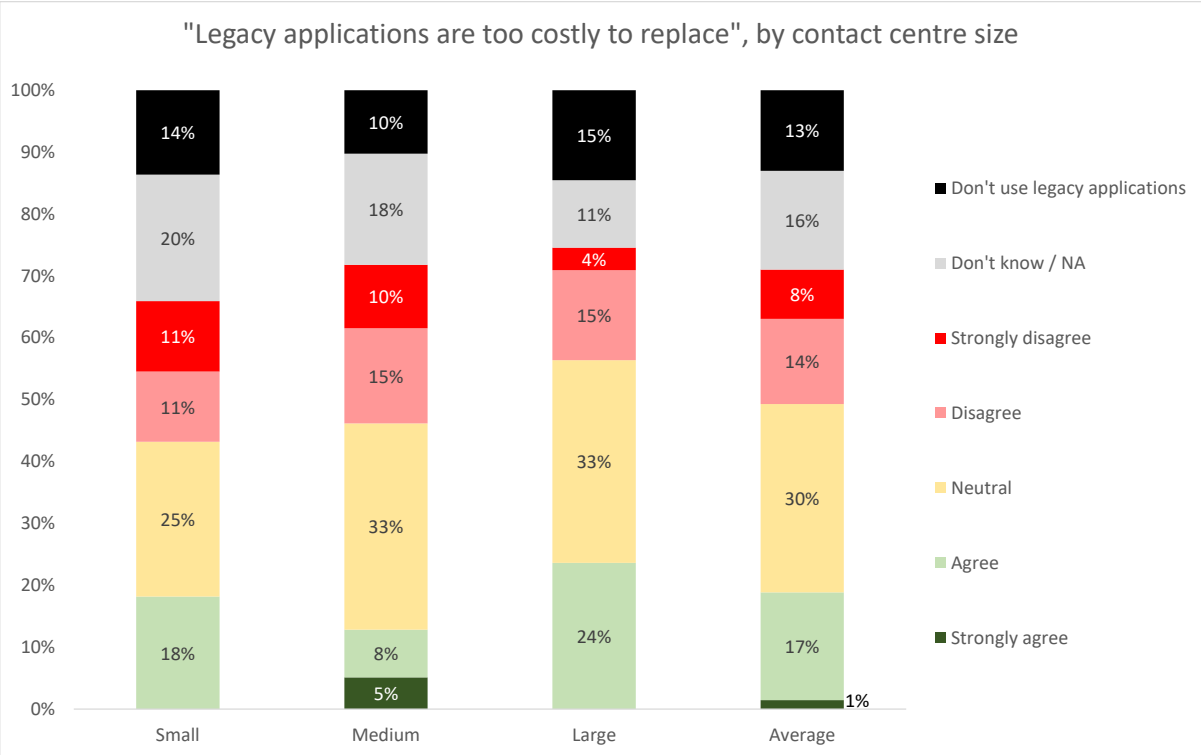


The previous chart shows that the functionality provided by legacy systems is still vital to most contact centres. As such, could contact centres simply replace the legacy systems with more up-to-date applications and duplicate the functionality?

The following chart shows that this would be too expensive for some operations, although this feeling is certainly not as strong as in previous years.

Of those contact centres that use legacy systems and which provided a definite answer to this question (i.e. excluding those answering “Don’t know”), 25% agree or strongly agree that this is too expensive an option.

Figure 50: Agreement with statement: "Legacy applications are too costly to replace", by contact centre size

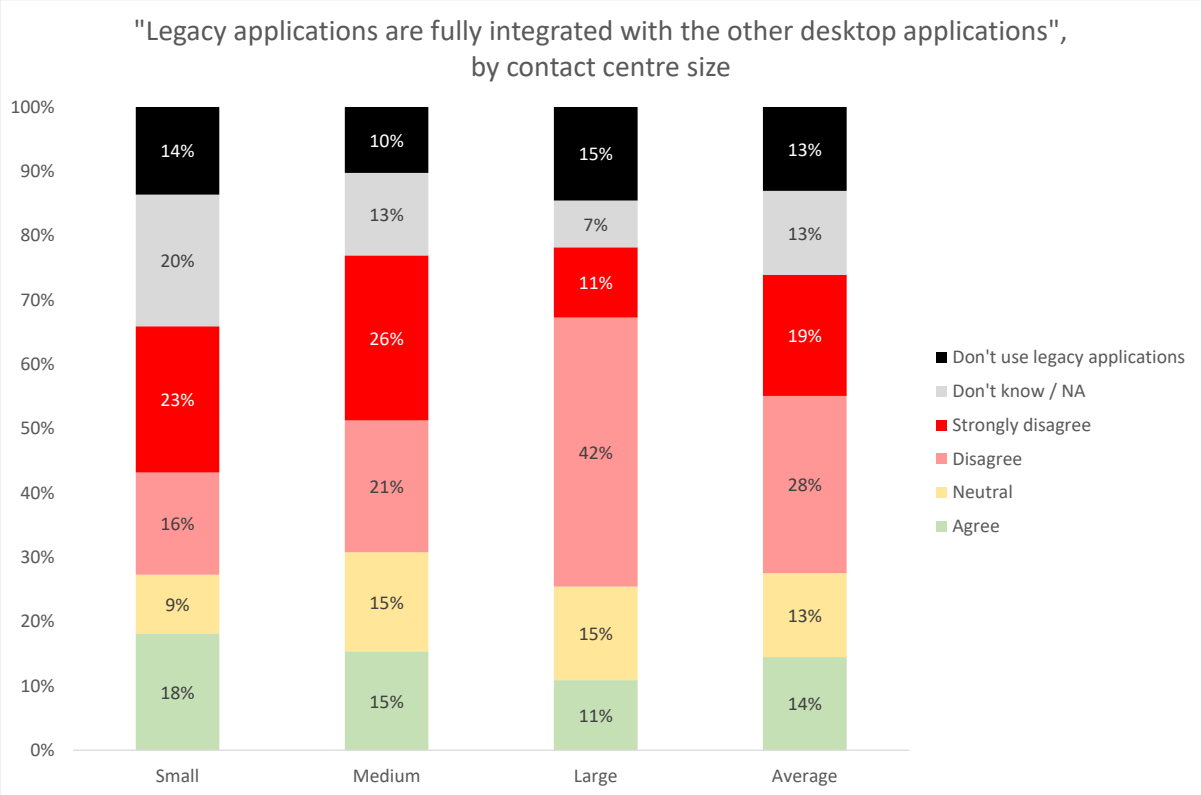


So if legacy systems are vital yet for some businesses are too expensive to replace, have they at least been fully integrated with the other desktop applications?

The answer is a very firm “no”, particularly amongst large contact centres, where 68% of respondents who use legacy systems and who also provided a definite response to this question disagreed or strongly disagreed that their legacy systems were fully integrated with other desktop applications.

Clearly, a definite need exists to keep legacy system functionality, but to merge it with newer technology to improve performance and reduce the cost of customer contact.

Figure 51: Agreement with statement: "Legacy applications are fully integrated with the other desktop applications", by contact centre size



The agent desktop lies at the heart of the integrated contact centre, with data and processes flowing to and from it. The requirements for a truly integrated solution have never been greater, incorporating the performance and effectiveness of the agent, as well as being a key node within contact process.

Many of today's contact centres use complicated, multiple applications, often only loosely linked, which require skilled and experienced agents to navigate, let alone to manage interaction with customers successfully at the same time. Even after the call is completed successfully, each system may need specific inputs from the agent in order to start the required back-office processes, or to keep each database consistent with the others, and there is always the danger that even if the call has been completed successfully, opportunities to maximise revenues have been missed.

Figure 52: Use of multiple applications across vertical markets

Vertical market	Use of multiple applications
Finance	Customer accounts, CRM, product database, payment systems, email, quotation system (esp. insurance), complaints, other sister companies' systems (often through merger and acquisition), legal and compliance scripts, insurance claims
Outsourcing	Multiple screens and applications depending on customer requirements, not all of which will be familiar to agents
Retail & Distribution	Supply chain systems, distribution and shipping history, warehouse stock systems, CRM, customer history, pricing applications, payment systems, complaints, email
Telecoms	Customer accounts, cross-selling/upselling applications, CRM, field maintenance booking systems, real-time network status screens, complaints, payment history, credit/debit card applications, fulfilment systems, email
Utilities	Customer accounts, payment systems, utilities status systems (e.g. scheduled or emergency work being done on water, gas, electricity supplies), cross-selling/up-selling prompts, product information, maintenance and booking systems, complaints, email

The result is that even though a contact centre may be staffed with experienced, hard-working and skilled staff, its overall performance is suboptimal, leading to low customer satisfaction, unnecessary costs and decreased profits. Agent desktop automation offers a way in which agents can be supported to assist customers through optimising the agent desktop without needing to rewrite systems or integrate deeply with multiple applications and databases.

With the vast majority of survey respondents requiring their agents to use multiple applications within a call, there are significant dangers around not asking or forgetting to key in information, or failing to initiate the correct follow-on processes or type in consistent data. The use of multiple applications will have a negative effect on training times and accuracy rates for new agents as well.

This is not merely an issue in large, complex environments: only 7% of respondents from sub-50 seat operations use a single in-call application.

In most cases where complex, multiple applications are used, they are necessary for the agents to do their job, so the question is not “How can we reduce the number of applications?”, but rather “How can we improve how the agent uses the applications?”. At the moment, due to complexity, expense and the sheer weight of constant change, applications are either integrated very loosely, or not at all. Agents are trained (or more likely, learn on the job) to switch rapidly between applications, relying on their experience to make sure they don’t forget to do what’s required. Agent desktop automation can gather the information and data relevant to the situation, and then start the back office processes required by the call’s outcome.

Using live agents to handle this manually can have severe primary and secondary effects:

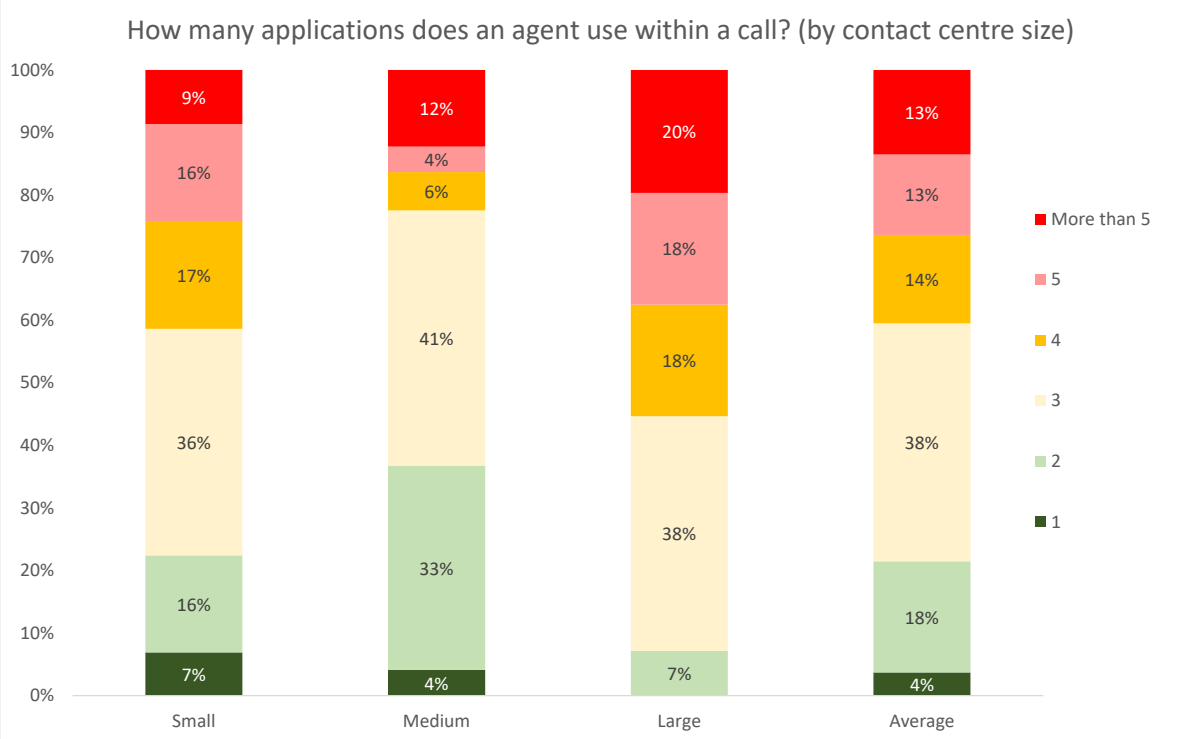
- Increased training costs
- Higher staff attrition caused by inability to complete tasks successfully
- Inconsistent data caused by keying errors or missed procedures caused by manual wrap-ups
- Increased call handling times
- Lower customer satisfaction caused by long queues and unnecessarily long calls
- Missed opportunities to cross-sell and up-sell
- Multiple open applications on the agent desktop can lead to system instability and lower performance.

Agent desktop automation solutions can remove the need for agents to log into multiple applications, assist them with the navigation between applications within the call, and make sure that customer data is gathered from the correct places and written back to any relevant databases without the need to navigate through multiple systems.

Within the call, dynamic call scripting helps the agent to provide the right information at the right time, seamlessly linking with multiple back-office applications and databases, providing only what is relevant onto the agent’s screen. Depending on the experience or profile of the agent, what the customer is trying to do and any regulatory inhibitors, on-screen buttons can be enabled or disabled, or access to fields limited according to business rules. Furthermore, adherence to business processes can be assured by making the agent complete all of the required steps in the transaction (for example, adding call notes, reading disclaimers, etc.).

Only 4% of this year's respondents use a single agent desktop, with 96% requiring their agents to navigate multiple screens and applications within the call, and 40% needing agents to handle four or more.

Figure 53: How many applications does an agent use within a call? (by contact centre size)



It is logical to hypothesise that using complex, multiple applications without any specific agent support will often lead to longer calls. However, this is not the end of the problem, as this type of work also tends to initiate requests for processes to be carried out within the back-office (e.g. initiating an engineer or sales visit, sending out literature, moving a customer request onto the right department with the right information, flagging a customer as a hot prospect for a specific marketing campaign, etc.).

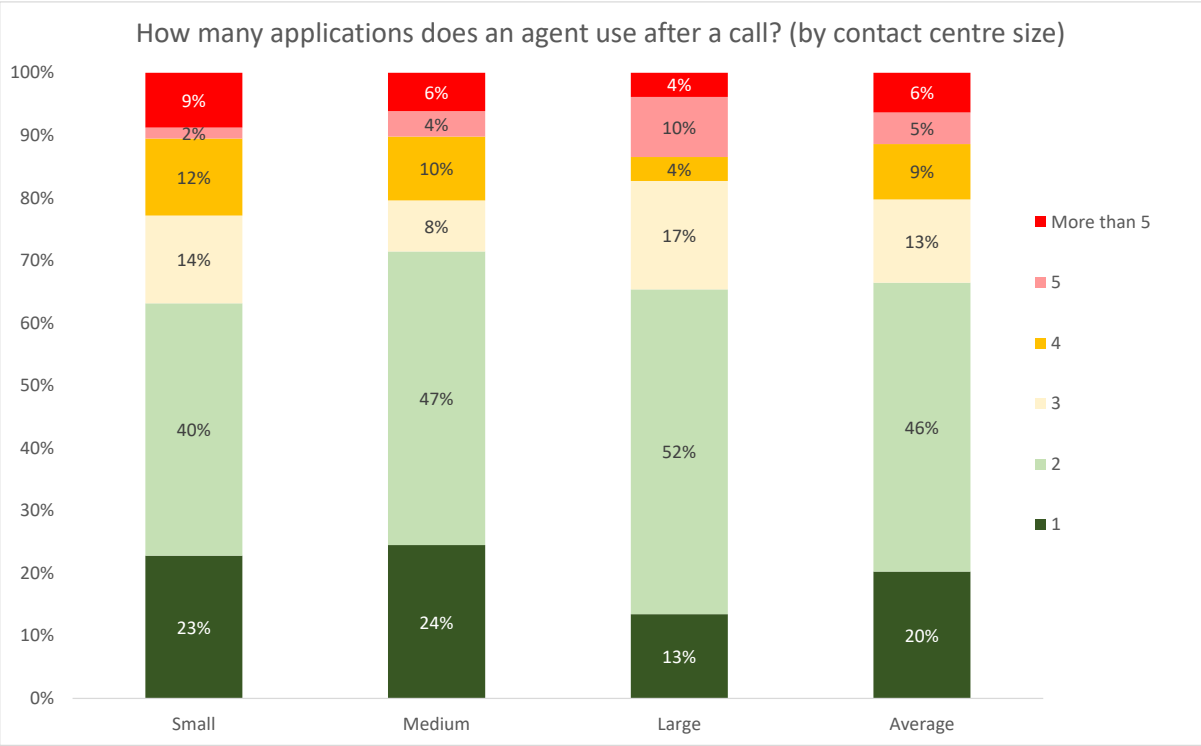
The post-call wrap-up stage wastes a lot of time and effort through sub-optimal manual processing of data. For example, a change of address request could take many minutes in a non-unified environment, with several separate databases having to be altered, which is itself a process prone to error, risking at least one extra unnecessary future phone call from the customer trying to put things right. Reducing wrap-up time through optimising the agent desktop is not simply a matter of writing consistently to the correct databases, although this is a key element. The contact centre also kicks off a number of processes elsewhere in the enterprise: it is the prime mover for sending out documents, instructing the warehouse to release goods, arranging deliveries, taking payment and many other key elements to a successful customer-business transaction. Automation solutions (including RPA) can handle these processes in a consistent, accurate and rapid manner.

Additionally, manual inputs involved in transferring data during wrap-up commonly lead to data entry and processing errors, causing an adverse effect on operational efficiency, contact centre cost, performance and customer satisfaction. Cost per call rises, productivity per agent declines and first-call resolution rates slip as more calls are escalated due to the complexity of the systems hindering agents, rather than helping them. So we can see that poor application integration and presentation at the desktop level has a direct and negative effect on those long-term contact centre strategies deemed most important and desirable, such as customer satisfaction, lower first-time resolution and reduced escalation levels.

Looking at post-call applications, agents generally have fewer to navigate in the wrap-up process, although only 20% of respondents allow agents to use a single application.

The need to enter information in multiple applications will tend to increase post-call wrap-up to a point where the agent spends a considerable amount of their time unavailable to take more calls. Historically, 10-15% of an agent's time is spent on post-call wrap-up.

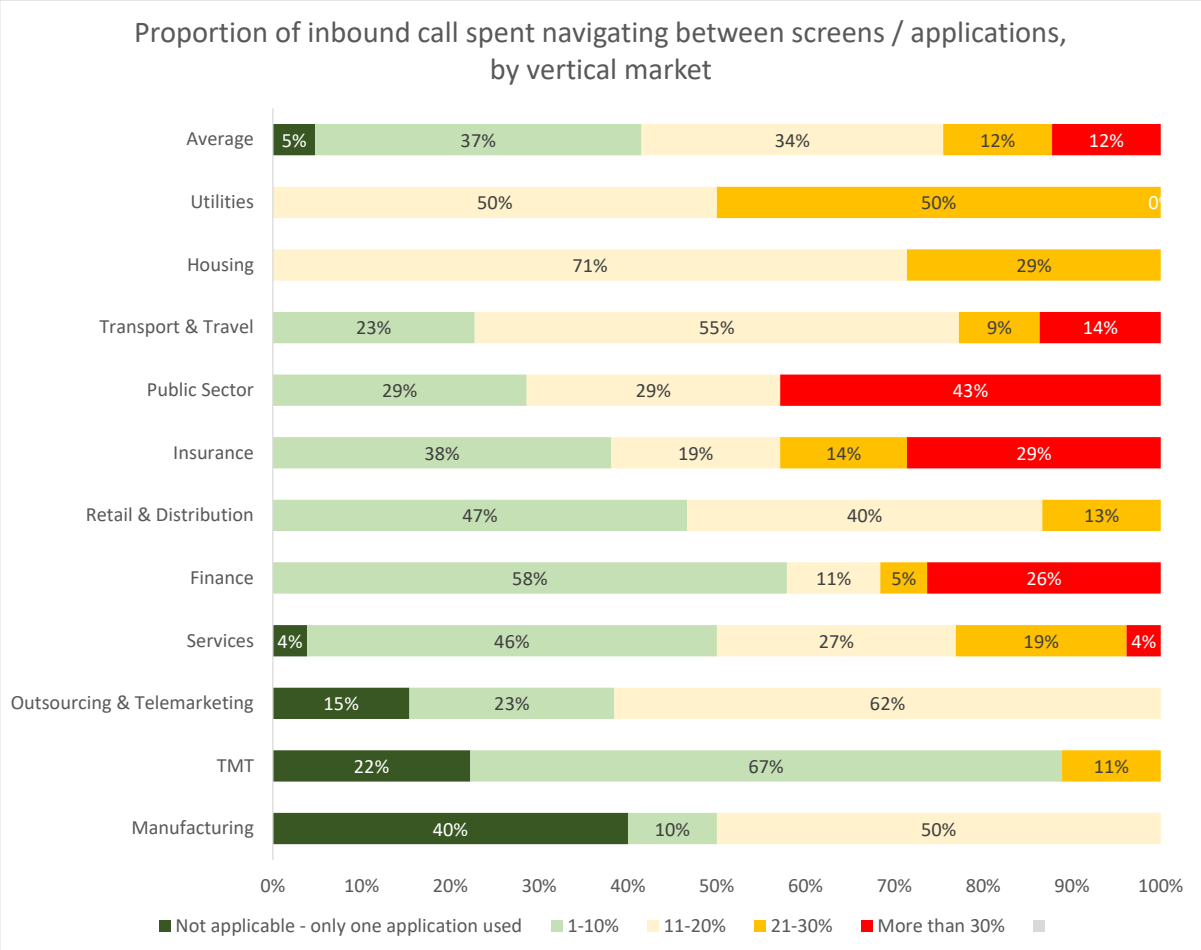
Figure 54: How many applications does an agent use after a call? (by contact centre size)



Survey respondents were asked how much time their agents spent navigating between screens or applications as a proportion of the overall call length.

58% of those respondents reported that their agents spent over 10% of the call's time in moving between screens and applications, and those in utilities, insurance, housing and the public sector were most likely to report excessive amounts of time spent doing this.

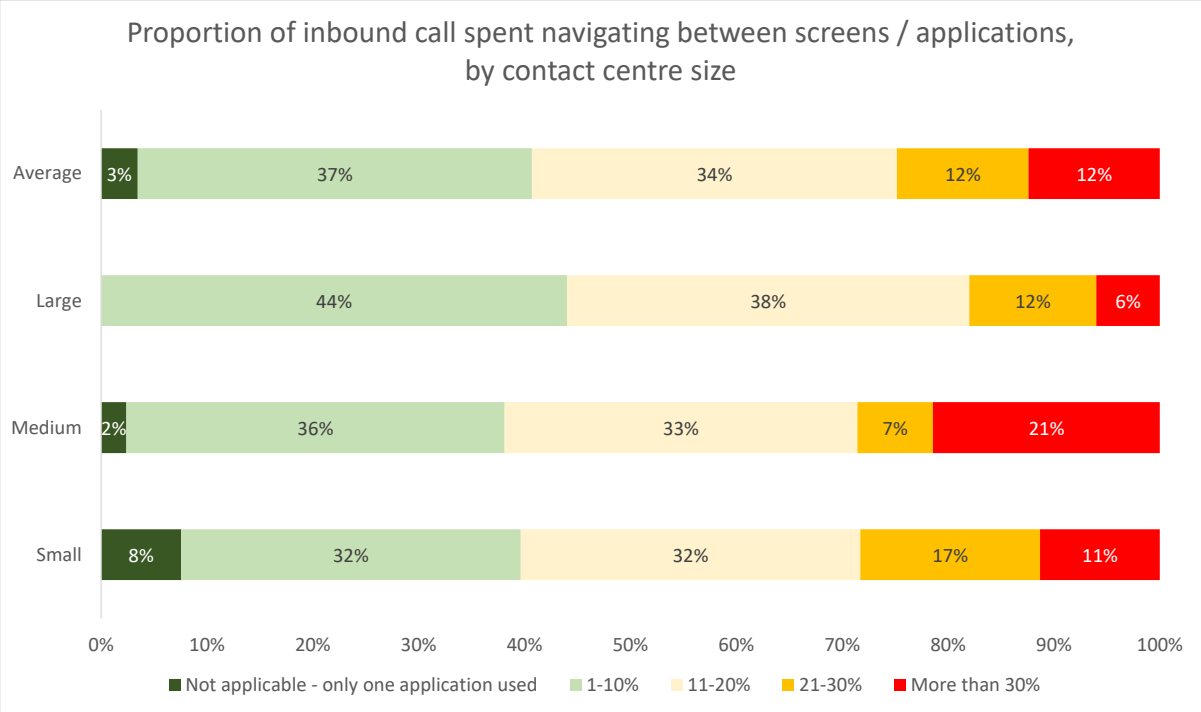
Figure 55: Proportion of inbound call spent navigating between screens / applications, by vertical market



It might be expected that larger operations, which generally have more systems, screens and processes to handle, would be more likely to require an agent to spend very significant amounts of time in navigating between applications while on a call but there is no clear pattern here.

18% of large operations, 28% of medium-sized contact centres and 28% of small operations report agents spending over one-fifth of call time on navigation.

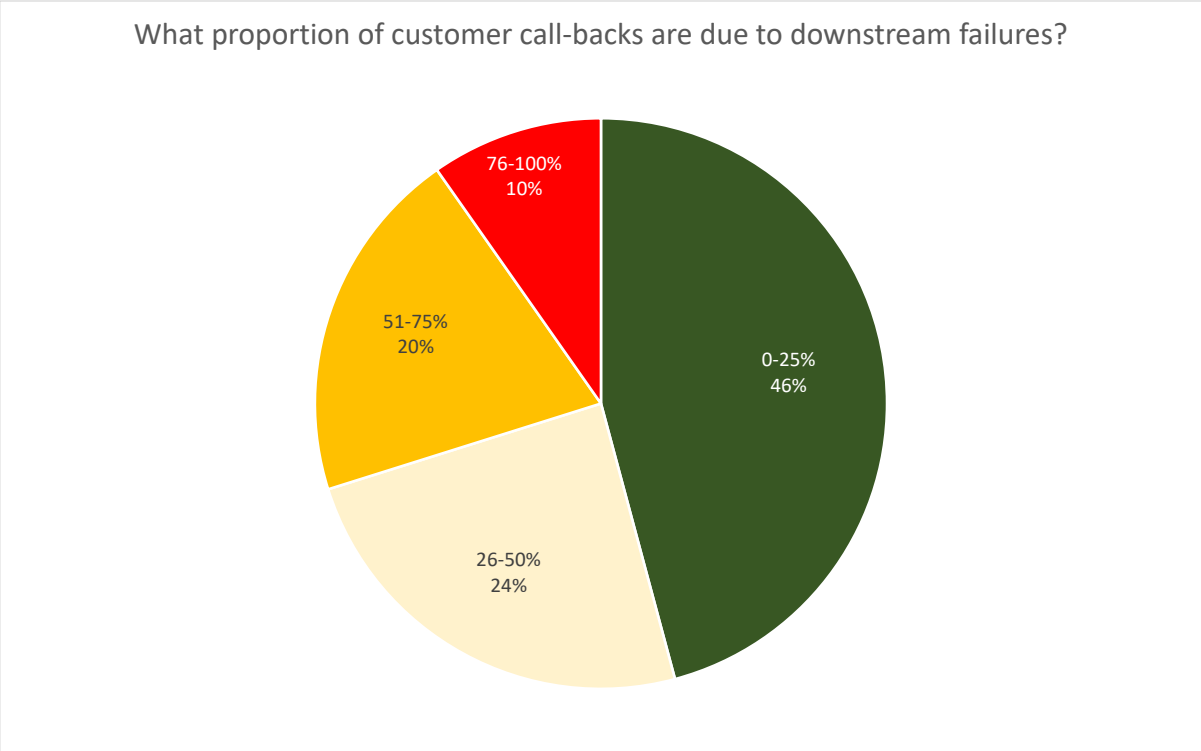
Figure 56: Proportion of inbound call spent navigating between screens / applications, by contact centre size



A failure to start the correct processes and provide consistent and accurate data to the applications and databases which require it can mean that downstream processes are not initiated successfully, or do not have the information to fulfil their purpose. In such cases, contact centres will receive call-backs from unhappy customers chasing the progress of the order or process, which impacts upon cost, agent availability and of course, customer satisfaction.

The following chart shows the proportion of customer call-backs received about downstream failures. Not all of these will necessarily be caused by agent inaccuracies in data input or process initiation – systems and processes outside the contact centre can fail too – but it would be worth companies investigating how many of these could be explained by a failure within the contact centre, and calculate how much agent desktop automation could help in avoiding these unnecessary call-backs.

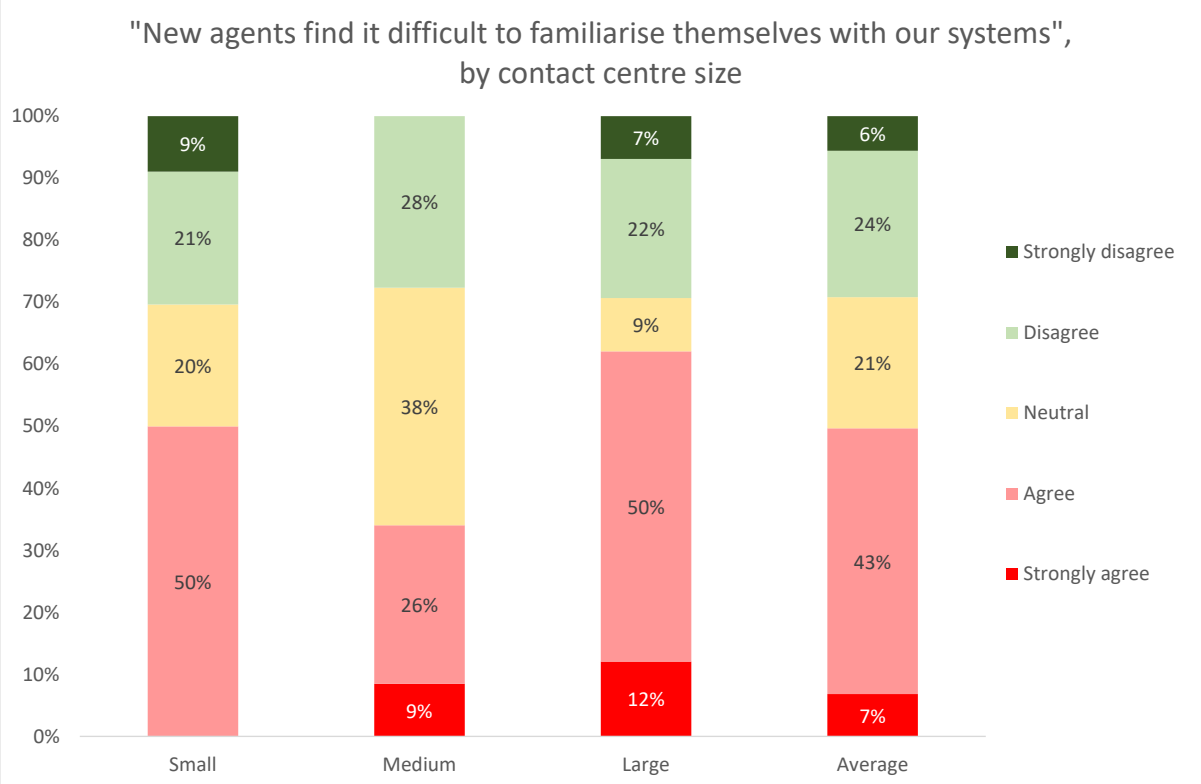
Figure 57: What proportion of customer call-backs are due to downstream failures?



The need to integrate legacy applications was looked at earlier in this chapter, and the following charts investigate some of the other potential business drivers for the implementation of agent desktop automation.

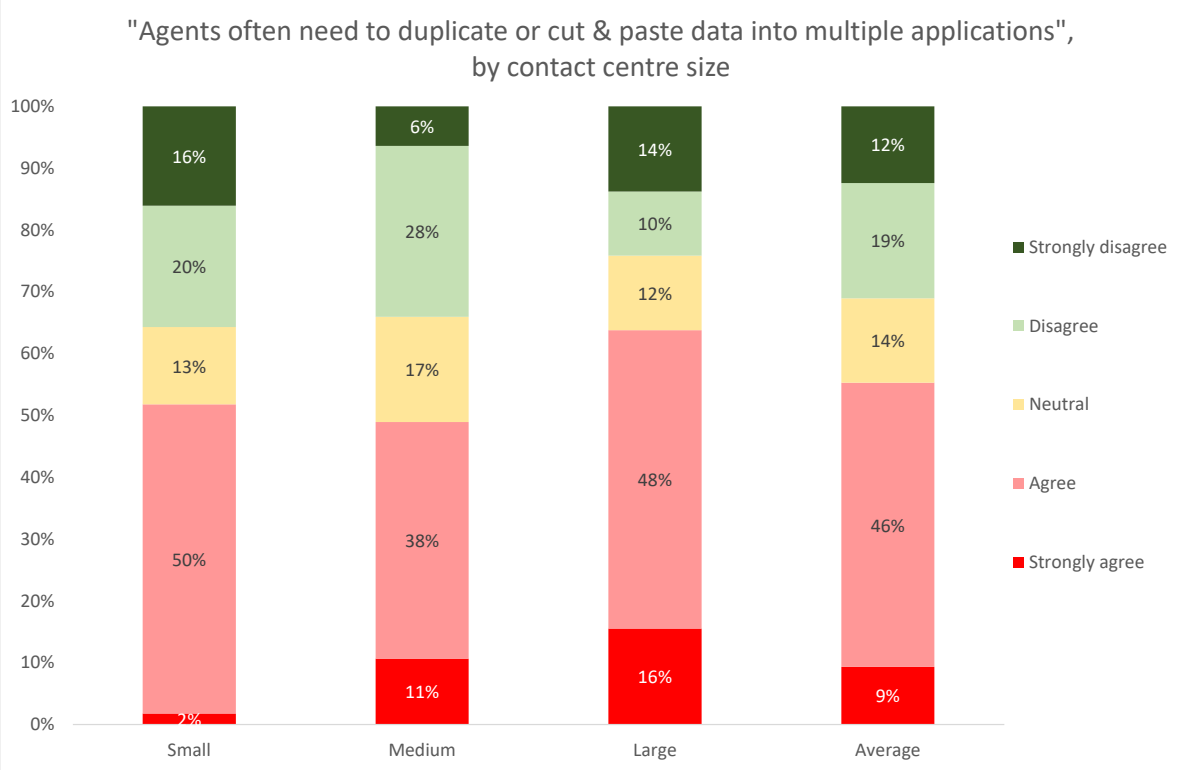
62% of respondents from large contact centres agree or strongly agree that new agents find it difficult to familiarise themselves with systems when they first start in the contact centre, which leads to sub-optimal performance, errors in processes and low morale.

Figure 58: Agreement with statement: "New agents find it difficult to familiarise themselves with our systems", by contact centre size



55% of respondents agree or strongly agree that it is necessary for agents to duplicate or cut-and-paste data multiple times across systems, leading to wasted time and transcription errors.

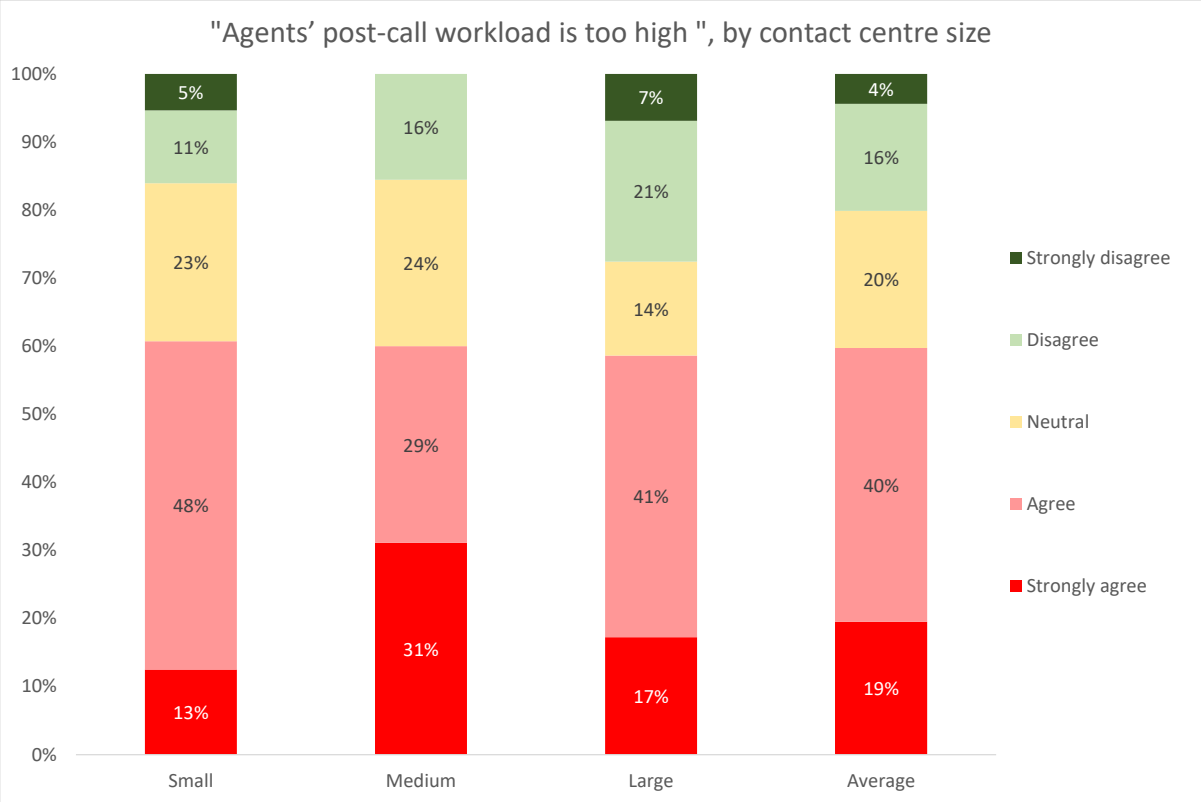
Figure 59: Agreement with statement: "Agents often need to duplicate or cut & paste data into multiple applications", by contact centre size



With agents spending 10-15% of their time on post-call admin, starting up back office processes, or making sure that data has been entered in all appropriate fields and databases, the resultant negative effect on agent availability and queue lengths can be considerable.

Respondents from all size bands report problems, with 59% agreeing or strongly agreeing that post-call workload needs to be reduced.

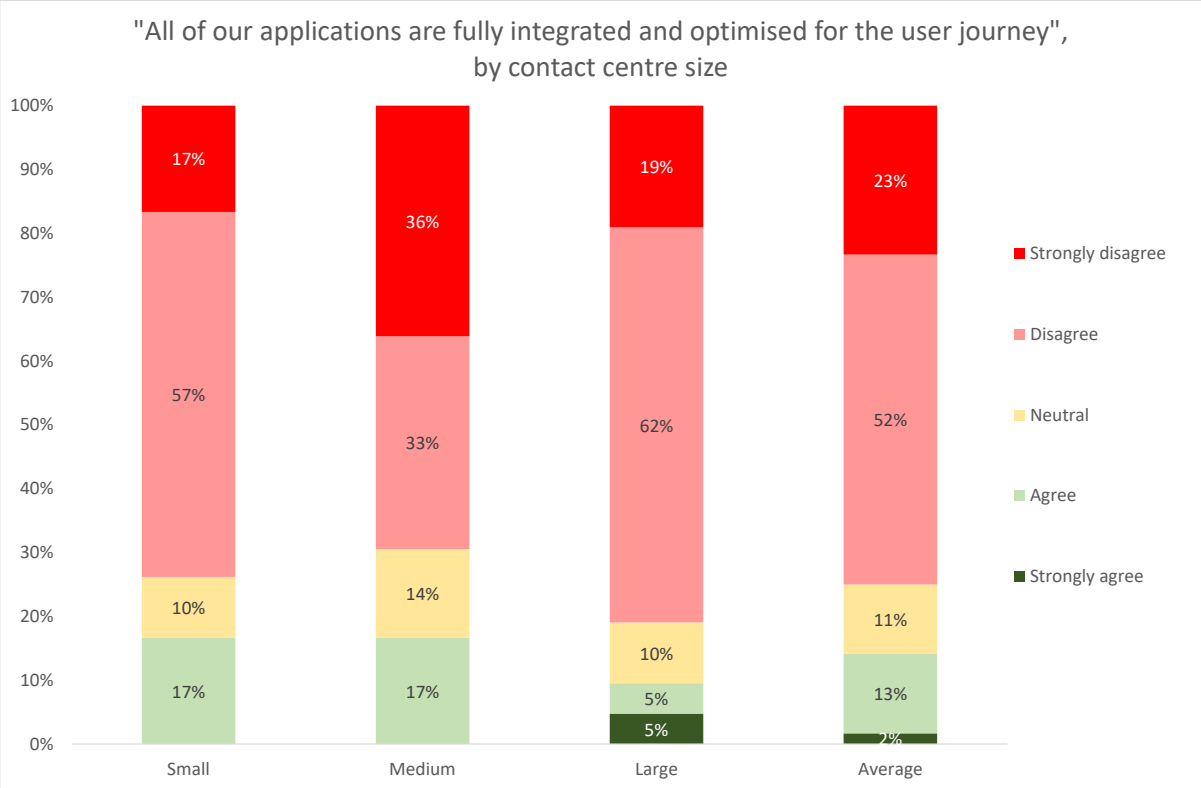
Figure 60: Agreement with statement: "Agents' post-call workload is too high ", by contact centre size



Survey respondents were also asked whether they felt that all of their applications were fully integrated and optimised for the user journey.

Three-quarters disagreed that this was the case, with contact centres of all sizes stating that there was still a general need for much deeper integration of applications.

Figure 61: Agreement with statement: "All of our applications are fully integrated and optimised for the user journey", by contact centre size

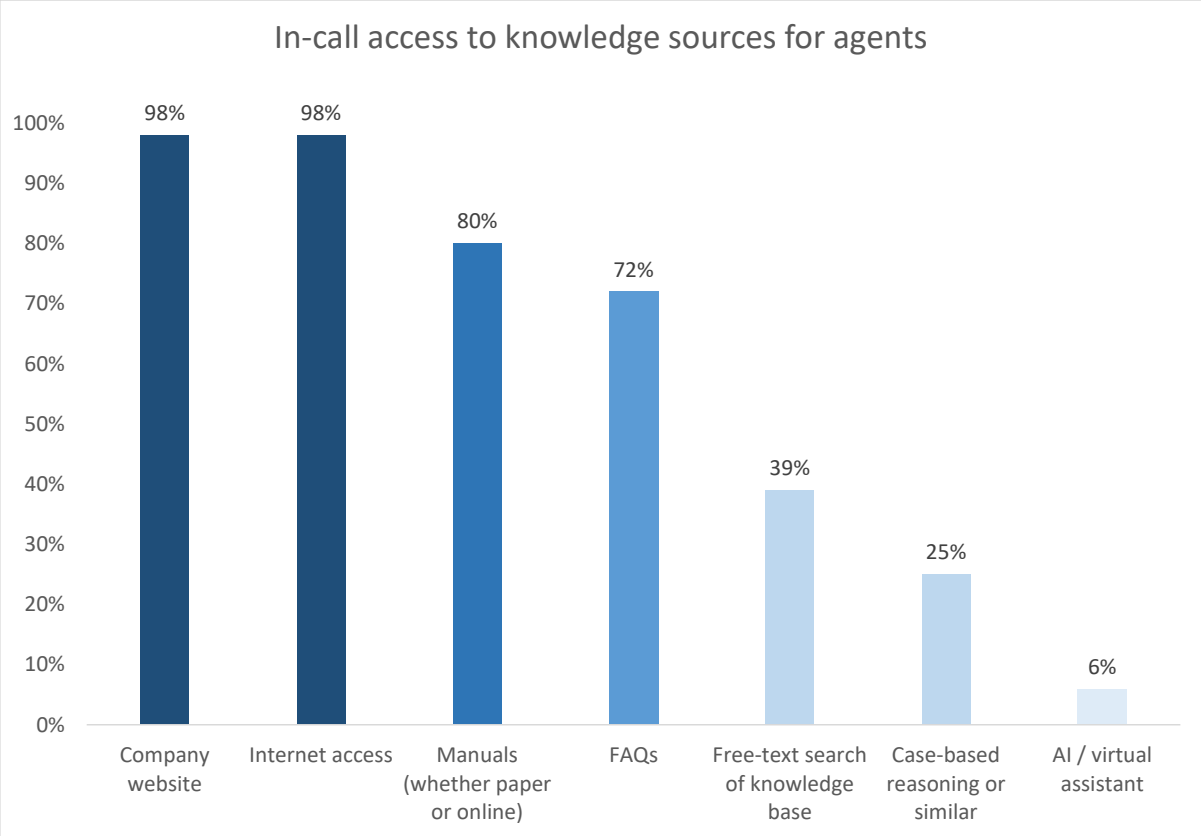


It is worth looking in more depth at how agents gather information from knowledge sources within a call, and how an integrated agent desktop could possibly assist them in being quicker and more helpful to their customers.

Within a call, the agent is likely to have to use multiple knowledge sources, which will also take longer and run the risk (especially for new agents) of missing vital information that is available but perhaps hidden away. Agent desktop automation can gather knowledge sources and provide them to the agent in a unified manner, and any updates to this information can be shared automatically across applications and systems, providing an immediate, up-to-date and consistent source of information. It can also assist with agent tasks in the background, provided guided assistance at specific stages of the call, including dynamic scripting and compliance hints.

The following table shows the knowledge resources that agents have within a call. Finding, reading, assimilating and using information actually within a call as very difficult and is rarely done seamlessly. An application such as case-based reasoning, which prompts the agent to ask specific questions, drilling down to find the right answer, is very useful but only 25% of agents have access to this sort of dynamic application and only 6% have access to an AI-enabled virtual assistant. Most agents have to search around on a company website or FAQ page, or rely on a wide, unsupported search of knowledge bases or the wider Internet, hoping to get lucky.

Figure 62: In-call access to knowledge sources for agents

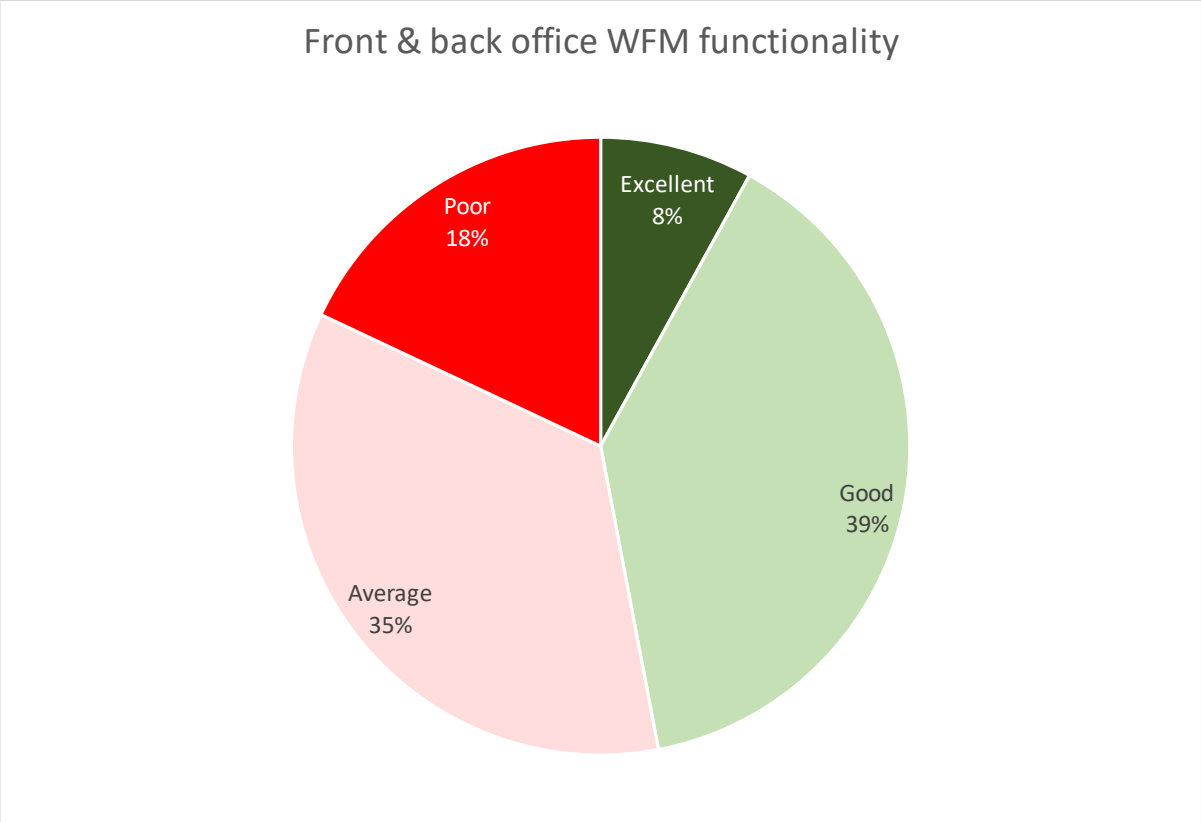


Not only do most agents have numerous in-call / post-call applications as well as non-integrated knowledge sources to contend with, but most also have hard-copy documents in their workspace that they have to refer to as well. A small minority of respondents had effectively a clean-desk policy with no hard copy reference material available to agents, a figure which was lower for agents working in a mixed service/sales environment, who tend to have to cover a wide range of varying topics.

Back office integration is placed as a top 3 technology investment priority by around 20% of contact centres (particularly large operations), but the current reality for many is that the back office exists for many businesses as an entity separate from the contact centre.

An example of this can be seen when looking at how businesses schedule back office work: although the back office depends in large part on what the front office / contact centre is doing, the scheduling of back office resources is not always integrated with the contact centre – front/back office workforce management is used in less than half of contact centres that use WFM solutions – and as the following chart shows, is thought of as being average or poor in more than half of these cases.

Figure 63: Integrated front & back office workforce management functionality



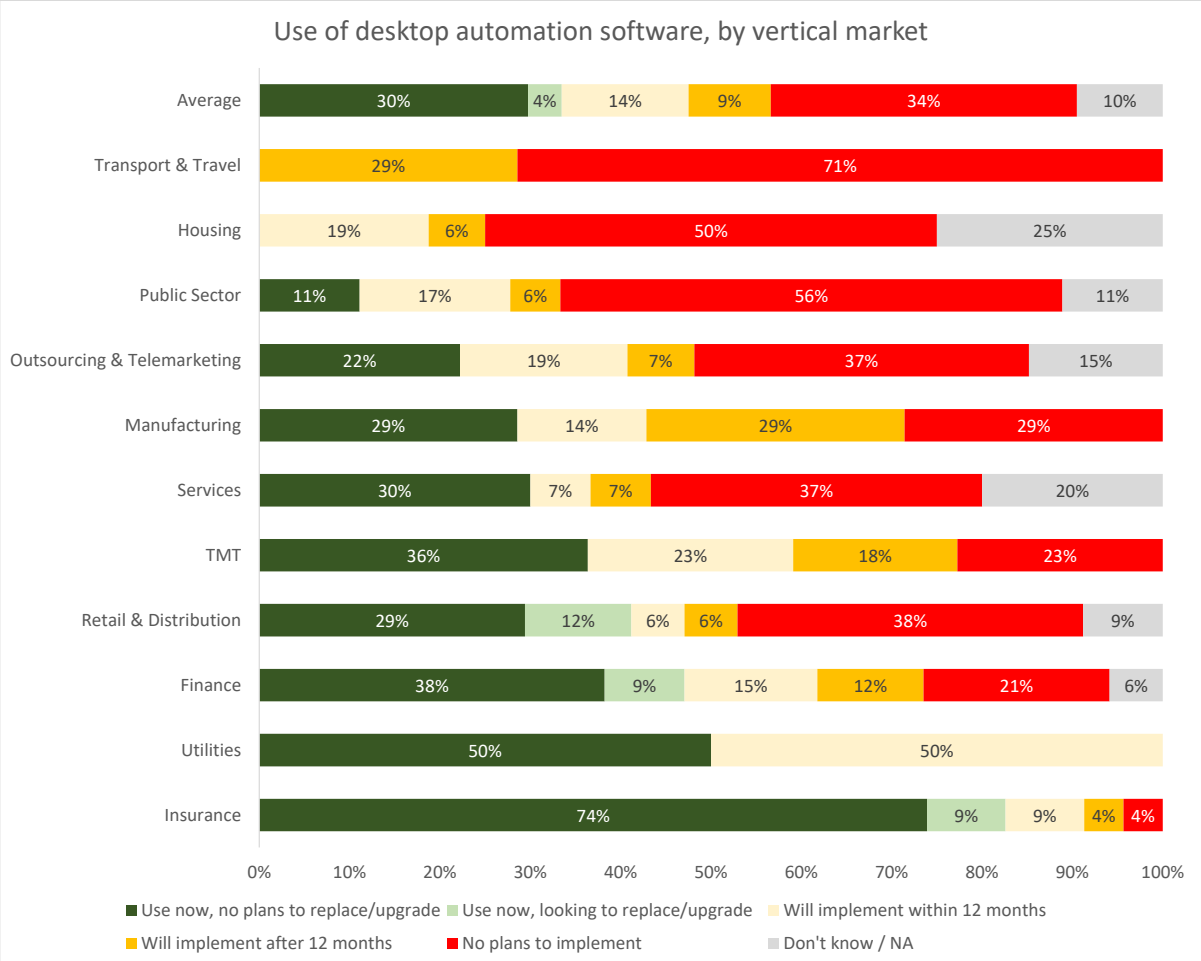
CURRENT AND FUTURE USE OF DESKTOP AUTOMATION

Current reported levels of desktop automation usage (including RPA and desktop integration solutions), are growing, with 34% of respondents stating that they are using it which is an increase on last year's figure of 25%.

Those in insurance, utilities, retail and finance are most likely to report using desktop automation / RPA, with fewer respondents in public sector, housing and transport & travel doing so, probably as a result of their typically small contact centre size.

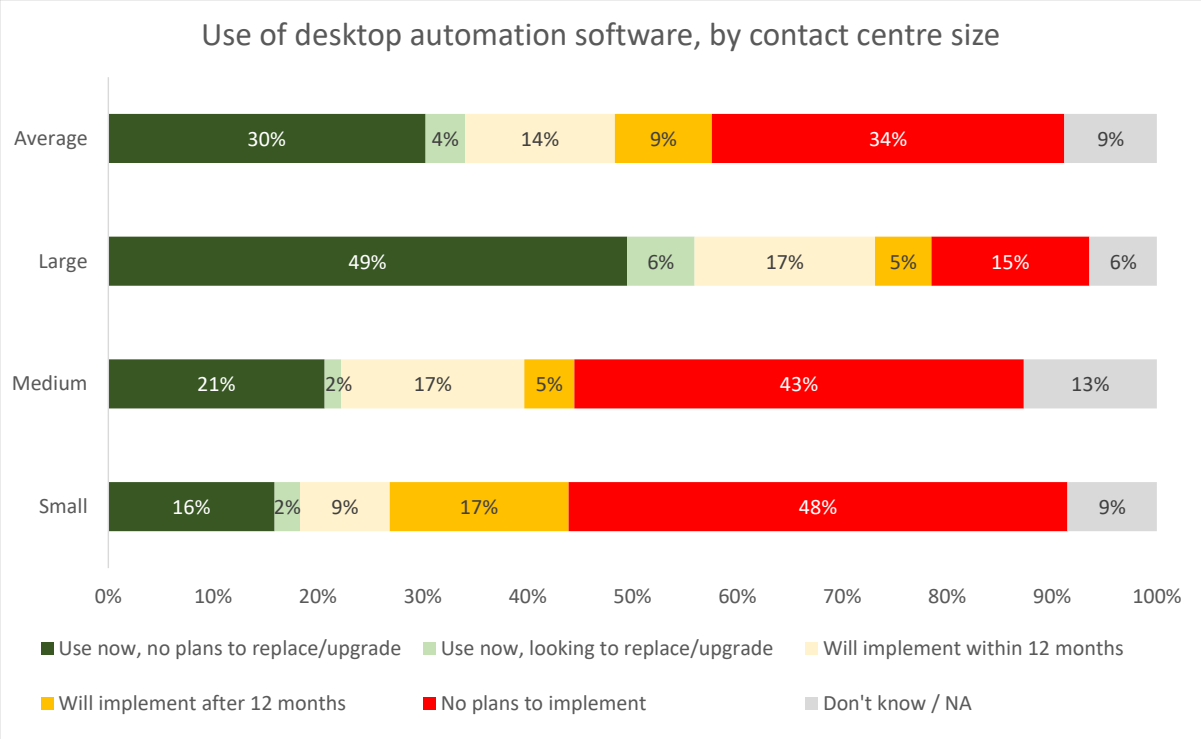
There is a significant interest in implementing desktop automation, especially in utilities and TMT, where back office processes can play a large part in the success of the overall customer experience, and where there may be many systems, processes and applications for an agent to familiarise themselves with.

Figure 64: Use of desktop automation software, by vertical market



Looking at the use of desktop automation by contact centre size, it is unsurprising to see that large 200+ seat contact centres are much more likely to be using it now, and also exhibit the greatest level of interest in the relatively short term, although many smaller operations are also enthusiastic about this.

Figure 65: Use of desktop automation software, by contact centre size



Customer security processes are about two factors: are you who you say you are, and are you allowed to do what you are trying to do?

Until a few years ago many businesses relied on trust that the caller was who they claimed to be, asking only for a name and address. Today, strong identity verification processes are now seen as critically important and most calls that are not merely initial enquiries will need to verify a caller's claimed identity by asking for additional information that only the real customer should know. The increasing focus upon fraud detection, strengthened by the need to comply with regulations, has meant that identity verification continues to become more important year-on-year, yet businesses have been slow to take up alternatives to the traditional challenge/response method.

Identity theft is high-profile, and businesses have tightened security and been seen to do so by their customers: fraud prevention is a brand issue, as well as a regulatory one. While fraud certainly causes losses to a business, along with the threat of regulatory fines, risk of losing customers' confidence by being seen as lackadaisical about security is at least as great a risk. Criminals' methods and the technology used have become more sophisticated, and businesses responded by introducing ever more complex identity verification processes.

Increasingly, customer identity verification has become intrusive and inconvenient for the customer, who is expected to remember an increasing array of IDs, passwords, PINs, memorable information, or details of their last transactions.

Customers can undergo extensive and complex security procedures before being permitted to make their enquiry or place their order – not only reducing customer satisfaction, but also costing businesses time and money. It can take 30-60 seconds to verify a customer's identity manually: the UK contact centre industry spends billions of pounds each year just to verify the caller is who they claim to be, and are permitted to do what they are asking. Many customers struggle to remember multiple passwords, and with numerous website hacks taking place, passwords that are used for more than one activity risk being exposed and used by fraudsters.

Identity verification processes are typically based on one or more authentication factors that fall into the following generally-accepted categories

- something you know - e.g. password, PIN or memorable information
- something you are - a biometric such as a fingerprint, retina pattern or voiceprint
- something you have - a tangible object, e.g. a PIN-generating key fob, or the 3- or 4-digit security code on payment cards.

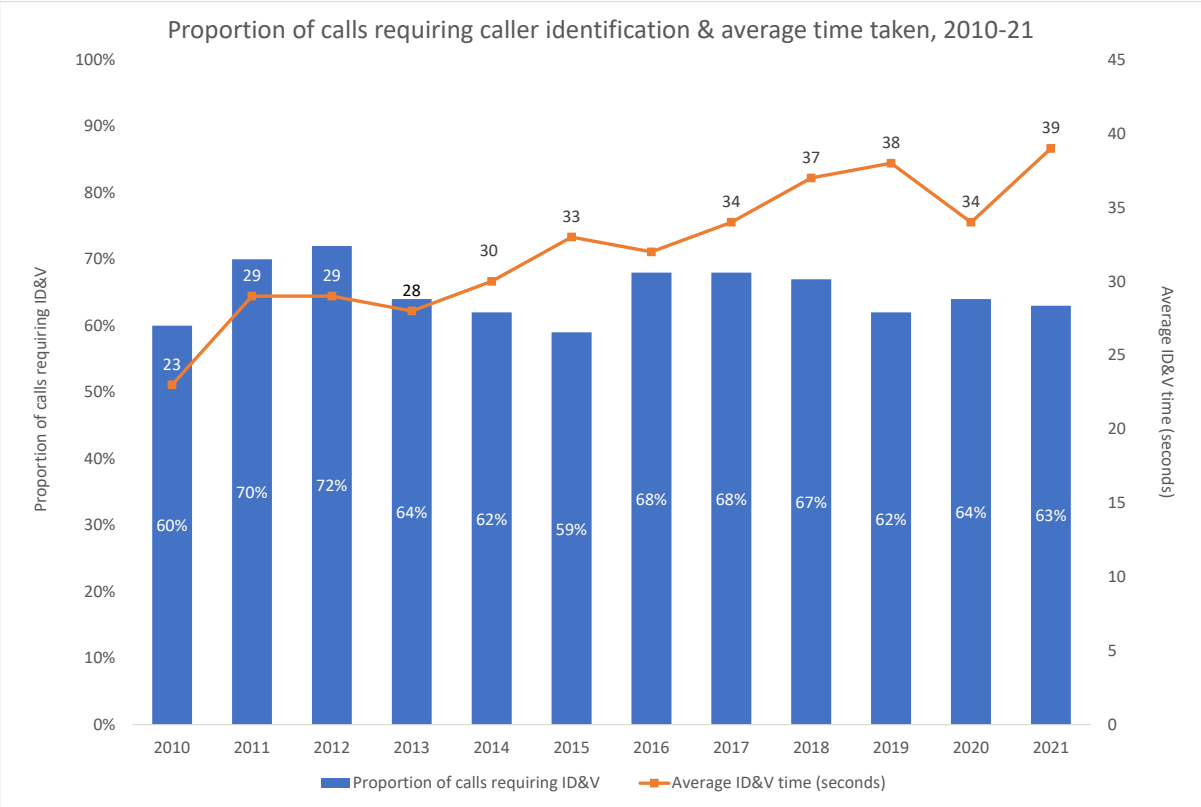
Combining these factors creates a more complex, and potentially more secure two-factor or three-factor authentication process, although being able to rely upon a previously enrolled voiceprint or having the calling device, location and other factors assessed pre-call (rather than have to remember various pieces of information or carry round a code-generating device) can make identity verification far quicker and easier for the customer.

This is also likely to impact positively on agent engagement: an agent taking 80 calls per day will spend around 45 minutes of an eight-hour shift doing the mundane and repetitive task of taking customers through security.

Over the past decade, our surveys have found consistently that around 60%-70% of calls require identity checks, which take considerably longer due to more stringent testing (a rise in the length of authentication of around 70% since 2010).

Although in-call efficiency has improved, identity verification is certainly no faster than it ever was: all factors which drive up the cost of initial identification.

Figure 66: Proportion of calls requiring caller identification & average time taken, 2010-21

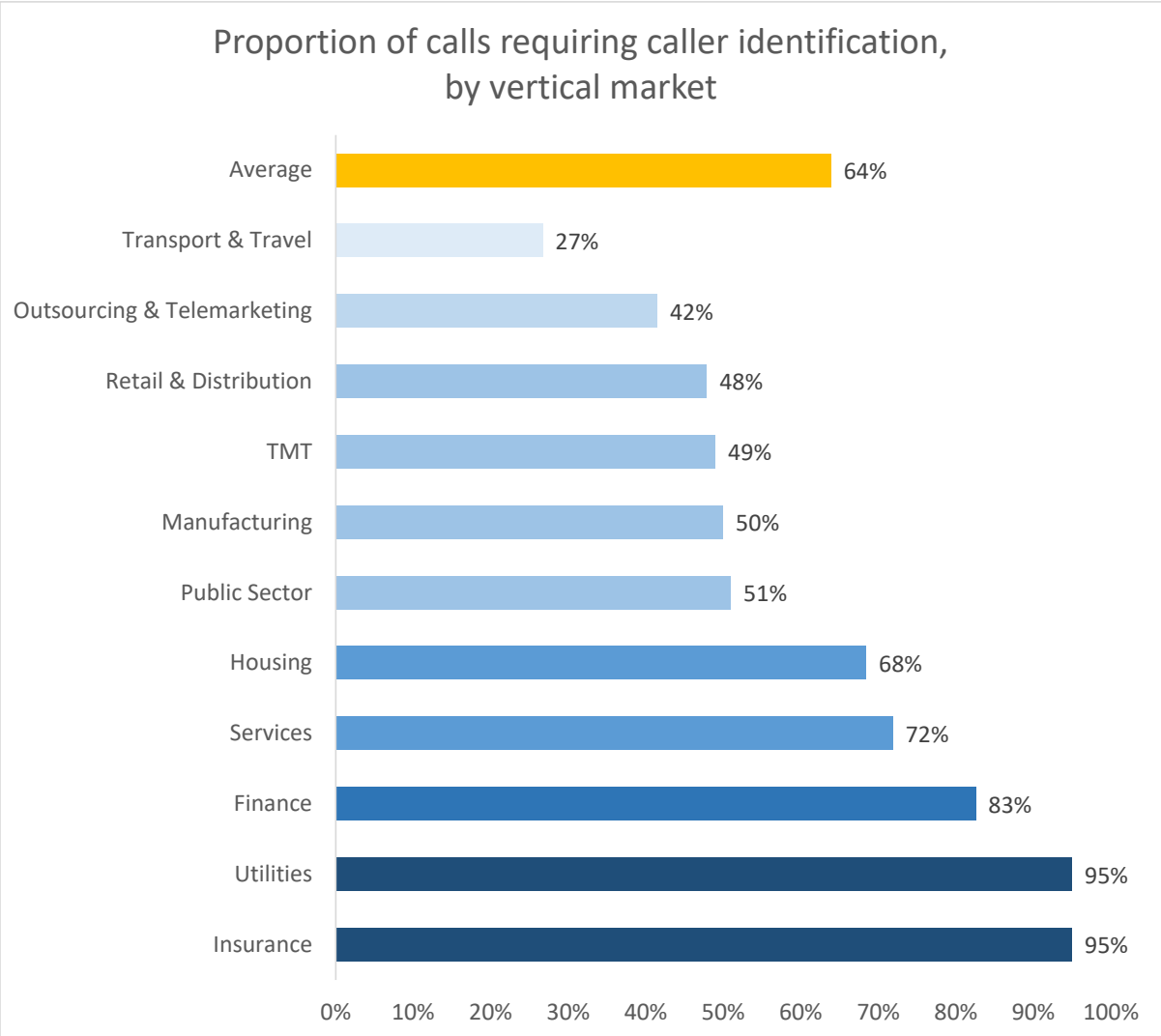


Industry-wide, a mean average of 63% of UK inbound calls are stated to require caller identity verification.

33% of respondents state that all callers go through identity verification, with 14% stating that they never do so. Insurance, finance, housing, services and utilities operations are the sectors most likely to require identity verification. Retailers and outsourcers (with initial sales order taking), and transport & travel (sales or travel information lines) are the least likely.

As we would expect, service-oriented operations are far more likely than sales-focused contact centres to require authentication, as access to user accounts is required.

Figure 67: Proportion of calls requiring caller identification, by vertical market



95% of respondents who authenticate identity do so through human means, taking an average of 34 seconds to do so.

Respondents that use IVR or speech recognition also use the agent to double-check in a large proportion of instances once the call is passed through, wasting the caller's time and increasing the contact centre's costs.

Figure 68: Caller identity authentication methods (only those contact centres which authenticate some or all calls)

Identification method	Proportion of callers identified using this method
Agent	98%
DTMF IVR (touchtone)	7%
Speech recognition	2%
Voice biometrics	1%
NB: total is greater than 100% as some calls may require multiple identification methods	

The mean average time taken to authenticate using an agent has increased to 39 seconds. The figure for authentication using an IVR is somewhat higher at 55 seconds. As the agent's time is not used, the call duration (from the operation's perspective) and cost per call is reduced.

Figure 69: Time taken to authenticate caller identity using an agent (seconds)

	Seconds to authenticate caller identity using an agent
1st quartile	20
Median	30
3rd quartile	60
Mean	39

The unnecessary cost of caller authentication

Using figures from this report and other ContactBabel research, it is possible to estimate the industry-wide cost of customer identification authentication using an agent. Please note that as respondents change each year, this figure is an indicative estimate based on this year's survey and should be read as such.

63% of all calls require a security and identification process to be completed first. This year, 98% of calls were reported to be authenticated by agents. On average, it takes 39 seconds to go through security. Using these statistics, it is possible to estimate how much UK contact centres spend each year on screening customers by using agents.

Inbound calls per year (handled by agents): 6.75bn[4]

Proportion of inbound calls that require security and identification checks: 63%

Average length of agent-handled security and identification check: 39 seconds

Average call duration: 6m 33s (393 seconds), therefore 9.9% of the call is ID&V

Mean average cost per inbound call: £5.42

Cost of time spent on agent-handled security and identification check: 53.7p per call

Proportion of calls requiring ID&V: 63%, of which 98% require an agent

Therefore, overall cost of agent-handled security and identification checking: £2.24bn per year

[4] ContactBabel, "UK Contact Centres 2021-2025: The State of the Industry"

To recap, there are several factors to consider when trying to predict changes in the ways in which customers are identified:

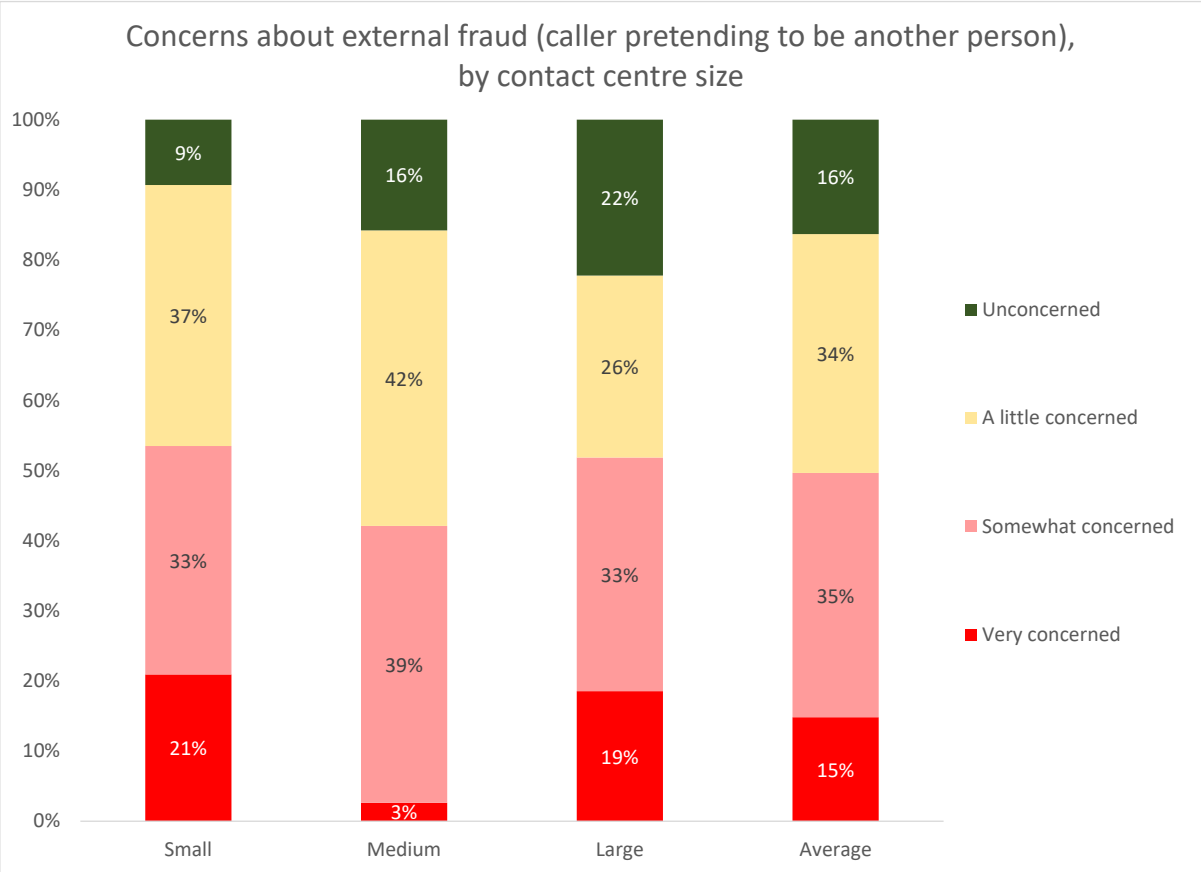
- businesses want to reduce the cost of fraud
- customers want convenience, but also their personal information and assets protected
- businesses need to comply with existing and new laws and regulations
- the contact centre industry spends excessive amounts of money on identifying and verifying customer identities
- relying on a single method of customer identification relies heavily on it being fool proof
- existing methods of identity verification (e.g. PIN, password, device, etc.) are not secure and/or are user-unfriendly
- it is not just criminal fraud that identity verification aims to stop. The issue of privacy, especially in the healthcare vertical market, is a powerful driver for using right-party authentication to facilitate personal information sharing. This is also the case when using speech-enabled automated outbound calls, it being necessary to make sure that the person answering the call is the one to which the business actually needs to talk.

Respondents were asked to rate the level of concern they had about the possibility of fraud coming from various sources.

52% of respondents from large contact centres and 55% from small operations stated that they were concerned to some extent about external fraud, defined within the survey as the caller pretending to be another person.

This shows that customer identity verification is taken very seriously and that many organisations of all sizes are aware of the need for strong fraud control.

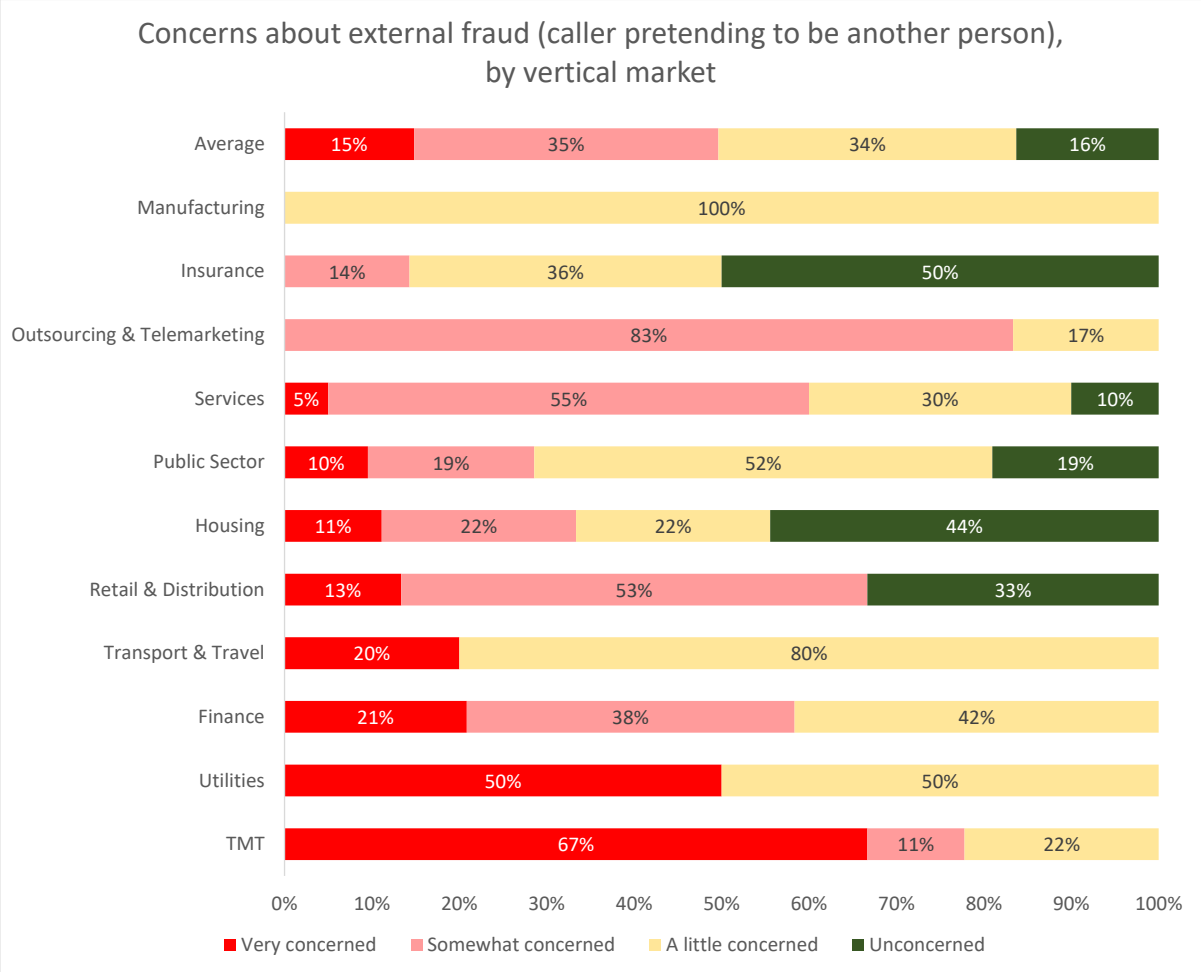
Figure 70: Concerns about external fraud (caller pretending to be another person), by contact centre size



Although some of the vertical markets studied did not provide enough responses for a rigorous statistical assessment, it is still worth looking at concerns over external fraud by vertical market.

Although the finance sector is the most likely target for financial fraudsters, the retail, utilities and TMT sectors also report concerns about external fraud.

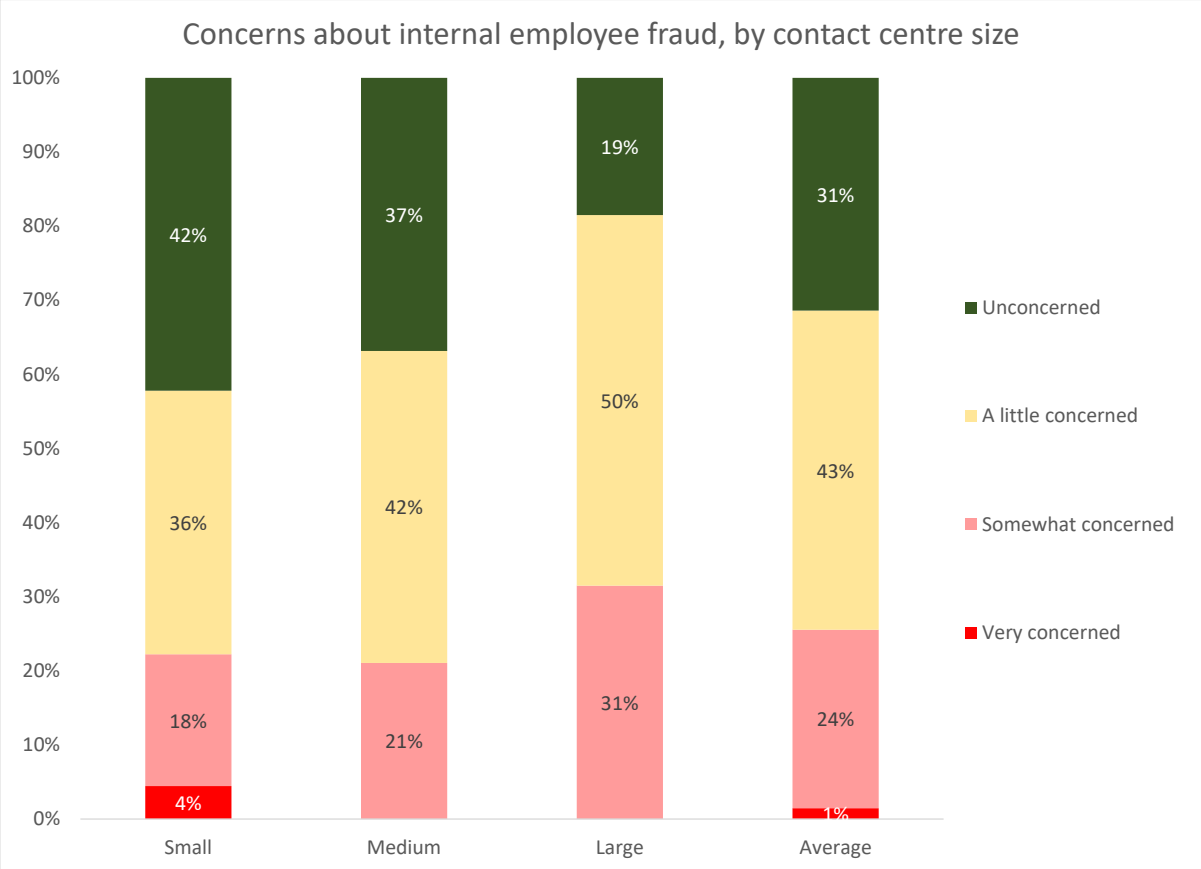
Figure 71: Concerns about external fraud (caller pretending to be another person), by vertical market



Levels of concern about internal employee fraud is fairly low this year, despite the risks associated with remote working.

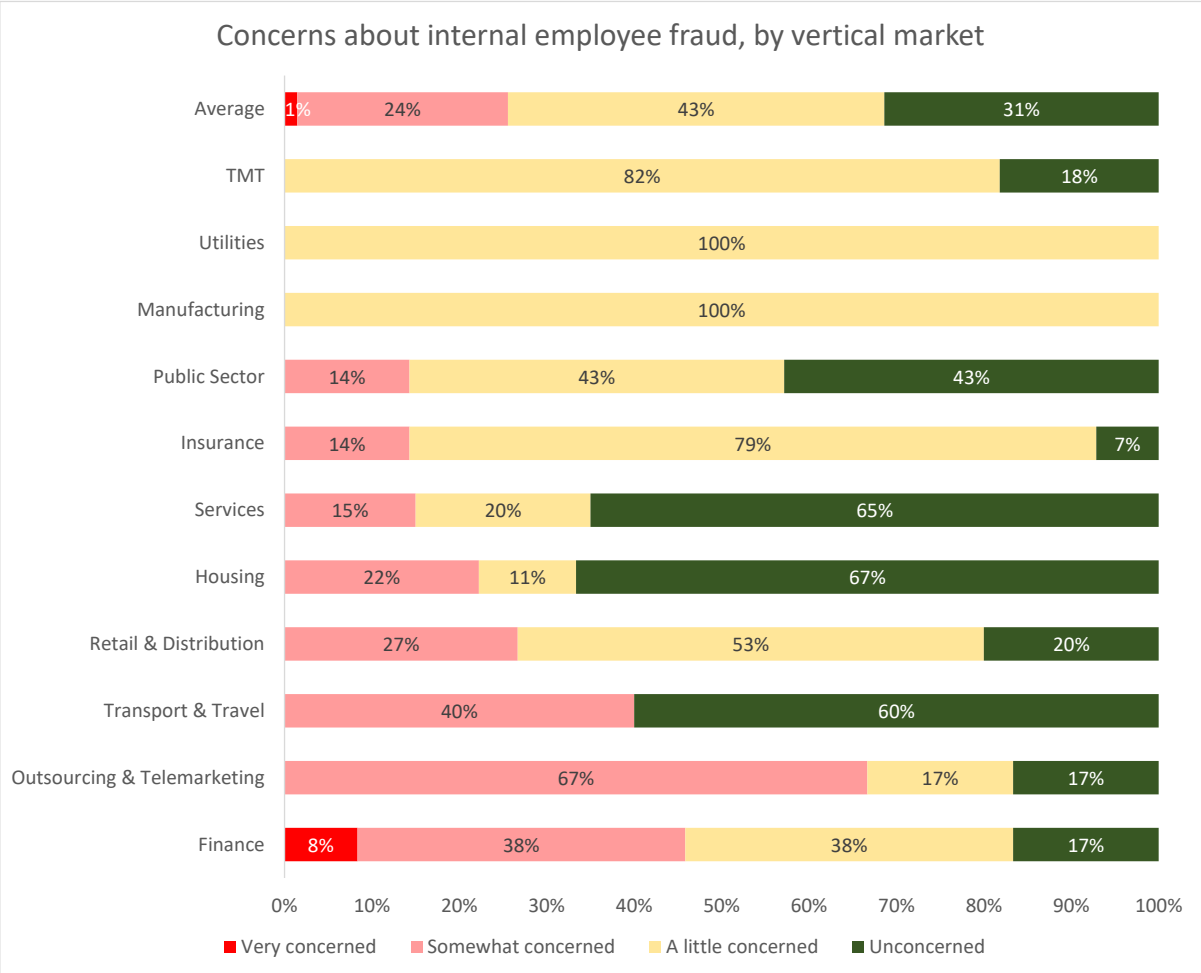
31% of respondents from large contact centres were somewhat concerned about this, and only 19% unconcerned.

Figure 72: Concerns about internal employee fraud, by contact centre size



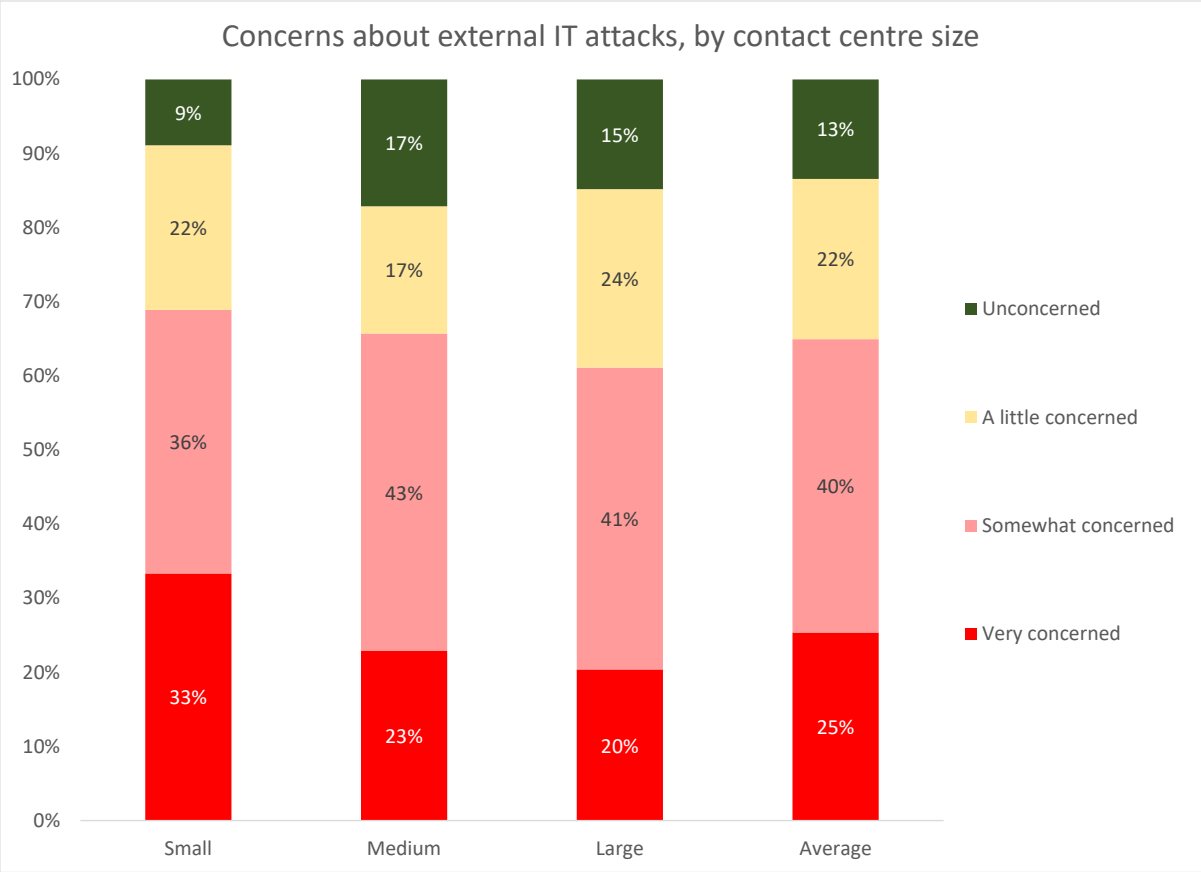
Looking at a vertical market level, finance, outsourcing and transport & travel respondents had the greatest worry about internal fraud.

Figure 73: Concerns about internal employee fraud, by vertical market



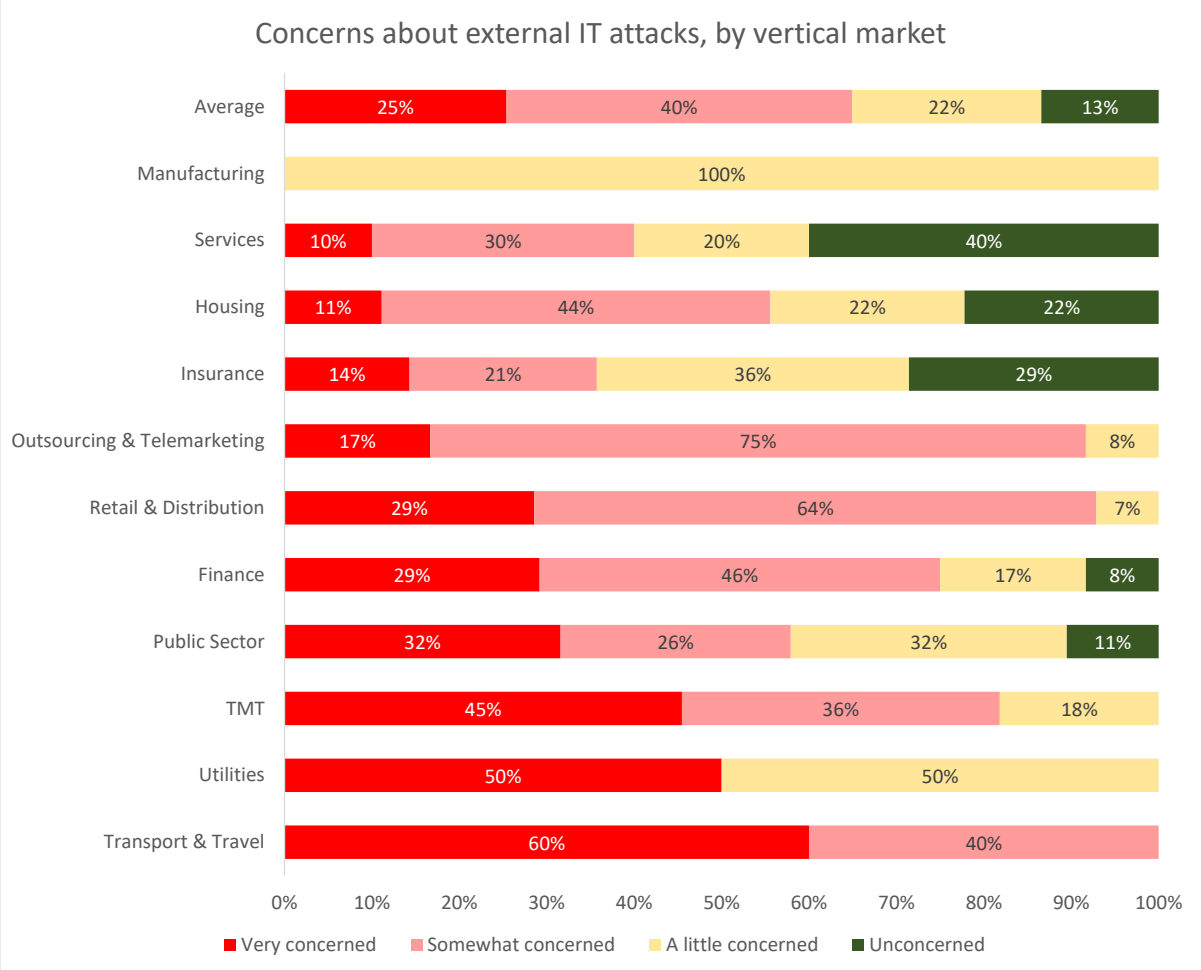
Concerns about external IT attacks were consistently significant across all size bands.

Figure 74: Concerns about external IT attacks, by contact centre size



Most vertical markets show deep concern about the possibility of external IT attacks on their business, with the transport & travel, utilities and TMT sectors showing significant levels of worry about this form of incident.

Figure 75: Concerns about external IT attacks, by vertical market



Biometric technology uses physiological or behavioural characteristics to verify a person's claimed identity. Physiological biometrics includes fingerprints, iris, or retina recognition, and voice verification. Behavioural biometrics includes signature verification, gait and keystroke dynamics.

Of these, voice is the only biometric that can currently be used over the phone, making it a viable identity verification solution for contact centres. It should be noted that some businesses now allow thumbprint-enabled smartphones to be used as trusted devices to log into mobile apps.

Voice verification systems use spoken words to generate a voiceprint, and each call can be compared with a previously enrolled voiceprint to verify a caller's identity. Systems generate a voiceprint by using spoken words to calculate vocal measurements of a caller's vocal tract, thereby creating a unique digital representation of an individual's voice, as well as other physical and behavioural factors, including pronunciation, emphasis, accent and speech rate. These systems are not affected by factors such as the caller having a cold, using different types of phones, or aging.

A significant advantage of voice biometric verification is that both enrolment and verification can be done unobtrusively - in the background during the natural course of customers' conversations with an agent - using text-independent and language-independent technology. Real-time authentication significantly reduces average handle time and improves the customer experience by utilising voice biometrics to authenticate customers within the course of the conversation.

With this technology, contact centres can:

- Voiceprint the vast majority of customers for seamless passive enrolment: in the course of a conversation, a voiceprint is created for that customer which lies on record for them to be authenticated against on the next call
- Securely authenticate customers with no customer effort: the first few seconds of a call should be enough to match the customer's voiceprint against those on record
- Cut seconds off average handle time: no need for customers to answer numerous security questions as the conversation they are having provides enough information to identify them
- Significantly reduce fraud risk for all customers, and deter fraudsters when combined with other layers of security, for example, phoneprinting, which analyses the background audio of the call.

However, voice biometrics, while an excellent authentication tool, is not in itself enough to deter fraud attacks. In fact, researchers at the University of Alabama[5] found that a fraudster armed with just a few minutes of recordings of a person's voice, could build a model of the victim's speech patterns and successfully pass voice biometric security. A similar and more recent example of this can be viewed here[6]. As voice is a characteristic unique to each person, such attacks essentially give the attacker the keys to that person's privacy.

[5] http://www.biometricupdate.com/201509/uab-researchers-find-that-automated-voice-imitation-can-spoof-voice-authentication-systems
[6] https://www.digitaltrends.com/cool-tech/baidu-ai-emulate-your-voice/

The customer's experience

Since speaking is natural and intuitive, a well-planned implementation can result in a better customer experience that eliminates the need for PINs or passwords. For example:

- In the case of text- and language-independent authentication, the customer's voiceprint (collected on previous calls) is authenticated in the background during the natural course of conversation with an agent, while simply outlining their service request - minimizing both customer effort and time-to-service. There is no need to remember PINs or passwords, which greatly improves the customer's experience
- 'Account Number'-based voice verification - the caller is asked to speak their account number. The account number identifies the caller, and the spoken words are used to generate a voiceprint that verifies the caller is the account holder
- 'Challenge Response'. Typically, the customer is asked to repeat a series of numbers, e.g. "Please say 'one seven three four'". The spoken words are used to generate a voiceprint. The numbers spoken are usually different each time the caller phones and can be used to avoid instances where the fraudster has recorded the customer's voice.

In cases where a two-factor authentication process is required, voice verification can be combined with a 'something you know' - such as an answer to a memorable question. Real-time agent guidance can prompt agents to ask a further security question within the call if the process requires it.

The business benefits

Businesses benefit from two types of savings. These can be illustrated in the following example:

A contact centre receives 10 million inbound calls per annum with the existing identity verification procedure taking on average 39 seconds and being performed by an agent:

- The cost of an agent to verify a caller's identity manually is 53.7p per call (£5.37m per annum): while voice biometrics won't remove this completely, it can make a substantial saving
- Secure automated identity verification enables a broader range of fully automated services to be offered, reducing agent cost.

The potential benefits for the business are huge, and the customer also gains through a better experience, longer opening hours and greater identity protection.

Similar savings will also be found in the case of text-independent authentication, where the caller's voiceprint is authenticated within the natural course of the conversation. The agent begins each call by immediately asking how they can help the customer, and the authentication process is carried out by voiceprint verification at the same time that the agent is listening to the caller and preparing to help them.

It is also possible to use contextual analysis, such as the caller's geolocation (as detailed from their mobile phone's GPS coordinates, or their ANI) to add another layer of confidence in the security process, automatically notifying the agent whether the caller has been identified successfully, and guiding the agent to ask alternative questions if further verification is required.

Contact centres wishing to deter fraud should consider combining voice biometrics with phoneprinting technology for a multi-layered solution. Phoneprinting relies on background audio, source, and channel features that are more difficult for an adversary to manipulate than voice. Phoneprinting can detect CLI spoofing, voice distortion, and social engineering-based fraud attempts, which voice biometrics would have missed.

Voice verification can also be used to protect the enterprise against repudiation (where the customer says at a later date that they did not do it) as it can verify the physical presence of an individual at the other end of a phone line. Interestingly, this capability is already used by various US law enforcement agencies to check that released offenders are where they should be.

For procedures such as internet password resetting, the higher level of security achieved with voice verification can enable businesses to offer real-time password resets or reminders. This benefits both customer and business and can reduce up to 70% of helpdesk calls.

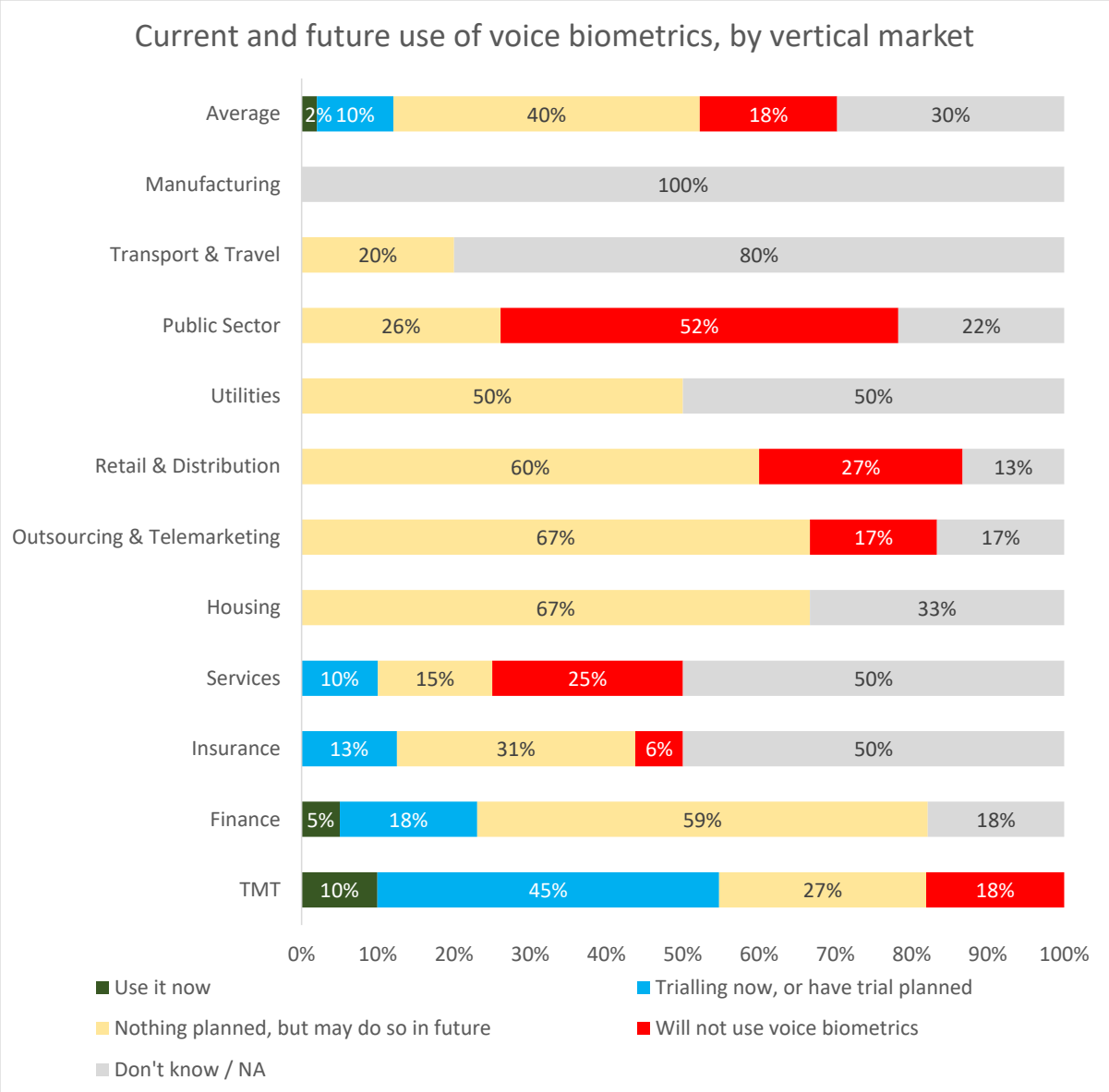
FUTURE USE OF VOICE BIOMETRICS

The interest in using voice biometrics for customer authentication is tipped more towards larger operations, which are more likely to have high call volumes, meaning that 40 seconds or so cut from each call would add up to a very considerable saving without affecting the customer or agent experience negatively.

Finance, insurance and TMT respondents are most likely to look favourably on voice biometrics, and although the argument has certainly not yet been won, there is a very significant increase in interest compared to previous years.

A significant number of respondents from these sectors are planning trials in the near future, and 10% of this year's TMT respondents are actually using voice biometrics.

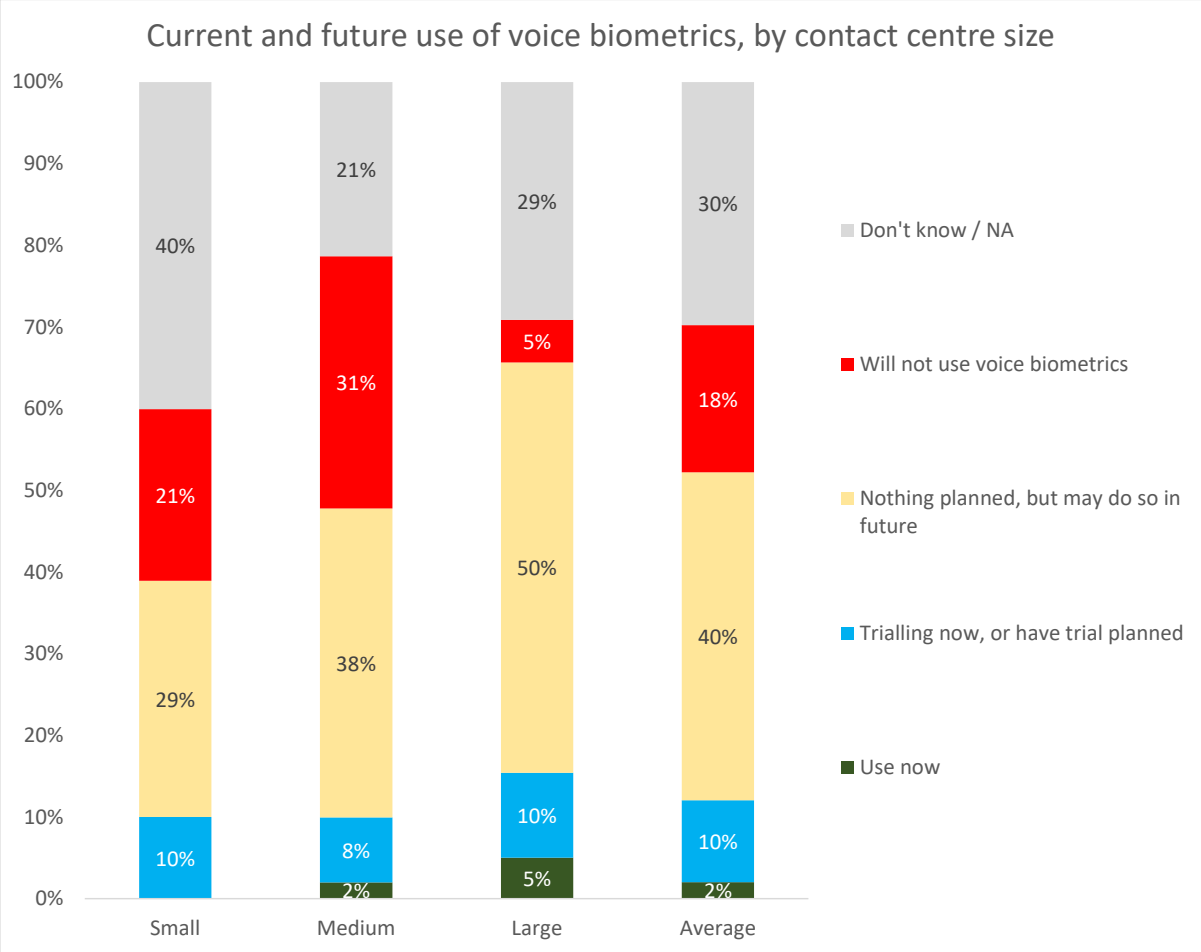
Figure 76: Current and future use of voice biometrics, by vertical market



Usually it is respondents from the largest contact centres with the greatest call volumes who are most interested in voice biometrics, although some smaller operations are also showing interest.

Large operations can benefit not just from fraud reduction, but also from the significant cost savings associated with secure customer authentication on a large scale.

Figure 77: Current and future use of voice biometrics, by contact centre size



INHIBITORS TO VOICE BIOMETRICS

When respondents were asked, the main inhibitor to voice biometrics is the perceived expense of the solution, with around half of respondents stating that this was a very important reason not to implement it. This was particularly the case for both small and medium operations.

Another issue with voice biometrics is the question of low customer adoption. Only around 60% of customers will call into a contact centre in a given year and of those, a significant group will be resistant to having a voiceprint created due to privacy concerns or will experience poor call quality. This means that voice biometrics will likely be applicable to 50% or less of customers and that a majority of customers will never be enrolled, leaving them vulnerable to fraud attacks.

In terms of usability, some issues have been reported with callers using speakerphone or cordless phones, leading to false negative responses, which means the caller then has to go through a very long and stringent manual ID&V process, taking far more time than is usually the case for agent-led identification.

Although the reliability of the technology was a concern, almost half of respondents admitted that they did not know enough about this to even form on opinion. Worries about managing the solution were also present in smaller operations and there are concerns over customer sentiment for contact centres in all size bands.

As might be expected, respondents in small contact centres are far more concerned that call volumes are too low to make the solution worthwhile: for large operations, it is not the case that the commercial benefit isn't there, but concerns over the use of the solution and its cost are far more important.

It has also been shown that voice biometrics in itself may not be watertight, and that risk can be further reduced by using biometrics in association with other security measures, such as phoneprinting.

Voice biometrics can be a useful tool, especially for larger contact centres through cutting call lengths and costs, and improving customer experience. However, it may not always be enough against a fraudulent attack or series of attacks.

Solutions that focus on identifying potential fraudulent callers don't rely solely on matching the voiceprint, which is not an infallible method of authentication, as can be seen below.

Biometric security fooled by twin's voice

The BBC carried a story[7] about an experiment that a BBC reporter and his twin had tried on a UK bank. The reporter had enrolled in a bank's voice identification system, but his twin was able to access the account after ringing the bank and pretending to be his brother.

The security breach did not allow the twin to withdraw money, but he was given access to some of the account's functionality. The twin took eight attempts to access the account, which is a failing in the implementation process rather than the technology – most typed passwords will allow perhaps three failures before the user is locked out.

Experts stated that although each voice is unique, if the system has been implemented to allow too much leeway when detecting some of the 100+ characteristics of the voice, then it would not take an exact voiceprint match to access the account.

The expert noted that if the voiceprint was hacked or copied, the genuine account holder would not have the option to change their voice like they would change their password.

Voice replication software was also noted to be becoming increasingly sophisticated, and the general feeling was that alternative methods of security would be required alongside voice biometrics.

[7] http://www.bbc.co.uk/news/technology-39965545

An alternative or additional method of customer identity verification is ‘phoneprinting’, which is perhaps focused more on identifying and preventing fraud than on simply authenticating genuine customers.

Phoneprinting collects information about the call being made, such as location, the type of phone being used (VoIP is far more likely to be used in fraudulent calls), CLI (the calling number), the phone number’s history and the chances it has been ‘spoofed’, levels of voice distortion, etc. These factors can be scored, and after assessing the likelihood of the call being fraudulent will then impact upon the security processes and questions that the agent is required to ask the caller, speeding up the process for genuine callers, and focusing the tightest levels of security on potentially fraudulent calls.

Some solutions allow fraudulent phone numbers to be gathered and shared with other businesses, red-flagging likely fraudsters. Data from various sources can be added, such as consumer complaint sites, spam calls databases, detecting attack patterns and improving suspicious call identification.

Fraud continues to be a widespread concern both for retailers (merchants) and the finance industry. According to UK Finance , fraud losses on UK-issued cards totalled £574.2 million in 2020 with payment cards accounting for 45% of total 2020 financial fraud loss during the year.

One of the key ways that contact centres currently prevent fraud is by training agents to understand the risks and to use security best practices. Manual processes and agent training are consistently stated to be one of the most widely-used methods for reducing fraud, with around half of UK contact centres doing so. However, with fraudsters becoming increasingly clever at picking up personal data and passwords, relying on training is no longer enough.

Additional security questions during a call are typically required to verify identity. However, this approach takes longer and can annoy the customer as their legitimacy as the card holder is being questioned. Declined transactions by issuing banks also present a challenge as they can lead to additional costs, as both the acquirer and gateway require payment.

A card payment may be declined for multiple reasons in addition to attempted fraud, for example insufficient funds, unusual purchase patterns, a new bank card or incorrect CVV code. All of these reasons can prove costly to contact centres and customers.

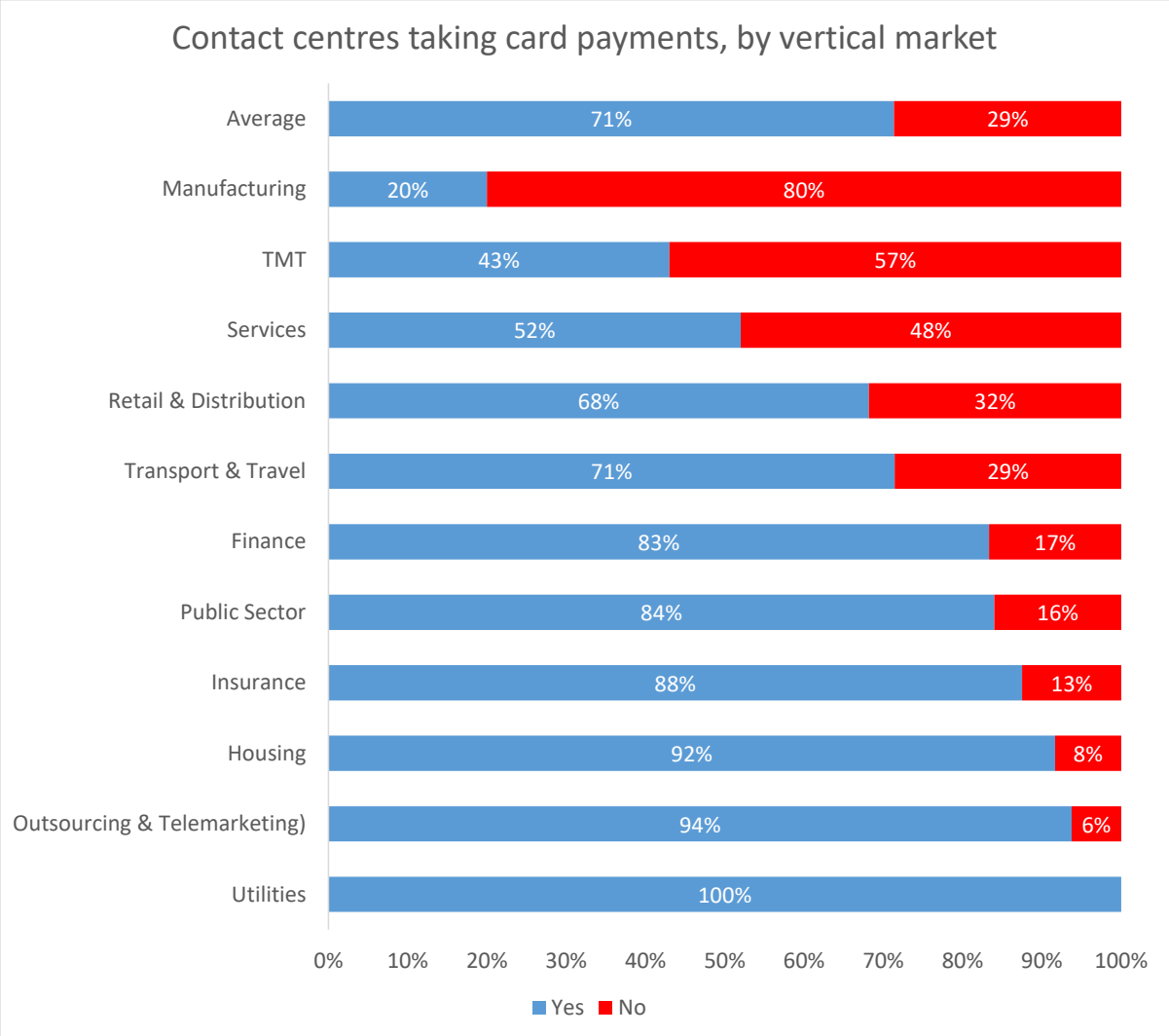
How agents manage card payments during a call is important in terms of customer experience. While it is necessary to carry out the right identity and affordability checks this should not be detrimental to customer service.

New technology solutions are available that can facilitate and protect mail order, telephone order (MOTO) payments and allow smoother customer journeys. They enable an agent to advise the customer that an additional level of validation is required, rather than simply saying the transaction has been declined. Card holder identity can be established using a variety of validation methods, including 3D Secure which is an additional security layer used in ecommerce credit and debit card transactions.

As well as helping to combat fraud, the result is increased transactions, reduce costs and a positive customer experience – a high priority for any contact centre.

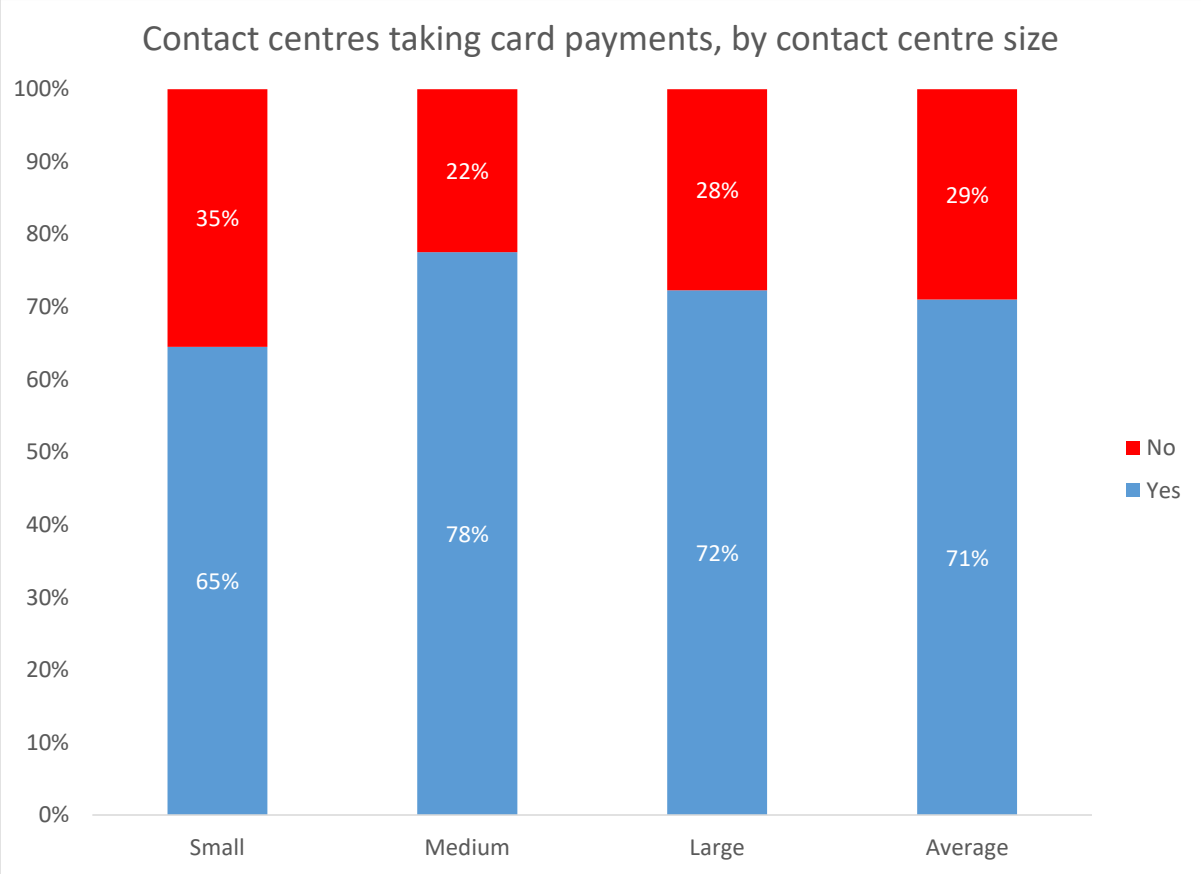
The majority of respondents in all vertical markets take card payments in their contact centres, except for the manufacturing and TMT sectors which this year reports 20% and 43% respectively doing so.

Figure 78: Contact centres taking card payments, by vertical market



The usual positive size correlation is present to some extent once again this year. As is shown later in this chapter, the cost of compliance means that some contact centres have stopped taking card payments.

Figure 79: Contact centres taking card payments, by contact centre size



Those businesses which wish to take card payments need to be PCI compliant, or take their operations out of scope entirely by contracting a third-party payment solution provider to handle payment for them.

The Payment Card Industry Data Security Standard (PCI DSS) is the creation of five of the largest payment card providers: VISA, MasterCard, American Express, Discover and JCB International, which together have named themselves the PCI Security Standards Council (PCI SSC).

The Council wished to clarify and align their terms, conditions and regulations into a single agreed global framework. The Council maintains, evolves, and promotes the Payment Card Industry Security Standards. It also provides critical tools needed for implementation of the standards such as assessment and scanning qualifications, self-assessment questionnaires, training and education, and product certification programs.

Compliance to the PCI DSS is a contractual obligation by the Merchant to either the scheme or the acquirer (in the UK, to the acquirer; in the US to individual schemes and/or acquirer). Penalties are levied by the schemes in the event of a data breach, and may even deny the merchant the ability to take card payments at all. At the time of writing, the current standard is PCI DSS 3.2.1, which was released in May 2018 and supersedes version 3.2 which was retired at the end of 2018. PCI DSS v4.0 is targeted for release in Q1 2022[8].

To be PCI DSS compliant, merchants have to complete the correct Self Assessment Questionnaire (SAQ) that applies to the payment channel that they are assessing. They complete the SAQ documenting evidence of compliance and then get their most senior responsible executive to 'attest' (warrant) that the organisation that they represent meets the requirements of the standard. Third Party Service Providers (included hosted contact centre providers) have to complete SAQ D SP (Service Provider).

PCI DSS is not a prescriptive methodology to be followed to the letter, but should be viewed as a set of contractual requirements that organisations, their Internal Security Assessors and or, external Qualified Security Assessors (QSAs) can interpret in conjunction with the business's existing processes, technology and policies to reach the required level of information security. Having said that, in the event of a data breach the card schemes will take a very dim view of any documentation that is not readily available as evidence of meeting the contractual requirements or official PCI SSC, card scheme or acquirer documentation that has been signed fraudulently or without due care.

Compliance with PCI DSS should also be seen in the wider context of a far-reaching information security framework, which may also take into account industry-specific regulations. There is likely to be a balance to be found between compliance with the various regulations in the context of the business's unique processes and internal guidelines. It's important to remember that PCI compliance isn't a once-a-year box-ticking exercise, but should be entwined in the security DNA of an organisation. It's just as important to note that technology or payment solutions in themselves are not – and cannot be – "PCI compliant": compliance is judged and proven at a company level and is only complete when an organisation has not also considered their PCI compliance status but also the compliance status of Third Party Service Providers supporting their card payments process.

A list and explanation of each SAQ is available from the PCI Security Standards Council here.

[8] https://blog.pcisecuritystandards.org/updated-pci-dss-v4.0-timeline

SAQ A is relevant to card-not-present merchants (including contact centres) who have outsourced all cardholder data functions to a compliant third-party, and who do not process, transmit or store any card data, even if encrypted, in any circumstances. Completion of SAQ A is therefore relatively easy and quick and on the face of it, this seems to be the obvious method for contact centres to consider, with many QSAs recommending this.

For Level 1, 2 and some 3 merchants, SAQs have become channel-related (e.g. a organisation may complete an SAQ for chip-and-pin payments, and another for phone or website payments), and PCI strategies are becoming increasingly built up by channel, reflecting the specific risks and controls that need to be put in place.

If using IVR, businesses should make sure that they do not discriminate against those customers who are unable to complete card payments via touchtone, and who need to read out card payment details. Examples include blind people, a proportion of elderly people uncertain with DTMF touchtone, and those customers who are perhaps driving at the time of the call or cannot use their hands for other reasons. Forcing customers to type card details into a keypad may also provide a sub-optimal experience in the case of smartphones, where the phone is taken away from the ear, the touchpad activated, and the required data typed in on multiple occasions (i.e. going through each stage for the long card number, expiry and CVC), or else use the speakerphone, which is not always appropriate. If a frustrated or confused customer decides just to read out the card details and let the contact centre deal with it, the call recording system will pick these up and immediately put the operation back in scope and become non-compliant.

Even in non-cardholder data environments (e.g. those completing SAQ A), there are likely to be some exceptions where card data is introduced into the environment unintentionally. Businesses should agree with the acquirer controls to be put into place to cover exceptions, and implement people controls, make sure any exceptional card data is handled on a terminal that is not connected to the main network, or stored electronically, and provide a demonstration and documentation if required.

If businesses store any electronic cardholder data, including any legacy data, SAQ D will apply, and businesses should review whether there is the need to maintain electronic cardholder data storage. SAQ D is the most complex questionnaire, and if cardholder data storage can be avoided, compliance efforts will be eased significantly by completing a different SAQ.

Each organisation should carefully assess the level of risk, the time and effort taken to complete the relevant SAQ(s), the cost of technology and the effect on customer experience. It should be noted that SAQ D for merchants may involve 12 requirements and 329 controls, rather than the 5 requirements and 24 controls involved in SAQ A, which is used in cases where there is no cardholder data environment within the business.

Merchants looking for a service provider should investigate the limit of the scope that any self-assessment takes, for example a cloud-based solution provider only applying it to the segments of their platform that handle sensitive data. Merchants may prefer a holistic perspective of security, and should also ask how the service provider tracks its assets (for example software versions, servers, operating and transport systems), in order to identify risk and react more quickly.

Proving compliance is also about understanding which parts of the business fall into the scope of the PCI compliance audit. It is important that whoever runs the PCI compliance programme, whether internal or external, is experienced in interpreting it fully. QSAs should look at intent and risk - what was the PCI requirement trying to achieve, and what risk was it trying to minimise?

PCI DSS REQUIREMENTS

There are 12 requirements to fulfil in order to achieve PCI DSS compliance (full details are available here[9]), with many specific sub-requirements within them, although for many businesses a large proportion of them may simply not apply.

- Build and Maintain a Secure Network and Systems
    - Requirement 1: Install and maintain a firewall configuration to protect cardholder data
    - Requirement 2: Do not use vendor-supplied defaults for system passwords and other security parameters
- Protect Cardholder Data
    - Requirement 3: Protect stored cardholder data
    - Requirement 4: Encrypt transmission of cardholder data across open, public networks
- Maintain a Vulnerability Management Program
    - Requirement 5: Protect all systems against malware and regularly update anti-virus software or programs
    - Requirement 6: Develop and maintain secure systems and applications
- Implement Strong Access Control Measures
    - Requirement 7: Restrict access to cardholder data by business need to know
    - Requirement 8: Identify and authenticate access to system components
    - Requirement 9: Restrict physical access to cardholder data
- Regularly Monitor and Test Networks
    - Requirement 10: Track and monitor all access to network resources and cardholder data
    - Requirement 11: Regularly test security systems and processes
- Maintain an Information Security Policy
    - Requirement 12: Maintain a policy that addresses information security for all personnel.

Whether contact centres decide to go down the self-assessment route or work with a QSA, all of the requirements of PCI DSS have some impact upon the way in which they work. Requirements 3, 4, 7, 9 and 12 may have the greatest relevance to the contact centre and its agents.

It should also be noted that requirements 5 and 6 can often be the most expensive, as the amount of work required gets exponentially bigger with the more staff a business has.

[9] https://www.pcisecuritystandards.org/document_library?category=pcidss&document=pci_dss

Requirement 3: Protect stored cardholder data

This requirement is about reducing the impact of any data breach or fraud, by minimizing the holding of any unnecessary data as well as reducing the value of any stored payment card information. Data must only be stored if necessary, and if stored must be strongly encrypted, and only kept for the period where it is actually needed, with a formal disposal procedure. Businesses should revisit the necessity of data storage on an ongoing basis, and it should be remembered that the storage of sensitive authentication data (SAD) such as card verification codes is prohibited even if encrypted, and must be permanently deleted immediately after authorisation. The requirements of other regulations (which may mandate keeping recordings for a long period of time) may need to be balanced against PCI DSS guidelines, with possible compromises occurring such as archiving encrypted call recordings offsite in a secure facility, with access to them only in the case of fraud investigation or when proving industry-specific regulatory compliance.

PCI DSS requirements also indicate that the full card number (PAN) should only be available on a need-to-know basis, and should otherwise be hidden, with 1234-56XX-XXXX-7890 considered the minimum masking format. For businesses which choose for agents to type in card details, post-call masking and role-based access to the full PAN should be considered, along with strong cryptography when stored.

For contact centres taking payments in their own environment, the most obvious place where data is stored is in recordings, and the use of RAM scrapers should be guarded against (a form of malware that takes data from volatile memory as it as being processed and before it is encrypted).

Organisations have to determine all of the locations which credit card data could potentially be stored, even if it is not part of the formal card handling process. For example, there is nothing to stop the customer sending their credit card details, including the card verification code, by email or web chat. However, if it were to happen, then a formal and documented policy would be required to evidence that the card data had been either removed or securely deleted: if the email or chat interaction is found to be stored, then a risk exists, and the operation is not PCI DSS compliant. There is an increasing use of data loss prevention solutions as a way to track data that has somehow moved out of the original environment, and PCI DSS version 3.2.1 states more clearly than previously that businesses need to have a good inventory not just of the equipment and infrastructure, but also of their logical environment as well.

Requirement 4: Encrypt transmission of cardholder data across open, public networks

In the event of a security breach, it is important to make sure that credit card data (such as the PAN, or 'long card number') is not readable, through the use of strong cryptography not only at its stored location but also as it is being passed across the network. The network is only as strong as its weakest link, and badly configured wireless networks, with out-of-date security and weak passwords are a particular concern. Do not allow payment card data to be transferred through non-encrypted means, including email, web chat, SMS or other means, and have the means to identify and delete it immediately if present. Use strong encryption for the storage and transit of voice traffic, call recordings, screen recordings and personal identification data, making sure that the most current guidelines on encryption and transmission protocols are adhered to.

Requirement 7: Restrict access to cardholder data by business need to know

Identify roles which require access to specific card data, limit access privileges and restrict access to information such as the full PAN only where needed in specific instances. For example, restrict access to call recordings based on logging and corporate role, only allowing screen recording playbacks that display payment card information to managers and compliance officers, having it masked for all other users. Regularly review stored data, and keep only that which is necessary for business or regulatory purposes. For example, hotels need to keep customers' credit card details from the reservation point until checkout: there is no hard and fast rule.

Requirement 9: Restrict physical access to cardholder data

Restrict physical access to environments where card data is present only to legitimate employees through access control. Discourage risk by encouraging a clean desk policy, and restricting the use of smartphones and cameras. Use secure data centres and limit physical access to servers storing payment card information.

Requirement 12: Maintain a policy that addresses information security for all personnel

This requirement is mainly about managing the security of payment card data through having an incident response plan that deals with card data at risk, and also deals with third-party solution providers – TPSPs – as requirement 12.8 states: Maintain and implement policies and procedures to manage service providers with whom cardholder data is shared, or that could affect the security of cardholder data.

Requirement 12.8 requires the merchant to have policies & procedures in place to manage their service providers, in addition to

- Maintaining a list of service providers
- Having a written agreement where the service provider acknowledges responsibility for card data security
- Having a documented engagement process in place "including proper due diligence"
- Having a program to monitor compliance status
- Maintaining information on which Requirements each provider is responsible for and which the merchant is responsible for (Responsibilities Matrix)

NB: In the context of contact centres, Requirement 12.8 will not apply to 'carriers' delivering voice traffic 'point to point'.

Requirement 12.6 also states that all employees should be made aware, in writing and through daily exposure to information security guidelines, of what their responsibilities are in terms of handling data. The regular and ongoing minimisation of potential security risks is perhaps even more important for homeworking agents, who are less likely to be in a rigidly maintained environment, and whose vigilance and adherence to security guidelines may therefore be less rigorous.

Compensating controls

Businesses that are unable to fully comply with PCI DSS objectives, for technical or business process reasons perhaps, may consider implementing 'compensating controls', which act as workarounds to achieve roughly the same aim as the PCI control in situations whereby the end result could not otherwise be achieved. These are not meant as an alternative to the control objectives, i.e. to be used in cases where the business simply does not want to meet the requirement and associated controls in full, but are supposed to act as a last resort allowing the business to achieve the spirit of the control, if not actually the very letter. Guidelines for valid compensating controls indicate that it must meet the intent of the original requirement, and provide a similar level of defence, go at least as far as the original requirement and not negatively impact upon other PCI DSS requirements.

VALIDATING COMPLIANCE

Merchant compliance validation involves the evaluation and confirmation that the security controls and procedures have been properly implemented as per the policies recommended by PCI DSS.

For merchants (organisations accepting card payments), there are four levels:

- Level 1 – Over 6 million transactions annually
- Level 2 – Between 1 and 6 million transactions annually
- Level 3 – Less than 1 million transactions annually and more than 20,000 ecommerce transactions
- Level 4 – Less than 1 million transactions annually and less than 20,000 ecommerce transactions

However, each of the card issuers has their own specific criteria:

- Visa
- Mastercard
- Discover
- American Express
- JCB

Depending on the merchant level (i.e. how many card payments are taken), businesses may either self-certify PCI compliance or use a **Qualified Security Assessor** (QSA) who is accredited by the PCI SSC. Only Level 1 merchants with over 6 million VISA transactions per year or any other merchant at the request of their acquirer or scheme, who are a 'Compromised Entity' (having experienced attacks before) must have an annual on-site QSA audit rather than one of the **Self-Assessment Questionnaires** (SAQs). They are required to have an Annual Report on Compliance ("ROC") delivered by the QSA - commonly known as a Level 1 onsite assessment – or by an internal auditor if signed by a senior officer of the company. They must also have a quarterly network scan by an Approved Scan Vendor (ASV), and complete an Attestation of Compliance Form. NB: Level 1 TPSPs with more than 300,000 Visa transactions annually also have to be externally audited and have an RoC. Level 2, 3 and 4 Merchants may choose to use a QSA, but do not have to, as a Self-Assessment Questionnaire, quarterly network scan and Attestation of Compliance form are the requirements.

An **Internal Security Assessor** (ISA) is an individual who has earned a certificate from the PCI Security Standards Company for their sponsoring organisation, giving them the competence to perform PCI self-assessments for their organisation. ISA certification empowers inward appraisal of their organisation and allows them to propose security solutions and controls.

Dependent on the SAQ that the merchant completes based on PCI SSC SAQ Guidelines, an **Approved Scanning Vendor** (ASV) may be required. ASVs perform penetration tests on the company's network in order to verify that it cannot easily be hacked, through using a set of security services and tools to conduct external vulnerability scanning services to validate adherence with the external scanning requirements of PCI DSS Requirement 11.2.2. The scanning vendor's ASV scan solution is tested and approved by PCI SSC before an ASV is added to PCI SSC's List of Approved Scanning Vendors.

The PCI DSS self-assessment questionnaires (SAQs) are validation tools intended to assist merchants and service providers report the results of their PCI DSS self-assessment. The Self-Assessment Questionnaire is a set of questionnaire documents that merchants must complete annually and submit to their transaction bank. Each SAQ question must be replied with "yes" or "no". In the event that a question has the appropriate response of "no", the organisation must highlight its future implementation plans.

A formal **Attestation of Compliance** (AOC) which is usually signed by the Financial Director or Information Security Officer states that all PCI requirements have been met and that any compensation controls have been put in place in case of system or process failure or exception.

Visa provides a partial list of compliant TPSPs on its website: while it is a requirement by Visa that TPSP's complete the listing documentation, a TPSP can be compliant without being on the published Visa list. In 2018, Visa listing became free of charge – prior, it was around £5,000 to register, so a more complete listing should be expected in future. It is worth noting that many corporate procurement teams make a Visa listing a requirement for their TPSPs.

QSA-audited PCI certification offers independently confirmed security, which removes the issue of how an organisation might interpret a PCI requirement in an internal self-assessment. Businesses should see QSAs as expert consultants, rather than as auditors who are just there to tick boxes, agree compliance and then disappear for a year, but should question them as to which SAQs are most appropriate for their business. It should be remembered that any business with a no card data environment (no CDE) approach will not require an external audit.

The vast majority of contact centres do not require a full audit, and self-assessment questionnaires (SAQs) are the norm for many organisations, and many Level 3 and 4 merchants complete an online questionnaire provided by their acquirer, as all main acquirers offer this service in the UK. The PCI DSS 3.0 standard introduced some new types of SAQ, with changes to others, recognising that one size did not fit all. It was acknowledged that it was inappropriate for smaller and less at-risk companies to have to complete the same list of requirements as a large multinational taking many millions of card payments each year. A list and explanation of each SAQ is available from the PCI Security Standards Council here. To make compliance easier, quicker and cheaper, businesses should consider a descoping process by limiting the number of places where card data is present in the logical or physical environment. This allows businesses to choose a less onerous SAQ to report their compliance.

For service providers, things are different: there are two levels, rather than four, and compliance requirements are different. A service provider is a business entity that isn't a payment brand, but is directly involved in the processing, storage, or transmission of cardholder data on behalf of another business. This includes companies that provide services that control or could impact the security of cardholder data. Examples include managed service providers that provide managed firewalls, hosting providers, payment service providers, etc.

A Level 1 Service Provider stores, processes, or transmits more than 300,000 Visa credit card transactions annually. The PCI Requirements need to be validated through:

- An annual Report on Compliance (ROC) by a Qualified Security Assessor (QSA)
- Quarterly network scan by an Approved Scanning Vendor (ASV)
- Penetration Test
- Internal Scan
- Attestation of Compliance (AOC) Form.

Receiving a ROC and validating as a Level 1 Service Provider allows the service provider to be on Visa's Global Registry of Approved Service Providers.

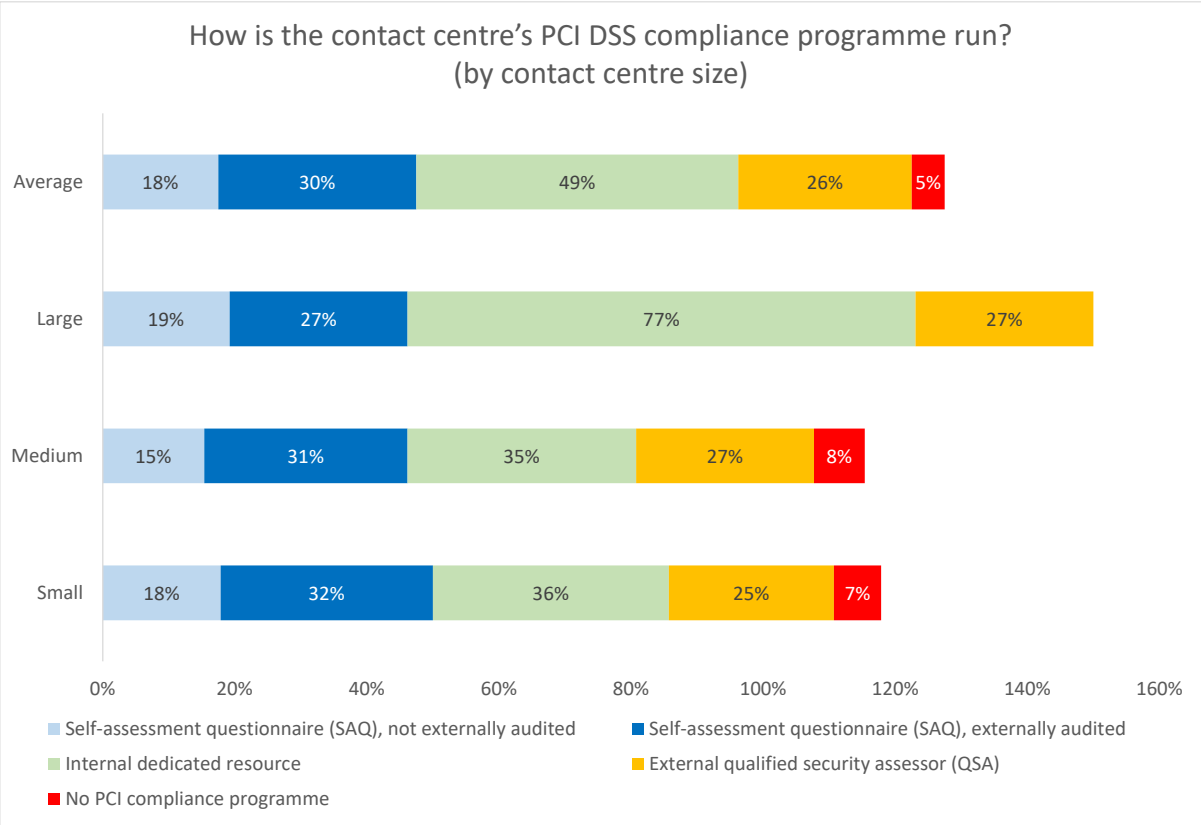
Level 2 Service Providers store, process, or transmit less than 300,000 Visa transactions annually. Their PCI Requirements are validated through:

- Annual Self-Assessment Questionnaire (SAQ) D
- Quarterly network scan by an ASV
- Penetration Test
- Internal Scan
- AOC Form.

Operations of all sizes are fairly equally likely to use self-assessment questionnaires and/or an external Qualified Security Assessor (QSA).

The majority of large operations use dedicated internal resource.

Figure 80: How is the contact centre's PCI DSS compliance programme run? (by contact centre size)



NB: totals in the chart above add up to more than 100%, as multiple selections are allowed. Only those respondents that reported taking card payments and were able to answer this question were included (29% of respondents did not know how their PCI compliance was run).

Potential danger points within the contact centre fall into three main areas: storage, agents and infrastructure. The storage element will include customer databases and the recording environment – both voice and screen – and the potential opportunity for dishonest employees to access records or write down card details should also be considered.

In terms of infrastructure, this is not simply a matter of considering the CRM system or call recording archives, but also includes any element that touches the cardholder data environment. This could include, but is not limited to the telephony infrastructure, desktop computers, internal networks, IVR, databases, call recording archives, removable media and CRM / agent desktop software.

The November 2018 PCI SSC information supplement "Protecting Telephone-Based Payment Card Data" had a change of emphasis away from "recorded" account data, towards "spoken" account data. The paper emphasized that "accepting spoken account data over the telephone puts personnel, the technology used, and the infrastructure to which that technology is connected into scope of PCI DSS", which also includes VoIP: "where VoIP is used for transmissions of payment card account data between a cardholder and an entity, the entity's systems and networks used for those transmissions are in scope.[10]"

The PCI SSC information supplement provides a useful classification of technology types. Technology is classified firstly by customer experience where the agent attends (in constant voice contact with the customer for the entire duration of the transaction) or unattended when they are not. The guidance then considers technology in terms of delivery media, either telephony or digital. Examples include:

- Telephony/attended: includes pause and resume, DTMF suppression
- Digital/attended: includes agent-initiated payment links sent via email, chat, SMS, social etc., where the agent remains on the call and can assist the caller
- Telephony/non-attended: IVR-based solutions, fully-automated or initiated by agent
- Digital/non-attended: automated payment links sent without agent's action, or where the agent closes the call after the link has been sent but before payment is made.

The information supplement also differentiates between simple telephone environments (limited number of lines; dial-up or virtual payment terminal), and complex environments (agents linked to systems and servers, i.e. a contact centre). The supplement also explains the processes whereby an organisation can understand which part of their telephony environment is in scope for PCI DSS, and which the responsibility of third-party providers. Bear in mind that responsibility for the security of customer card data ultimately lies with the merchant organisation, so any third-party used must themselves be confirmed to be PCI compliant.

[10] See FAQ 1153 How does PCI DSS apply to VoIP? for more detail.

For those organisations which handle customer card data themselves, the various elements of card data are permitted to be processed and stored in different ways.

Figure 81: Data elements and storage in PCI DSS

	Data Element	Storage Permitted	Must Render Data Unreadable
Cardholder Data	Primary Account Number (PAN)	Yes	Yes (e.g. strong one-way hash functions, truncation, indexed tokens with securely stored pads, or strong cryptography
	Cardholder Name	Yes	No
	Service Code	Yes	No
	Expiry Date	Yes	No
Sensitive Authentication Data	Full magnetic stripe data	No	Cannot store
	CAV2/CVC2/CVV2/CID (Card Security Codes)	No	Cannot store
	PIN / PIN Block	No	Cannot store

Compliance with PCI DSS should be seen in the wider context of a far-reaching information security framework, which may also take into account industry-specific regulations. There is likely to be a balance to be found between compliance with the various regulations in the context of the business's unique processes and internal guidelines.

Policies and activities that are helpful include:

- make sure that contact centre employees do not share passwords or user IDs with each other, in order to maintain a segmented and auditable security and access environment
- limit the number of employees given access to full card information. For example, restrict access to call recordings based on logging and corporate role, only allowing screen recording playbacks that display payment card information to managers and compliance officers, having it masked for all other users
- manage the physical and logical access to stored recordings and regularly report upon those accessing this information
- do not allow payment card data to be transferred through non-encrypted means, including email, web chat, SMS or other means, and have the means to identify and delete it immediately if present
- initial focus should be on improving business processes, rather than implementing technology. For example, analysing and restricting access to cardholder information to only those employees who actually need it will significantly reduce the risk of fraud even before implementing any technology
- quarterly vulnerability scans should be carried out via an external approved scanning vendor approved by the Payment Card Industry Security Standards Council (PCI SSC), which holds a list of these. ASVs perform penetration tests on the company's network in order to verify that it cannot easily be hacked
- use secure data centres and limit physical access to servers storing payment card information
- do not record sensitive authentication data such as the card validation code in any circumstances
- use strong encryption for the storage and transit of voice traffic, call recordings, screen recordings and personal identification data, making sure that the most current guidelines on encryption and transmission protocols are adhered to
- up-to-date, fully patched and automated malware, anti-virus and personal firewall software (of particular importance to homeworkers) - requirements 5 and 6
- regularly review stored data, and keep only that which is necessary for business or regulatory purposes. For example, hotels may need to keep customers' credit card details from the reservation point until checkout: there is no hard and fast rule.

It is worth noting that with the takeover of Visa Europe by Visa, US security methods are more likely to be brought into Europe. The requirement to supply the CVV code (3 digits on the back of the card) is something which UK merchants and customers are now trained to do, but it is worth noting that many merchants will pay the same processing fees to Visa regardless of whether they supply the CVV code or not, and that small merchants may simply be on a blended tariff where CVV/non-CVV transactions are grouped together.

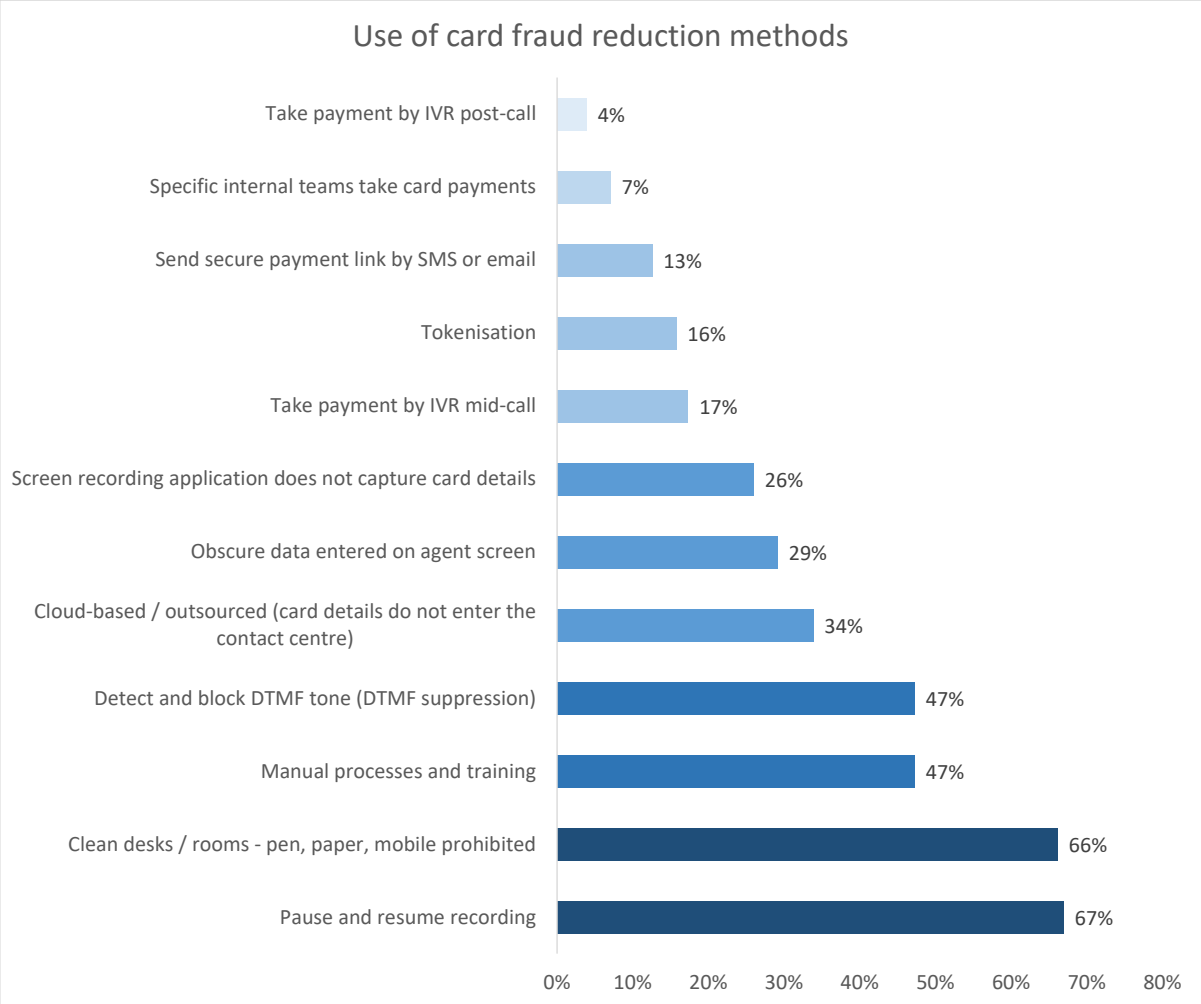
THE USE OF CARD FRAUD REDUCTION METHODS

The PCI DSS guidelines state: "As a starting point, consider whether the organisation should aim at excluding telephone-based card payment data entirely…for organisations committed to taking payments over the telephone, consideration should be given to techniques that minimise exposure of PAN and SAD to the telephone environment and balance that with user/customer experience requirements, with the object of significantly reducing the CDE (card data environment) or eliminating the CDE altogether".

Respondents were presented with a long list of solutions, approaches and business processes that aimed to reduce the risk of card fraud within the contact centre, and were asked to indicate which they used. It should be noted that many of these methods used do not in themselves render the operation fully PCI-compliant, although methods that do not allow the card data into the contact centre at any point (even encrypted) will take the operation out of the scope of PCI. Respondents used a mean average of 3.9 card fraud reduction methods.

Pause and resume recording and clean desk/room policies were the main methods used to reduce card fraud., with DTMF suppression and manual processes / training also being widely seen.

Figure 82: Use of card fraud reduction methods

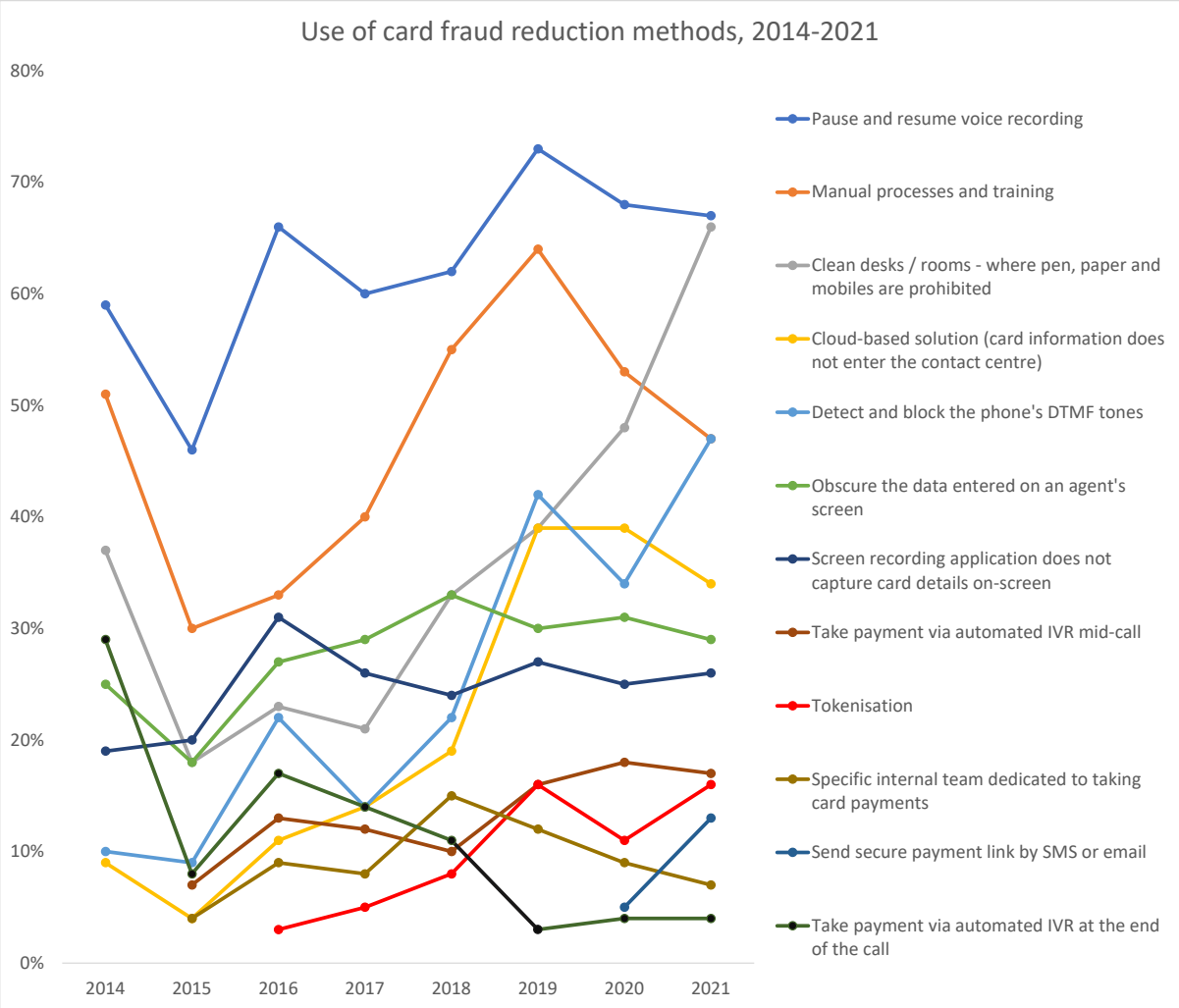


The chart below shows the use of card fraud reduction methods over the past eight years. Care should be taken when considering these data: a rise or fall from one year to the next may not necessarily mean that this is indicative of what is happening industry-wide, as many of the respondents taking part in the survey from one year to the next are different. The chart should be viewed as providing a view of card fraud reduction methods relative to each other, and as a longer-term trend.

Pause & resume voice recording and manual processes & training have been consistently the two methods most used, although the use of clean desks/rooms has grown considerably since 2019.

Cloud-based solutions have shown significant growth, as has DTMF suppression. Tokenisation has risen from a low base, and this is the second year that sending secure payment links by SMS or email has been tracked, and is now used in 13% of survey respondents' operations.

Figure 83: Use of card fraud reduction methods, 2014-21



The following section discusses some of these more common card fraud reduction methods.

Pause and Resume (67%)

'Pause and resume' or 'stop-start' recording aims to prevent sensitive authentication data and other confidential information from entering the call recording environment. Pause and resume may be agent-initiated, act for a fixed time period (e.g. stopping recording for a minute), or be fully automated. The PCI DSS standard is interpreted as preferring automation over manual intervention to avoid human error. Automated pause and resume may use an API or desktop analytics to link the recording solution to the agent desktop or CRM application, being triggered when agent navigates to a payment screen, for example. The recording may then be paused, to be resumed at the time when the agent leaves the payment screen, which in theory should remove the period of time whereby the customer is reading out the card details. This method, consistently the most popular, has several obvious benefits, not least of which include a very low set-up cost and the speed of implementation. However, breaking a recording into two parts makes it difficult to analyse the entire interaction, and goes against some industry-specific regulations, e.g. any financial services regulations which require a record of the full conversation, so some contact centres prefer to mute the recording or play a continuous audio tone to the recording system while payment details are being collected, meaning that there is still a single call recording which can be used for QA and compliance purposes. This principle is similar to that applied to **screen recording** applications, where 26% of respondents stated that their application does not record card details from the agent's screen. 29% of respondents **obscure card details** on the agent's screen, to prevent copies being made.

It should be noted that the November 2018 PCI SSC information supplement "Protecting Telephone-Based Payment Card Data" put more emphasis on "spoken" account data, rather than just focusing on recorded data, which is what pause and resume is obviously aimed at managing. The paper states that "accepting spoken account data over the telephone puts personnel, the technology used, and the infrastructure to which that technology is connected into scope of PCI DSS" including VoIP, so businesses should be aware that pause and resume could only be part of PCI compliance.

Improving Manual Processes and Agent Training (47%)

The third most-widely used method was that of improving manual processes and agent training: the biggest risk in any organisation relating to data theft is its staff – not necessarily from fraudsters, but laxity in taking proper care of data – and the relatively low cost of training and education of the risks can go a long way in making staff vigilant to perils such as phishing emails and such like. Phishing emails can mean that staff innocently allow hackers to enter the system, and is a far bigger risk than a rogue staff member writing the odd card number down.

Clean Desks / Rooms (66%) and Dedicated Payment Teams (7%)

Some organisations set up dedicated payment teams, working away from other agents, often in a clean room environment with no pens, paper or mobile phones, so that customers can be passed through this team to make payment. As these agents have a single responsibility – handling card payments – sometimes they are underutilised, and at other times there can be a queue of people waiting to make payments. In terms of the customer experience, this latter scenario is suboptimal. A clean room is generally not seen as being a particularly pleasant working environment for agents, being spartan of necessity. Not being able to be in touch with the outside world, for example with children or schools, can be a significant problem for some agents. It has been estimated that it takes around £2,000 per agent per year to create and maintain a clean room environment. A clean desk environment is somewhat easier to establish and maintain, and can reduce the threat of card fraud to some extent.

Third-Party Cloud-Based Payment Solution (34%)

The increasing requirements and costs associated with more stringent payment technology, processes and training mean that many contact centres are choosing to use a third-party to handle card payments, rather than remove the payment option entirely. 34% of this year's respondents use third-party cloud-based payment solutions. Using a cloud-based solution to intercept card data at the network level means that no cardholder data is passed into the contact centre environment, whether infrastructure, agents or storage.

As such, this de-scopes the entire contact centre from PCI compliance. Like any cloud-based solution, it relies heavily upon the security processes and operational effectiveness of the service provider, although the PCI DSS attestation of compliance and external audits, along with regular penetration testing may well show superior levels of security over what is present in-house. Some cloud-based solutions may require greater levels of integration or configuration than their on-site equivalents, but are engineered so as to minimise changes to the contact centre systems, processes or agent activities. This option has become significantly more popular with businesses which wish to take card payments but not have to invest in technology or manage the processes that ensure PCI compliance.

IVR Payments – post-call (4%) and mid-call (17%)

A minority of respondents, especially those with large contact centres, use an automated IVR process to take card details from the customer, cutting the agent risk out of the loop entirely. Mid-call IVR (or agent-assisted IVR) is seen as a more customer-friendly approach than post-call IVR: the caller may have additional questions or the requirement for reassurance and confirmation after the payment process, perhaps around delivery times or other queries not related to the payment process. However, the card data is still within the organisation's network, so although this approach takes the agent out of scope, it does not in itself ensure PCI compliance.

Detect and Block the Phone's DTMF Tones (47%)

47% of this year's respondents use DTMF suppression in order to assist with card fraud reduction, which is a large jump on last year's figure of 34%. It will be interesting to see if this is a structural change, or a one-off data blip.

DTMF suppression describes the practice of capturing DTMF tones and altering them in such a way that cardholder details cannot be identified either by the agent, the recording environment or any unauthorised person listening in. DTMF suppression aims to take the agent out of scope as well as the storage environment, as card details on the agent's screen may be masked as well as the DTMF tones being neutralised (thus removing any – albeit theoretically small – danger of a handheld recorder being used).

At the point in the conversation where payment is to be taken, the agent directs the customer to type in their card details using the telephone keypad. The DTMF tones are altered so that they no longer represent the card number or sensitive authentication details. The caller inputs their card data via a touchtone keypad in a similar way to an IVR session, keeping them in touch with the agent at any point in the transaction in case of difficulty, clarification or confirmation. Although this method has grown in popularity in recent years, it is one of the more expensive card fraud reduction methods to implement.

Tokenisation (16%)

The practice of **tokenisation** is used in 16% of this year's respondents' operations (up from 11% last year).

Tokenisation takes place in order to protect sensitive card information such as the PAN (primary account number or 'long card number') by replacing it with non-sensitive data which merely represents the initial data. The purpose of this is to devalue the data so that even if it is hacked or stolen, it is of no use to a criminal. One of the main benefits to tokenisation is that it requires little change to the existing environment or business processes, as apart from the addition of a decoding mechanism, the flow of data, its capture and processing works in the same way as if it were true card information coming into the contact centre environment.

A customer entering a 16-digit card number might have six digits within the middle of the card taken out and replaced by entirely different digits, before this information is passed as DTMF tones into the contact centre environment. This allows the contact centre to be outside PCI scope, as there is actually no **real cardholder data** entering the environment, as well as making it a less attractive target for data hacking and stealing. Tokenisation does not require special integration with existing payment processes, storage systems, telephony or IVR systems, nor does the agent desktop have to change as the same data format is coming into the desktop environment.

The first stage of tokenisation is to collect the actual cardholder data via DTMF tones. For each key press, the solution replaces the associated tone with a neutral or silent tone, and sends the actual number relating to the DTMF tone elsewhere within the solution in order to be tokenised. Card numbers and sensitive authentication data such as card validation codes are replaced as necessary, and the new tokenised DTMF tones are played down the line to the contact centre. The actual cardholder data is held temporarily within the hosted environment.

Within the contact centre environment, the tokenised DTMF goes to the same places that the existing payment process defines, being recorded as usual and going to the agent desktop just as if the card information was actually true, passing through a decoder (which may be hardware or software) which converts the tones to keystrokes that are entered in the payment screen. As the card data is only a tokenised representation, it cannot be said to be actual cardholder data and thus does not fall into the scope of PCI DSS compliance.

Once the agent submits the tokenised payment card details, the transaction is sent back to the hosted environment, where the tokenised data is matched and converted back into the actual cardholder information, which is passed on to the payment service provider, which returns the usual payment success/failure confirmation.

Of course, cardholder data is not the only DTMF-provided information coming into the contact centre environment, as other data such as IVR routing options and the entry of account numbers often requires capture of DTMF tones as well. Various configuration options exist within solutions, based upon the specifics of the business in order to circumvent confusion. Customers should check that any hosted tokenisation solution will not alter the performance of any required card number validation checks, including card length, range validation and 'Luhn' checks (to make sure a card number 'looks right' before presenting it to the payment services provider). The PCI SSC has published tokenisation product security guidelines[11].

Send Secure Payment Link by SMS or Email (3%)

This is the second year of tracking this self-service card fraud reduction method, which involves sending an SMS, email or WhatsApp link to a customer which then opens a secure form in which card details can be entered. It has risen significantly from last year's figure of 5%.

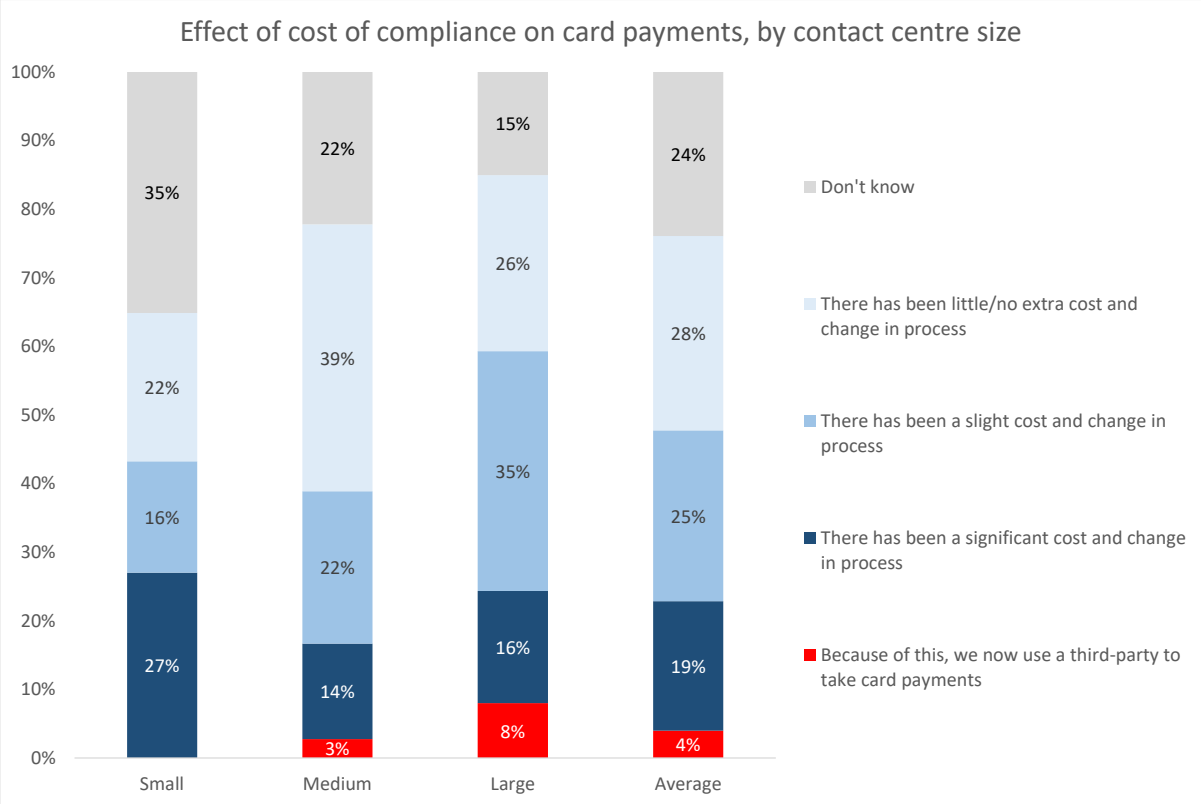
Card data is kept outside the organisation, keeping it outside of scope and can also be linked with tokenisation to collect new information if existing data has expired. This method is secure and reduces agent time, allowing customers to pay at their own convenience, although will possibly be more suitable for some demographics.

11 https://www.pcisecuritystandards.org/pdfs/15_04_02%20PCI%20Tokenization%20Product%20Security%20Guidelines_Final%20Press%20Release.pdf

The following chart shows that a significant proportion of contact centres have found that the cost of PCI DSS compliance is very considerable, with 19% of respondents stating that they have seen a significant cost associated with compliance, as well as a change in their processes. Only 28% of survey respondents state that they have not had to increase their costs or change they way in which they operate in order to be compliant.

Furthermore, 3% of respondents in mid-size contact centres and 8% in large operations state that they either no longer take card payments or decided use a third-party to do so in order to take the contact centre out of scope.

Figure 84: Effect of cost of compliance on card payments, by contact centre size

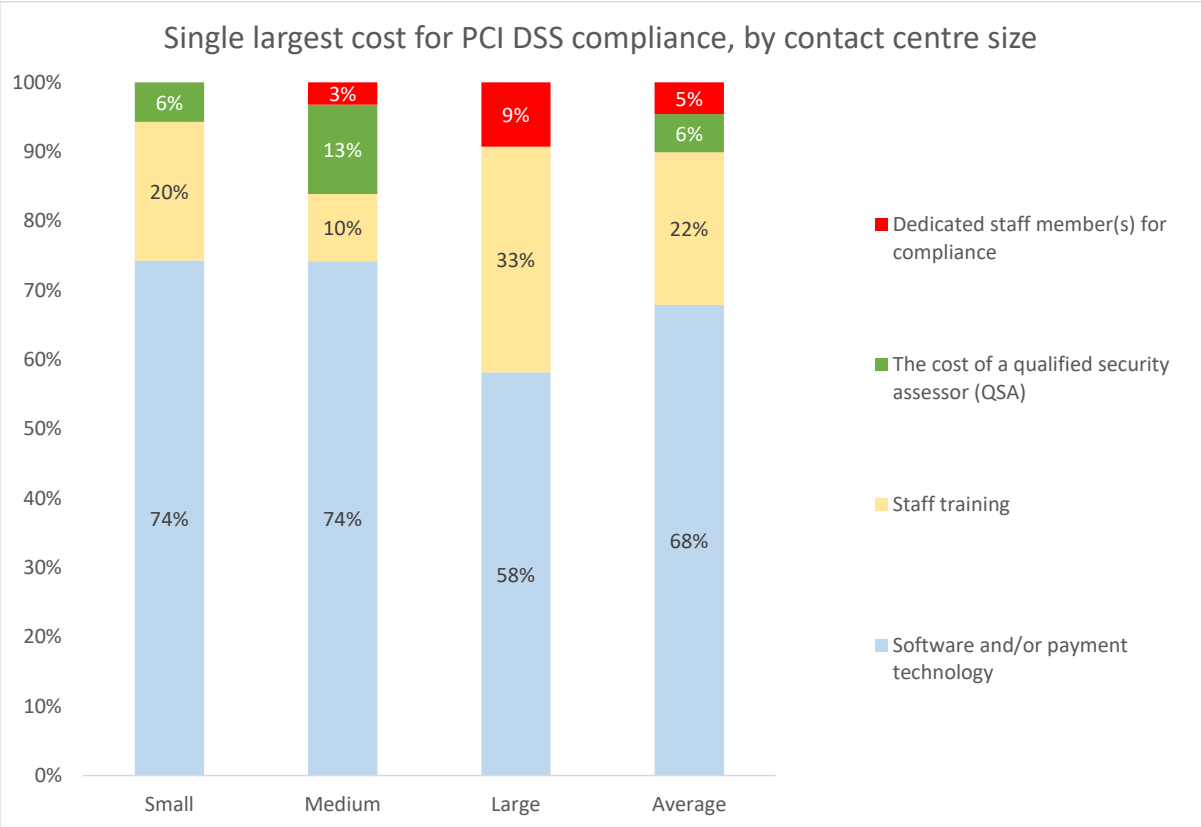


68% of survey respondents state that software and/or payment technology is the single largest cost associated with PCI DSS compliance. This is particularly the case in small and medium-sized operations.

In the largest contact centres, the cost of training staff in card fraud prevention techniques and processes is said to be the largest cost in 33% of cases, with 9% stating that having dedicated compliance staff was the largest cost.

A small minority in small and mid-sized operations stated that the high cost of bringing in external qualified security assessors (QSAs) was the greatest cost borne.

Figure 85: Single largest cost for PCI DSS compliance, by contact centre size



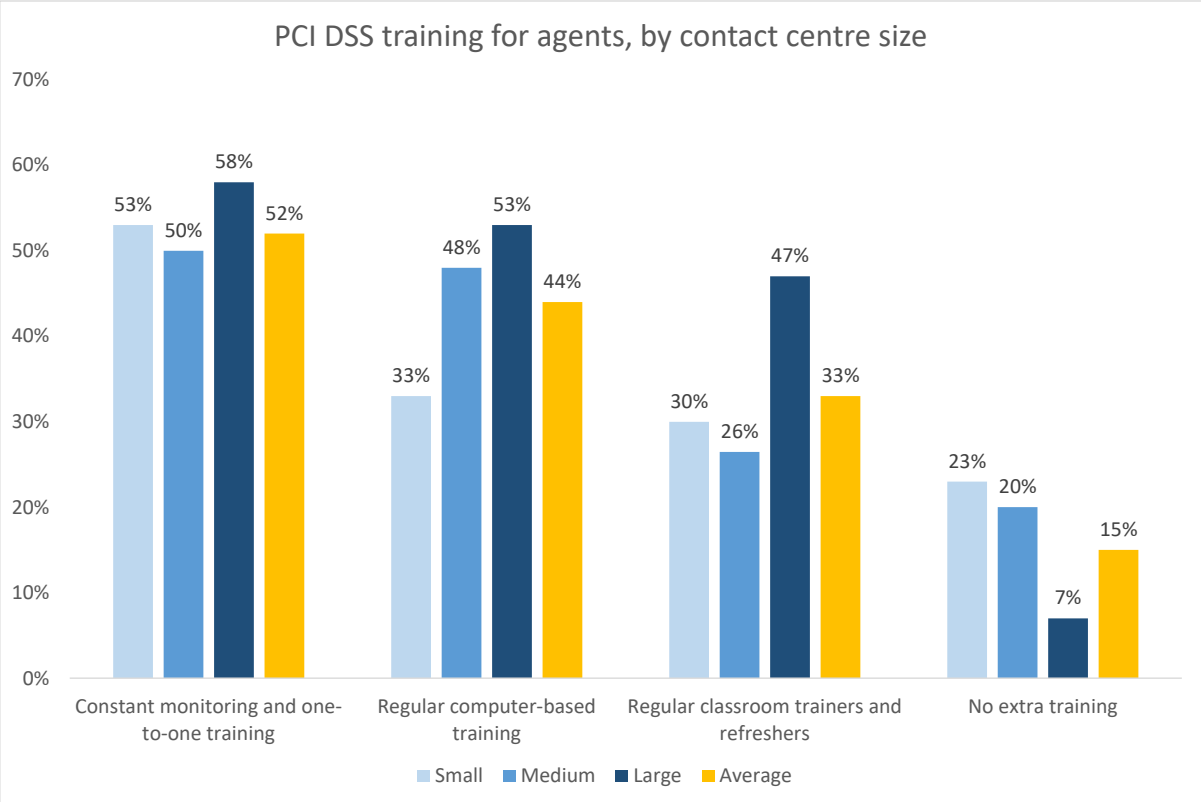
The cost of staff training is reported to be a major drain on resources for large contact centres in particular, and the following chart shows that such operations are providing higher levels of classroom-based training for their agents than is the case in small and mid-sized contact centres.

Regular computer-based training, used to educate agents about card fraud reduction practices, is likely to be scalable and require less personal support from managers and security specialists, which should make it popular with cost-sensitive small and medium operations as well as larger contact centres.

Agents in small operations as likely as those in larger contact centres to be receiving monitoring and one-to-one training.

15% of survey respondents do not provide any additional PCI DSS or card fraud reduction training for agents whatsoever, and this is considerably more likely to be the case in small and mid-sized operations.

Figure 86: PCI DSS training for agents, by contact centre size

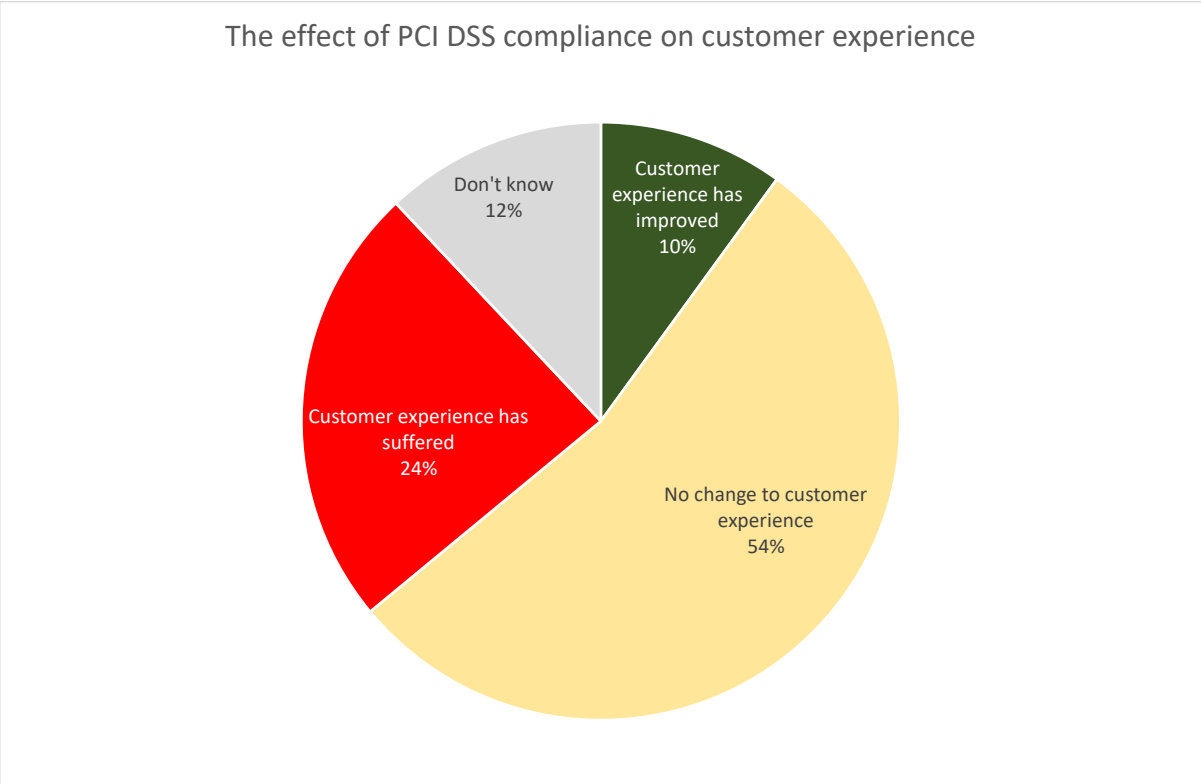


Many PCI DSS compliance and card fraud reduction methods are likely to have an impact upon the customer, in terms of increased effort or inconvenience (e.g. having to type in a card number can be awkward if using a smartphone, as navigation through screens will be required while holding the phone away from the ear; or waiting for a dedicated card-handling agent to become available).

Other methods are less intrusive: pause and resume recording or DTMF tone suppression are unlikely to be noticed from the customer's perspective.

24% of respondents stated that PCI DSS compliance had a negative effect on the customer experience, with only 10% believing that there had been an improvement.

Figure 87: The effect of PCI DSS compliance on customer experience



THE PERCEPTION OF QUEUING

A key finding to bear in mind while reading this chapter is that only a minority of customers that need to communicate with a company choose voice as their **preferred** channel.

Once the customer is placed into a contact centre queue, regardless of whether this was their first choice or out of necessity, the clock is ticking on providing a good service to someone who probably doesn't want to be on the phone in the first place.

Having said that, most UK customers are quite willing to give businesses a reasonable amount of time to answer their call. 52% of respondents to a major survey of 2,000 UK consumers[12] said that a wait time of more than five minutes is acceptable to them, with those in the 18 to 24-year-old age bracket most willing to wait for this amount of time. Only 1 in 6 customers in the 65+ age range are willing to wait over 10 minutes.

On the other hand, 1 in 20 UK customers consider that even waiting over a minute in a contact centre queue is unacceptable, with the 18 to 24-year-old age group twice as likely to be impatient.

It seems that the vast majority of the UK public are realistic and experienced enough to expect to have to wait in a contact centre queue, with many prepared to grit their teeth and wait for a considerable period of time to speak to the business. However, bearing in mind that the contact centre was not the preferred channel of choice for most, the state of mind once the call is eventually picked up is unlikely to be particularly positive.

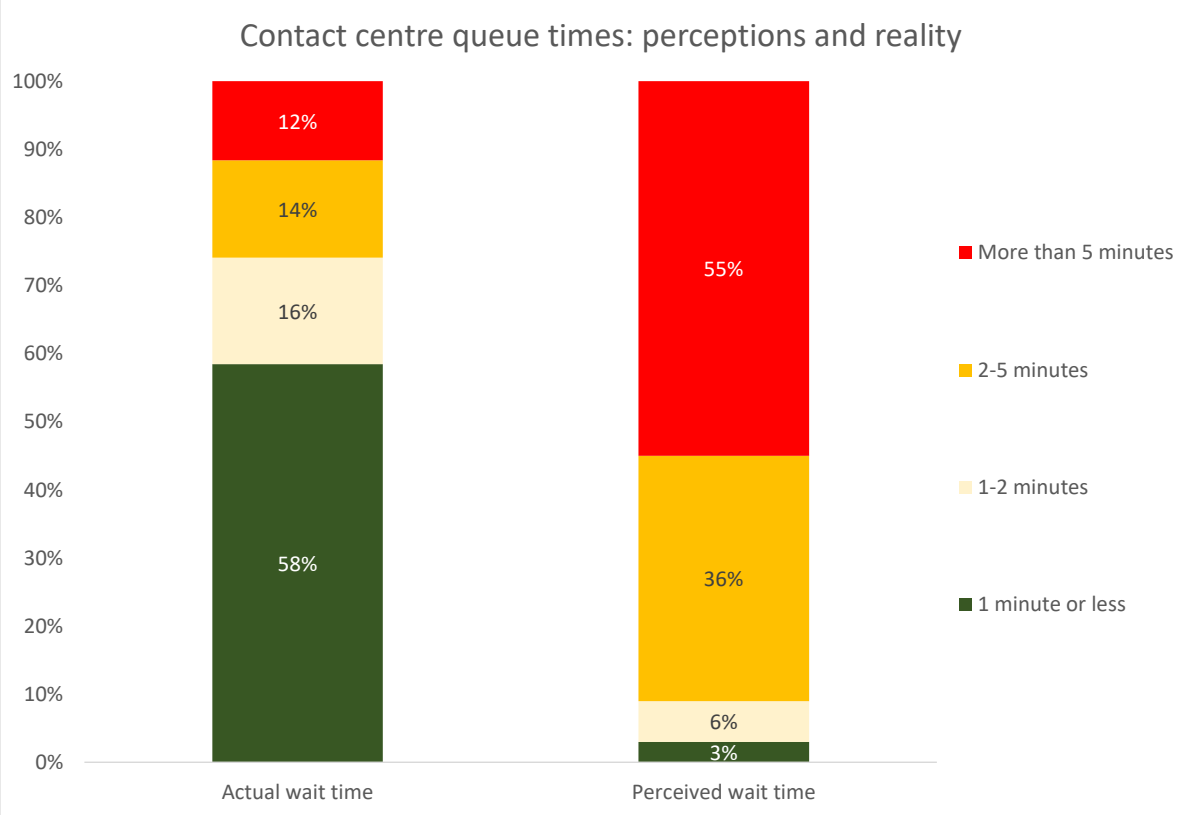
As businesses are very concerned with customer sentiment, the following chart should be of great interest, as it investigates the average amount of time that people believe that they usually wait in a contact centre queue before speaking with an agent, compared with the average actual time that it takes to answer a typical call. Unfortunately for businesses, there is a massive disconnect between customers' perception of typical queue times, and the reality of how long customers actually have to wait.

[12] Survey of 2,000 UK customers carried out by ContactBabel on behalf of Videlica.

Gathered from primary research with hundreds of UK contact centres, the left-hand column in the chart below shows the average speed to answer customers' calls. 84% of UK contact centres report an average speed to answer of under two minutes. Of course, queues can be far longer at certain times of day (or indeed, as a result of the pandemic), but as an average, this has been steady over many years.

Compare this figure with the paltry 9% of UK customers who believe that they will normally wait for under two minutes to speak with the contact centre agent, and the gap between perception and reality becomes clearer.

Figure 88: Contact centre queue times: perceptions and reality



This leads to a greater problem for businesses: a proportion of customers will actually turn to a competitor simply based on the feeling that they are queuing excessively. 12% of customers report having chosen an alternative supplier due to excessive queue lengths. The following figure shows the financial impact of this on a specific vertical market – utilities – although this is applicable to finance, insurance, retail, telecoms and other business sectors too.

The Cost of Excessive Queue Time

Survey respondents who had indicated that they have definitely changed supplier due to excessive queue times were asked which products and services this applied to.

The typical annual value of products such as broadband, retail, gas, electricity and mobile telephony, and services such as motor and home insurance, current accounts and credit cards was gathered from reputable online sources. The proportion of customers switching product or service because of excessive queue lengths was multiplied by this annual value, which was itself multiplied by the overall number of UK customers or households to give an overall lost revenue opportunity.

For example:

- 22,514,000 UK households use gas (Sources: Department of Energy and Climate Change; consumerfocus.org.uk; Office for National Statistics)
- Typical household expenditure on gas per year: £753 (Source: Office for National Statistics)
- Total gas expenditure per year: £16.953bn
- % of customers stating they changed utilities supplier because of excessive queue lengths: 2.64%
- => 2.64% x £16.953bn = £448m per year

Of course, one company's loss is often another's gain, so overall this is likely to be close to a zero-sum scenario, but the fact remains that huge amounts of UK customer expenditure moved from customers' original choices to a competitor, simply because of excessive queue lengths rather than lower cost or higher quality.

THE PROBLEM WITH QUEUING

The report has established that customers have such a dislike of contact centre queuing that they cannot objectively estimate how long they queue for, and will actually change supplier although the reasons for doing so – excessive queuing – may not even exist in reality. The following section explores this in more depth, in order to understand which solutions and practices could be implemented to avoid the potential financial loss.

ContactBabel carried out a large-scale survey of the UK public that explored why customers notoriously hate queuing to speak to a contact centre agent, yet seemed far more acceptant to wait in an actual physical queue, often for a longer time.

Figure 89: Reasons given for dislike of contact centre queuing

Reason for disliking queue	Average score from 10 where 10 is "extremely frustrating"	% of public scoring this at a maximum 10
Not knowing how much longer you'll have to wait	8.7	61%
Repetitive announcements	8.0	45%
Having to restate account information already given in the IVR	8.0	45%
Can't do anything else in the meantime	7.9	46%
The music you have to listen to	7.3	39%

Apart from the fact that customers have a lot of strongly felt reasons for disliking phone queues, the key finding from this table is that 61% of the public hate not knowing how much longer they will be waiting. This is less of a problem when waiting in a shop to speak to an assistant, as although they cannot give you an exact statement of when someone can help, the queuing system allows a customer to see how many people are ahead of them, to estimate their own wait time, and exercise some level of control over the situation. This makes queuing psychologically easier for the customer, even if the actual waiting time is significantly longer than it would be in a contact centre queue.

Customers also resent not being able to do anything while they wait, and the actual process of waiting on hold, with repetitive announcements and music that they have not chosen just makes things worse. There is also a feeling that information given in the IVR session for identification should be sufficient, without needing to restate it to an agent.

Queue position announcements, call-back and screen-popping or routing based on IVR will go a long way to making the customer feel back in control of the situation, leading to less frustration and potential revenue loss.

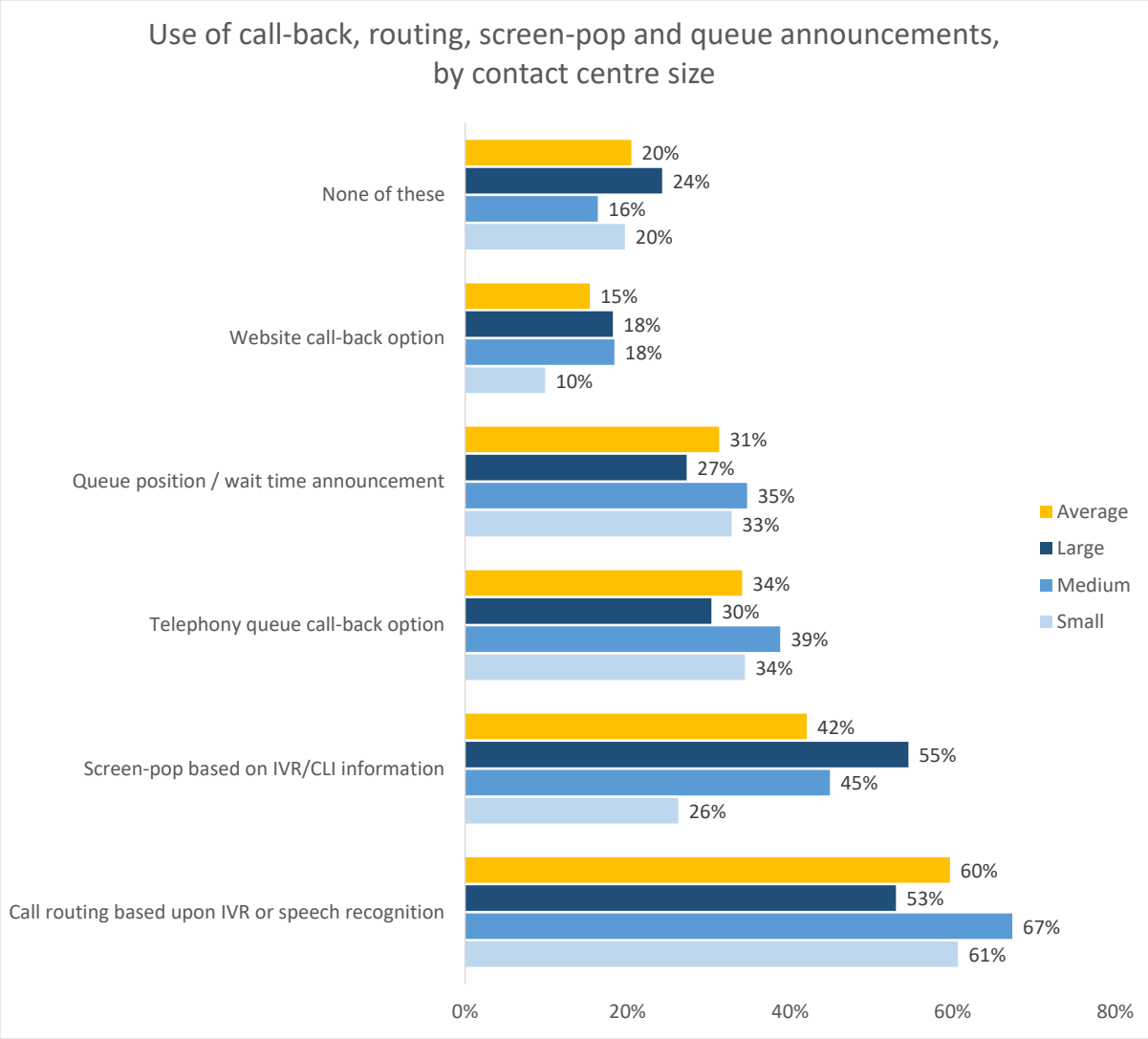
QUEUE MANAGEMENT SOLUTIONS

A question was asked to UK contact centres about which of these queue management solutions they were using.

The use of a website callback button (which initiates an outbound call at a time specified by the recipient) is weighted towards operations that carry out significant sales, but is present only in the case of 15% of this year's respondents, with larger operations being more likely to offer this option. We would expect to see this grow further for sales operations, and potentially play a part in providing customer support especially via smartphone channels.

34% of this year's respondents offer a telephony queue call-back option, and 31% announce the position of the call in the queue, similar to last year. Rather more respondents use call routing based on IVR or CLI (60%), with screen-popping functionality (42%) being used to put information about the caller and possibly their requirements on the agent desktop.

Figure 90: Use of call-back, routing, screen-pop and queue announcements, by contact centre size



QUEUE POSITION ANNOUNCEMENTS

Trimming 10% off average queue time isn't going to make a lot of difference to the perception of the caller, even though it may be a very difficult task for the contact centre to carry out. If customers aren't informed of wait time, they may become discouraged and frustrated as hold time drags on. This can lead to increased abandonment and even if the caller does decide to hold on, this experience starts the call off badly leaving the agent with a lot to make up. Customers waste time complaining about their experiences and may even ask additional questions on the call so that they 'get their money's worth'.

If customers are given the estimated wait time, they may decide to abandon immediately or may judge that the wait is acceptable and remain on the line to speak with an agent. This alleviates some customer frustration but means that some of the callers which abandon may not call back – ever – and it doesn't solve the fact that customers are still having to wait. One solution is to implement a virtual queuing system, which not only provides customers with information about current queue conditions but also presents them with various active options, such as remaining on hold or choosing to be called back when it is their turn.

CALL-BACK

There are several different varieties of virtual queuing systems: the "First-In, First-Out" (FIFO) system keeps the customer's place in line by monitoring queue conditions until the estimated wait time hits a set target, at which point it intercepts incoming calls before they enter the queue, informing customers of the likely wait time and offering the option of receiving an outbound call in the same amount of time as if they had personally waited on hold.

At this point, customers choosing to remain on hold go directly into a queue. Customers who opt for a call-back are prompted to enter their telephone number and possibly some extra details that can be used for agent selection and skills-based routing, and are then asked to hang up. Virtual placeholders keep the customers' places in line and the virtual queuing system launches an outbound call to the customer at the agreed time. When the call-back is answered by the customer, the system checks the right person is on the line and ready to talk. If this is the case, the call is routed to the next available suitable agent, who handles it as a normal inbound call.

By replacing real hold time with this virtual version, customers are free to do other things, thus removing four of the five problems that they have with queues - unknown queue times, hold music, the inability to do anything else and repetitive announcements.

Scheduled call-back options differ from a FIFO experience, in that customers do not keep their place in queue, but are called back at some time in the future that is more convenient for them (for example, when they know they will be back at their desk and available to take a call).

There are several types of scheduled virtual queuing:

- Datebook-type scheduling systems allow customers to schedule appointments for days in the future, with times blocked-out that are unavailable for scheduling, and limiting the number of call-backs available. This system also allows customers that reach a contact centre out-of-hours to schedule a call-back during normal working hours
- Timer scheduling systems promise a call-back after a specific amount of time, regardless of queue conditions. While this ensures an on-time call-back for the customer, a surge in call volume or staff reduction due to a shift change can create problems for the contact centre's queue, lengthening wait times for other callers
- Forecast-based scheduling systems offer appointments during times that are expected to have low call volumes. These times may not be convenient for the customer, and the contact centre runs the risk that their scheduling may be inaccurate.

Respondents offering a telephony call-back option were asked to state which types of call-back were presented to callers. Two-thirds of respondents that offered call-back functionality allowed callers to request a FIFO call-back (i.e. acting as a placeholder in the queue), with significant minorities allowing customers to specify a scheduled time.

Figure 91: Types of telephony call-back offered to customers (only from respondents offering telephony call-back)

Type of call-back	Proportion of respondents offering call-back that use this
FIFO (first-in, first-out) - holds the caller's place in the queue, then calls once they are at the front	70%
Timed (called back at or before a specific time, regardless of queue conditions)	40%
Forecast-based (called back at a time to suit the contact centre)	15%
Datebook (caller can specify a day to be called back on)	10%

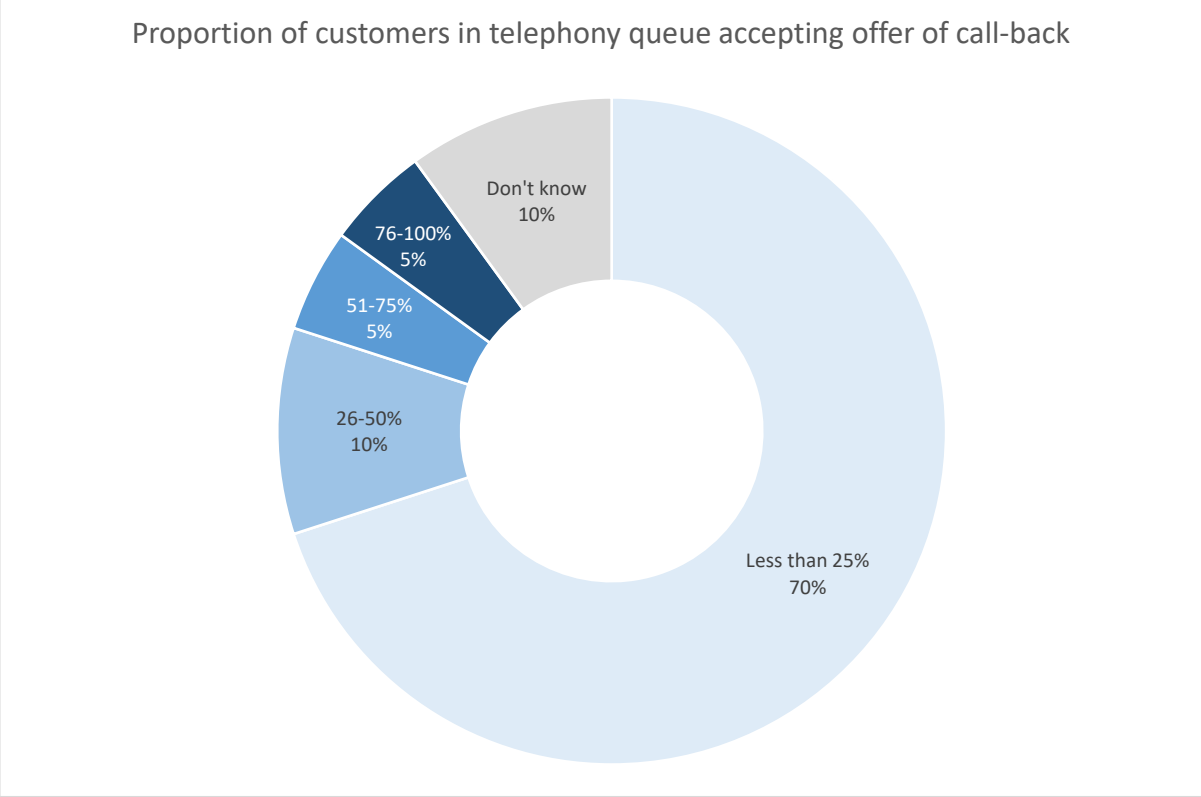
Most of the survey respondents who offered call-back reported that FIFO placeholder call-backs were far more requested than one of the delayed call-back types. On analysing the contact centre activity type (i.e. sales or service), those callers making sales enquiries were more likely to want a placeholder-type of call-back. This could possibly be explained by the differing states of mind of customers calling to purchase something, or to make a query or payment. The former is more likely to have chosen to call the contact centre to make a purchase that they are enthusiastic about, and/or which is time-sensitive, and as such, want to speak to the business as soon as possible.

Respondents indicate that telephony call-back tends not to be universally available to callers, with businesses only offering it after a certain period of wait time or once the queue becomes so long that it triggers the functionality to be offered. Half of respondents trigger call-back functionality based on the actual time that the customer has spent waiting, with around 30% looking at the estimated wait time based on ACD statistics. The remainder of respondents use a mixture of actual and expected queue time.

Two-thirds of contact centres using call-back state that it is offered after the caller has spent up to two minutes in the queue, although 10% say that it takes longer than five minutes before call-back is offered, at which point many customers have already given up.

Of those who are offered a call-back, most respondents report that fewer than a quarter of callers chose this option. This may be because customers lack confidence that the business will call back when they say they will, are relatively unfamiliar with the technology and/or do not have the call-back option offered to them early enough and so have already abandoned the call.

Figure 92: Proportion of customers in telephony queue accepting offer of call-back



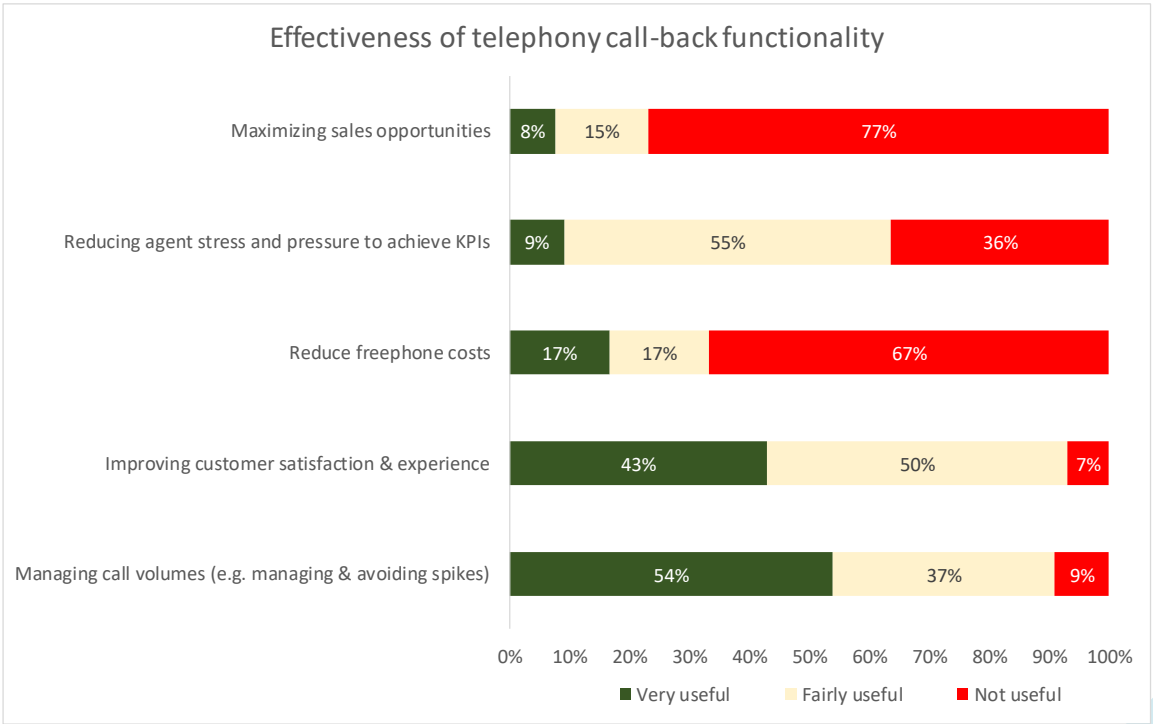
The previous finding is concerning, as call-back has great potential for both customers and businesses: virtual queuing and call-back, when implemented – and explained properly to customers – can be a win-win for both business and customer by:

- Increasing customer satisfaction and experience by being called back by an agent who already understands the customer's context and identity
- Reducing average speed to answer and call abandonment rates
- Reducing call lengths as customers should spend less time complaining and adding-on unnecessary queries "while they're on...", pressuring agents trying to meet targets
- Reducing toll-free/freephone costs, as virtual queuing time does not incur telephone charges borne by the business.

Respondents offering telephony call-back functionality stated clearly that is was most useful for managing call volumes and spikes in busy periods, thus improving customer satisfaction and experience. Being able to spread calls out over the day and allow callers to keep their place in the queue - without actually having to queue – is seen by users as being of great use to both company and customer.

Telephony call-back is not seen by businesses as having a particularly positive effect upon reducing agent stress and pressure to achieve key metrics, and it is definitely not viewed as maximising sales opportunities from customers who would otherwise go elsewhere. Few respondents considered it particularly useful in reducing their freephone costs from customers who were queueing at the businesses' expense from considerable amount of time. It is not to say that telephony call-back does not provide these benefits, only that respondents do not use call-back with these in mind.

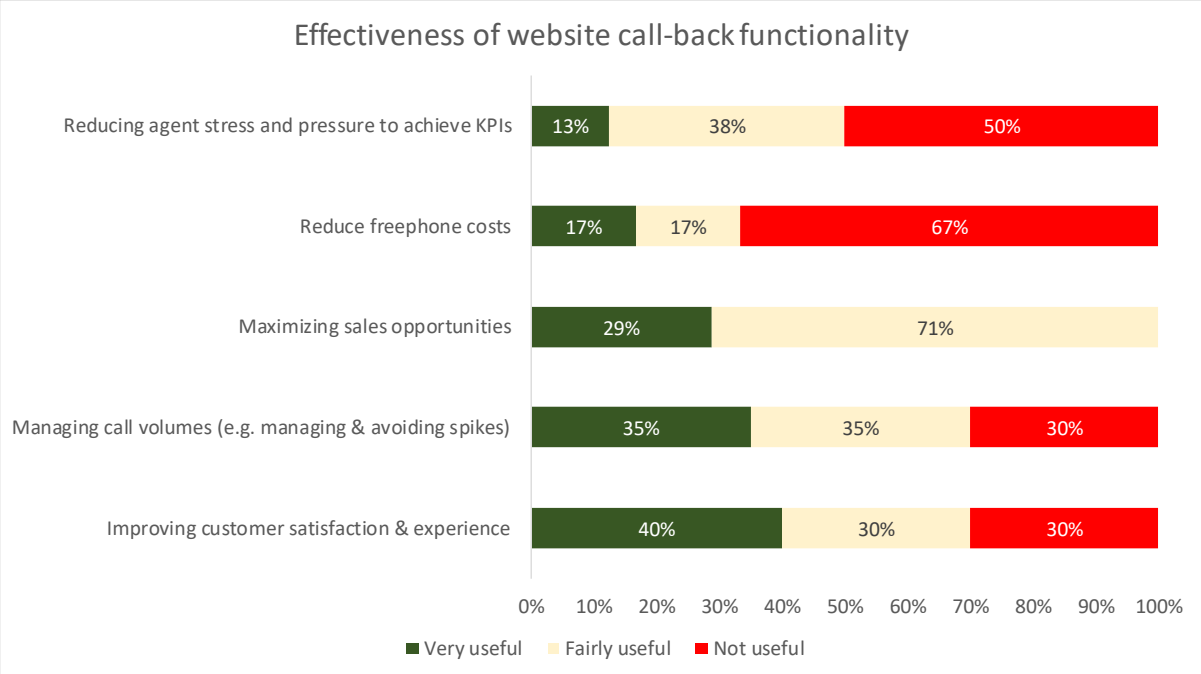
Figure 93: Effectiveness of telephony call-back functionality



Looking at the perceived effectiveness of website call-back functionality, it is worth noting that respondents believed web call-back was less beneficial than telephony call-back for improving the customer experience or providing relief from call spikes.

However, there was much more positivity that website call-back was useful in maximising sales opportunities, allowing the customer to be contacted at the point of purchase.

Figure 94: Effectiveness of website call-back functionality



VIRTUAL CONTACT CENTRES AND THE CONNECTED ENTERPRISE

Although many contact centres still operate as a single, centralised site, there have been increasing commercial pressures and technical opportunities allowing businesses to look at alternative ways of working, such as using virtual contact centres, encouraging homeworking or bringing in knowledge workers from elsewhere in the enterprise.

Recent events have meant that homeworking / remote working has become vital to the business continuity plans of many contact centre operations. After the crisis has passed, businesses may well find that reverting to the previous centralised contact centre model is no longer optimal and that remote working can bring greater flexibility and performance, augmenting the traditional way of operating.

Apart from the pandemic-driven requirement for business continuity, the drivers for decentralisation include:

- the presence of multiple contact centres – possibly gained through mergers and acquisitions (especially in the finance, insurance, telecoms and utilities sectors) – which are not linked together in any way, thus not gaining from any economics of scale
- increasing levels of staff attrition and difficulty in finding the right staff to replace them, especially highly-skilled agents
- the requirement of many contact centres for better-qualified staff, rather than just "warm bodies" to answer phones as a result of self-service take-up increasing the average level of interaction complexity that an agent now handles
- the need to keep the contact centre open for longer, despite agents not wishing to work anti-social hours or businesses wanting to pay for a full shift when only a couple of hours are needed. For many organisations, the offshore experiment has not been as successful as they had hoped, and they are now required to offer UK-based service to their customers rather than offshore service outside core UK hours
- homeworking is more environmentally friendly and supports a flexible lifestyle and corporate green aims
- the rising concern about coping with call spikes, which could be dealt with by logging agents on for an hour or two, rather than having them come in for a full shift
- the desire to increase the size of the contact centre, which may not be possible in that location due to market saturation and a shrinking labour pool.

This section looks at alternatives to the 9-to-5, full-time, centralised ways of working, and investigates the number and type of contact centres that are using these alternatives.

The application of technological abilities to commercial issues created the virtual contact centre which, although located in multiple sites, can still be run as a single logical entity. The virtual contact centre consists of many operations (including homeworkers or satellite offices) which are linked together so as to be viewed and managed as a single site, allowing significant economies of scale and improvements in performance to take place, but with fewer of the attendant problems around environment, morale and attrition that plague many very large operations.

The virtual contact centre model has been driven by several factors. These include:

- For businesses involved in acquisitions or mergers, the number of contact centres they run have increased, particularly in the finance, insurance, telecoms and utilities sectors
- Rapid contact centre growth in certain geographical hotspots has caused agent recruitment issues. This has meant that businesses have to consider new physical locations in which to establish and grow their operations
- A rise in teleworking and remote locations means some agents may never see their parent contact centre. This is increasingly the case in 2nd- and 3rd line technical support, where skilled agents can be scarce and expensive to replace
- Some companies prefer to offer a local touch to customers by basing operations in the area or country which they serve, or in which the company already has a non-contact centre operation, but with capacity available to develop a new telephony department
- Improvements in networking and communications, such as cloud and IP telephony, have meant that the virtual contact centre is now much more easy to realise at an affordable cost with reduced upfront investment required
- Companies have increasing needs to serve global customers, necessitating either contact centres operating in different time zones, or paying overtime for working anti-social hours
- Operational redundancy, disaster recovery and continuous service are possible with multisite contact centres
- Smaller contact centres tend to have lower staff attrition rates than large operations, meaning that a large virtual operation made up of several smaller sites could benefit from this.

Treating multiple contact centres as a virtual contact centre allows great efficiencies to be made through economies of scale. This is especially true where businesses are using skills-based routing. All agent competencies are displayed to the scheduler – regardless of agent location – who can be more flexible simply because the available resource pool is so much deeper.

Figure 95: Virtual contact centre commercial and operational benefits

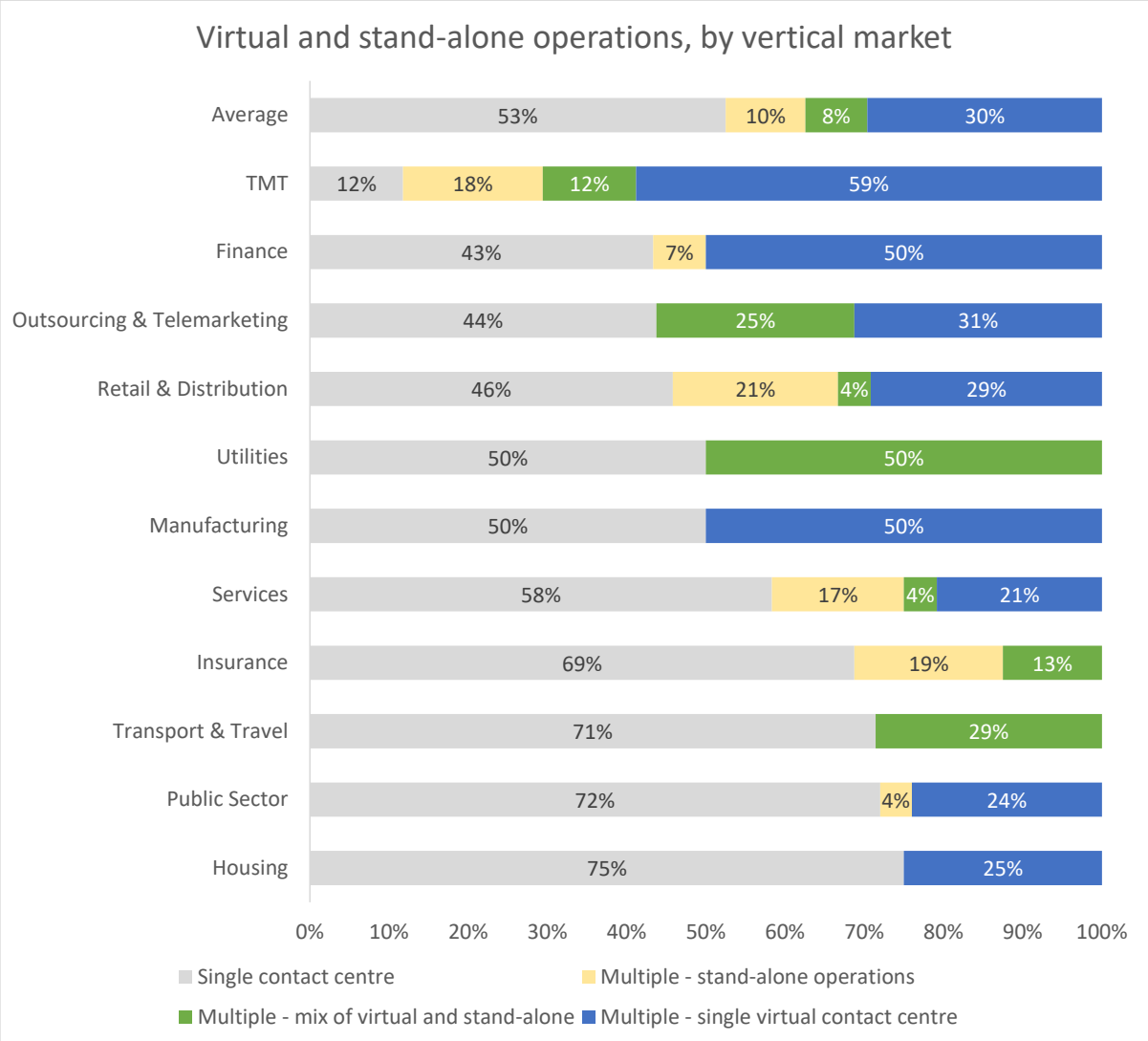
Effect of virtual contact centre	Commercial advantage
Larger pool of skills available	More likely to be able to match the call to the customer effectively. This improves first-call resolution, customer satisfaction and also improves agent morale, as they are able to help more customers first-time. It also means that businesses can route calls based on more detailed criteria than previously, as the available pool of skills is greater (e.g. if there are 5 contact centres, but only 1 person in each contact centre speaks a specific language, then it only becomes feasible to offer this as a routable skill once the contact centres are linked together to create a virtual language team)
More balanced work across contact centre locations	In a stand-alone multiple contact centre environment, there is a very real risk that agents in one contact centre will be overworked (leading to stress and increased queue times), whereas those in another may be underused yet unable to help their colleagues. The ability to overflow calls between physical locations is a key advantage of virtual contact centres, which can improve both customer and agent experience
Skills may be widely deployed and managed	Virtual contact centres can look at agent skills and competencies with a view to scheduling staff and routing calls accordingly. This allows specialised virtual teams to emerge
Forecast and schedule only once	Where many contact centres are treated as a single entity, work can be shared across sites as the contact centres are viewed as a single resource. Viewing the operations and skills available as one entity makes scheduling easier and more flexible. The resource pool is much deeper, allowing customers to be offered more skills, and the time and cost of scheduling is greatly reduced
Increase global coverage	For global businesses which have contact centres spanning distant time-zones, the opportunity exists to create a follow-the-sun contact centre, where the customer can be served 24/7, without the need to increase headcount or bear the costs and inconvenience to staff of working anti-social hours
Deploy applications in a standardized way	Virtualisation can mean that improving and standardizing the functionality available to agents in separate locations can be easier through a cloud-based hosted solution. Making the same functionality available to each agent regardless of their location means that a consistent level of customer service and agent experience can be achieved
Offer 24/7 availability and use more flexible and imaginative agent resourcing	Agents which work from home or smaller offices allow the business to expand dynamically, offering 24/7 cover without the cost of keeping the major contact centre operation open. Virtual contact centre technology also allows businesses to reach out to new labour pools such as the housebound and other non-traditional sources
Allows dynamic choice of outsourcers	If a company uses multiple outsourcers, these outsourcers can bid dynamically for the work available, e.g. the company does 80% of the work with its own people, but outsources the overflow as and when needed

Linking contact centres together has often been a complex task, especially in circumstances where the business had multiple types of switch and other infrastructure, perhaps as a result of merger and acquisition history. In recent years, the widespread take-up of IP-based infrastructure and cloud-based applications has usually made such a task easier.

Without a solid and scalable platform, separate applications, hardware and locations will remain isolated, or cost so much time and money to integrate that it would be better to leave them alone. Using a cloud-based single open platform, this investment becomes much lower, and leaves the way open for businesses to add locations, channels and applications as needed.

Survey respondents from the TMT, finance and outsourcing sectors are most likely to have multiple UK operations, with housing and public sector the least.

Figure 96: Virtual and stand-alone operations, by vertical market

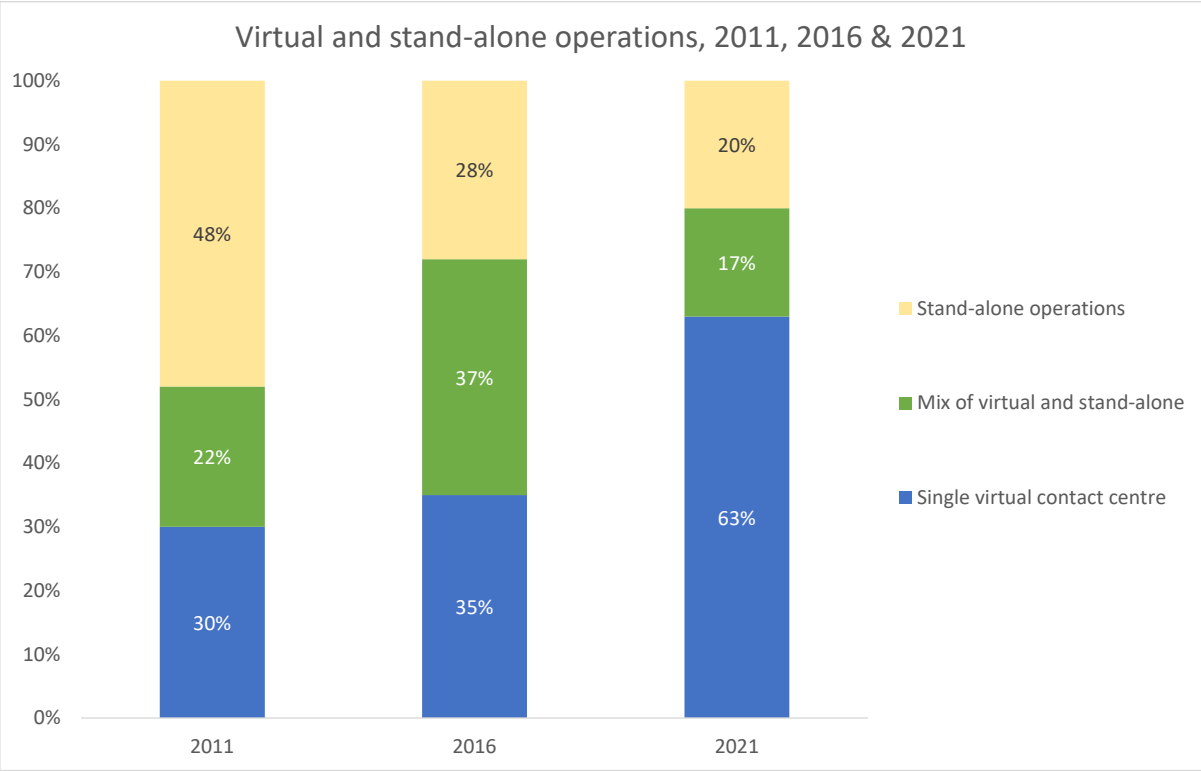


The following chart shows the current and historical status of multiple-site virtual UK contact centre operations in 2011, 2016 and 2021.

47% of this year's respondents' centres are part of a multiple-site operation, and as such are potentially part of a larger virtual contact centre structure.

63% of multi-site contact centres act as part of a full virtual contact centre operation (the highest figure on record), with a further 17% acting as a part of a partial virtual operation (e.g. in cases where only a few of the overall number of UK operations are linked together). This is a significant rise on the results seen 10 years ago.

Figure 97: Virtual and stand-alone operations, 2011, 2016 & 2021 (multisite operations only)



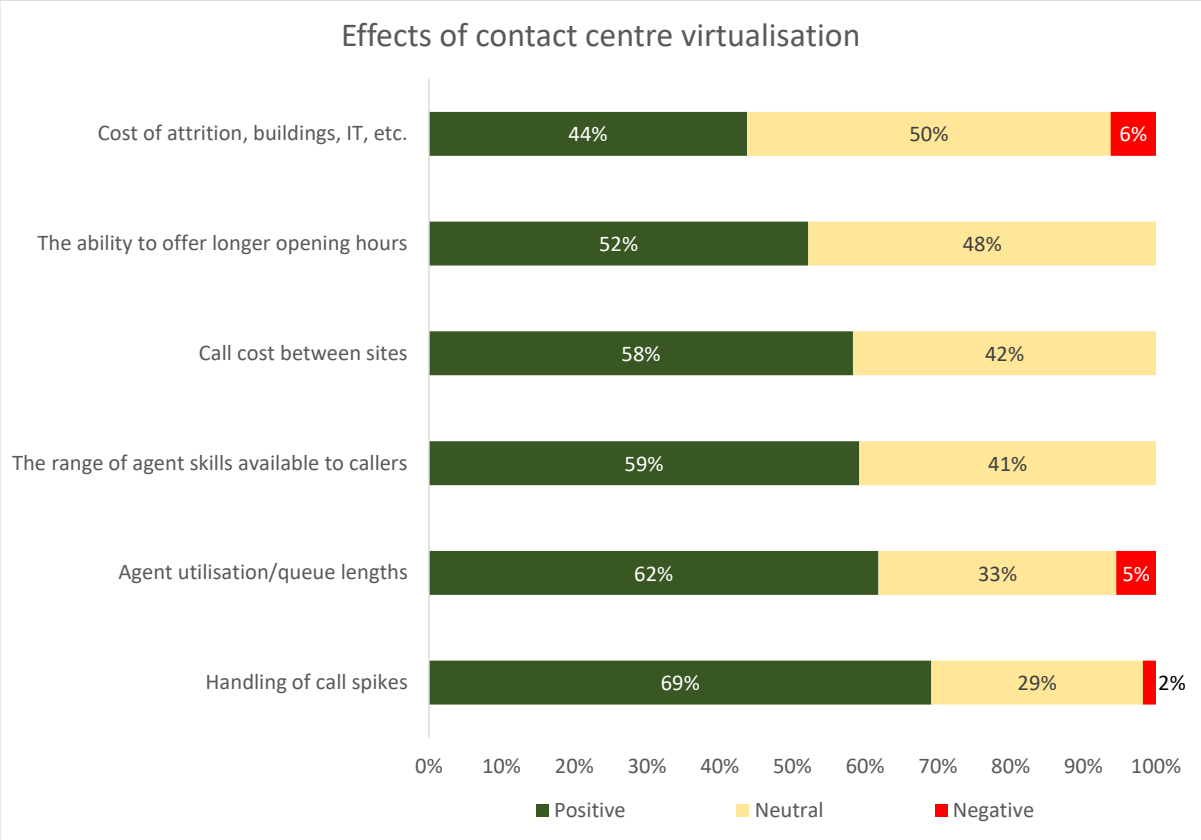
There has been a significant drop in the proportion of organisations with a mix of virtual and standalone operations in recent years, and a corresponding increase in the proportion of organisations with a single virtual contact centre.

While the reasons for this cannot be proven, it could be that organisations with multiple standalone operations have at least tried to become more virtual, although there may have been technical, operational or budgetary issues preventing them achieving a single virtual site to begin with, which have now been resolved, allowing more companies to use fully virtual operations.

Respondents with virtual contact centres have generally been very pleased with the gains in efficiency and service level that they have experienced.

The ability to smooth out call spikes by moving them between contact centres, and the reduced wait times were particularly mentioned, although all of the potential virtual contact centre benefits mentioned were rated positively, showing a maturity and bedding-down of the technologies.

Figure 98: Effects of contact centre virtualisation



The issue of coping with call spikes has grown year-on-year, and virtual contact centres allow agents from other locations (including homeworkers) to make themselves available to deal with a different queue, being seamlessly moved back to their original work when the spike has flattened or the length of their own primary queue triggers a move back to their original work. Dealing early with such call spikes can often remove the issue before it becomes a real problem, and such movement between call groups can be done automatically by setting thresholds in each queue. Such flexibility of agents means that there is a fairer agent utilisation, as the situation of a set of agents sitting idle while others are under great pressure is less likely to happen.

When considering inhibitors to virtualisation, there had historically been a strong feeling that virtualisation is difficult because there are too many different systems to integrate, and to a lesser extent, that it was too expensive and disruptive. This opinion has declined recently, although there was still a general feeling of concern about the practicalities of managing multiple teams across multiple sites.

Recently, there has been less agreement across the board that any of these reasons were major inhibitors for non-virtualisation. This can be linked with the major drive towards cloud-based contact centre solutions that has been seen in the past few years, which has helped implement a consistent underlying architecture and given rise to many new browser-based tools and applications that can support a virtual contact centre operation, as well as the growing acceptance that cloud-based solutions are generally secure.

Despite the strides that open, scalable systems have taken in recent years, around one-third of non-virtualised multiple operations still have no intention of virtualising. This shows not only that concerns over the feasibility and risk of joining operations together are still very real for some contact centres, but also perhaps that the benefits of doing so are still not seen to be strong enough to get over the inertia of the status quo.

For many years, businesses have been encouraged to look beyond the four walls of a typical operation and consider how and when to involve other knowledge workers in the enterprise, whether office- or field-based, in the business of customer service.

IP contact centre and cloud-based solutions can break down the boundaries between the contact centre and the wider business, allowing every employee to act in the capacity of a contact centre agent if in the best interests of the business. In many cases, the drive and interest towards IP telephony has come from the internal corporate telephony and IT departments, especially in the multi-office environments where real savings can be made.

From a contact centre perspective, there are significant advantages to having non-contact centre personnel available to speak with customers on occasion: superior customer service (and the attendant improvements in customer spend and retention), immediate interaction with the right person, reduced call abandonment rates, shorter resolution times and fewer call-backs, as well as more intangible benefits like the ability of executives to listen to the customer first-hand and learn from the experience. The recent pandemic also saw some experienced customer service staff move out of the physical store in order to help customers over the phone or online.

Usually, respondents in the TMT, utilities, services, public sector and housing vertical markets tend to report the greatest levels of contact handling by non-contact centre staff (the TMT sector includes many IT helpdesks where subject matter experts can be brought in if needed). However, 2021's figures are very different, with a much lower-than-usual use of non-contact centre staff across most verticals, probably caused by pandemic- and lockdown-related pressure on staff across the whole organisation. It will be interesting to see if this rebounds in 2022.

Figure 99: Non-contact centre staff handling substantial numbers of calls, by vertical market

Vertical market	2016	2017	2018	2019	2020	2021
Finance	25%	20%	38%	12%	19%	23%
Housing	33%	57%	61%	50%	42%	20%
Insurance	20%	20%	19%	10%	0%	0%
Manufacturing	5%	15%	15%	20%	25%	30%
Outsourcing	15%	27%	39%	31%	40%	36%
Public Sector	50%	31%	42%	58%	43%	24%
Retail & Distribution	33%	14%	31%	29%	33%	32%
Services	20%	29%	38%	50%	50%	33%
TMT	50%	67%	63%	60%	50%	18%
Transport & Travel	10%	10%	0%	24%	25%	29%
Utilities	50%	60%	71%	67%	50%	50%
Average	**29%**	**31%**	**39%**	**38%**	**34%**	**25%**

Knowledge workers can be incorporated into the contact centre on a part-time basis, without actually becoming a customer service agent. Although only used by 26% of the respondents who use non-contact centre staff to handle calls, 'presence management' links workers from diverse back office departments into the contact centre by allowing communication and collaboration across sites and functions. Presence management shows if a user is available to communicate via a specific medium, such as instant messaging, email, telephony etc. Availability can be defined either by the knowledge workers themselves, or via device detection. It is possible to route calls to experts using the same criteria as in the contact centre.

Presence can be seen as an extension of multi-channel contact routing by being integrated into software-based contact routing solutions, and can take omnichannel routing further, particularly in a SIP environment where presence can be detected in a greater variety of modes.

There are, of course, some potential dangers:

- Highly-paid knowledge workers may be overworked by the demands and interruptions placed on them by agents, and become less productive
- Most collaborative tools include directory search, instant messaging and presence for every individual, however, it is skill sets rather than names that should be used, to discourage dependency on one expert.

Intelligent routing should be used to govern requests for help to experts, creating routing rules to decide when experts should be used, and at what times. This should have the benefit of keeping the knowledge workers onside, and not choosing to show their presence as unavailable to avoid interruptions. Each skill area or department could offer a schedule to make sure that someone is available for the contact centre, thus ensuring the privacy of the others in that virtual team, although this is used by only 21% of these respondents.

67% of staff outside the contact centre who answer customer queries have access to the same level of customer information as an agent within the contact centre. This year's drop in the use of schedules for on-call experts is likely to be a factor of pandemic-related pressure on other parts of the organisation which means that the availability of expert knowledge workers cannot be guaranteed.

Figure 100: Integration of non-contact centre staff with systems and processes (only respondents using non-contact centre staff)

Level of integration with contact centre systems and processes	2016	2017	2018	2019	2020	2021
Same access to customer information as a contact centre agent	55%	65%	68%	71%	70%	67%
Can be viewed in real-time as being available or unavailable ('presence')	20%	29%	21%	27%	23%	26%
Rota / schedule for on-call experts	10%	23%	18%	18%	21%	13%

REMOTE WORKING

Up until very recently, the majority of UK contact centres worked as a traditional, centralised model, with fewer than 4% of agents working remotely at home.

Faced with the challenges of continuing to run contact centres in an environment decimated by coronavirus, many businesses urgently implemented business continuity plans which usually involved remote working.

Apart from this, homeworking / remote working promises contact centres significant benefits, including:

- the environmental benefits of working at home, reducing carbon emissions and decreasing congestion on the roads
- achieving cost reductions without having to use offshore contact centres through targeted working hours and reduced office space rent
- increased flexibility in working hours means rapid response to call spikes and reduced idle time
- increasing costs of recruiting and retaining staff allow agents outside the commutable distance to be employed at times that suit them and the business.

Remote working opens the door to people who might not otherwise seek employment in a typical contact centre but who would happily work in their own home taking calls. For an industry facing cyclical difficulties in the recruitment of employees who themselves are having to become more highly skilled and deal with more complex issues year-on-year, this opportunity to deepen the labour pool without widespread pay increases should not be ignored.

Remote agents, whether working at home, or in a telecottage (small, remote sites), can be a part of the larger virtual contact centre by being linked to the main operation via DSL or a leased line (in the case of telecottages). Some solutions permit least-cost routing and redundancy, where if the IP voice quality deteriorates, the call can be switched onto a back-up connection until the IP quality improves sufficiently to move it back to IP. Agents need only a PC which may act as a softphone, a headset (or IP phone) and a data connection.

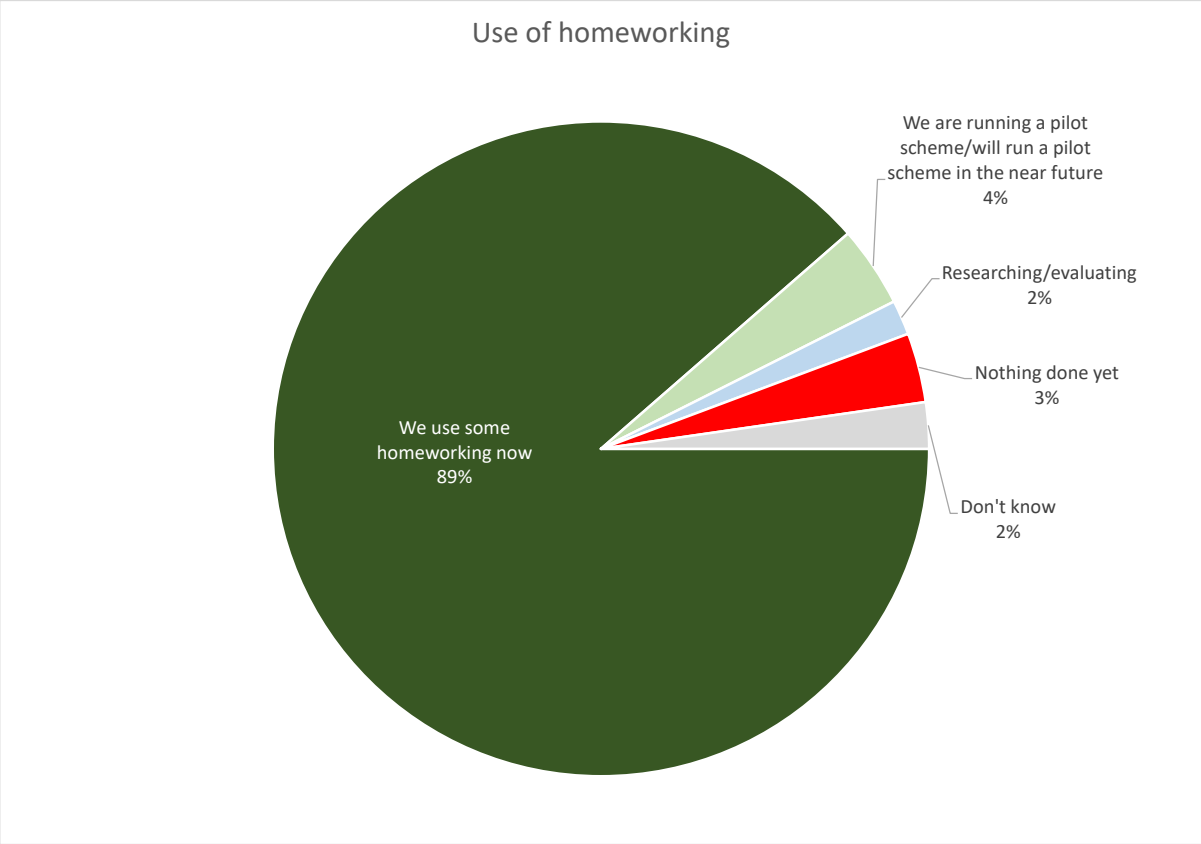
The ContactBabel report, "The Inner Circle Guide to Contact Centre Remote Working Solutions" looks in depth at the technology and working practices required to operate a successful remote working operation.

USE OF HOMEWORKING

In 2019, 26% of survey respondents were using homeworking, with 9% running a pilot scheme or about to set one up. Last year, driven by the need to react to the pandemic, these figures were 75% and 5% respectively.

In 2021, these figures have increased further, with 89% of respondents using remote working (which includes hybrid home-office working), and 4% trialling it.

Figure 101: Use of homeworking



The following chart looks at the historical use of homeworking / remote working, and shows a very slight but steady increase up until 2020.

By 2015, the proportion of contact centres using homeworkers had almost doubled since 2008, and the overall number of homeworking agents had increased by almost 300% since 2010. Yet since then, the proportion of operations using remote working had barely changed, and the actual number of homeworkers amongst the survey respondents seemed to have declined.

The snapshot survey carried out at the beginning of lockdown in April 2020 showed a massive increase in the proportion of contact centres using remote working, although no figure on the proportion of remote working agents was available. November 2020's survey showed that despite a relaxation in lockdown, 4 in 5 contact centres were still using full or partial remote working, and that almost three-quarters of agents in the survey were based at home.

2021's survey showed 93% of agents working at home at least some of the time, with 23% of survey respondents stating that all of their agents are currently still working at home.

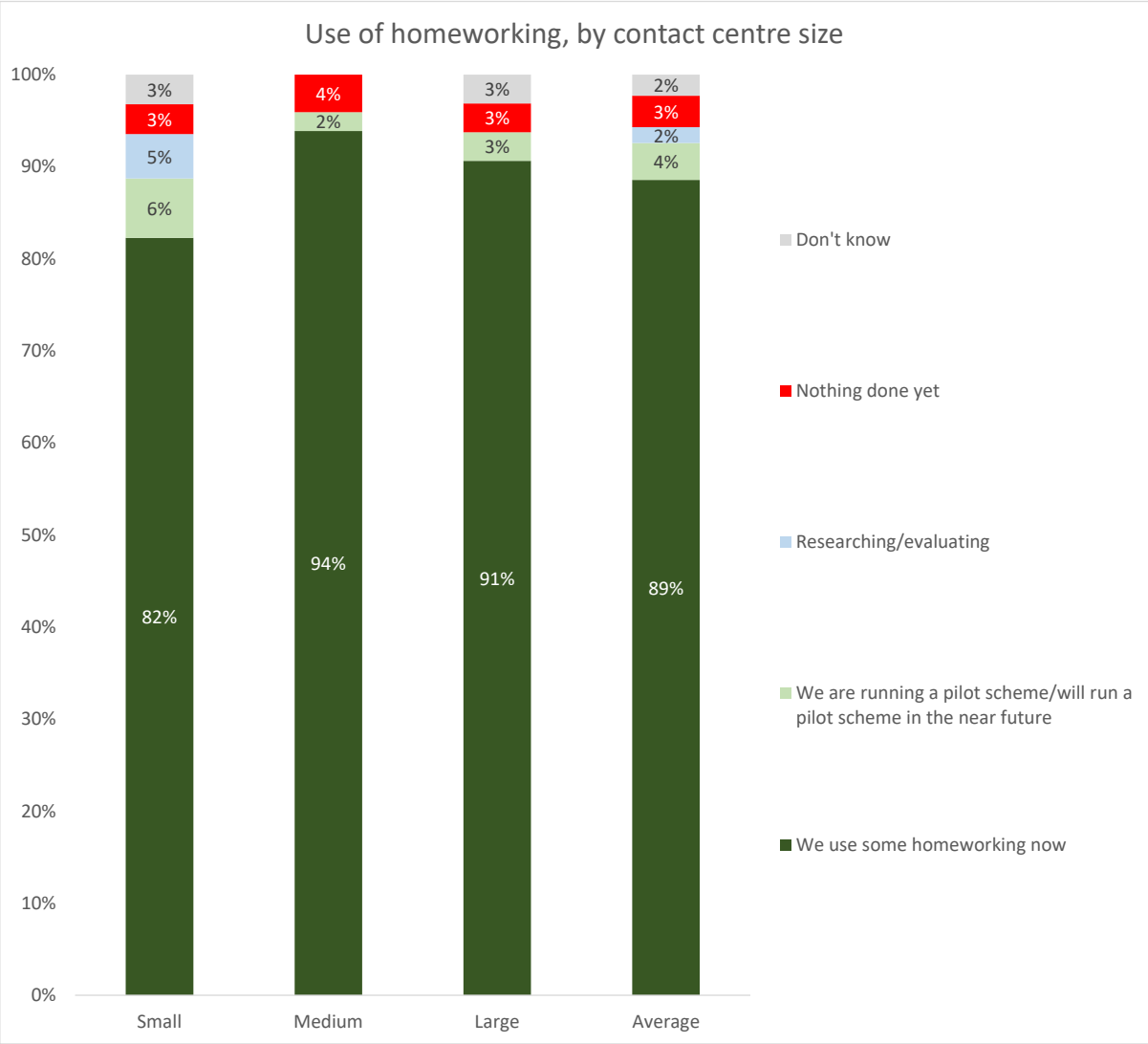
Figure 102: Changes in use of homeworkers, 2008- 2021

Year	% respondents using homeworkers	Mean % of agents that are homeworkers industry-wide
2008	12%	n/a
2009	13%	n/a
2010	15%	1.9%
2011	18%	2.5%
2012	23%	3.6%
2013	22%	4.1%
2014	21%	4.6%
2015	23%	5.1%
2016	17%	2.4%
2017	23%	3.4%
2018	20%	3.3%
2019	26%	3.8%
Apr 2020	87%	n/a
Nov 2020	80%	74%
2021	93%	72%

NB – figures are year-end except where stated

There is little real difference in remote working when considering contact centre size bands, although those in larger operations seem to be a little more likely to be doing so.

Figure 103: Use of homeworking, by contact centre size

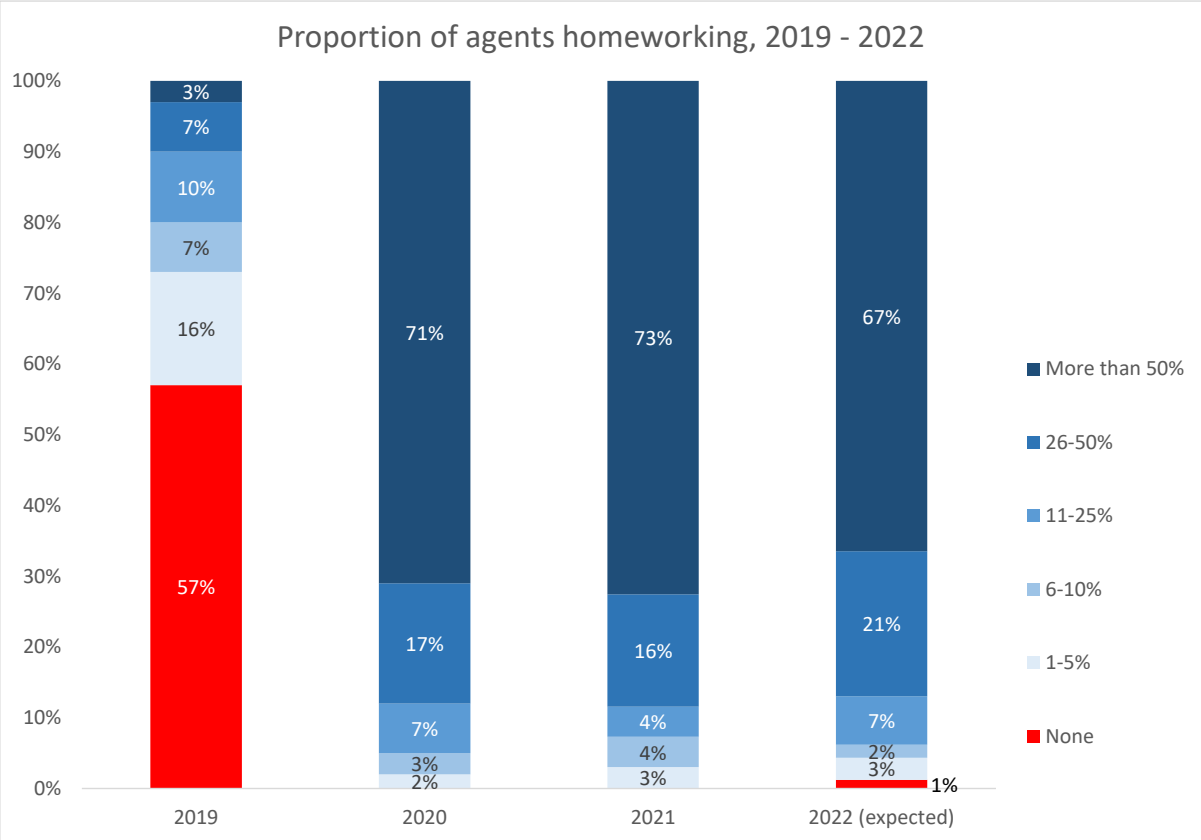


The massive growth in remote working can be seen in the following chart: in 2019, 57% of respondents did not use any homeworking, a figure which dropped to zero in 2020 and remains there in 2021.

73% of operations now have more than half of their agents working at home at least some of the time, and there has been very little change in this in the past 12 months.

Of course, this is likely to be a factor of the uncertainty surrounding the future and may change once confidence in public health is re-established.

Figure 104: Proportion of agents homeworking, 2019 - 2022



Survey respondents were asked what their expectations of remote working are for 2022.

The proportion of agents working at home (either full-time or in a hybrid model) is expected to be 64% (down from 72% in 2021). 9% expect all of their staff to be homeworking, and 1% expect all of their agents to be working in the contact centre.

43% of contact centres expect no real change to their remote working model, 40% expect a decrease and 17% expect an increase.

The main homeworking benefits have usually been reported to be about improving staffing flexibility and the ability to handle overflow or unexpected volumes of traffic: in the same way that the virtualisation of multiple contact centre sites allows agents to be moved between virtual queues instantaneously, having a large pool of homeworkers to draw upon very quickly, as needed, can be a great advantage in handling call spikes.

This is certainly still the case, but of course the opportunity for business continuity that remote working provides is very clearly top of the agenda at the moment.

Figure 105: Most important benefits of homeworking, (respondents using homeworking now)

Benefit	Score from 10	% scoring 9 or 10
Disaster recovery / business continuity	9.5	96%
Staffing flexibility	8.2	60%
Reduce staff attrition	6.7	30%
Overflow / call spikes	6.6	23%
Reduced equipment and building costs	6.3	29%
Seasonal demand	4.8	15%
Scarce skills	4.2	5%
Incentives for staff	3.8	4%
Organisational environment goals	3.2	4%

To some extent, homeworking is also credited with reducing agent attrition, as it takes away the stress, cost and time of the commute and enables the employee to work in less stressful, more personal surroundings. This allows the business to offer a more flexible working day to their employees, for example, a 4- or 5-hour shift in the middle of the day, allowing the employee to pick up and drop off their children at school, which may also coincide with the busiest period of the day for the organisation. In such cases, the employee is happy to work the hours that suit them, and the organisation bears less cost. Agents are far more likely to be able to work an hour or two in the evenings as well, allowing the contact centre opening hours to be longer.

When considering the inhibitors to homeworking, concerns over security and fraud were stated by 1 in 3 respondents to be the greatest hurdle, especially in the financial services sector, which is noticeably less enthusiastic in general about homeworking.

Working in an unsupervised environment is likely to mean that the potential risks for data theft and fraud are greater than in a closely supervised environment such as a traditional contact centre, especially if any physical paperwork is involved, payment card details taken or passwords written down. With the home workspace accessible to family members and visitors as well, risks are not just restricted to the homeworker.

The use of an automated payment card application, such as a cloud-based solution, would reduce the opportunity for deliberate card fraud and definite policies around the storage and usage of equipment have to be agreed upon. There are various data access methods available that circumvent the need for written passwords, such as voice biometrics or coded key-fobs, and strong firewalls and encrypted hard drives will also reduce risk.

There is also some concern that it would be difficult to manage homeworkers effectively from a remote location, which has always been an objection to this way of working. Isolation can be a problem for both agent and management, and not all roles or agents are suitable for homeworking.

It is generally considered that new parents returning to work part-time, or older people who wish to reduce their working hours but who are not yet ready to retire completely are particularly suitable to be considered for homeworking roles, which require experience and maturity in the agent. With real-time adherence and call management systems in place, there is no real reason that a virtual contact centre made up of homeworkers is more difficult to manage than a 'typical' operation, although the role of the team-leader (being someone to help actively) has to be re-addressed.

For some contact centre workers, it would be difficult to have a room away from the noise of the household, and this is a concern for some businesses. Obviously, it's important to consider working location on a case-by-case basis to assess the suitability of the agent for homeworking.

Non-homeworking respondents are far more likely to expect homeworkers to be less productive than centralised staff, perhaps as they are not in such a high pressure environment, with supervisors encouraging them, peer pressure and wallboards telling them the state of play. To some extent, it depends on the definition of 'productive': if it is a matter of call volumes, then not having these cues to hurry up may well have an effect. On the other hand, there are perhaps fewer distractions in the home. In any case, there is no reason to expect that quality will suffer – possibly quite the opposite – and the homeworking model is particularly suitable to moving agents between queues rapidly, which in fact will improve the productivity of the entire operation.

One of the previous greatest inhibitors to homeworking was that there was not seen to be a need to change the status quo: many respondents did not believe that homeworking would help with any business issue that they face. Clearly, the pandemic has reversed this opinion.

Having the correct technology in place to handle customer locations is only the first step in remote working, with success also dependent upon:

- the supervision and measurement of performance and quality
- effective intra-team communication
- targeted and effective coaching and training
- accurate workforce management, if possible including the flexibility to alter scheduling on an ongoing real-time basis
- motivating staff for whom homeworking is not a desired choice.

In situations where remote working has been forced upon the business rather than being part of its chosen customer communication strategy, processes and policies may not already be in place. Management teams should focus upon delivering simple and easy-to-follow guidelines for new homeworkers, and roll out more granular and complex updates as and when they are agreed upon.

Quite apart from the day-to-day operational guidelines, key policies may include:

- what is expected of staff when they are working from home (i.e. timekeeping, the frequency of virtual team meetings and one-to-one coaching sessions)
- a revision of key performance metrics to reflect the new reality: it may be better in the first instance that performance management is simplified, for example the number of customers handled or sales achieved, rather than a more complex scoreboard with multiple targets
- details on how targets and appraisals will be met and carried out going forward, and how any drop in performance or adherence will be handled
- management and supervisory advice on how to build trust with their teams without over-managing
- clear guidelines for homeworkers on the use of technology must be provided – whether their own or the company's – including detailed guidelines on secure and appropriate use inside and outside of working hours. This should also include direction on infosec, including working from unsecured Wi-Fi networks and making sure that any devices are password-protected and locked whenever the agent is not actively using them, as well as password and phishing policies.

Most contact centres have centralised teams which are physically located in a group that is able to communicate effectively with each other in real-time. Remote working creates an obstacle to this type of communication, but there are numerous methods to overcome this.

Use of an Instant Messenger such as WhatsApp installed on the agent desktop allows agents to see who else is logged on and talk to them or ask for help, including their supervisor and other members of the team. The aim is to replicate the centralised contact centre model's quick and informal ability to request assistance or receive support whenever it is needed, rather than waiting for the next official scheduled meeting. However, supervising manager should make sure that they are not virtually hovering over the shoulder of the agent, as if they were waiting for them to make a mistake: it's a fine balance. Agent performance dashboards replicating what they are used to seeing in the centralised contact centre can also help motivation.

Posting information to online message boards on the agent's desktop is a good way of communicating up-to-date information, as well as supporting the feeling that the agent is working as part of a larger team. It is important to set expectations on the level and type of communication that agents and supervisors will have on a daily basis while remote working. If remote working is new for employees, it will be helpful if specific communication activities can be scheduled, at least in the early days when people are still finding their feet. It is almost certain that in times of crisis, some of the metrics which are entirely appropriate to use within a centralised contact centre structure may be detrimental to the performance and morale of remote agents, so management should concentrate on outcomes rather than other metrics in order to reduce the stress upon agents. It may well be worth considering implementing gamification in order to encourage healthy competition and to make agents feel as though they are still part of a wider group.

Real-time communications are vital to supporting remote workers, in that they:

- deliver key communications about the company
- can be used to address concerns or rumours: a short video message from a C-level executive reassuring agents about the performance of the company and its long-term future can be helpful in reducing anxiety and improving focus. Large 'town hall' meetings can keep everyone up-to-date on the latest developments and make them feel that they are still part of the larger corporate body
- bring agents up-to-date with issues faced by other agents in near real-time, in order to prepare them for upcoming calls
- prevent agents from feeling that nobody cares what they are doing and that they are unsupported by making sure that the tools used offer the opportunity for immediate assistance from supervisors
- alert agents to be ready to move between channels as and when required
- encourage agents to speed up calls in times of extremely high call volumes
- make sure that they are adhering to schedule, and address any outlying performance issues (e.g. a series of extremely long calls).

Many businesses consider it best practice to take a morning meeting over video, involving all members of the team, in order to discuss any issues arising over the past day and discuss the type of work that the coming day is likely to hold. Scheduling a few free minutes at the end of the meeting to discuss personal matters and have a gossip has been highly recommended by contact centres who have only recently been forced into the remote homeworking scenario. Ideally, each meeting should have a fixed agenda which realistically reflects the amount of time each item should take and have a strong chairperson to enforce this, allowing time at the end of the meeting for socialising.

One-to-one video coaching sessions should be considered seriously: agents are likely to be feeling more isolated emotionally as well as physically, and a face-to-face meeting over video can help with this, especially for assessment and feedback where agents may be feeling uncertain about themselves. Recording all or part of the feedback session may also be useful for the agent to review in their own time.

Some agents will require more support than others, and the same remote management techniques do not work for every agent type. For example, the “farmer / hunter” model of salespeople is well-known, and there are other behavioural models for other contact centre employee types that take into account their confidence, communication skills, risk-taking, and attention to detail amongst other factors. Some of these character types prefer autonomy, but others thrive upon group interaction, whereas others may become stressed and anxious about not having the support around them with which they feel comfortable.

Consider how experienced agents can become buddies or mentors to less experienced agents. If agents have particular experience of remote working already, they should be encouraged to share their thoughts and tips with the rest of the team.

In a remote working environment, having classroom-based lectures of an hour or more (even virtually) is usually less effective than it is in a shared physical environment. Shorter sessions of live video could certainly be used, but businesses should also consider implementing more computer-based e-learning and cutting training into more manageable, smaller chunks.

Consider implementing a real-time customer feedback application which can show each agent what customers are thinking and where to focus any improvements. Sharing the performance of the team and individual regularly throughout the day provides motivation and feeling of belonging to the team as if they were working in a centralised environment.

Remote working may create some new issues for security, and it is desirable to be able to replicate the existing centralised security measures within the new way of working as far as possible. Since the adoption of chip and PIN cards, many fraudsters have shifted focus onto the contact centre, where personal information, card numbers and other sensitive personal data flows.

It has been estimated that more than 70% of agents still require customers to read payment information aloud over the phone, despite available technologies for more secure data transmission. There have also been numerous cases of agents having been approached directly to share customer information.

Security commentators typically report human error as the main cause of data breaches. The Cyber Security Breaches Survey, conducted by Ipsos Mori on behalf of the UK Government, revealed that 72% of reported breaches related to staff receiving fraudulent emails. Security systems and processes rely heavily on having informed, motivated and supportive personnel behind them i.e. creating a human firewall. Without a strategic 'push' to keep employees supported, engaged and aware, staff can turn from being the greatest asset to a serious vulnerability. Remote working increases this risk as agents can feel isolated from their usual way of working, and may not receive the ongoing reminders about following security processes that are required to keep everyone's guard up. Staff can fall prey to phishing attacks due to pressure and lack of training, and in times of crisis – where the 'new normal' is more than just a phrase – they may find themselves taken advantage of.

Businesses should strengthen their existing security, and look for potential weaknesses in the remote working landscape that fraudsters could exploit. If a contact centre is only protected with knowledge based authentication, where the answers are readily available from previous data breaches, fraudsters will exploit that unprotected channel. Multifactor antifraud solutions and strong authentication methods should be considered, as well as extra security measures, such as restricting homeworker access to certain customer data. There are also numerous ways of taking card payments without involving the agent in any way.

On the face of it, homeworking presents an increased security risk for businesses, for the simple reason that if card details are being read out within the call, no-one can physically verify whether the homeworker is writing these down, or if the agent is copying down other personal information. It is also impossible to stop homeworkers bringing phones into their home office which could be used to photograph or record sensitive customer information.

There is also a greater risk from the potential use of unsecured, unencrypted data and voice transmissions using the public Internet or low-grade Wi-Fi security protocols. Even if the agent is blameless, it is possible for others in the environment to eavesdrop on the conversation or otherwise have access to records if the agent steps away from the desk for a moment, or even to install keylogging software or hardware.

As such, businesses may wish to use a strongly encrypted virtual private network for the transmission of voice and data traffic, and make sure that personal firewalls, malware and virus protection software are fully operational and up-to-date, without requiring any manual intervention from the agent. Voice and screen recording should be compulsory, and where possible, supplied hardware should not allow the storage of data on unencrypted or removable media such as memory sticks, although this is obviously more difficult to enforce with agent-owned equipment.

Some of the best practices around managing the infosec of homeworking agents include:

- Agent hardware needs to have the same level of malware, antivirus and firewall protection as computers used within the contact centre environment, and these need to be automatically updated and security patched without the agent being able to disable or delay any updates. Where possible, agent hardware should not have any capability to move data onto removable hard drives

- Agents should have clearly defined responsibilities regarding the physical security of all equipment in their homes, and understand the importance of keeping the workspace secure (e.g. not using sticky notes to write passwords on)

- Wireless network, VoIP and network encryption protocols used should be up to the current published standards, as these frequently change. Any supporting hardware or infrastructure should be upgraded or changed at the same time as the central contact centre's infrastructure. Ideally, the public Internet should not be used for the transmission of voice, with analogue landlines being preferable if encrypted VoIP systems are not available

- Agent user IDs and passwords should be changed frequently, with multi-factor authentication being used, in order to verify that the person typing the password is actually the authorised user (this may be an additional requirement to those normally needed within the contact centre, where other employees will be immediately aware of the presence of an unauthorised user)

- Regular on-site visits to the home environment are necessary to identify any other potential risks, where possible.

More information about remote working can be found in ContactBabel's free report, "The Inner Circle Guide to Contact Centre Remote Working".

More choice for customers over the way in which they contact a business should mean a better customer experience. In fact, many times the opposite is true. Having multiple channels can simply offer businesses more opportunities to get things wrong.

If a business doesn't offer a channel that its competitors do, it's a problem. If the channel doesn't meet the required quality, it's a problem. If customers have to change from one channel to the other to get their issue resolved, it's a problem.

This section of the report will investigate the effect of today's omnichannel and cloud environment on the customer experience, and suggest ways in which businesses' and customers' very different requirements can be aligned so that everyone wins.

This section of the report considers:

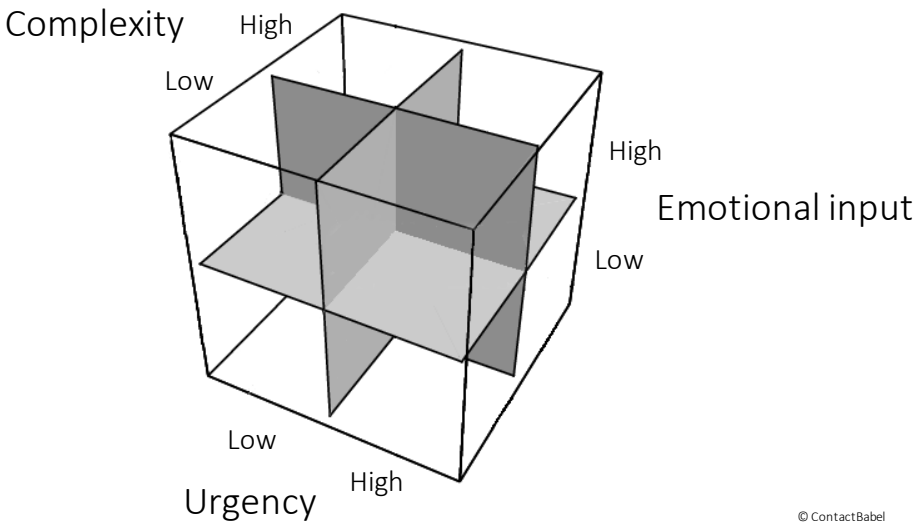
- Omnichannel
- Digital Channels
- Artificial Intelligence and Machine Learning
- Cloud-based Contact Centre Solutions.

THE CUSTOMER INTERACTION CUBE: UNDERSTANDING CUSTOMER REQUIREMENTS

There are two main factors that influence contact centres within any vertical market: the commercial activity within that sector, and customers' requirements and preferences for contacting organisations. It is not only the nature of the specific business vertical market that needs to be considered. The urgency, complexity and emotional importance of the interaction is perhaps at least as important as the nature of the business that is being called: for a customer calling a bank, a simple balance request and an urgent call about the progress of the mortgage application are very different types of call, and should be treated as such.

The 'Customer Interaction Cube' is a structure developed to categorise the different types of customer interactions that businesses have to handle, considering the urgency, complexity and emotional input of the interaction from the customer's perspective. Businesses could use this to analyse their volumes of each type of interaction, cross-referencing it with other variables such as the time of day these types of interaction are received, and the customer demographic preferences seen elsewhere in this report in order to support the relevant channels through the promotion of alternatives to live calls, and the correct levels of resourcing. Doing this will not only improve the customer experience, but also reduce the cost of service through anticipating the likely resourcing required and even proactively engaging with the customer on lower cost channels first.

The Customer Interaction Cube



Using this 2x2x2 cube as a structure, there are eight types of interaction, a combination of either low or high urgency, complexity and emotional input. Each of these eight interaction types may best be suited to specific channels, and that both business and customer could benefit from matching channel with interaction type.

The examples shown below of various scenarios and the channels most suitable for these are suggestions, and will differ between customer types, businesses and vertical markets, but may offer a framework for readers to build their own scenarios.

Figure 106: The Customer Interaction Cube and associated channels

Emotional importance	Urgency	Complexity	Examples of interaction	Primary channel	Secondary channel
Low	Low	Low	Meter reading; casual product research	Self-service	Web chat
Low	Low	High	Instructions on how to program a TV remote; find out about proposed planning / house building	Self-service	Email
Low	High	Low	Top up mobile credit; check payment has been made	Self-service	Phone
Low	High	High	Details of how to make an insurance claim; understand mobile roaming charges before imminent trip abroad	Web chat / self-service	Phone
High	Low	Low	Book train tickets for important engagement	Self-service	Phone
High	Low	High	Complaint about incorrect billing	Phone	Email
High	High	Low	Simple question about imminent desired purchase (e.g. delivery, personalization, return policy)	Web chat	Phone / social
High	High	High	Household emergency advice; 999	Phone	Web chat

There are many other variables that could be considered alongside these that will impact upon the suitability of channels:

- Demographics
- Ownership of smartphone / broadband impacts upon channel availability
- Time of day (i.e. is this an out-of-hours enquiry? Is the customer at home, at work, or travelling?)
- Whether the request is specific to an account, or a generic issue (i.e. is it necessary to pass through security first?).

While the 2x2x2 cube can help businesses to estimate the current and potential volumes and resourcing required to serve the customer base, it is important to remember that similar types of customer interaction may require very different handling depending on circumstances. For example, a query about product delivery may be a small part of a wide-ranging research process carried out by a particularly thorough prospective customer, or may be asked by a customer who has just realized he's forgotten about an important birthday and needs immediate, accurate information.

"The UK CX Decision-Makers' Guide" contains primary research on customer channel preferences in cases of high emotion, urgency or complexity, and can be downloaded free of charge from www.contactbabel.com.

McKinsey talks about the 'moment of truth' in customer interactions[13], often occurring when the customer has an unexpected problem or has a high emotional stake, when long-term loyalty and customer advocacy can be won or lost depending on the outcome and the way in which it is handled. Businesses and their representatives should be aware that these relatively rare occurrences offer great opportunities. Recognising and handling these moments of truth appropriately – moments which are defined as such by the customer, not the business - will have a far greater long-term impact on customer satisfaction and loyalty than the dozens of competently-handled, forgettable interactions that may have happened previously.

Although the 2x2x2 cube gives some indication of the types of interaction that are more likely to be 'moments of truth', which businesses may choose to be handled by their more experienced and empathetic agents, they are by their nature difficult to predict. Current real-time speech analytics solutions can indicate a measure of stress in the customer's voice, flagging this up to the agent within the call, but agents should be in any case capable of recognising this without technology. In any case, if the customer has already tried two or three other channels without success, even the most competent and empathetic agent will find it difficult to turn the moment of truth around positively.

[13] http://www.mckinsey.com/business-functions/organization/our-insights/the-moment-of-truth-in-customer-service

For this reason, a true omnichannel approach is vital which offers the same high level of service and knowledge through each channel. Equally important is the freedom for agents to act in way appropriate to the situation – for example, if a 'high-emotion' interaction happens on social media, which can't be handled on that channel (e.g. it needs to go through security, or is too complex and lengthy for a non-voice channel), the agent should be given the license to place an outbound call to that customer in real-time, rather than advise them to call the contact centre. While this will impact upon the social media channel's service levels while the agent is away from it, the moment of truth offers the opportunity to lock-in that customer's loyalty. For contact centre operations traditionally run on a structured command-and-control basis, this may sound chaotic, but businesses have to decide if the occasional relaxation of their own procedures is an acceptable trade-off for providing the customer with something that they truly value. Agents need to be given carte blanche to deliver in 'moments of truth', and the training and support to recognise when this is happening.

This is not to say that 'moments of truth' necessarily have to be handled by a live agent. The popularity of self-service runs deep in the customer base, and the only reason that many customers abandon self-service at the point of crisis in order to ring the contact centre is because self-service cannot deliver what they need. If companies focused their efforts on providing more sophisticated and reliable self-service applications, there is no reason why these could not deliver at least as much customer benefit at these moments of truth.

For example, if a passenger misses their plane, they are then likely to engage in a long and complicated discussion with a live agent (either at the airport or in a contact centre), involving alternatives, connections and payments. If, on missing the last call for the plane, the customer were immediately provided with an SMS or email detailing the various options available to them, which they could then select and rebook at once, this would be more convenient for the customer and significantly reduce the cost of service to the business. Perhaps more importantly, the customer would feel that the airline is looking out for them, creating long-term loyalty out of the negative experience of missing a plane.

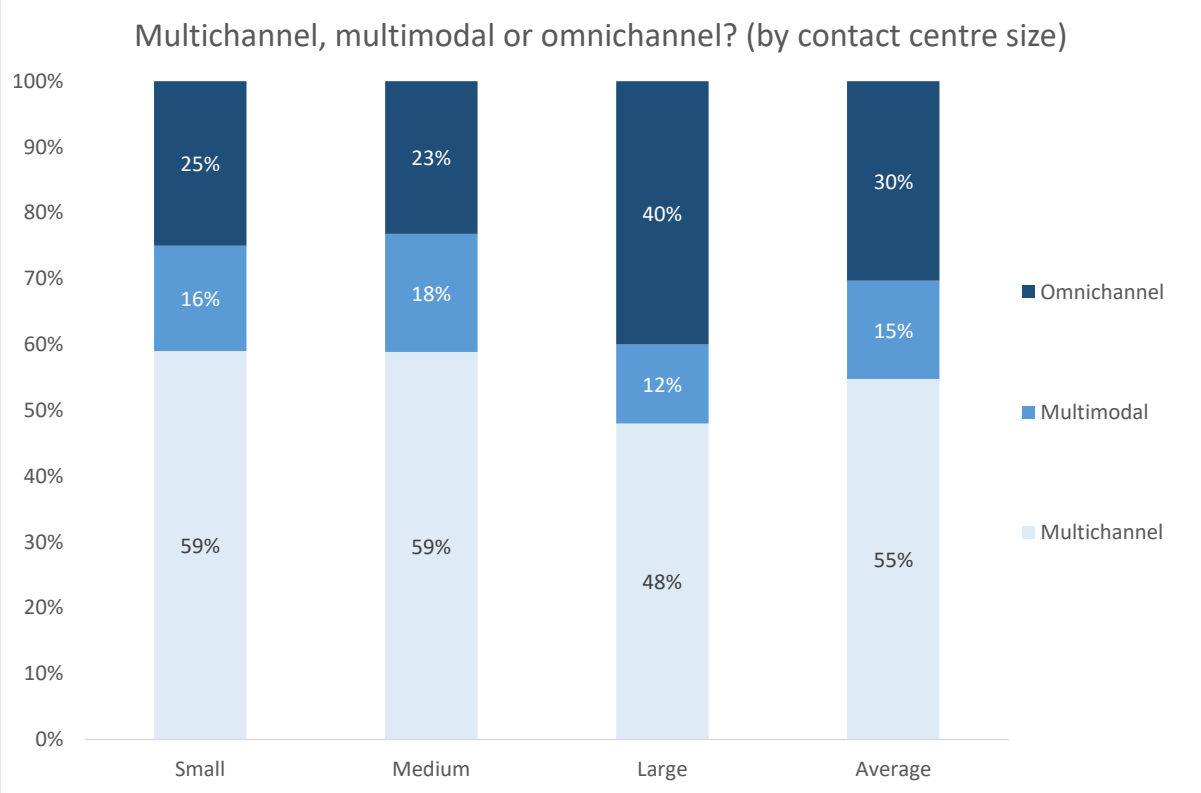
OMNICHANNEL, MULTICHANNEL OR MULTIMODAL?

Recent years have seen the word 'omnichannel' introduced as describing the goal of customers being able to contact (and be contacted) through any channel – switching between them during the interaction as appropriate, while taking any relevant data and history along with them – with a single, unified view of the customer's journey being available to the agent.

For the purposes of describing how far along the omnichannel process our survey respondents are, those who offer multiple communication channels to customers were asked to place themselves into one of three categories:

- Multichannel: "We offer a choice of channels to customers (i.e. several of voice, email, social media, web chat), from which they can use one in a single interaction. If they change channel, the context and history is lost"
- Multimodal: "We offer a choice of channels, and customers can use more than one in the same interaction (e.g. an agent can send an email or SMS to a customer while they are talking on the phone)"
- Omnichannel: "We offer a choice of channels, and can use more than one over multiple interactions, while retaining the history and context of the original enquiry. Relevant information follows the customer across channels and interactions".

Figure 107: Multichannel, multimodal or omnichannel? (by contact centre size)



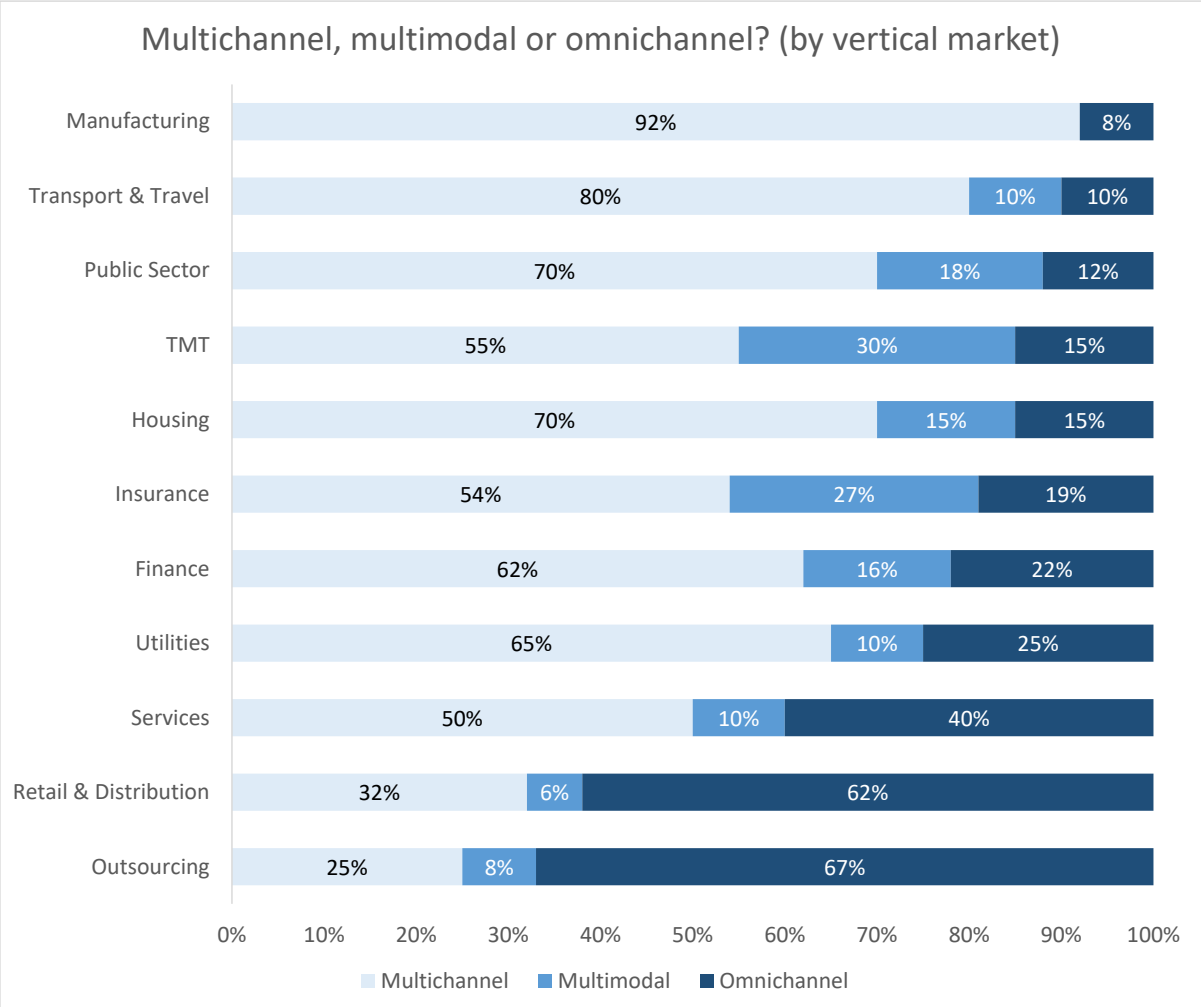
30% of respondents described themselves as omnichannel, with 15% assessing themselves as multimodal and 55% multichannel.

A factor based on contact centre size seems to be emerging: smaller, sub-50 seat operations were more likely to identify as either multichannel or multimodal than larger operations, as the investment and process optimisation involved in moving to a true omnichannel environment is significant, with the platform, infrastructure, applications and resources available to identify, route and switch interactions between agents and channels seamlessly while keeping all relevant data gathered in the course of the interaction requiring major effort and investment.

At a vertical market level, retail, outsourcing and services respondents were most likely to describe their operations as omnichannel.

Manufacturing and transport & travel respondents are least likely to describe themselves as omnichannel.

Figure 108: Multichannel, multimodal or omnichannel? (by vertical market)



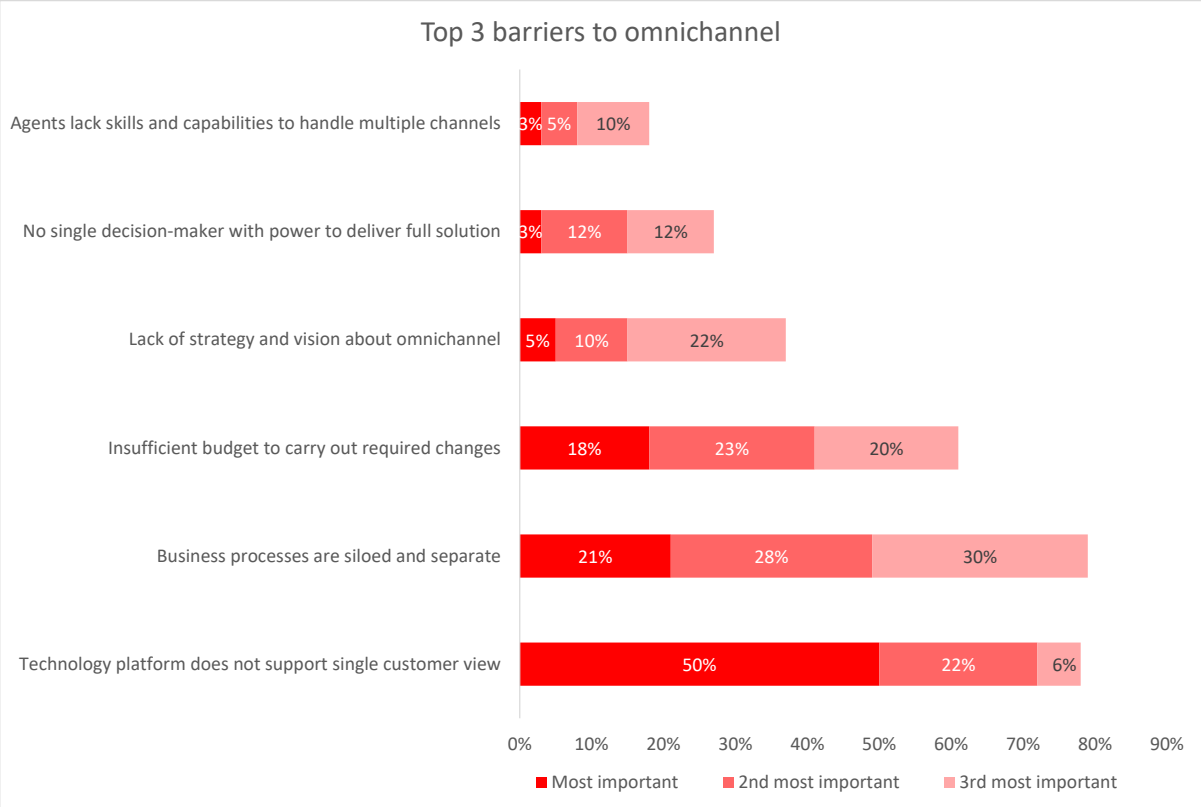
Apart from perennial issue around budgets, survey respondents believe that there are two main barriers to omnichannel:

- the technology platform does not support a single view of the customer
- business processes are siloed and separate.

While these inhibitors to omnichannel are certainly formidable, they are not insurmountable. From a technical viewpoint, the starting point is to have a single integrated platform that is capable of identifying a customer regardless of the channel which they choose to use. This will mean evolving from the siloed, channel-focused point solutions that were put in place to handle a specific need, and using a services architecture that is extendable to different channels in the future. It is also important to have a master dataset for product and customer data which is a 'single source of truth' that can be drawn upon by any customer or agent through any channel.

A key aim of omnichannel is to provide a consistency of customer experience, and this requires access not only to the same master dataset, but also the same knowledge bases and business logic must be applied equally. There must be real-time data flow and updates between channels and databases, as without this, consistency is impossible.

Figure 109: Top 3 barriers to omnichannel

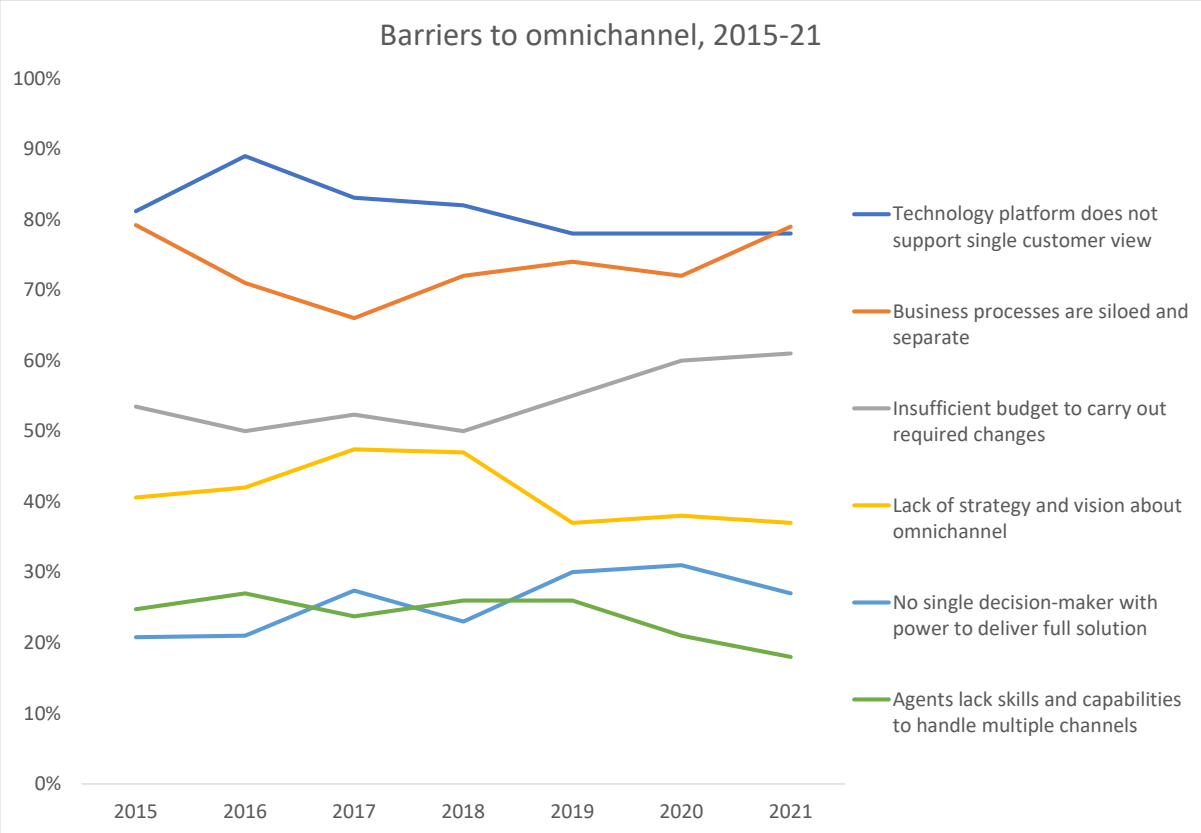


The following chart shows how respondents' views on the barriers to omnichannel have changed since 2015, by calculating the proportion of respondents that rated each inhibitor in their top 3.

There has been little change in the ranking – the technology platform and business processes have been seen to be the major problems throughout this time period – and it is also notable that the overall scores have also changed very little, suggesting that no single area has been addressed to a greater extent than the others.

Having said that, there seems to have been a rise in concerns over budget in the past three years, and it will be interesting to see if this continues next year as many businesses will face pressures to cut costs in response to any economic downturn or uncertainty created by the pandemic or the effects of Brexit.

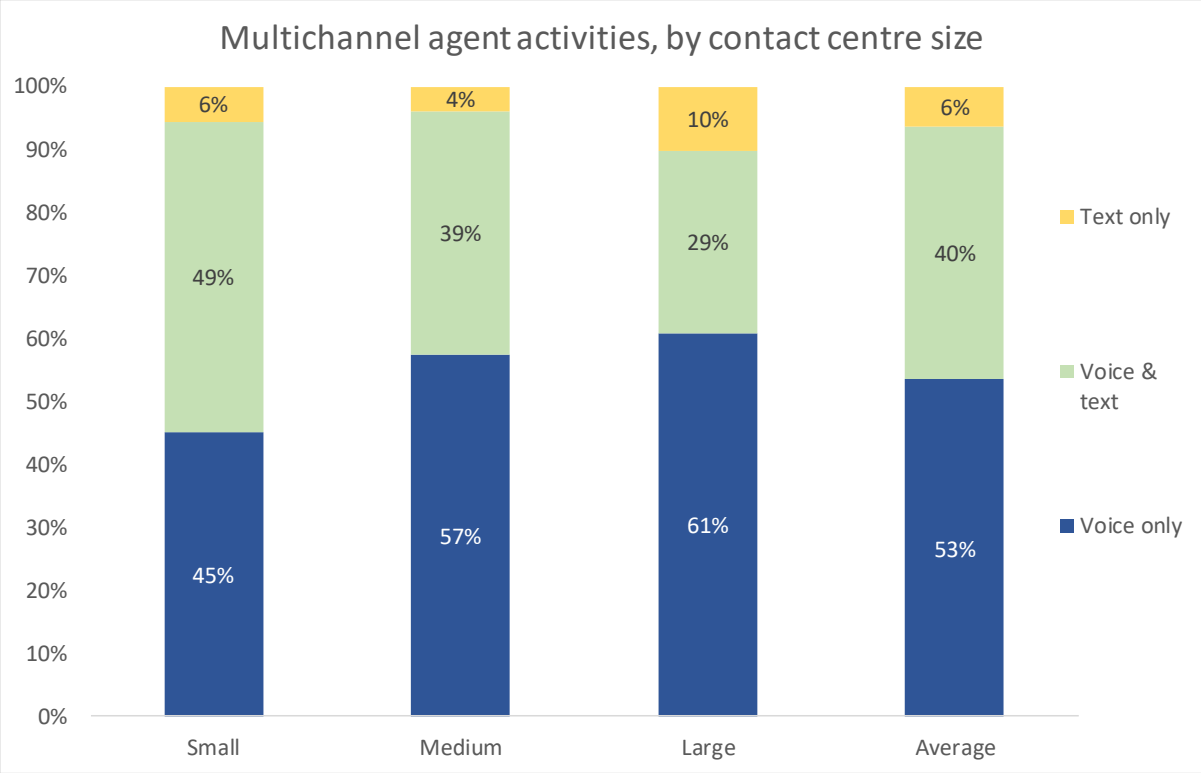
Figure 110: Barriers to omnichannel, 2015-20



Respondents were asked how they used agents to handle multichannel. In medium and large contact centres, around 60% of agents handle only voice, with around 5-10% handling text only (including email, web chat and social media).

Smaller contact centres – which tend not to have the depth of resource available to operate a dedicated single channel teams – are somewhat more likely to have agents moving between voice and text interactions as required. This approach, whether ad hoc or through a more formal blended approach, has been proven many times in past years' data to be positively correlated with improved agent attrition. This is not to claim causality, but that a variety of work may impact positively upon agent engagement and attrition rates is a point to consider.

Figure 111: Multichannel agent capabilities, by contact centre size



- Gather as much information as possible from customers, through analytics, customer surveys or preferably both: many businesses are doing this through a voice of the customer program. The aim is to understand which business processes are working, which are suboptimal and perhaps most importantly, which are most valued by the customer. Omnichannel is a journey, so focusing upon those areas which are most obviously broken will make sense, both from the customer's perspective and also in proving the concept to stakeholders within the business

- While the vision and strategy should be distinct and all-encompassing, the implementation can be done in phases that immediately impact upon the customer experience and prove ROI

- Set measurable objectives, using metrics that are directly related to the desired outcome. For example, if one of the aims of the omnichannel project is to reduce customer effort, it would make sense to consider first-contact resolution rates, rather than agent occupancy rates, for example. Metrics that are able to demonstrate ROI should be chosen wherever possible, in order to demonstrate to and reassure stakeholders elsewhere in the business that the project is achieving financial success. As elements of the omnichannel journey go live, behaviours and outcomes that support these metrics should be tangibly rewarded

- As with any large, cross-departmental project that may need to alter the culture of the organisation, omnichannel will require a project champion at a senior level, with the authority and vision to influence and create change wherever required, backed by and reporting to a sponsor at the highest level of the organisation. Create a cross-functional organisational overlay that represents the interests of each interested party

- Identify as many of the customer journeys as possible (and their business owners), tracking them across channel, into the back office, financial and distribution systems, and back out towards the customer. If some channels are owned by different departments (e.g. social media is often run by marketing), pitch the benefits of having the contact centre deal with customer interactions, allowing the marketing department to concentrate on their core job

- Using a tool such as the 2x2x2 cube matrix shown earlier, identify volumes and uses associated with each customer channel, segmented by variables such as customer demographics and intent if possible. Identify the potential moments of truth and the knowledge and data required at each stage in the journey to identify gaps

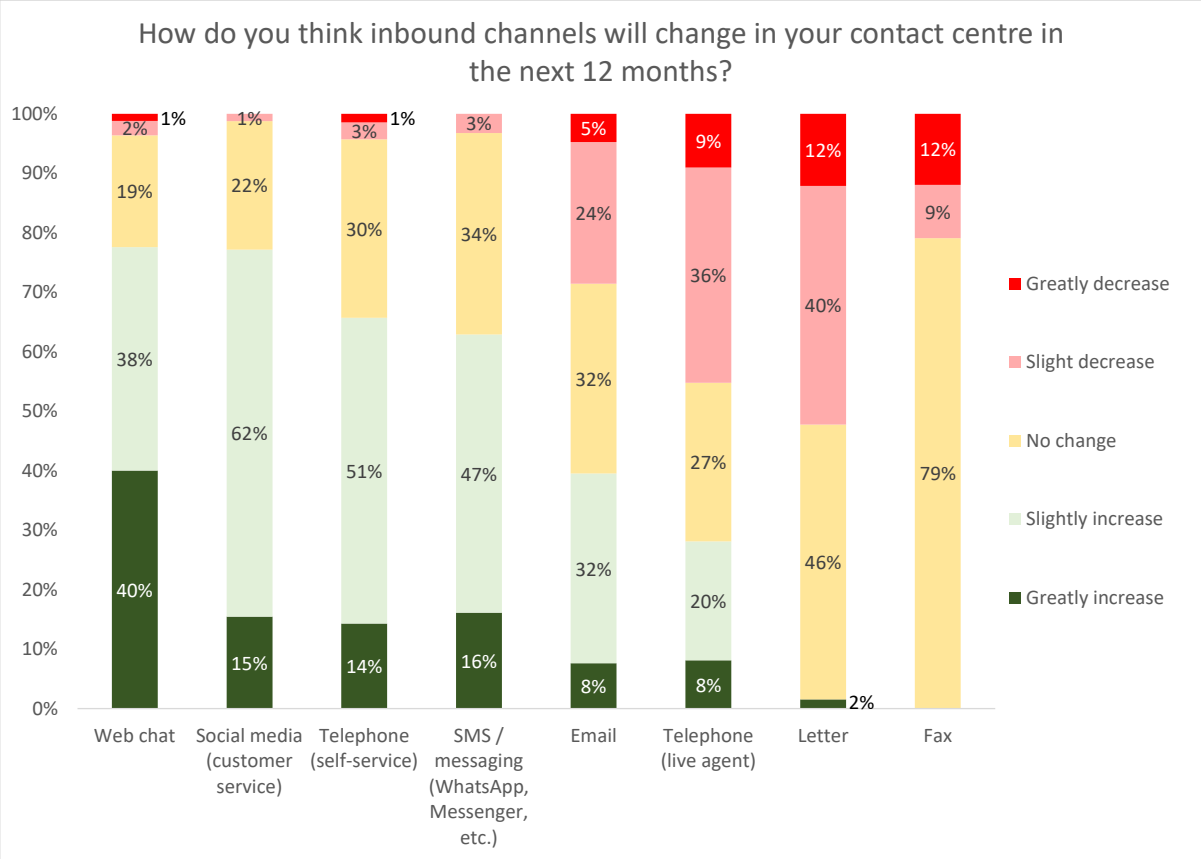
- Make a point of learning from the people who have actually been handling interactions over different channels, and have the contact centre agents work alongside them to understand what's different in these channels

- A platform or hub will be required that allows every channel to access and update the customer's master record as and when required, with real-time synchronization being of vital importance. Within each individual channel, consider the potential use of further automation: for many businesses, non-voice channels still rely upon manual input and there are considerable opportunities to reduce cost and improve data consistency

- Accept that omnichannel customer contact is an ongoing process, to be revisited and continually improved as the nature of business, customer preferences and new channels further evolve.

As not all of the same respondents take part in this survey every year, a jump or drop in the usage of a minor multimedia channel could be an industry-wide phenomenon or a case of a handful of early adopters skewing the results, which is certainly possible where only a few use a channel, and where mean averages are used. As such, a question is asked to respondents about how each inbound channel will change, so being able to judge if any alterations in the use of channels is due to real changes at a contact centre-level, or is more of a statistical blip caused by a different set of respondents providing data each year.

Figure 112: How do you think inbound channels will change in your contact centre in the next 12 months?



As usual, the traditional media of letters and fax will have a net decline in our respondents' eyes: letters still have their place in the likes of the insurance, medical and manufacturing industries, but fax is very much a channel of the past. More respondents believed the live telephony channel volumes would drop (45%) than thought they would rise (28%), a finding that had grown for some years until 2020. This trend in the industry is explored in the next chart.

Strong growth is once again expected in web chat and social media customer service interactions (and SMS / messaging), with email volumes still predicted to grow although at a much lower rate than previous years. Telephony self-service is expected to grow once again this year, with its twin benefits of customer convenience and low cost still very much relevant. New approaches, such as visual IVR, are likely to encourage further use of self-service. Although not shown on this chart, around half of respondents offer an app or mobile service option for customer service.

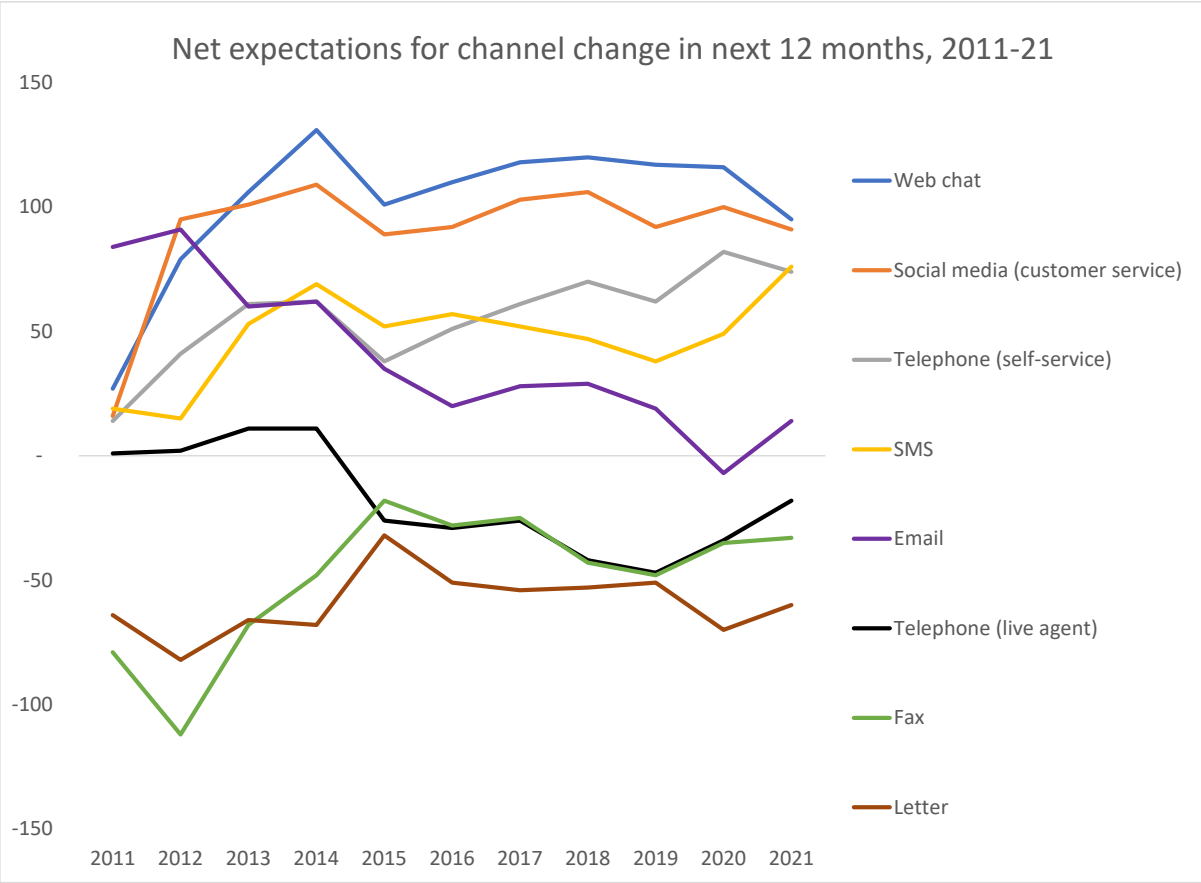
The previous chart's real message is that (with the exception of fax) channels aren't being replaced, but rather augmented, and businesses have to accept that they need to develop an omnichannel approach, as that's what their customers are expecting. This means that the pressure to unify the view of the customer across channels is a challenge that isn't going to go away.

The following chart shows a historical representation of answers to this question, showing how the enthusiasm and expectation of channels has changed. Respondents could choose one of five options connected with how they believed each channel would grow in the next 12 months, and a score was given to each to reflect its effect: greatly increase (+2); slightly increase (+1); no change (0); slightly decrease (-1); or greatly decrease (-2). This would give a net score of between -200 and 200, with positive scores expecting growth and negative scores decline. For example, a channel where 70% expected a slight increase and 30% a slight decrease would receive a score of +40 (i.e. "70" + "-30").

Web chat and social media show very strong growth, having net scores of around 100 since 2012. Email, while historically strong, has shown a distinct cooling in expectations since 2012, and dropped into negative territory (i.e. an expected decline) last year before recovering slightly in 2021.

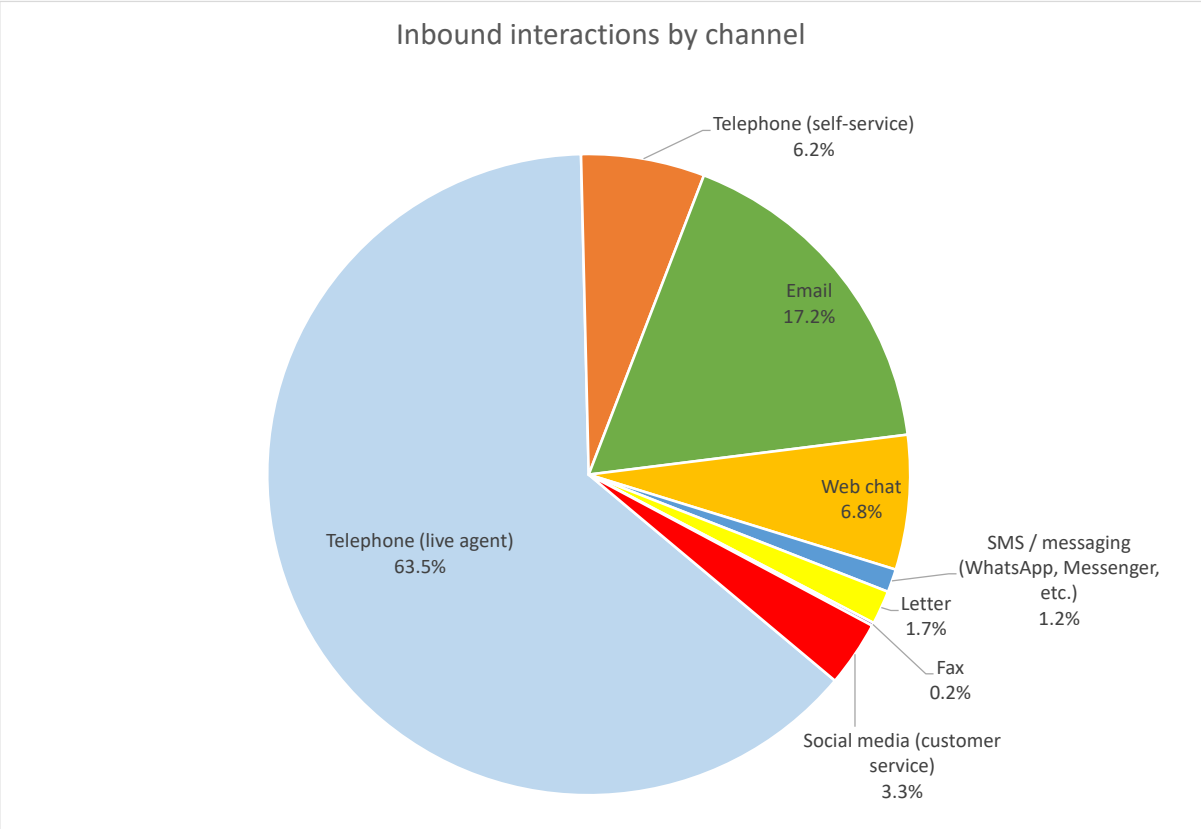
The expectations for live agent telephony have dropped considerably since 2015, showing a definite decline in its relative importance although its rate of expected decline is lower this year. Telephony self-service is generally expected to grow strongly in line with self-service generally, and letters & fax continue their decline.

Figure 113: Net expectations for channel change in next 12 months, 2011-21



Looking at the reality of multichannel, multimodal and omnichannel activity, the UK contact centre industry has now strongly embraced the various forms of non-voice customer communication.

Figure 114: Inbound interactions by channel



The proportion of live inbound interactions by telephone dropped to 65.3% in 2017, its lowest recorded level, in line with a long-term gentle downward trend, and after a slight rebound in recent years, it is now at 63.5%.

The proportion of telephony self-service interactions has risen from 4.9% in 2019 to 6.2% in 2020 and 2021, in line with the growth of self-service across other channels.

The email channel increased significantly in 2017 to around 20%, after being around 15% for a number of years. 2020's figure of 15.4% after a slight decline in 2018 and 2019 was a significant drop, and it has recovered somewhat to 17.2% in 2021.

Web chat and social media grew strongly in 2020, up to 5.7% and 4.6% respectively, after being only 3.6% and 3.1% in 2019. 2021 has seen further growth in web chat, up to 6.8%, but social media's figure has returned to being just above 3%.

SMS / messaging has grown to 1.2%, driven in large part by a rise in WhatsApp / Messenger rather than standard text messages.

Looking at vertical market figures, agent-handled calls are most important to respondents in the transport & travel, housing and insurance sectors, with manufacturing respondents (usually working in B2B environments) reporting lower levels of telephony as usual.

Email is well represented in most vertical markets, with the manufacturing, insurance, retail and TMT sectors highest.

Telephony self-service seems strongest in the utilities sector as usual, and the finance respondents report a higher than usual finding this year.

Web chat is developing a stronger presence in retail, so as to encourage and close online sales, and this is also very much the case in manufacturing.

The retail sector reports being ahead in terms of social media customer contact, although most vertical markets show some interest in this channel.

Figure 115: Inbound interactions by channel, by vertical market

Vertical market	FS	HS	INS	MAN	OS	PS	RD	SVCS	TMT	TT	UTILS	Mean
Telephone (live agent)	62%	75%	76%	42%	68%	66%	57%	63%	54%	71%	53%	**63.5%**
Telephone (self-service)	10%	5%	4%	6%	4%	11%	3%	0%	9%	2%	18%	**6.2%**
Email	10%	14%	15%	29%	15%	14%	20%	19%	28%	15%	22%	**17.2%**
Web chat	8%	3%	3%	19%	7%	3%	9%	11%	5%	9%	2%	**6.8%**
SMS / messaging	2%	1%	1%	1%	2%	0%	1%	1%	2%	0%	0%	**1.2%**
Letter	6%	0%	1%	1%	1%	2%	1%	1%	0%	0%	2%	**1.7%**
Fax	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	**0.2%**
Social media (customer service)	3%	1%	1%	2%	3%	3%	8%	5%	2%	2%	3%	**3.3%**

NB: “0%” refers to a number lower than 0.5%, rather than necessarily a zero value.

Care should be taken when considering vertical market statistics, as the research sample size may be small. Use only as an indication of relative importance.

In terms of customer contact, one of the traditional main rationales for any business investment has been cost reduction, assuming that any change does not have a negative impact on the quality of service. This has certainly been the case for self-service – whether through IVR or website – where after the initial investment has been made, cost per interaction is extremely low.

When emails started to be used as a customer service channel in the late 1990s, the expectation from businesses was that this would be a low-cost alternative to voice. In fact, the reality for most businesses and customers was that it was a low-quality alternative to voice, and that it took just as much time and effort (and thus, expense) to answer an email as it did a phone call.

Looking at figures from hundreds of UK contact centres, it seems fair to say that although there is some cost differential between email, phone, social media and web chat, it is by no means dramatic (except for social media, although it should be noted that these figures should be treated with caution as the sample size is fairly small).

One of the main reasons for this is that there is still a relatively low level of automation being used in many businesses. For emails, it is also the case that if the query is not answered satisfactorily within a single response, the time and cost associated with multiple replies and possibly phone calls is soon greater than if the customer had simply called in the first instance.

Figure 116: Cost per inbound interaction (phone, social media, email & web chat)

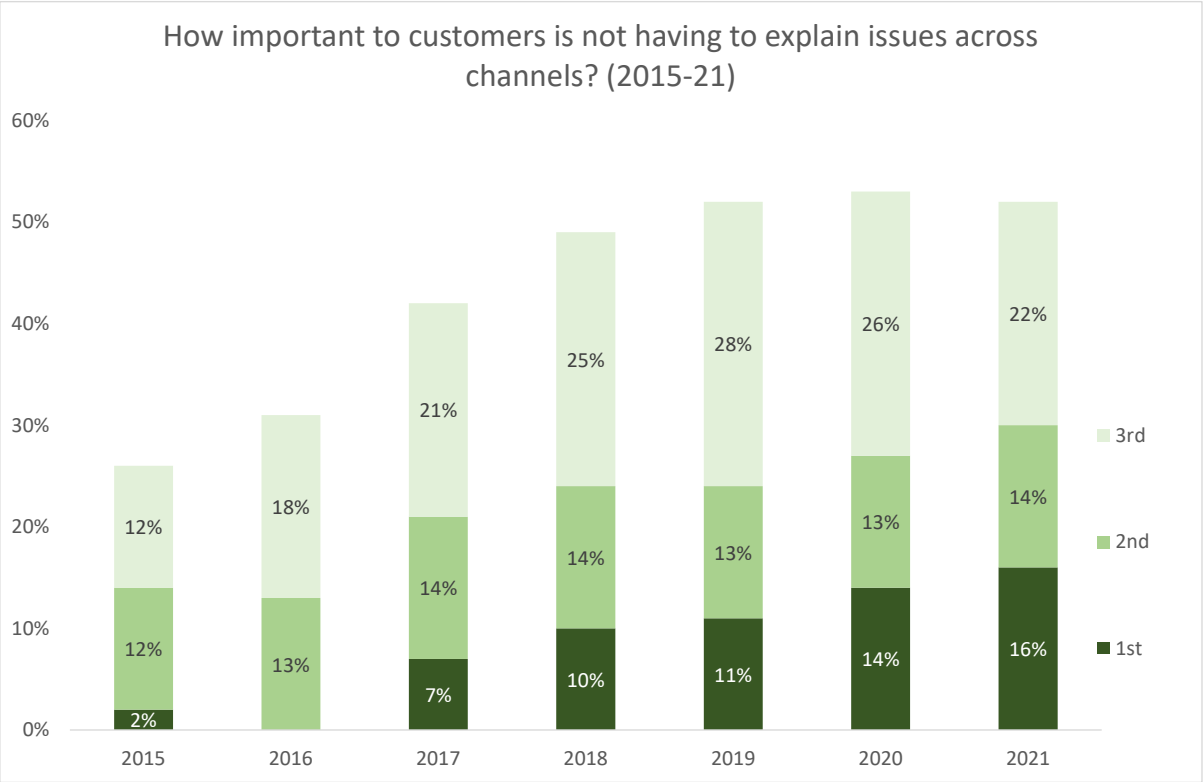
Channel	Mean	1st quartile	Median	3rd quartile
Phone	£5.42	£6.06	£4.30	£3.36
Email	£4.02	£5.38	£4.00	£1.69
Web chat	£3.04	£5.00	£3.03	£1.27
Social media	£2.58	£3.20	£2.60	£1.15

Even if, inexplicably, businesses did not increase the level of automation and sophistication with which they answer web chats and emails, customers' appetite for choosing to communicate with the business in the way in which they wish (often, a non-voice method) would make any reversal of the multichannel/omnichannel strategy impossible.

The next chapter, “Digital Channels”, looks in-depth at social media, email and web chat. Within this ‘Omnichannel’ chapter, the focus is upon these channels working together seamlessly to give a closed-loop customer experience, where at all stages, the relevant information is available to whatever system of agent needs it.

The importance of having an integrated omnichannel solution can be seen in the chart below, which shows the importance that customers place upon not having to re-explain issues or re-enter information if they have to move between channels to complete an interaction with a business. The question was asked as to which were the top 3 factors that impacted most upon customer experience and satisfaction, with a long list of factors presented. Although first-contact resolution is consistently seen as the no.1 issue, not having to re-explain issues when moving between channels has risen from relative unimportance in 2015, to being seen as a top 3 customer experience issue by 52% of respondents in 2021.

Figure 117: How important to customers is not having to explain issues across channels? (2015-21)



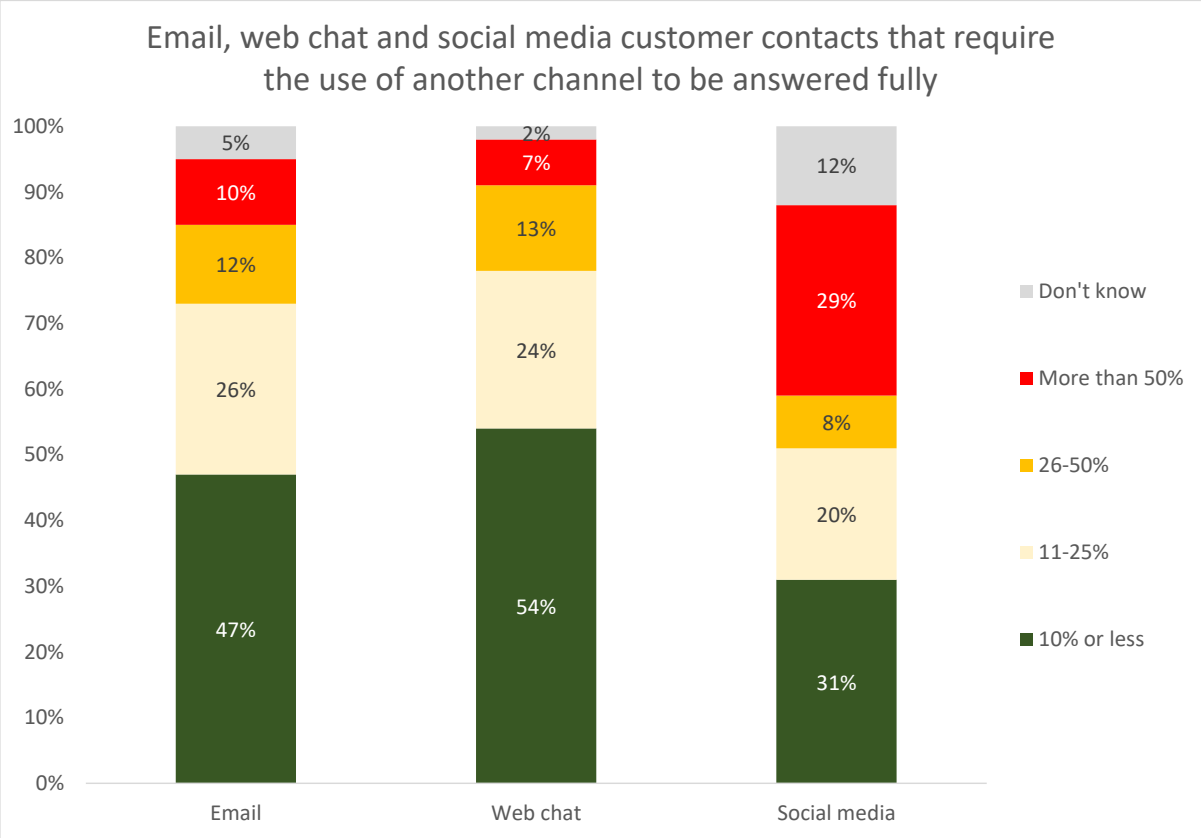
Having identified a seamless transition between channels as being of growing importance to the customer experience, the chart below shows that using multiple channels is still a very likely requirement for many customers and interactions.

54% of respondents state that web chat can be handled over that specific channel more than 90% of the time, with 47% of respondents stating that email requests can be handled entirely by that channel more than 90% of the time. This figure is only 31% for social media.

29% of respondents state that more than half of their social media requests have to use another channel to resolve them effectively, highlighting the previous finding that customer satisfaction is increasingly affected by whether the customer has to repeat issues across different channels.

Omnichannel aims to provide a seamless transition between channels, and is ever more necessary to provide a superior customer experience.

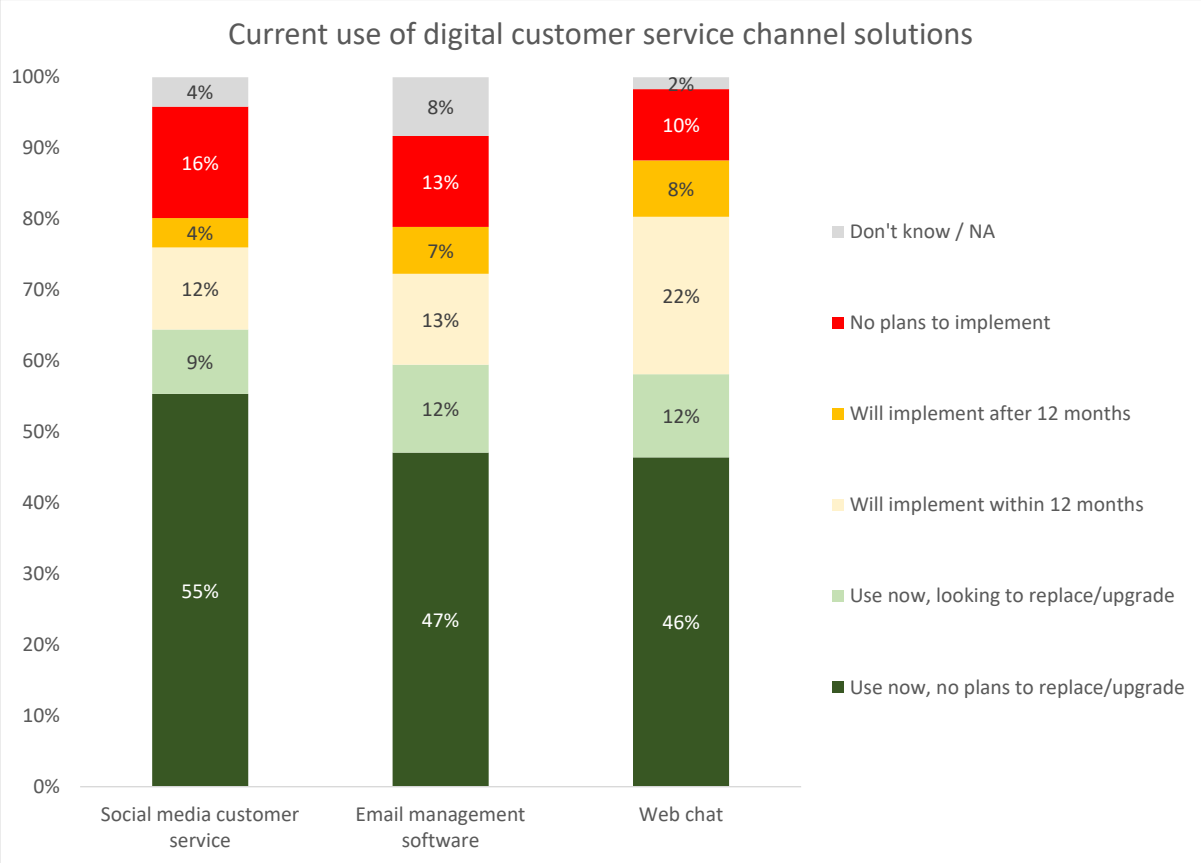
Figure 118: Email, web chat and social media customer contacts that require the use of another channel to be answered fully



The 'Digital Channels' chapter looks in-depth at the widely used digital channels – email, web chat and social media – to understand their prevalence and how they are being handled, along with the service levels provided and how they compare with more traditional channels.

The following chart shows the solutions that are being used to support digital channels, with around 60% of respondents using automation or agent-supporting solutions for each of web chat, email and social media. Interest in these solutions from those not already using them remains strong, especially for web chat.

Figure 119: Current use of digital customer service channel solutions



Email was the first of the non-voice multimedia channels to be used, and is still by far the most well-used, having been mainstream for well over a decade.

Email should stand as a salutary lesson that it is not businesses that make new channels a success, but customers. Email, in its first incarnation, failed almost entirely. Too many businesses rushed to push customers to this new channel – commonly supposed to be cheaper than voice – without having the processes, solutions or staff to manage this properly. What happened next can be understood as a 'herd inoculation': enough customers had enough bad experiences from enough organisations that the entire channel was discredited, even for those businesses which were providing a reasonable service through email or just keeping a watching brief.

The reason for this rejection was the unacceptable level of service provided by many of the early multimedia businesses. With response times stretching into many days, if not weeks, the companies failed to understand that any communication with the business has a degree of urgency to it, else why would they be trying to speak with the business at all? Of course, even when a response was eventually provided, the issue might have gone away, or been dealt with by calling the contact centre, meaning that customers' existing confidence in the voice channel was further reinforced at the expense of the email channel. It is also the case that email does not fit the type of enquiries that people make in some cases, such as the need for quick, simple and confidential information (such as an account balance), and the increasing requirements for identity checking places a cap on the usefulness of email as a channel for some types of business.

It took many years, much investment and the coaxing of customers to try new channels again for email to emerge as being credible. Of course, businesses and customers now both realise that email is more suitable for some interaction types than others (the rise of web self-service has meant email is no longer the only online communication method available), and complex issues such as complaints, or other enquiries requiring a formal paper trail are well-suited to email. In fact, much of the demise in the letter and fax as channels can be traced to a direct replacement by email. Email is also an excellent outbound channel, providing reassurance, great levels of detail and attachments, and is able to link to other specific areas of information via hyperlinks.

As an inbound channel, it has inherent weaknesses: an inability to carry out customer authentication and to carry out a real-time 2-way conversation being amongst them, as well as the lengthy wait to get a response. However, it does have the advantage over virtually every channel that there is no queue time at all – the customer writes the email and presses 'Send' immediately – a 'fire and forget' interaction.

Retail respondents often report the greatest proportion of inbound traffic as email, with the B2B manufacturing and services sectors also receiving high levels. The technology, media & telecoms sector also reports high levels of email activity this year.

The insurance sector again shows high levels of email after many years of very little activity, and this may be due to a change in working practices which allows customers and intermediaries to send through documents via email rather than by the more traditional fax and letter.

Figure 120: Inbound interactions that are email, by vertical market

Vertical market	% of inbound interactions that are email
Manufacturing	29%
TMT	28%
Utilities	22%
Retail & Distribution	20%
Services	19%
Transport & Travel	15%
Outsourcing & Telemarketing	15%
Insurance	15%
Public Sector	14%
Housing	14%
Finance	10%
Average	**17.2%**

As with previous years, emails are proportionally less important for large contact centres, although this gap has shrunk considerably over recent years.

Figure 121: Inbound interactions that are email, by contact centre size

Contact centre size	% of inbound interactions that are email
Small	23.4%
Medium	14.4%
Large	13.4%
Average	**17.2%**

The cost of email is a little lower than live telephony (which has a mean of £4.55 this year), but it is still considerably more expensive than a self-service session. In a similar way to live phone calls, emails are getting longer and more complex as the easier work is handled through self-service, which is keeping their average cost up despite a move towards using more automation to answer them.

Figure 122: Estimated cost per email

	Email cost
Mean	£4.02
1st quartile	£5.38
Median	£4.00
3rd quartile	£1.69

Do you need an email response management system?

An organisation that has relatively small volumes of email will tend to handle it initially on an ad-hoc basis, often using Microsoft Outlook to do so. At some point, the contact centre will realise that costs are going up and quality going down, and that they need to implement the more sophisticated email response management system. What signs are there that show this is the right time to do so?

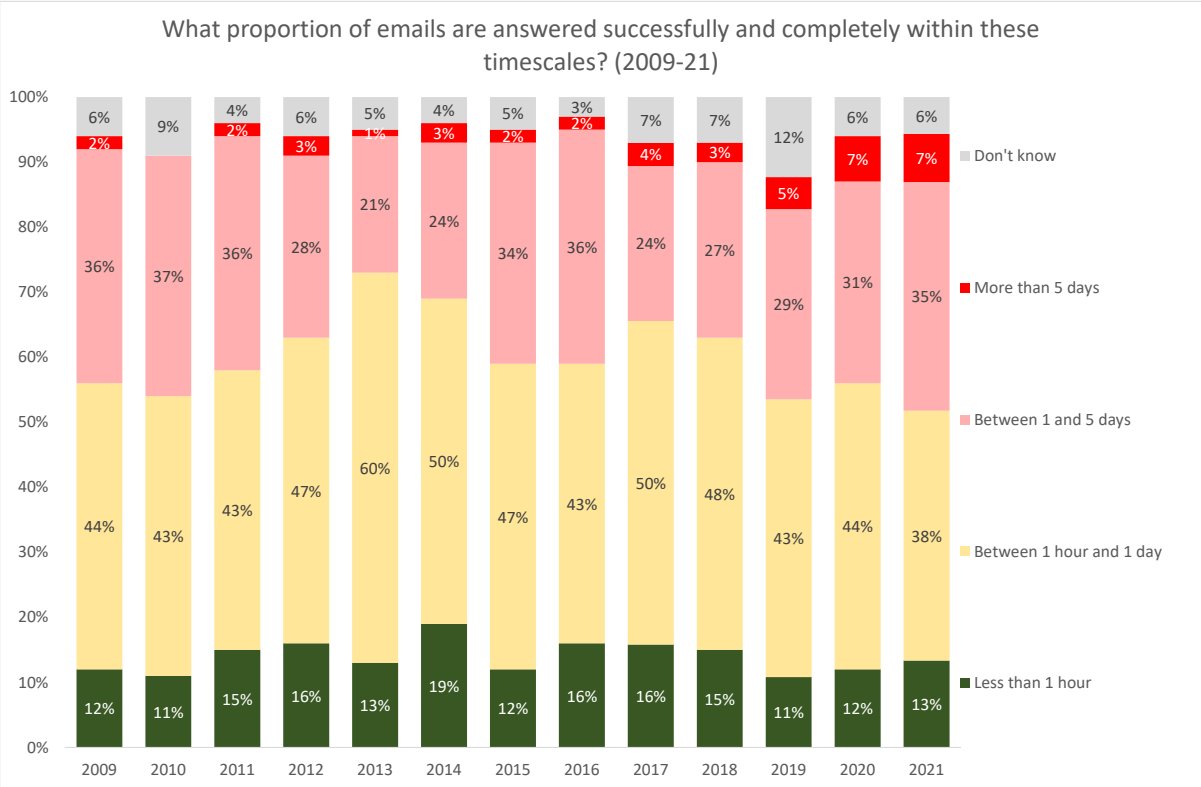
- While there is no fixed figure for email volume, as it will depend on the complexity and time required to handle each one, organisations receiving greater than 100 emails per day are likely to have issues handling and tracking them
- There are a significant number of customer telephone calls that refer to emails that were sent, but which never received a response
- Prioritisation and routing of emails to agents with specific skills sets is no longer a matter of a few minutes of management time
- Email handling times are not going down, despite most being about a small number of topics
- Complex emails may take days or even weeks to resolve, and different agents may be working on similar types of issue without even realising it, thus duplicating the effort
- You lack flexibility in dealing with spikes in email traffic, as it is too difficult to bring secondary email agents to bear without damaging the voice channel's service level
- Visibility and accuracy of service levels for email channel is worse than that for the voice channel
- It is difficult to report on the content of the emails that you receive as this has to be done manually.

For businesses that handle substantial volumes of email, while it is not suggested that they should aim to answer an email in the same amount of time that it takes to complete a phone call, it is desirable to manage all interactions closely to consistent business rules, and to act quickly if service levels slip. Too often it seems, contact centres have become so used to managing the telephony queue that they neglect multimedia interactions. The result is that multimedia response times (mostly email) have historically been sacrificed to meet telephony service levels, and although there have been steady improvements in response rates in recent years, these seem to have tailed off somewhat.

In 2015, reported email response handling times reversed the improvements of recent years, especially in the all-important 'less than 1 hour' segment. This year, the proportion of emails answered the same working day is only 51%, while those taking more than 1 day has grown again to 42%, the worst figure on record.

Taking longer than one day to answer an email runs the risk of the customer losing patience, and going elsewhere or phoning the contact centre, placing a greater cost burden on the business than if they had just called in the first place. Clearly the pressure placed on businesses as a whole and the phone channel in particular throughout the pandemic does not help, but this chart shows that email response rates have shown little improvement for many years.

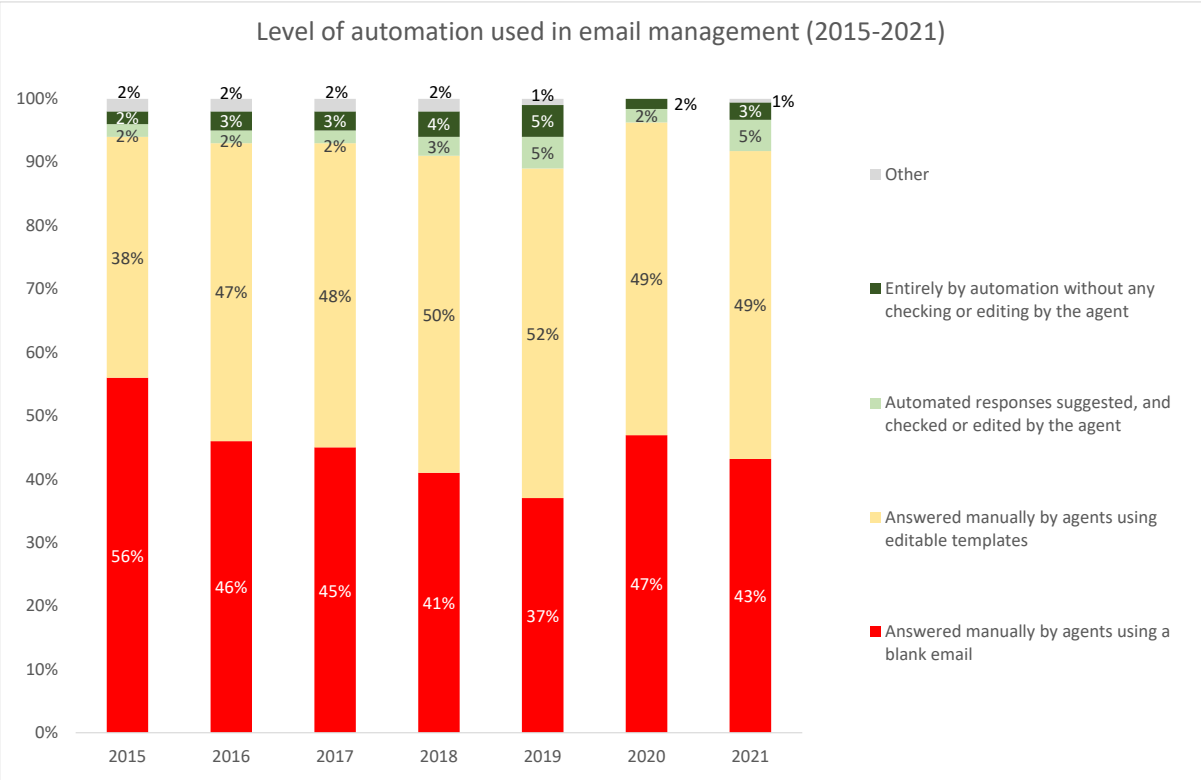
Figure 123: What proportion of emails are answered successfully and completely within these timescales? (2009-21)



The most popular method of answering inbound emails is to use agents rather than automation. Around half of emails are answered by agents who start with templatised, editable responses and change them accordingly, thus not having to compose every email from scratch, but also being able to draw from a common pool of knowledge. Starting with a blank email and letting agents complete it themselves is not only likely to take longer, but also leads to an increased risk of poor grammar, spelling and punctuation, as well as a less consistent response.

Only 8% of emails have automated responses, (these statistics do not include simple automated acknowledgements), and of those, more than half are checked by agents before sending.

Figure 124: Level of automation used in email management (2015-2021)

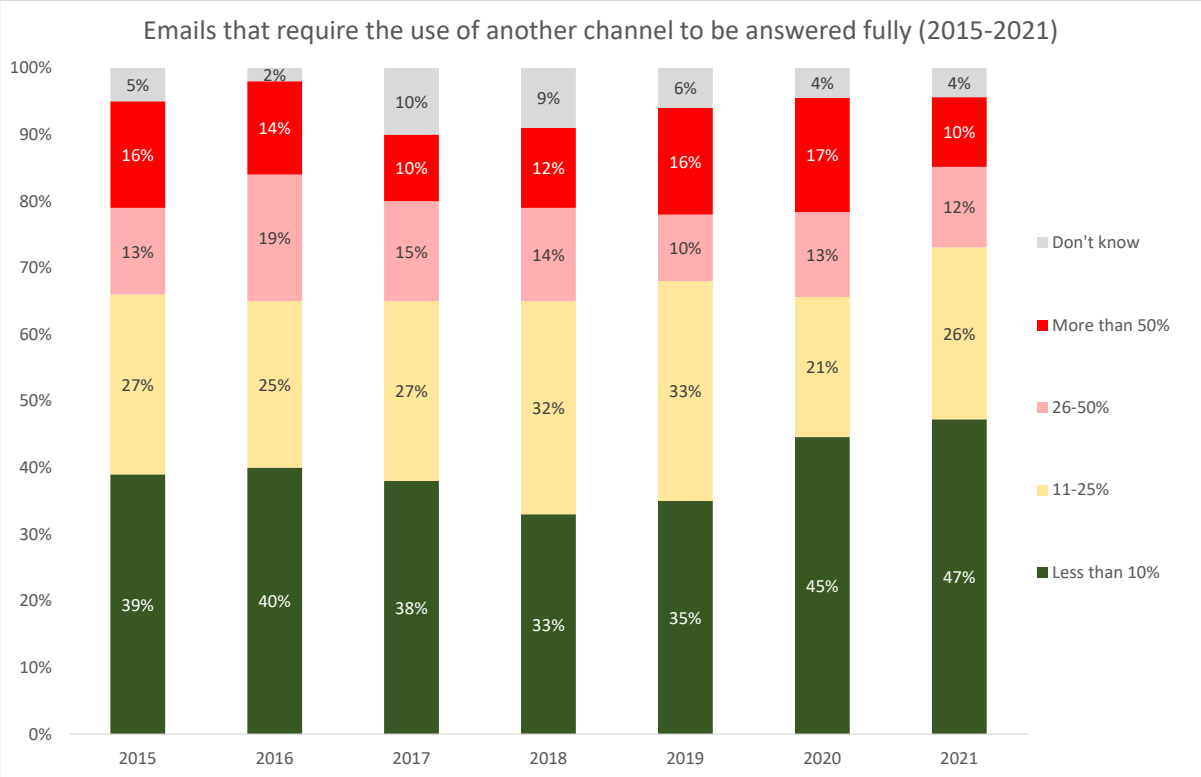


Respondents state that around half of their inbound emails are queries about products or services that have already been bought, with only 1 in 6 being from prospective new customers, who have queries about products or services which they are considering buying.

Complaints represent around 15% of inbound email traffic for our respondents, compared to the telephony figure which is usually below 10%.

Respondents were asked to estimate the proportion of emails that required the use of another channel to be answered fully. 47% of respondents stated that fewer than 10% of their emails could be answered fully without recourse to alternative channels – an improvement on past years' results – with only 10% stating this year that more than half of their emails needed supplementary channel assistance.

Figure 125: Emails that require the use of another channel to be answered fully (2015-2021)

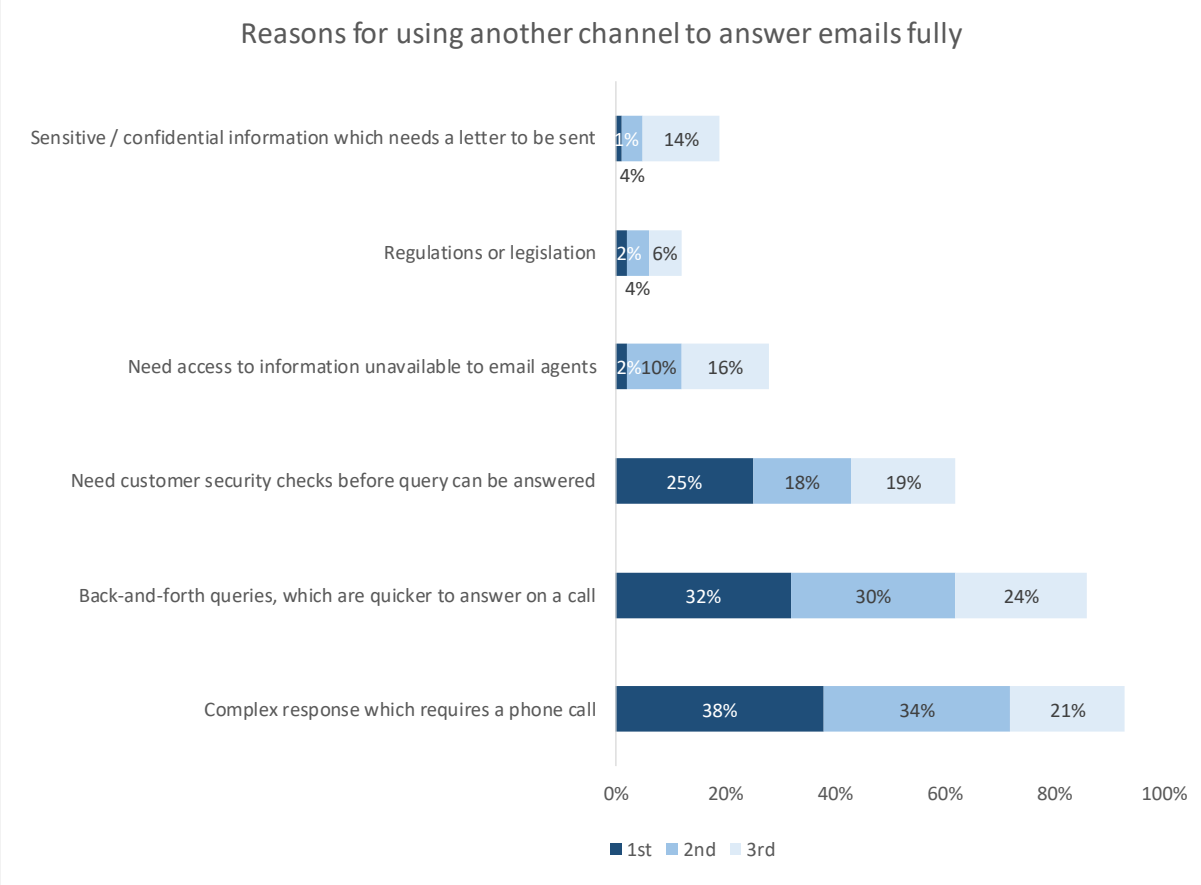


Respondents that indicated that a proportion of their emails require the use of another channel to be answered fully were asked to give the top three reasons causing this.

Two interlinked responses came out clearly ahead: the multiple, back-and-forth nature of the queries are quicker to answer on a call; and that complex issues are better handled with a phone call rather than an email.

The ability to take customer through security checks more easily in a different channel was also considered important (i.e. given a top 3 place) by 62% of respondents, and 28% considered that email agents do not always have access to the sources of information that they need to answer the question fully.

Figure 126: Reasons for using another channel to answer emails fully



There is no general agreement within the industry on how best to deal with email, although there are genuine reasons to encourage email/voice blending. On one side, there is a case made that letting agents answer email makes the job more interesting for them, lowering attrition and improving skills. The other side to this says that the skills required by email agents are different from voice agents, and that it is difficult to find the agents to do both jobs. Both sides make sense logically, and historically, of those contact centres which use voice/email blending, only around 1 in 5 have experienced problems finding the right staff for these types of role, a figure that decreased each year that it was surveyed.

The great majority of respondents in most sectors allow at least some of their agents to carry out both email and telephony. However, email requires certain skills, including grammar and punctuation, which not every agent has, even with assistance from an email management system's response template.

On average, 72% of agents in a blended multimedia environment are allowed to do both email and voice work, a figure which had been growing year-on-year, but which has steadied recently.

Those in small and medium operations are much more likely to use the same agents to handle email and telephony, probably because there is not the option to have the specialised teams found in large contact centres, which are much more likely to have a dedicated group handling email.

Simply because a contact centre uses the same agents for email and voice does not mean that all operations use the same level of multimedia blending. For some operations, multimedia blending is a strategic decision which has been invested in with the right levels of technology and training being provided. For others, it is a necessity, with agents encouraged to answer emails in slack call times. Small and medium operations - which in the past may not have had sufficient email volumes or the investment available to formalise the blending by forming a universal queue to deal with all types of interaction - are now as likely to use a universal queue as the ad hoc method. Many larger contact centres prefer to use dedicated email groups.

However, this preference of many larger contact centres to form specialised multimedia groups may not provide the same levels of service. Previous years' data indicated a formalised blending environment, such as a universal queue, has a beneficial effect on email response times. Respondents using a formal blended environment reported that twice as many emails were successfully handled within an hour, although the proportion being dealt with in the same working day were fairly similar, regardless of whether formal blending, ad-hoc distribution of work, or dedicated email teams were used.

Web chat (or instant messaging / IM) sessions act by offering a live or automated assistance option to the process of web browsing. Like email, it has been around for many years, but only recently has started to grow volumes to the extent where it has become a mainstream channel for customer-business interactions.

Web chat offers an organisation a chance to cut costs through running more than one chat session at a time with customers, using the time that a customer spends reading and replying to an agent's response to deal with other customers concurrently. Some solution providers have stated that an agent can deal with 4 or more web chat sessions at the same time, but whether this is a sustainable model for the agent or provides an acceptable quality of service for the customer is quite another question. Agents can respond to frequently-asked questions by using 'hot-keys', which provide templatised answers and can escalate queries if required, but current levels of automation are low.

Web chat has often been used as a 'point of crisis' channel, for example, to convert an online shopping basket into a sale by providing timely service, or if a browser is paused on a webpage too long, perhaps as they can't find what they are looking for. In such cases, there are two main benefits to the business in providing web chat: revenue maximisation, and the avoidance of unnecessary calls.

Web chat can also act as a safety net for the customer if an online self-service attempt fails. An analogy can be made with voice self-service, where a failed session is often ended with the customer 'zeroing-out' - pressing zero to get in touch with an agent. Failed web self-service sessions may end with a phone call being made, but web chat can avoid a number of these, which is a cost saving for the business, and better for the customer as well.

Many customers – and not just the younger generation - are often accomplished Instant Messengers, and will be keen to use the web chat option with the businesses they work with. However, web chat is in reality most useful for general information and sales purposes, as many users aren't taken through security processes, meaning the agent can't help with specific account queries; the same usually applying to email. Putting some form of trusted biometric device on a PC or mobile device (such as a thumbprint reader) which then assures the businesses' system of the user's identity could possibly overcome this issue. Alternatively, and more simply, there doesn't seem to be any reason why the web chat agent can't ask the standard security questions to the customer via chat, but this is rarely done today, perhaps as some customers are wary of giving out personal details online.

There has been increasing interest in using chatbots or virtual assistants to handle web chats, whether as a front-end gathering relevant information before passing it to a live agent, or in more sophisticated cases, using AI to try to handle the entire interaction.

One form of value-added web chat functionality is a AI-enabled 'Virtual Agent', which may appear to a browsing website visitor to be a human agent, offering web chat. However, it is an automated piece of software which looks at keywords and attempts to answer the customer's request based on these, including sending relevant links, directing them to the correct part of the website or accessing the correct part of the knowledge base. If the virtual agent cannot answer the request successfully, it may then seamlessly route the interaction to a live web chat agent who will take over. It is possible that the browser will not even realise that any switch has been made between automated and live agent, particularly if the web chat application is sophisticated enough to pass the context and the history to the agent, although some businesses believe it is best practice to identify clearly between virtual and real agents.

Most virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyse and search for the answer which is deemed to be most suitable, returning this to the customer instantly. Many virtual agent applications will allow customers to give all sorts of information in any order, and either work with what it has been given, or ask the user for more detail about what they actually meant. Having been unconsciously trained over the years to provide their queries in a way which standard search functionality is more likely to be able to handle (for example, a couple of quite specific keywords), customers must be encouraged and educated to use natural language queries in order for virtual agents to be able to deliver to their full potential.

The virtual agent application is different from standard search functionality, ignoring bad punctuation or grammar, and using longer phrases rather than just searching on keywords. Sophisticated applications attempt to look for the actual intent behind the customer's question, trying to deliver a single correct answer (or at least a relatively small number of possible answers), rather than a list of dozens of potential answers contained in documents which may happen to contain some of the keywords that the customer has used. The virtual agent application may also try to exceed its brief by providing a list of related questions and answers to the original question, as it is well known that one question can lead to another. Solution providers and users train the system to pattern-match the right words or association of words with the correct result: the application, unlike older forms of web search techniques, does not simply guess what the customer wants, or how they will express themselves. Through 'listening' to what the customers actually say - perhaps through a mixture of large quantities of audio and text – the initial set-up configuration can achieve a good accuracy rate, which really benefits over time as a positive feedback loop is established. Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Virtual agent functionality 'understands' the context of what the customer is asking, with the result being more akin to that of an empathetic human who also has had access to what the customer has been trying to do. For example, if asked "When can I expect my delivery?", the context and the required answer will be different depending on whether the customer has placed an order and is enquiring about its status, or has only a hypothetical interest in turnaround times in case they decide to place an order.

Proactive and reactive chat: originally, web chat was reactive, relying upon the browser to initiate a conversation. Businesses then decided to go on the offensive, popping up chat boxes and encouraging customers to start conversations. Some more sophisticated customers are unfazed by this, but overly insistent use of web chat can put some customers off entirely.

There are various levels of intelligence that can be used to support proactive chat more effectively. If the customer has logged in, it is possible to identify them, and take into account past channel preferences, purchase history and other relevant information in order to personalise the experience, (for example including details of relevant offers to that customer).

As an aside, some contact centres report that those experienced in playing online games - are particularly suited to the fast-paced, text-oriented nature of web chat, and some businesses are actively recruiting such people to work as web chat agents. It is also worth commenting that although offshore customer contact has received a mixed press, many of the negative issues surrounding offshore are not applicable to the multimedia channel, such as the possible mutual incomprehensibility of accents.

Web chat is experiencing strong growth in its availability in the UK, although volumes on average are still only around 5% of all customer/business interactions. There is no reason why the user uptake of web chat will not continue: it works well for customers as providing an immediate response, and with multiple concurrent chat sessions per agent, it can be a lower cost channel than voice for the business to support, although cost differential between phone and web chat are not dramatically different, as so much of the web chat work carried out is still non-automated. Solution providers report that web chat is currently being trialled by numerous businesses, often at a limited, or departmental level so they can assess the suitability of the channel for a company-wide rollout, and understand what needs to be done to ensure full implementation is a success.

The mean average cost of a web chat is stated this year to be less than a phone call (£5.42) and also than an email (£4.02), and we are starting to see a greater differential from a channel that can be at least partially automated and which offers the opportunity for multiple concurrent sessions.

Figure 127: Estimated cost per web chat

	Web chat cost
Mean	£3.04
1st quartile	£5.00
Median	£3.03
3rd quartile	£1.27

40% of respondents using web chat offer the option immediately to all website visitors, with 60% only doing so at some specifically-triggered point in the interaction.

Of these 60%, the most frequently used trigger for web chat was when a visitor went to a specific page, with other triggers being when a customer was on a page for a certain amount of time, and at the point of sale, although these latter options are much less frequent.

When considering how web chats are handled, respondents from larger contact centres are more likely have dedicated chat-only agents, rather than taking phone agents out of the queue to handle web chats on an ad-hoc basis, probably because chat volumes are more predictable in high-volume businesses. Multi-channel text agents (e.g. handling social media or email too) are popular in small and medium respondents' contact centres. Small operations are more likely to be using a single multichannel queue that also includes handling calls.

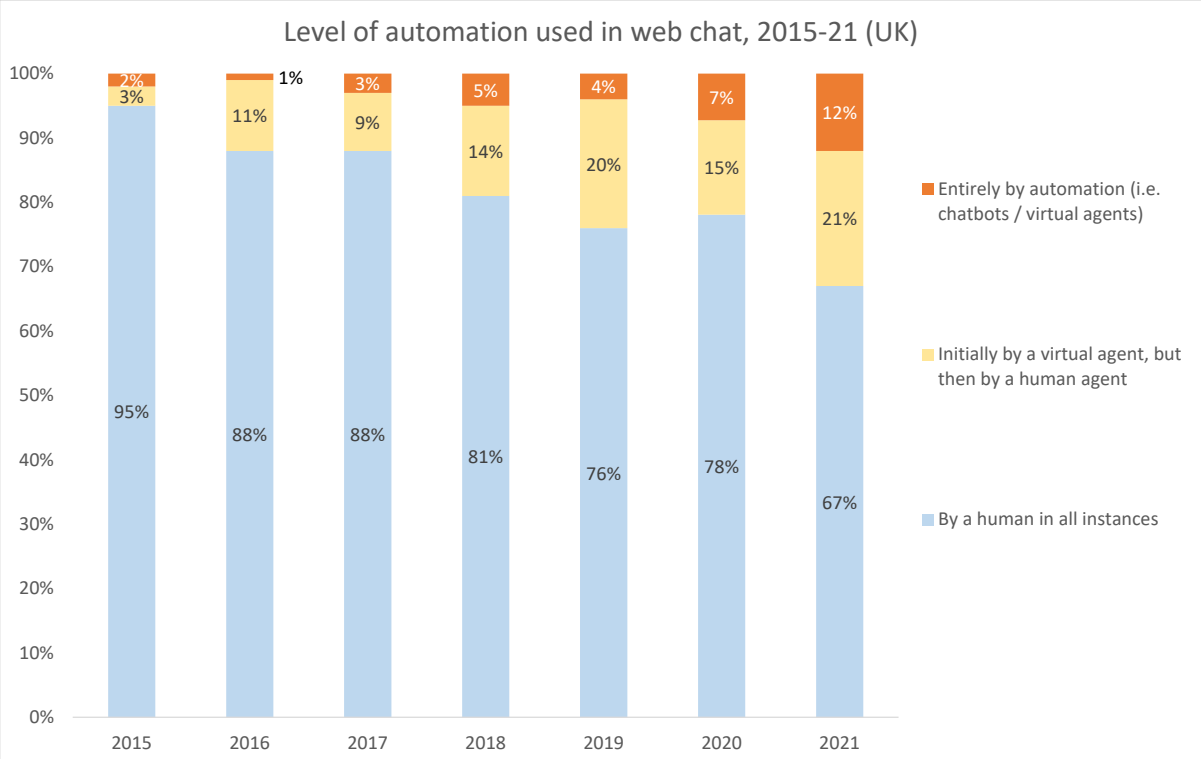
One of web chat's traditional strengths is seen as the ability to have agents handle multiple chats concurrently (of course, it only seems this way to a customer, as the web chat agent uses the time that the customer is typing their response to handle other chats). Some vendors have stated in the past that agents could run five or six concurrent chat sessions: the reality seems to be that two sessions is a reasonably consistent average, with a peak of three or even four if required, but which is not possible on a long-term basis.

Most respondents indicated that web chats are mainly carried out with existing customers, which fits in with previous findings that sales operations are less likely to be using web chat. This finding is further supported by the nature of most web chat: around half of respondents state that their web chats are very much focused on servicing existing products and services, with only 1 in 6 respondents stating that web chat is used far more for sales queries than service requests. The remainder of respondents have a roughly similar mixture of both sales and service.

As the cost of web chat is not dissimilar to other channels such as email, voice and social media, there is still considerable room for increasing efficiencies and lowering costs.

Whereas only 5% of web chats had any automation involved in 2015, this has grown to 33% in 2021, mainly as a result of initial handling by automated chatbots which may then hand off to live agents where appropriate.

Figure 128: Level of automation used in web chat, 2015-21

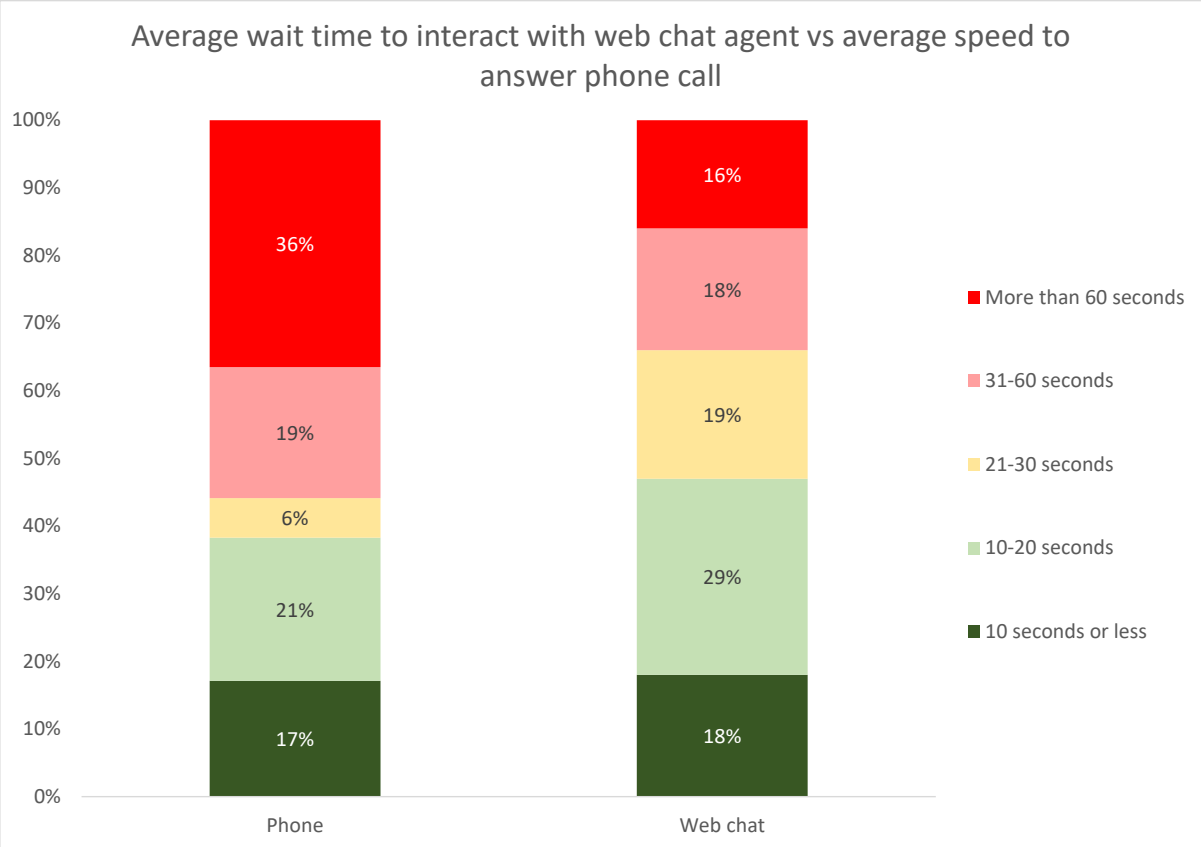


Respondents indicate that the typical wait for a web chat session is usually a little less than that of a phone call.

18% of respondents have an average wait time for web chat of lower than 10 seconds, with a further 29% stating that the average wait time is 10-20 seconds. Maintaining this level of accessibility for customers will reinforce their positive experiences of web chat, and will encourage customers to keep using the channel, not only when contacting a specific business, but also in general.

Little research has yet been carried out into the expectations of customers around web chat service levels, but it is reasonable to expect a channel being presented as an alternative to phone to have similar service level expectations and reality. If only 16% of web chats take longer than 1 minute to initiate, then we can expect customers to flock to this channel enthusiastically as these service levels are generally superior to that of voice.

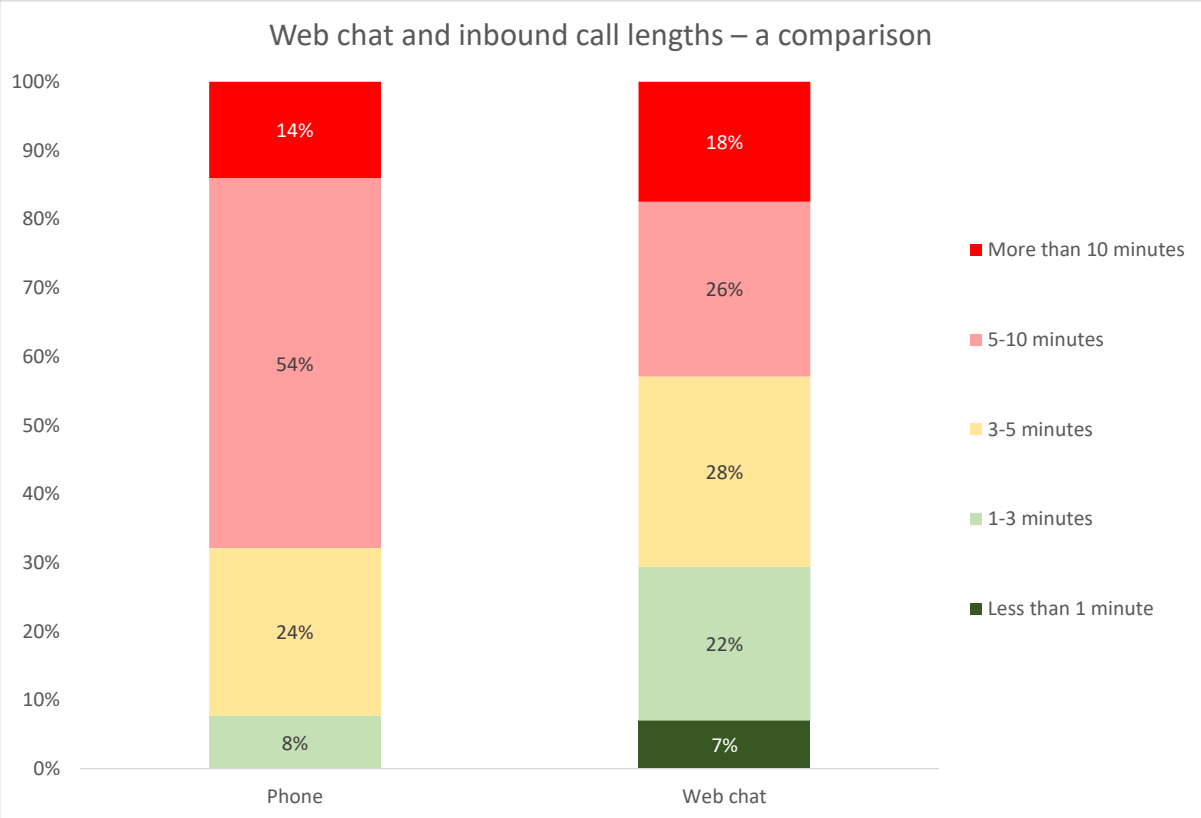
Figure 129: Average wait time to interact with web chat agent vs average speed to answer phone call



Further comparing the experience of web chats with telephone calls, the survey finds that 44% of web chats take longer than 5 minutes to complete fully, compared to 69% of phone calls. While agent multi-tasking and the time taken to type differs from the experience of handling a phone call, web chat is still often a shorter experience for many customers.

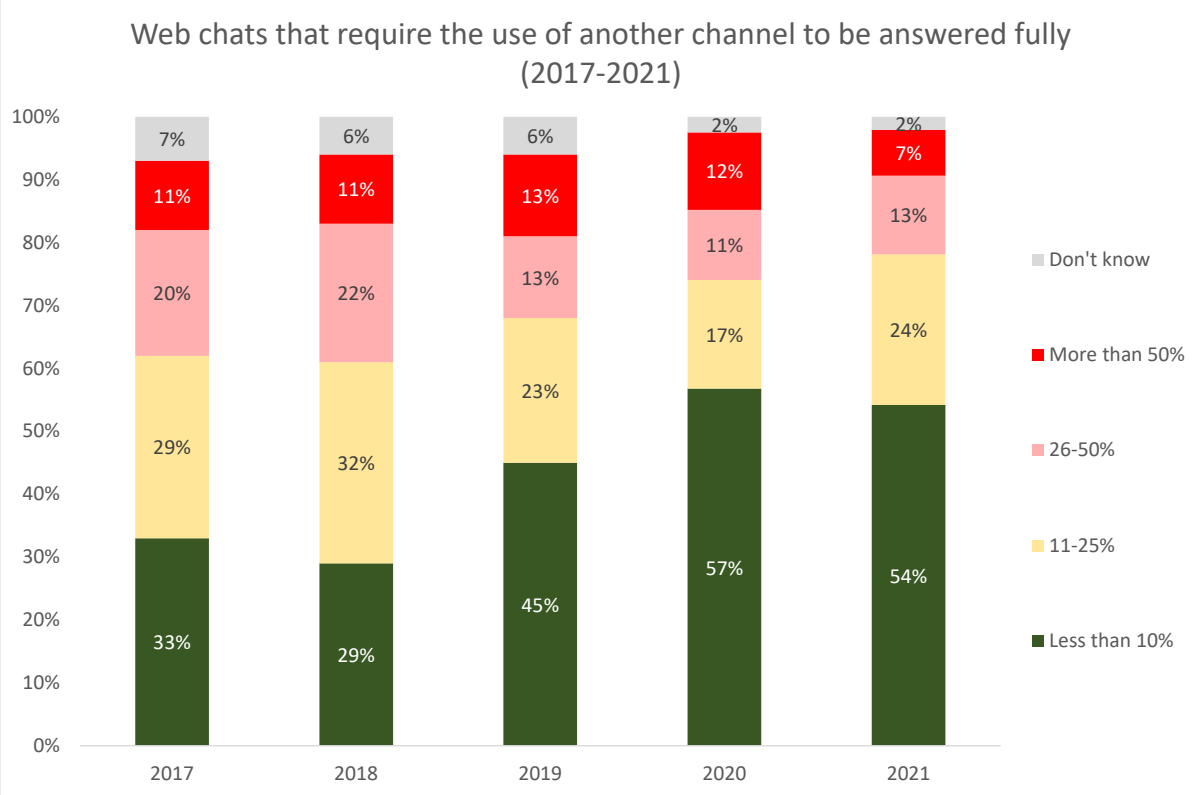
This may well be because the subjects of web chats usually often simpler than telephony, which is increasingly being used for more complex and multiple queries.

Figure 130: Web chat and inbound call lengths – a comparison



54% of respondents report that fewer than 10% of web chats require another channel to answer the query fully, with only 7% stating that more than half of web chats require movement to another channel. This supports the suggestion that web chats are being used for simpler interaction types.

Figure 131: Web chats that require the use of another channel to be answered fully (2017-2021)



Tips for using chat and cobrowsing successfully

Understand the role that you want web chat to have within the customer contact mix. Do you see it as a replacement for email? Or is it more of a call avoidance strategy? Or is it perhaps a way to close the sale? Without understanding this, it'll be difficult to measure its success. Some businesses will offer web chat and cobrowsing only to their premium customers, or to those who are in the final stages of purchasing but who have stalled.

Choose the most suitable metrics for what you're trying to achieve. If web chat is about revenue, then perhaps focus on sales conversion rates, rather than average handle time, in order to encourage agents to make the most of cross-selling and up-selling opportunities.

Some customers may use web chat as an initial method to ask tentatively about products and services. The solution should provide the option to continue the conversation via a phone, or to send relevant documents and videos.

Work with the solution provider to determine what a reasonable and realistic number of concurrent web chat sessions might be. While it is theoretically possible for an agent to cope with four or more conversations at once, the reality is that this is unsustainable over long periods or with complex issues. It is far more realistic to expect a well-trained agent to deal with perhaps two or three conversations concurrently, and this should be fed into your workforce planning system. However, it may be that agents who deal with both telephony and web chat find it too difficult to deal with multiple chat sessions as well, and will deal with only one chat at a time.

As with any real-time interaction channel, monitoring traffic is vital to success. Plans need to be made to handle web chat spikes and providing estimated wait times to those in a web chat queue will allow them to choose a self-service, phone or email option instead.

Plan how web chat will integrate with existing customer service channels. It is possible to run web chat as an entirely separate, siloed channel, but customers expect to be able to move between channels seamlessly. Being able to treat web chat interactions in the same way as other communication channels means that resources can be spread across channels as and when needed.

Sophisticated web chat solutions allow for 3-way chat, so that an agent can bring subject experts into the conversation as required.

Consider using a trial, in a discrete department, product or service area. This will allow you to understand what works and what doesn't, in a relatively low-risk environment. Changing a small number of variables will also provide a more accurate understanding of how web chat affects customer service levels, customer satisfaction and revenue. It will also provide information about the types of customer and queries that web chat is likely to be used by and for.

Make customers aware that you're offering web chat, by promoting it through existing, higher-cost channels such as within the telephone queue's recorded announcement.

While web chat is an increasingly popular channel to offer to customers, the current reality is that it is being used as a direct replacement for live telephone calls, with very limited use of automation or value-added features. Although customers are increasingly comfortable with initiating chat sessions, the visual nature of this channel and the increasing use of smartphones means that opportunities exist for businesses to leverage customers' increasing acceptance of web-based communication to provide deep functionality, a richer customer experience and improve their own profitability.

Co-browsing (or web collaboration), which sometimes includes form-filling and page-pushing as a sub-set of functionality, is a very intensive, one-to-one channel, formerly used for high-value customers or in those cases where it is quicker and more effective for an agent to take over the reins than to talk the customer through the process. While it has been useful for certain businesses, processes and customers, it is difficult to make a case for it on a cost-saving basis alone, although it will encourage the completion rate of sales, and as such, improve profitability.

Co-browsing may be used to help customers fill out forms, or to complete online transactions, and may be done in conjunction with a concurrent telephone call or web chat. Unlike page-pushing - which is a one-way movement of information from agent to customer - and screen sharing - where the agent takes control of the customer's desktop - co-browsing is a true two-way collaboration tool. Either the agent or the customer can control the cursor or enter data into fields, and business rules can be set up so that the agent does not see or enter sensitive information.

While it is not a cheap option, cobrowsing, particularly in association with a telephone call or web chat, can be an effective way of closing a high-value sale. It is, however, currently used in few UK organisations.

WebRTC or Web Real Time Communications is an API definition that supports browser-to-browser applications for voice calling, video chat, and P2P file sharing without the need of either internal or external plugins[14].

It allows customers to start a video or voice call from the web browser (which may be via a desktop computer or smartphone, perhaps as an escalation from an existing web chat session), which means the organisation's website can then offer video or voice contact centre functionality in a seamless manner, with customers able to request live communication with the business without the need to download specific software or seek out the phone number and break off from what they are doing on the website. Two-way video communication is likely to be of more interest to mobile users, as their smartphone device already comes enabled with a camera and microphone, unlike many desktop computers which may not have this functionality or whose users have it disabled. One-way video, to protect users' privacy, is perhaps a more likely option in many instances.

[14] https://en.wikipedia.org/wiki/WebRTC

Natural Language Processing

While some knowledge base solution providers state that 80% of questions can be answered by 20% of content, it is each business's decision to decide how the remaining 20% of queries will be handled (but of course, even these 20% of documents will change over time as customers' requirements and the businesses' products will not stay static). Some will consider that this is a reasonable proportion to be handled by more traditional means, such as the contact centre, whereas others will leverage expert internal resource, as well as customer communities and forums to fill these knowledge gaps. It is not just the publishing of information that is vital: it is feedback on its accuracy and success from the wider user community and any automated systems which will help the business to fine-tune the knowledge base. Processes to gather this feedback should be put in place, and continually revisited to check their effectiveness, and it is possible to add successful answers to the knowledge base very quickly if a response from an agent (for example, via email or web chat) has been marked to be successful.

In all cases however, one of the keys to successful knowledge management is continually monitoring, updating and publishing the most accurate and in-demand information. Businesses should consider setting internal service levels for the knowledge base, for example only returning documents and suggested answers that have over a specific score for relevancy, and no more than a small number of answers per enquiry. If customers are trained to expect a self-service or virtual agent experience that returns pages and pages of documents that bear little relevance to their original query, they will very soon abandon self-service entirely. It is also vital that the information contained in the knowledge base is available consistently across all channels, whether through a virtual agent or human agent.

One of the keys to successful automated service, with a via telephony or website, is for the user to be able to describe their issue in their own words, rather than feeling that they have to use specific terms or a stilted, incomplete account of the issue. Natural language processing-based systems encourage users to describe their issue more fully, asking follow-up questions if there is any degree of ambiguity in the initial request. One of the obstacles to overcome for NLP-based systems (whether through speech recognition or text recognition) is that many Internet users have been trained to use keywords, believing that simplifying the description of their issue will lead to greater levels of accurate response. In fact, NLP works best with longer and more detailed requests, and it is a challenge for businesses and solution providers to encourage and support users of the system in using the solution in an optimal way.

Many current self-service systems are inflexible and structured rigidly in their information flow, so as to handle simple, unambiguous service requests by customers (such as account balances). Generally speaking, these are very successful at delivering this information, and customers will often choose a familiar and effective method of handling the simplest enquiries. However, historical interaction volume information shows that the number of live calls received by contact centre remains steady: although the contact centre is the primary channel choice for only 12% of customers, two-thirds of interactions with the business still come via live telephony. This suggests that the various methods of using self-service and the supporting knowledge base still have a very long way to go before customers rate them as highly for effectiveness and timeliness as they do the traditional contact centre.

New channels such as social media, email and web chat have grown rapidly in popularity, yet the vast majority of interactions involving all of these channels are still along same lines as the traditional contact centre telephony model: that is, a customer making a request to a live agent. Although web chats and emails tend to have slightly lower costs than telephone calls, the differential between these is far smaller than between a live phone call and a self-service phone call. Of course, not only are businesses missing out on huge potential cost savings, but one of the main customer experience problems still exist: that of having to wait until an agent is available to answer the query.

Expanding the boundaries of self-service outside the simplest and least ambiguous requests will be one of the main challenges over the next few years. Success in this will mean not only greatly reduced costs for businesses, but also improved customer experience through higher real first-contact resolution rates through the customer's channel of choice.

The rise of social media as a customer service channel has often been de facto, in that customers have actively sought out the company's Facebook page or Twitter account to communicate with it, even if the company originally had a social media presence only to disseminate information. We expect social media to remain a relatively minor channel in terms of overall number of interactions compared to telephony, but one with the potential to be strongly negative – to punch well above its weight – and many senior executives within most companies are treating the channel with a great deal of respect.

Despite the relatively low levels of customer interactions via social media, the high-profile nature of this channel and the possible magnifying effects of negative comments means that social media is viewed as being far more important than baseline interaction statistics would suggest. Some savvy customers, knowing that their public complaint or issue will be dealt with quickly, prefer to go straight to a social media channel rather than wait in a telephone queue. Others might choose the social channel after they've had a bad experience on another channel, such as waiting on hold for a phone agent.

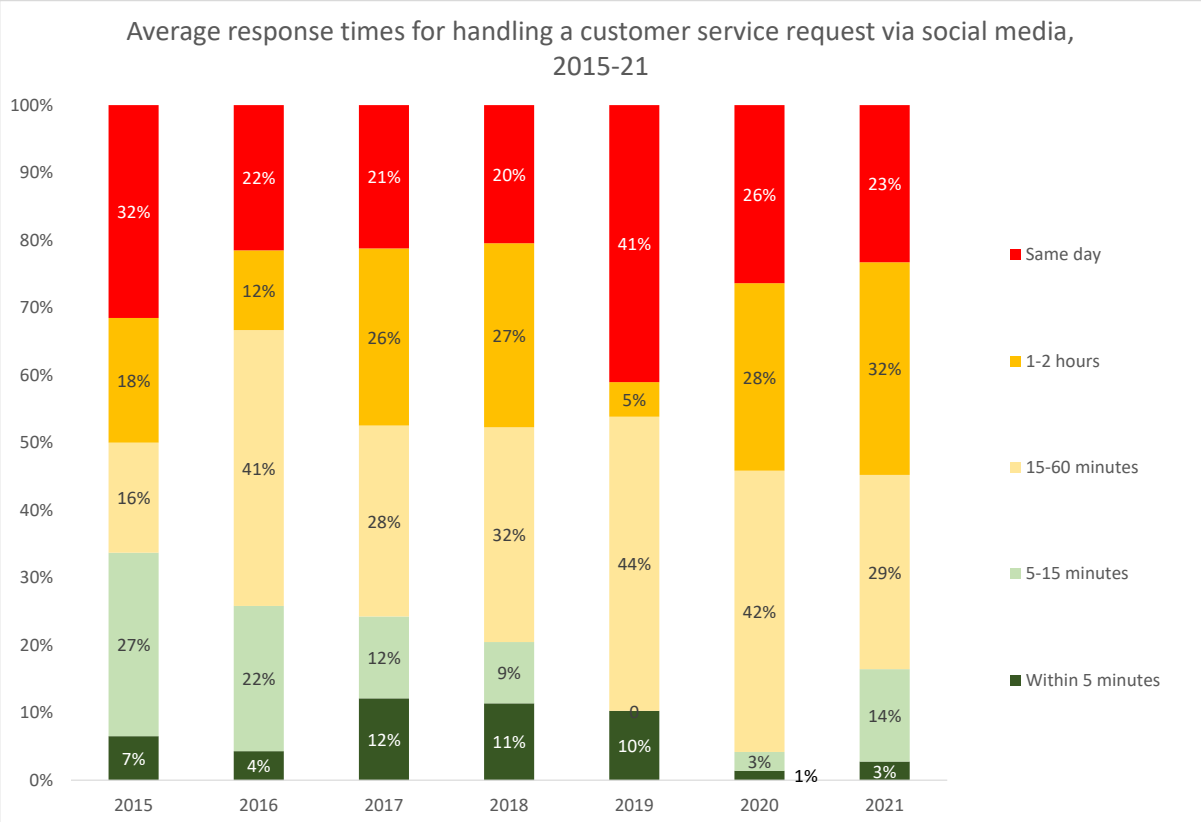
Uniquely, social media has taken off as a customer service channel as a result of customer demand, rather than businesses' enthusiasm for promoting a cheaper service channel. The following chart shows how channels fit customers' needs, and we can see that social media for some customers can provide a very positive experience with a very low pain point, and at virtually no cost of time or money: the customer complains, loudly and in public, so the business reacts quickly and effectively. For the customer, this is great: it is the business for whom the popular methods of social media handling are not optimal: not only do they have to carry out their business in public, reacting quickly and without being able to authenticate the customer's identity, but they often cannot handle the query without resorting to another channel such as phone or email, which provide more privacy and functionality. In such cases, they are not even seen by the outside world to be reacting quickly and effectively, or to have solved the problem. Both customers and companies are finding out what works with social media and what does not. Crucially, as with any channel, success will only come when a channel delivers a successful experience for both sides of the equation.

There is some debate about the best way to handle social media inquiries. While it is possible for requests via social media to be analysed (often by keyword spotting), prioritised and then routed to the agent team most capable of dealing with these specific inquiries, it is not just the same as a phone call or web chat. Some customers expect an almost instantaneous response, with the attendant pressure that such a service level places upon the organisation, but this is generally unfeasible.

Response times for handling a social media customer service request are somewhere between a phone call / web chat on the one hand (i.e. a maximum of a few minutes), and an email on the other (i.e. several working days).

46% of respondents answer within the hour, but 23% state that they will probably take longer than an hour but less than a day.

Figure 132: Average response times for handling a customer service request via social media, 2015-21



A social media interaction is a little less expensive than a web chat, although there is little to choose between them.

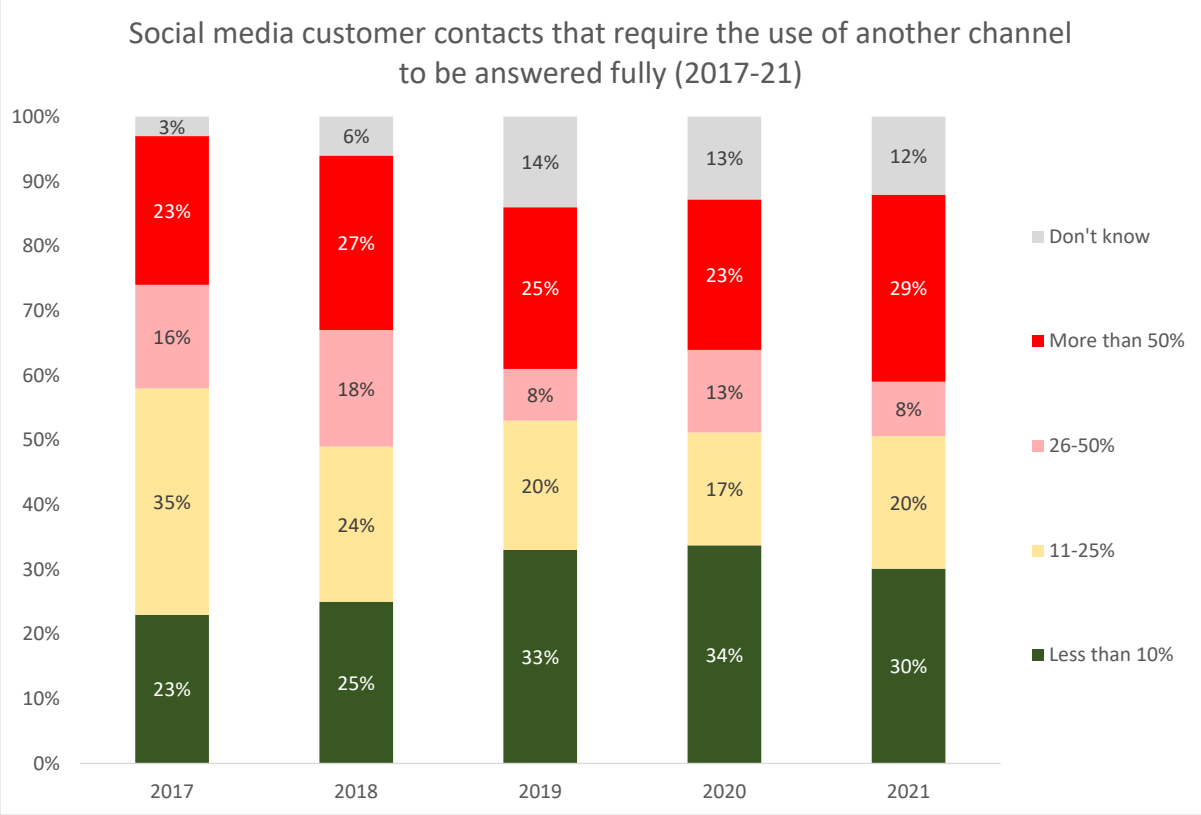
It should be noted that the majority of survey respondents did not answer this question, so care should be taken when considering this table.

Figure 133: Estimated cost per social media customer contact

	Social media customer contact cost
Mean	£2.58
1st quartile	£3.20
Median	£2.60
3rd quartile	£1.15

29% of respondents state that more than half of their social media requests have to be completed via another channel, perhaps because of the public nature of the channel, and that customer identity verification is not as straightforward as with voice. This is considerably higher than for web chat or email.

Figure 134: Social media customer contacts that require the use of another channel to be answered fully (2017-21)



Tips on providing customer service via social media

- Despite the pressure that social media puts onto a business, younger generations express a preference for communicating with businesses in this way. They are also more likely to complain about problems on social media, so supporting a social media customer care plan is vital to winning and keeping this section of your customer base.

- Social media does not have to refer only to the likes of Twitter and Facebook. Customers are growing increasingly more sophisticated at seeking out help themselves, with many preferring to attempt to find their own solution via customer communities before contacting a business, although this can be a very hit-or-miss approach.

- Be aware that age has a particularly strong role in the choice of customer communication channels. Generally speaking, older generations will choose the phone as their primary channel, whereas younger customers will look at online channels first. Men are also far more likely than women to look for a self-service solution initially.

- 80% of customers trust recommendations from other customers. The downside to this, of course, is that customers will also take a negative criticism of a product or company very seriously.

- By keeping a Twitter feed or Facebook page up-to-date, an organisation can reduce inbound call traffic at a time when a particular issue is causing a spike of calls, for example, if bad weather threatens to close schools.

- Blending social media with other forms of customer communication can mean that agents get a more well-rounded view of what customers are actually thinking. Knowledge sharing between agents, especially where new information is put in a timely fashion into the knowledge base, will assist both agents and self-service customers.

- Just because the customer has initiated a social media interaction does not mean that a business has to stay on that channel to resolve it successfully. Customers may like to receive an outbound call from the agent, as this may provide the opportunity to go into further detail, and to resolve the issue entirely.

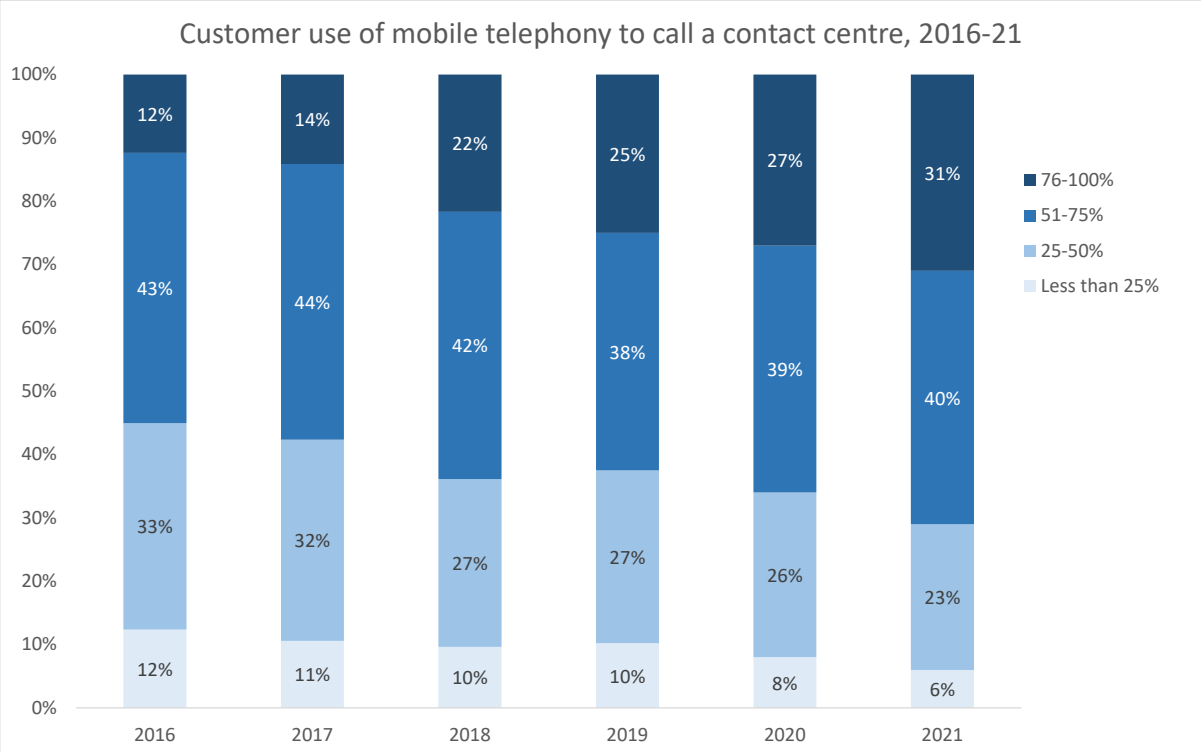
For information on the use of messaging for customer support (including WhatsApp and Facebook Messenger), please see the following chapter, “Mobile Customer Contact”.

Statistics that show the number of smartphone users, volume of apps downloaded and the value of mobile transactions are rising so quickly that they would be out-of-date before this report is published. It is sufficient to note that with very few exceptions, the mobile customer is relevant to every organisation, in every vertical market, in every geography of the world.

The rapidly decreasing cost of mobile bandwidth, coupled with the huge improvements in mobile networks mean that businesses can be ambitious in what they are attempting within this channel, having an opportunity to build presence and functionality in an area that is growing rapidly.

71% of respondents state that more than half of the calls made to their operation are done through mobile phones rather than landlines, offering huge potential for value-add services such as video, visual IVR and other mobile-related functionality.

Figure 135: Customer use of mobile telephony to call a contact centre, 2016-21



At a vertical market level, respondents in transport & travel, utilities and housing report the highest proportion of calls being made from mobile phones, with those in the manufacturing and transport & travel sectors reporting the lowest.

Research shows that 91% of customers who have a poor experience with shopping on a mobile site will abandon it: some may intend to return via a PC, but many others will search elsewhere: there is no differentiation or allowances made for sub-optimal mobile web experiences. Furthermore, most businesses are currently failing in this attempt, with the mobile channel lagging way behind online websites and bricks-and-mortar shops. Offering a mobile customer experience tends to mean offering a smartphone app and/or a mobile version of a website, and the next section of the report looks at what this means for businesses and customers.

MOBILE WEBSITES

A mobile website differs from simply accessing a full website via a mobile browser, rather offering a mobile-optimised alternative which is easier to use and overcomes some of the constraints around using a smartphone to access the web, such as tiny fonts, excessive scrolling and difficult-to-press buttons.

Mobile websites usually do not try to offer every single item available on the full website, but focus upon the information and processes that most users will want in order to act or make a decision. Ease of use is vital: text must be fully displayed on screen, buttons must be clickable and businesses have had to consider minimising the use of graphics to achieve quicker load times in areas with poor mobile data services, although this is becoming less of an issue as 4G/5G and cheaper data become more widespread.

Bearing in mind that a mobile site generally cannot support every type of interaction that a customer may want, businesses may consider that allowing mobile users to access the main website is a good idea. Contact details should be clear, and offering a seamless route from self-service into supported service, via email, web chat or telephony is very desirable.

It is beneficial for businesses to understand why customers are using a mobile site rather than waiting until they are in front of a computer: the request may be related to what they are doing at that current time, and so waiting is not appropriate. Generally, customers will be more task-focused on a mobile device than a computer, so the emphasis should be on delivering quick, simple, high-volume interactions. For example, by looking at the current use of their full website, a bank may discover that a high proportion of users want to check their bank balance or view recent transactions rather than setting up automatic bill payments or ordering foreign currency. Consequently, the mobile version of the website may focus only on a small number of high-volume interaction types.

A good app may provide a superior user experience to a mobile website, due to the greater level of design. However, they tend to be much more expensive to build, and unlike a mobile website, a new one has to be developed for each smartphone platform. Additionally, company apps will tend to be free to download, so there is little opportunity to make money directly from them. However, for many businesses, the cost savings made by having customers self-serve via an app rather than calling the contact centre are very considerable.

Smartphone platform market shares show that Android and iOS shipments account for almost all of the market, so businesses could decide to produce only two flavours of app, which would actually support the vast majority of the smartphone market.

A native application developed for a mobile device can use some of the device's capabilities to enhance the customer experience. For example, a smartphone app can prompt drivers at the scene of a car accident to provide and capture the correct information, including photos. Such an app could also use GPS to give the exact location of the accident for use by the insurance company.

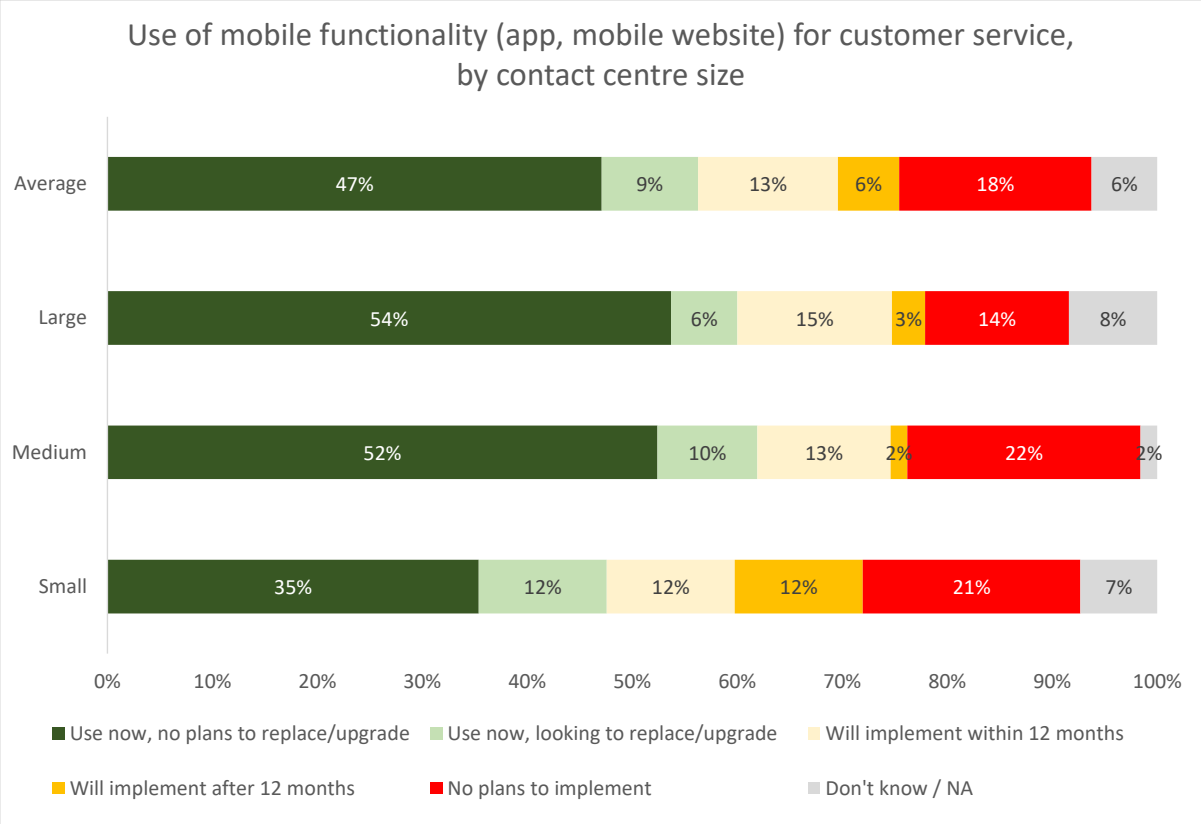
Industry estimates for building an app vary considerably depending on what they are trying to do, but many sources indicate that a cost of £20,000 upwards (per platform) is very feasible. The cost of developing a mobile website is less, and only needs to be done once. Whether an app is suitable for a company depends on their budget, and their customer base. It may be that the superior branding associated with apps is seen as being well worth the expense, even before factors like increased sales conversion rates and reduced live contact costs are taken into account.

USE OF MOBILE SERVICE FUNCTIONALITY

56% of this year's survey respondents stated that they offer mobile functionality for customer service, with a further 19% having plans to do so.

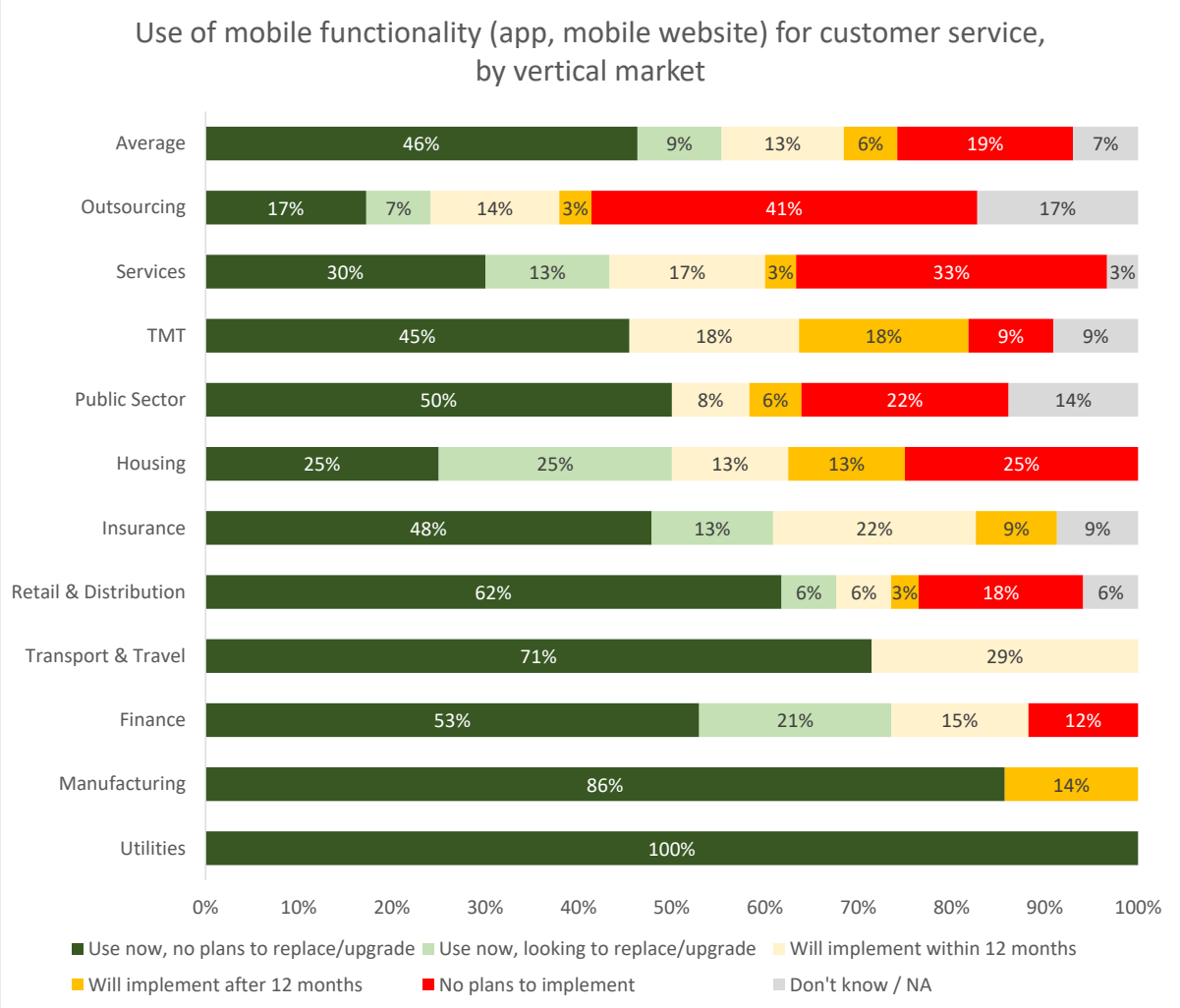
Respondents from medium and large operations are more likely than smaller contact centres to be using mobile customer contact functionality already.

Figure 136: Use of mobile functionality (app, mobile website) for customer service, by contact centre size



Looking at the picture by vertical market, those in the utilities, manufacturing, transport & travel and finance vertical markets are most likely to be offering mobile functionality, with interest in doing so coming from the transport & travel and insurance respondents.

Figure 137: Use of mobile functionality (app, mobile website) for customer service, by vertical market



Of the respondents which provide mobile customer service, over 80% offer a mobile version of their website, for example by having the most popular elements available, speedy load times, optimised graphics, improved readability and scrolling, etc.

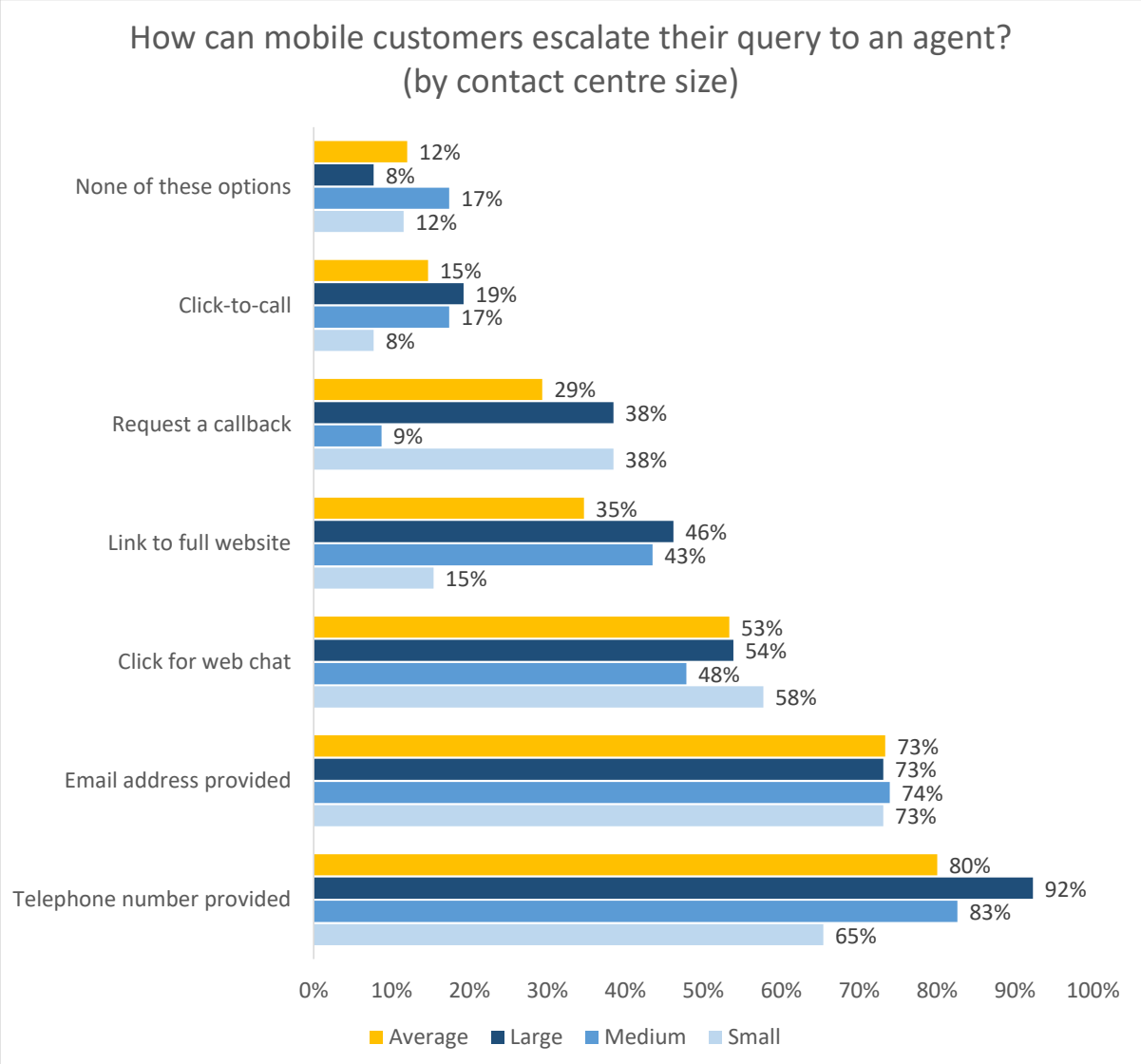
Around half of respondents offered a smartphone app for service, with larger respondents much more likely to be doing so. However, only 25% offer the same mobile support for sales, with larger operations again being more likely to try to win new business through investing in an app.

CROSS-CHANNEL ESCALATION

If the customer cannot successfully do what they want to on a mobile app, they will be forced to initiate a service request via another channel, which will be treated by the business as a separate request without any understanding of the history, activity or effort that the customer has already undertaken. No business where this occurs can describe itself as being 'omnichannel'.

Gathering, understanding and using the contextual data that can surround the mobile consumer will be key to pushing the uptake and functionality of this channel forward. The plethora of channels immediately available to the mobile consumer – including voice, web browsing, SMS, social media, and web chat – encourages the customer to act immediately for all their service or information requirements, rather than waiting until they are in front of a computer. In cases where the user needs to pass through security – and also where other reasons mean that the customer cannot complete their interaction solely through mobile browsing or using an app – businesses should consider how they will keep the customer or prospect engaged with the business.

Figure 138: How can mobile customers escalate their query to an agent? (by contact centre size)



The easiest way to support cross-channel contact is to offer a telephone number on the mobile website or inside the app, and 80% of respondents do so, with 15% having a click-to-call shortcut. However, the user/ customer must often start their request again from the beginning, as many respondents will not credit the security and identification process that the customer has already been through, nor will the browsing history be passed onto the agent. Effectively, the customer may as well not have used the mobile channel at all, which is a negative for them and their attitude towards this channel in future.

Providing an email address is the second most popular escalation method, which does allow the pre-population of fields in an email form (user details, account details, type of issue etc.) although only a few respondents go as far as this. However, email is a slow medium even when done correctly, and the user will not get an answer in real time. Sales operations prefer to encourage mobile browsers to contact them through a more immediate channel, to reduce the chance of losing a sale.

29% of respondents using the mobile channel state that they offer call-backs to customers. While this is a positive and proactive response, the user is often left in the same situation as if they had called in the first place, as the agent will often have to take them through security and establish what the problem is.

53% of respondents offered a web chat option within the mobile site or app, this being the channel most closely resembling the activity the user is already undertaking (i.e. using the mobile device to look for information, and typing rather than speaking). Web chat is more immediate than email, and offers a chance to move between self-service and assisted service seamlessly, with the agent being able to push links and video to the user in real-time. The difficulty in typing on a smartphone screen means that this is still not a perfect solution.

A significant minority of respondents state that upon escalation, an agent is provided with some information about the customer, most often only the customer's name, rather than anything more closely linked and relevant to what the customer was trying to do, their account details, or where they are currently located. As such, this means an escalation from the mobile channel will rarely provide a quicker customer experience (for example, by jumping a call queue or by having details of the mobile session already undertaken screen-popped onto the agent's desktop).

The nature of mobile devices means that businesses potentially have the opportunity to know more about their customers and their specific requirements and preferences than ever before.

This includes:

- Customer identity: once the customer has identified themselves, such as by logging on, or through the mobile phone number, this allows the agent to access their existing customer history in the same way that would be done so on a phone call into the contact centre.
- Geographical information: smartphones are GPS-enabled, allowing agents to see where customers are, and to direct them to the nearest store, for example.
- Historical activity: if the customer has been browsing a mobile website or app beforehand, the information that the customer browsed previously may be useful for the contact centre agent to have to hand, in order to see and understand what the customer has already tried to do.
- Stored data: the mobile device may have data stored that identifies the customer, such as account number, that can speed up the interaction and make it more effective.
- Collected information: the mobile device may also be used to capture and share information with the business such as photographs or videos. It may be possible to automate a two-way interaction: for example, a customer may use their mobile phone to scan a QR (quick response) code on a product. Using the information on the code, as well as the customer's input into the app about what they are trying to do, the customer may be directed to the correct place within business's self-service function in order to solve the issue that they have. This can take the contact centre out of the equation altogether, resulting in reduced costs for the business and a quicker and more effective customer experience.

Solution providers are keen to offer technology that ties the mobile channel in more tightly with the existing voice and data customer support channels, providing a single integrated user experience regardless of initial channel choice and any cross-channel movement by the customer. One of the key ways to do this is to offer live agent support more easily (for example, through clicking an icon within an app), which provides a context-relevant, geographically-supported and personalised customer experience. The movement between self-service and live service is currently very difficult for many customers - it is certainly not seamless - and actually may involve abandoning the mobile channel entirely as a failure in order to start afresh with another channel. As the customer has chosen originally to use a mobile channel, even a successful outcome with another channel will risk leaving the customer dissatisfied with the company, and less likely to use the mobile channel in future. There is also the danger that because the organisation is unaware that a failed mobile session has been the root cause of a live contact, it will underestimate the reality of cross-channel interaction failures.

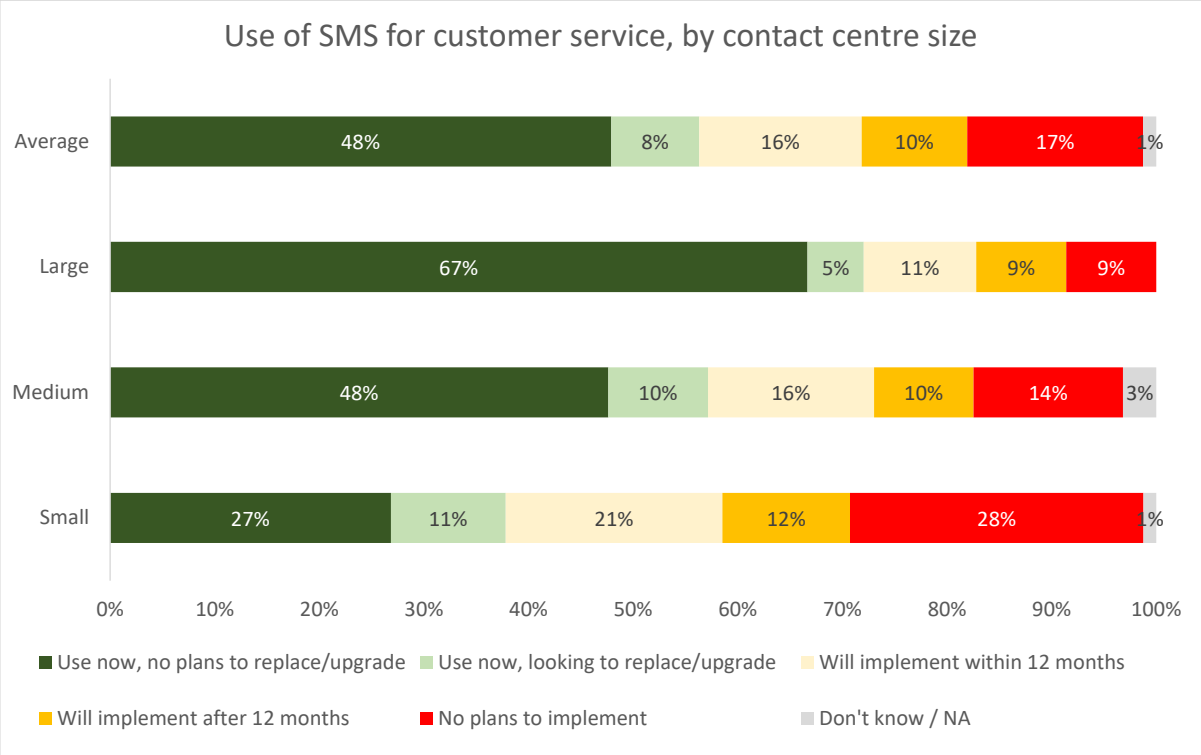
On moving from self-service to assisted service, mobile service applications should gather the browsing history, customer information and the context of the session in order to pass this to a live agent. Smartphones are enabled with GPS tracking, so businesses should look to leverage this capability to deliver better customer experiences where possible. In fact, the inherent capabilities of the mobile device offer businesses huge opportunities to impress their customers, including location-specific information, such as local broadband outages, or the ability to leverage photo-taking functionality on the phone to provide the agent with a clearer picture of the situation (which may be particularly useful for insurance claims, for example).

SMS and outbound calling also offer opportunities for businesses to deliver proactive customer service through the mobile channel, creating a positive attitude. Furthermore, location-specific device information also allows businesses to deliver timely service and relevant marketing messages which can be positives for the customer at that specific place and time.

SMS is growing in importance as a customer service tool, particularly for reminders, notifications and for customer surveys.

Large operations are more likely to be using SMS to communicate with customers, with 72% of respondents from this size band doing so. There is some interest in implementing SMS in the short-term in smaller size bands.

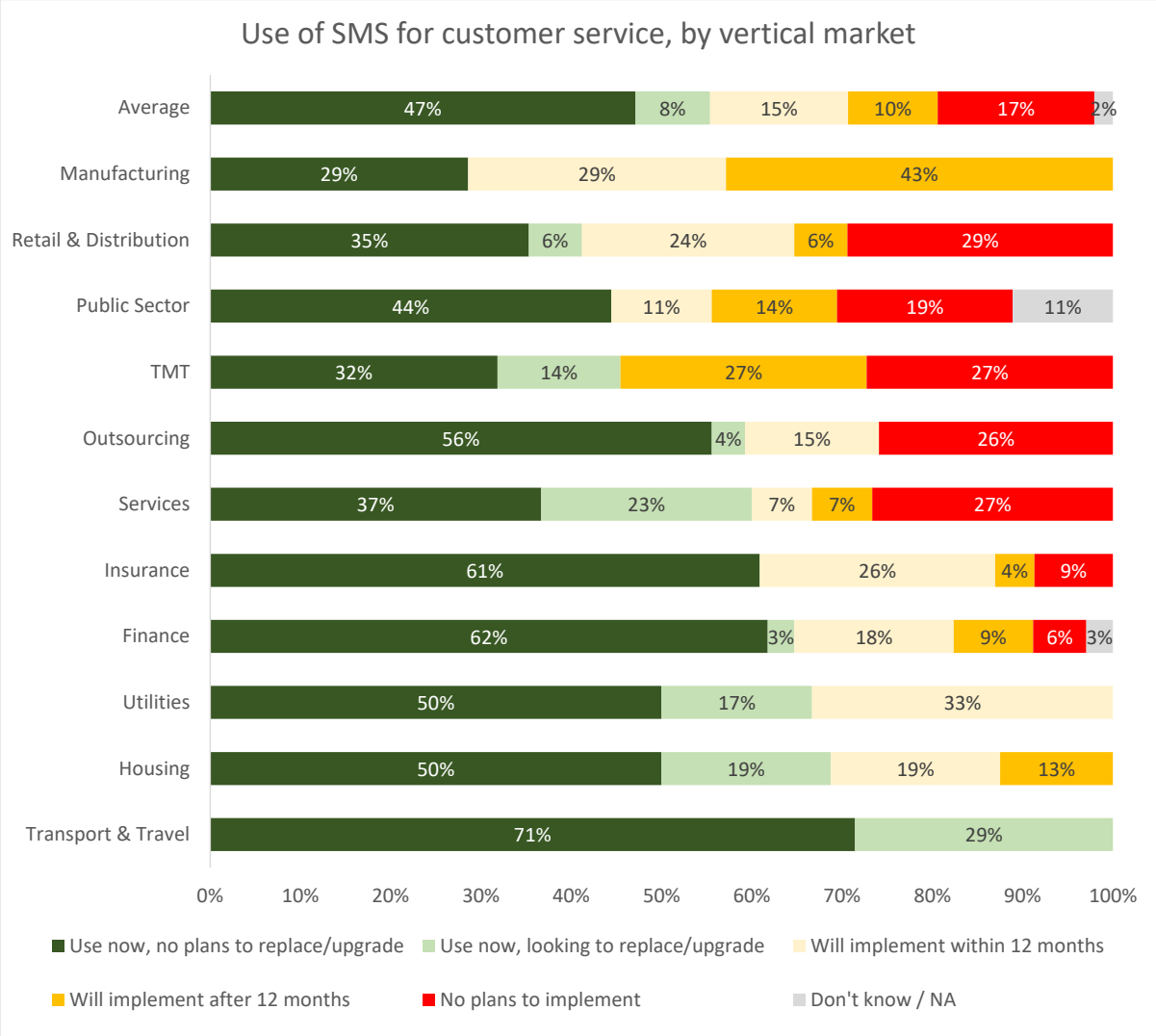
Figure 139: Use of SMS for customer service, by contact centre size



Those respondents in transport & travel, utilities, finance, insurance and housing are most likely to be using SMS.

Even where current SMS use is low, such as in manufacturing and retail, there is interest being shown in implementing this solution.

Figure 140: Use of SMS for customer service, by vertical market



It is not just the customer interaction points that will become more integrated. Brick-and-mortar stores are also becoming more integrated with their digital component, in order to provide correct inventory levels at store- and company-wide levels, thus matching the capabilities of their dot-com competitors while being able to take advantage of being able to provide in-store services to customers.

Like any technology, application or channel, mobile service has to be seen to pay its way. Quite apart from the importance of fulfilling a customer demand, there are numerous elements to consider when looking at return on investment:

- Call avoidance due to increased use of self-service, although the difference made to the number of IVR sessions should be taken into account: customers may simply be swapping one self-service method for another, rather than avoiding expensive live calls
- Increasing the accuracy of routing by leveraging mobile and customer data means that calls are more likely to go to an agent that can resolve them first-time, impacting positively upon first-contact resolution, call transfer rates, average handle time and customer satisfaction
- Decreased call handling time in cases where mobile browsing information and other contextual data is passed to an agent, enabling them to reduce effort duplication
- Improved customer satisfaction, and decreased customer effort is likely to lead to improved loyalty, revenue and customer advocacy
- Contextual information, such as geographical location, enables greater cross-selling and up-selling opportunities based on improved knowledge about the customer and their circumstances.

While not a channel in itself, WebRTC (Web Real Time Communications) is an API definition that supports browser-to-browser applications for voice calling, video chat, and P2P file sharing without the need of either internal or external plugins[15].

The announcement[16] that Apple would support WebRTC within its WebKit engine that runs the Safari browser was seen as a major step forward for next-generation customer support, enabling voice, video and collaborative communications directly from a website without the need for additional software. While mainstream use of click-to-video has been a very long time coming, WebRTC offers the opportunity to businesses to engage customers face-to-face where appropriate, offering the browsing customer a route straight into the contact centre without any breaking of channel or extra effort.

WebRTC allows customers to start a video or voice call from the web browser (which may be via a desktop computer or smartphone, perhaps as an escalation from an existing web chat session), which means the organisation's website can then offer video or voice contact centre functionality in a seamless manner, with customers able to request live communication with the business without the need to download specific software or seek out the phone number and break off from what they are doing on the website. Two-way video communication is likely to be of more interest to mobile users, as their smartphone device already comes enabled with a camera and microphone, unlike many desktop computers which may not have this functionality or whose users have it disabled. One-way video, to protect users' privacy, is perhaps a more likely option in many instances, as is click-to-call.

Video agents as a step towards more personalised, high-quality customer contact. The customer will be able to see to whom they are talking, through a computer or mobile device, assuming the broadband requirements are met.

There are a number of cultural and business issues to consider:

- Customers may prefer the impersonality of non-visual contact, and may be uncomfortable with the agent seeing them in a domestic environment, which would suggest one-way video may be more popular
- Eye contact is critical for establishing trust and 60% of the communication process is actually visual. For sensitive purchases such as financial services, being able to see the financial advisor can help to establish trust and put the customer at ease. The entire contact may be captured and distributed electronically for further reference
- Verbal abuse, a major problem for some agents, may decrease in a virtual face-to-face setting, however, agents may feel their privacy is decreased if they are on camera, especially one-way, and the incidence of disturbing crank calls may increase
- The contact centre environment will need to be altered to impress the customer, and voice agents will need to be trained in visual communication.

[15] https://en.wikipedia.org/wiki/WebRTC

[16] https://webrtc.ventures/2017/06/webrtc-support-in-safari-11/

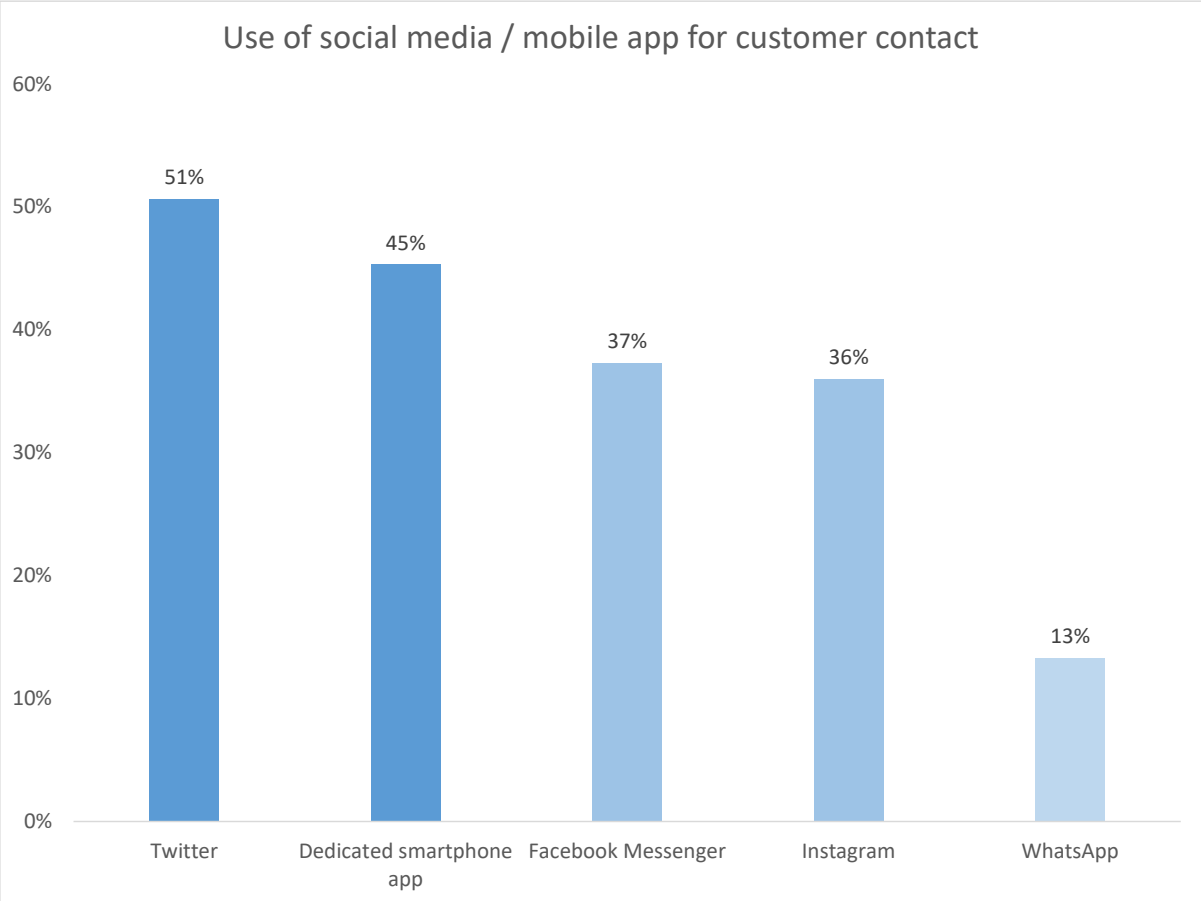
This application has potential, especially in a sales environment, and with technical support, where the agent shows the customer what they mean. Various businesses – usually banks – are already using video kiosks to offer virtual branch banking services in areas where physical branches have closed. Currently, customers are more likely to find that video is not being used to show a company's agents in a live environment, but as part of a supported multimedia service experience, with the agent sending relevant recorded video clips either via chat or email.

With well over 1bn active users of Facebook Messenger and WhatsApp, organisations should at least have a watching brief over these tools where customer contact is concerned.

Messenger/WhatsApp have the benefit of familiarity with customers, and businesses may wish to investigate including these types of interaction within their agents' web chat screen. As many users live their lives permanently logged into these applications, there is an ease-of-use and ubiquity associated with them.

The applications allow historic records of interactions to be kept (which is not the case with all users of web chat), and there is a great advantage over social media such as Twitter and Facebook: messages are private, which not only allows customer identity verification, but also will reduce the damage to a business through public negative messages. Unlike most web chat, these applications allow the sharing of images.

Figure 141: Use of social media / mobile app for customer contact



The familiarity of these applications will work in favour of agents as well as customers, which will reduce training time and cost. Businesses will also need to consider what is an acceptable service level for these channels: as detailed elsewhere the report, web chat is perhaps closest to the telephony channel's service level target, whereas social media is more akin to email. Although Messenger/WhatsApp are types of social media, they will be used as web chat from the customer's perspective, and should be resourced according to similar expectations.

WhatsApp, especially, is often used as a closed, group-based application, and there may be pushback from segments of the customer community that do not currently associate the use of these applications with business communication. The challenge to businesses will be to persuade customers that letting them into their social circle is worth the effort.

Regardless of the familiarity that customers and agents have with new communication tools, channel hopping and the need for these various channels to work together (not siloed) in a unified omnichannel experience will continue to remain a large concern. Organisations must be aware of the customer's intent and journey as more channels continue to become available.

There is more information about the use of social media for customer contact in the 'Digital Channels' section of this report.

Artificial intelligence (AI) is a wide-ranging term for technology solutions which appears to emulate human cognitive capabilities through the 'understanding' of complex, natural language requirements, in order to reach its own conclusions and develop itself based on what works and what doesn't. Machine learning refers to the ability of software to evolve based on measuring its performance and success, without input from humans.

Within the customer contact space, there is a great deal of interest in how AI can work to deliver a superior customer experience at every hour of the day, across channels, leveraging the vast amounts of data that are available to many large organisations. Supported by the speed and availability of affordable processing power, and the enormous amount of structured and unstructured data available, the opportunity exists for AI to take customer contact far beyond what is feasible now.

Although we are towards the beginning of the AI revolution, there are already numerous well-known examples widely used by the public, including Amazon's Alexa and Apple's Siri. These virtual assistants 'understand' unstructured natural language requests and deliver the solutions in a manner similar to a live personal assistant.

As AI can be given access to all of the relevant data a company holds on its customers, as well as unstructured data held elsewhere (for example, forums or social media channels), it has a far wider source of knowledge from which to draw, compared to human agents. In theory, an AI with sufficient sophistication could make human agents all but unnecessary, but for the foreseeable future, AI will usually work alongside its human colleagues.

The usage of the term 'AI' in the contact centre covers an enormous area, and is often used by solution providers, media and businesses to refer to functionality that may only very tenuously be said to be linked to true AI, which is itself a wide-ranging term for technology solutions which appear to emulate human cognitive capabilities through the 'understanding' of complex, natural language requirements, in order to reach its own conclusions and improve itself.

Rather than arguing about semantics, the umbrella term of AI will be used descriptively rather than prescriptively within this chapter. Its use within the contact centre will be linked to three broad types of linked functionality – the "4 A's of AI" – analysis, anticipation, augmentation and automation.

Analysis:

Whereas for humans, enormous, fast-changing datasets make understanding and action more difficult, AI requires extremely large sets of data in order to find patterns and work optimally. Tools such as speech-to-text and optical character recognition (OCR) enable the AI to normalise data and compare like with like, and machine learning allows systems to improve accuracy and the effectiveness of outcomes without constant input and tweaking from human users.

Anticipation:

Based upon the customer's history, the context of the interaction, and the factors influencing successful outcome of similar interactions in the past, AI will be able to predict the best action to take. This may be in the form of an answer taken from the knowledge base, the correct prioritisation and routing of a call, or the prompting of an agent to ask a specific question or make a relevant sales offer.

Augmentation:

The AI is able to gather relevant information from numerous sources in real-time in order to provide enhanced information to human agents or the self-service system, increasing the likelihood of a successful outcome. The AI is also tasked with updating relevant systems and initiating the correct business processes.

Automation:

In circumstances where there is a high level of confidence that the solution presented by the AI is correct, human intervention may be circumvented altogether. The AI system may monitor the interaction in real-time, using sentiment analysis to determine whether there is a need for a live agent to collaborate.

There are numerous use cases for AI and machine learning in the contact centre, and they are listed in greater detail in ContactBabel's report, "The Inner Circle Guide to AI, Chatbots & Machine Learning", including:

Improve Voice Self-Service

Using AI-enabled natural language recognition can alleviate the high level of self-service abandonment associated with speech recognition and DTMF IVR, as there is no fixed menu to navigate and no limit to the number of options a customer has to explain their issue. The onus is placed upon the system to understand the customer's intent, rather than forcing the customer to shoehorn their request into a format allowed by the predefined rules and format of the business.

Improve Web Self-Service

For most businesses, the customer is given free rein to search through documents, pre-written answers and archives, hoping to stumble across the right answer for themselves. The often proves time-consuming and ultimately frustrating for the customer, who will then go elsewhere or call the contact centre in a negative mindset. An AI guide would be a valuable aid in improving CX and deflecting unnecessary calls.

Assisted Service

The use of AI to assist agents in real time within a call offers the chance of a real paradigm change: by the nature of the job, an agent-customer interaction has always necessarily been between two people, and the level of support that an agent can actually receive within a call is very limited. AI can work alongside agents to provide relevant knowledge that may be otherwise take a long time to find, and update the knowledge bases available to humans and AI self-service systems using an automated feedback loop that is constantly improving based on actual outcomes.

Improve Digital Channel Experience and Decrease Cost

Perhaps the currently most popular use of AI in the customer contact environment is in handling digital enquiries, where web chats generally take far longer than phone calls (due to agent multitasking, and typing time) and some email response rates can still be measured in days.

As the cost of web chat is broadly similar to other channels such as email, voice and social media, there is room for increasing efficiencies and lowering costs. Digital channels may work well for customers, but businesses are not generally seeing the cost savings that automation can bring. Very few emails or web chats are handled entirely by AI, although a growing proportion of web chats are dealt with by AIs working alongside agents, suggesting responses which agents can then accept or amend. This way of working is most likely to be the norm in the foreseeable future, with the speed of automation and the emotional intelligence of humans combining to provide superior service at a lower cost.

Real-time Analytics and Support

AI can be trained to understand intent and recognise patterns through immersion in vast quantities of historical data, so that when a call is taking place, it can draw upon this knowledge and provide advice or action that has proven successful previously, moving towards the actual provision of real-time analytics.

AI assists in real-time speech analytics through applying the results of machine learning that have been carried out on large quantities of previously recorded conversations, providing:

- agents with the understanding of where their conversational behaviour is falling outside of acceptable and previously successful norms (such as speaking to quickly or slowly, or in a monotonous fashion)
- an assessment of the meaning of non-verbal cues such as intonation, stress patterns, pauses, fluctuations in volume, pitch, timing and tone in order to support sentiment analysis
- understanding the actions and information that have been seen to provide successful outcomes in previous similar interactions, and relaying this to the agent within the call.

Augment RPA

Robotic process automation (RPA) consists of digital software agents that handle repetitive, rules-based tasks at high speed, with great consistency and accuracy. The RPA workforce acts in the same way as human agents, working at the presentation layer level rather than requiring deep integration with systems, replicating the work that live agents or chatbots would be doing, but more quickly and without requiring any rest. RPA agents can input data, trigger processes, pass work onto other robots or humans as rules dictate and replicate data across multiple applications without making any copying mistakes.

AI can work in association with other process automation solutions (which may in themselves not fall under the category of AI). For example, in the case of unstructured data such as customer emails or letters, optical character recognition can assist the entry of the customer requirements into the business system. Using natural language understanding, AI is able to discern the intent of the enquiry, using a knowledge base and assessing the previous best responses to similar enquiries in order to provide an agent with a recommended solution. It is very likely that the agent will be given the option to add or amend this response before sending to a customer. Any feedback from the customer can be assimilated in order to gauge success and fine tune future responses.

Improve the Customer Journey

AI can be applied across the entire customer journey, including sales, marketing and service, helping organisations understand customer behaviour, intent and anticipating their next action. For example, an AI solution may find a pattern amongst previous customers that they are likely to search for specific information at a particular point in their presales journey, and proactively provide this information (or an incentive) to the customer before they have even asked for it. AI can also help with customer onboarding through predicting which customers are likely to require specific assistance.

Machine learning will allow AI to go beyond simply what they have been programmed to do, seeking out new opportunities and delivering service beyond what has simply been asked of them. Through understanding multiple historical customer journeys, AIs will be able to predict the next most-likely action of a customer in a particular situation, and proactively engage with them so as to avoid an unnecessary inbound interaction, providing a higher level of customer experience and reducing cost to serve.

Improve Routing Strategies and Outcomes

AI can be applied to IVR interactions, asking a series of questions to customers using natural language processing to understand their intent. Depending on the customer requirements, it may be possible to answer the query without using a live agent, or in those cases where agents are needed, the prioritisation and routing of the call can be optimised, decreasing call transfer rates and increasing first-contact resolution. Over time, routing strategies will move away from being rules-based and towards cognition, which will also feed forecasting and scheduling processes.

Predictive behavioural routing uses insights gathered from historical calls and the analysis of customer communication types in order to choose the agent whose skills and characteristics are most likely to achieve a positive response from the next caller in the queue. Predictive behavioural routing uses millions of algorithms to decode the language used by agents and customers, in order to understand sentiment, personality type, preferred method of communication, emotional intelligence and transactional attributes (such as ability to overcome objections and willingness to sell.

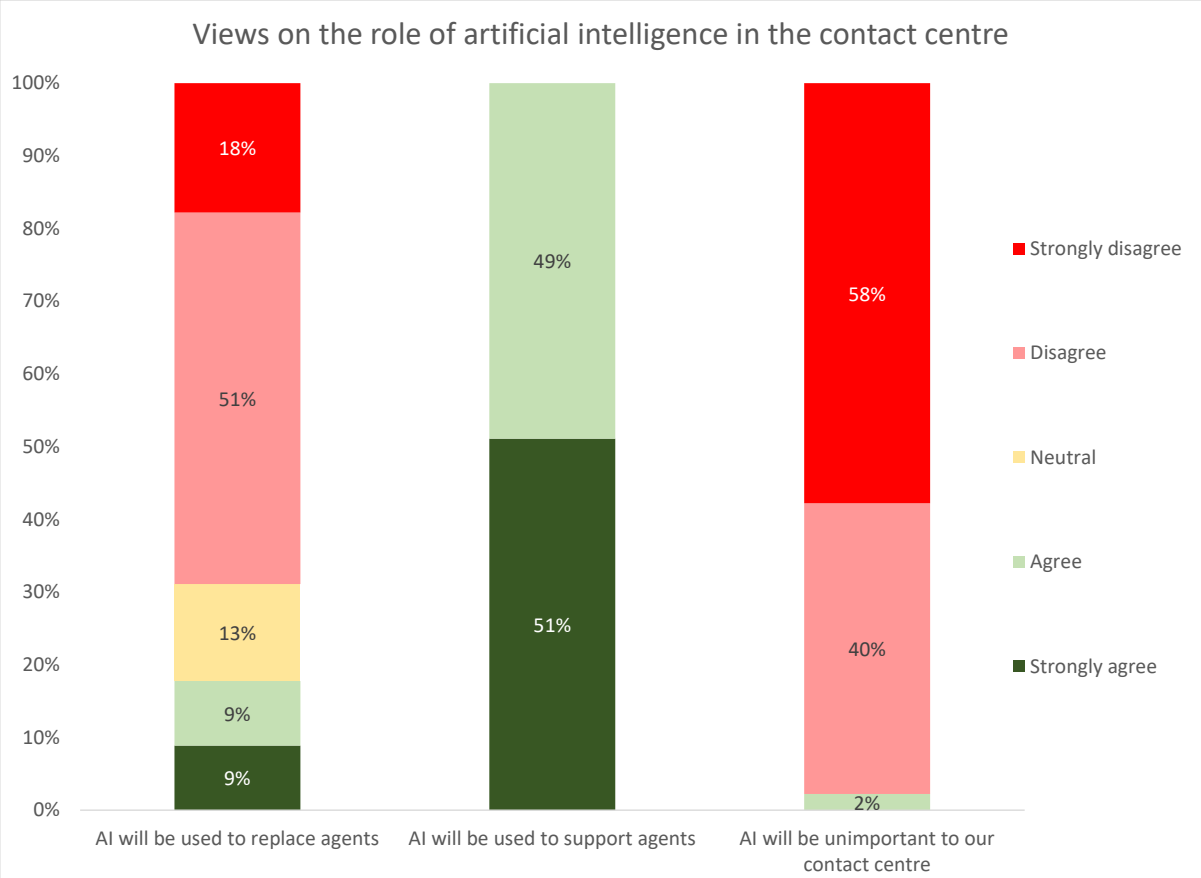
Each customer can be allocated a specific personality style, and when calling again, are routed through to an agent whose performance when interacting with this specific personality type has generally positive results.

Survey respondents generally did not believe that AI would replace agents: only 18% agreed to some extent that this would be the case, with 69% disagreeing. It is worth noting that after a gradual movement over the past couple of year towards a growing feeling that AI will replace agents, this year's views are very much of the opinion that they will not.

Unanimity was found when the question was asked as to whether AI would support human agents, with all respondents agreeing or strongly agreeing that this would be the case, reducing risk, speeding up responses and providing customers with higher quality resolutions.

58% strongly disagreed that AI would be irrelevant to their contact centre, with almost unanimous agreement that AI will affect contact centres of all sizes. This figure is growing year on year as AI becomes more widespread and the benefits better understood.

Figure 142: Views on the role of artificial intelligence in the contact centre



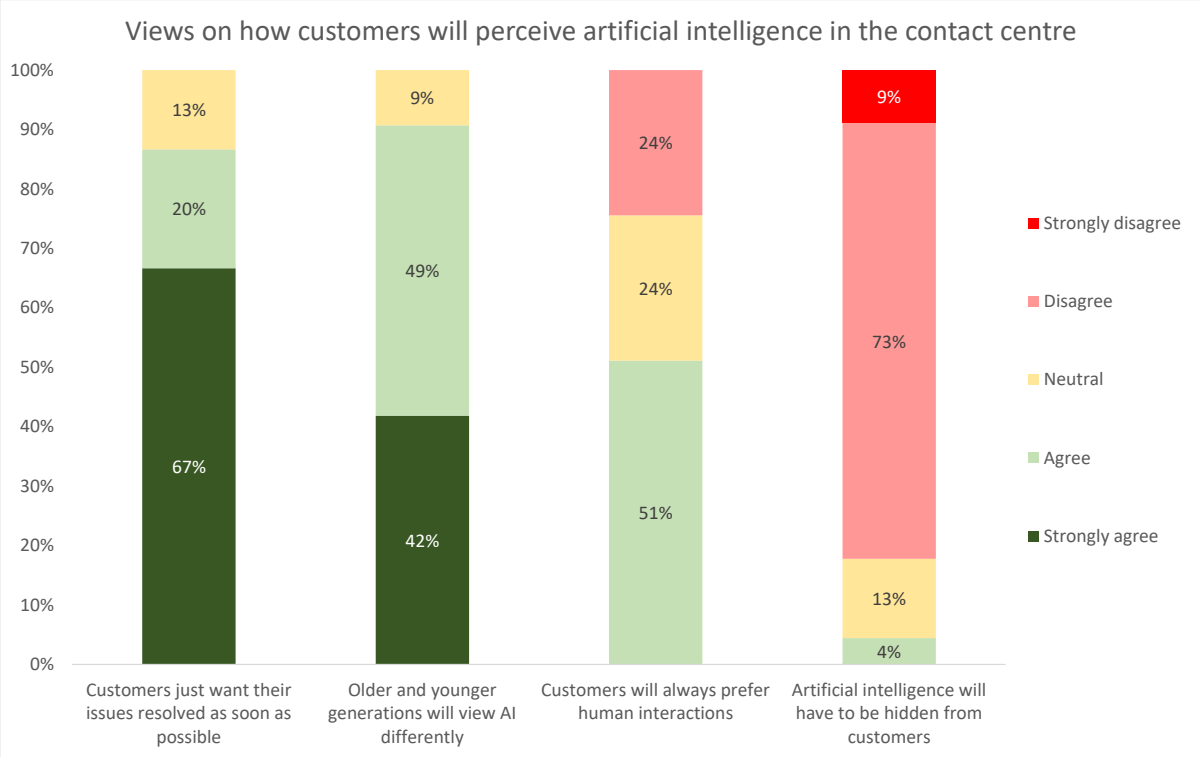
There was a very strong widespread belief that customers would not have a problem with AI if it helped them to resolve their issue as quickly and easily as possible. The uptake in web self-service suggests that customers will accept non-human assistance if it is most convenient for them.

There was also agreement that older generations would take a lot more persuasion to be happy with AI compared to a younger generation that is already used to dealing with AI in their everyday life (e.g. through smartphones or other virtual assistants in the home).

There was also a widespread feeling that AI should not need to be hidden from customers.

Respondents disagree about whether customers will always prefer human interactions: although more believe that customers will always prefer human interactions, there are few strong feeling about this. The next question looks at this issue from the perspective of the customer.

Figure 143: Views on how customers will perceive artificial intelligence in the contact centre

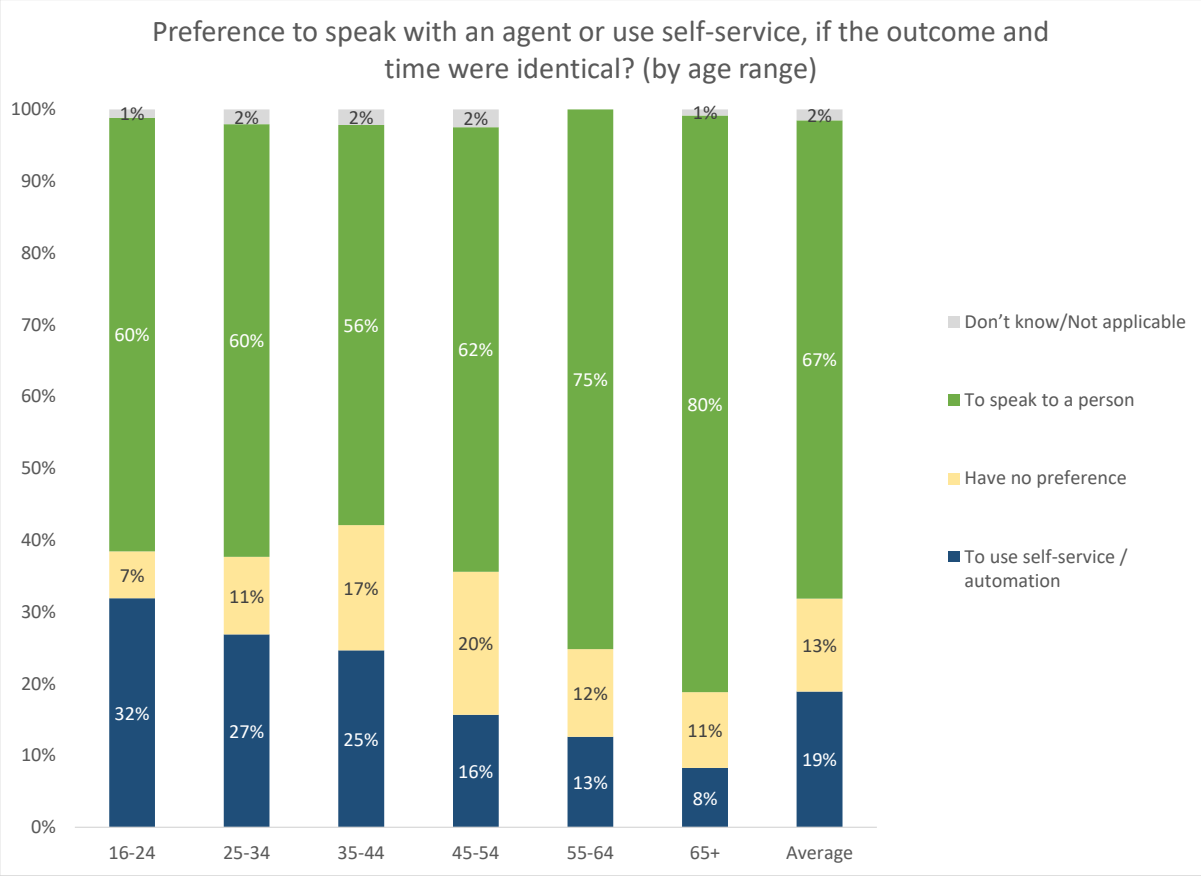


In order to gauge the level of acceptance and expectation around fully-automated customer contact, 1,000 UK consumers were asked whether automation or human assistance would be preferable to the customer base if the customer effort, time and outcome were **exactly** the same. Bearing in mind the rapid advance and uptake in digital channels, the findings were quite surprising.

Looking at the age group of the customer base, older demographics feel more strongly about human contact, with only 8% of over-65s preferring to use automation, compared to 32% of 16-24 year-olds. This fits in with the previous findings that this section of the customer base places more value on their time, whereas the older demographic prefers to have their issue resolved first-time by a single employee. Having said that, every age group expressed a preference to speak with a human agent.

Bearing in mind that this question emphasised that the outcome and customer effort/time **would be identical** in each case, the results show that the customer base at present is not yet at a stage where automation is generally seen as being even on equal terms with human contact, let alone the preferred method of contact with a business, and that the human touch is still very much valued.

Figure 144: Would you prefer to speak with an agent or use automation, if the outcome and time were identical? (by age range)



Further analysis of this data showed that 69% of men preferred to speak with a person, compared to 65% of women.

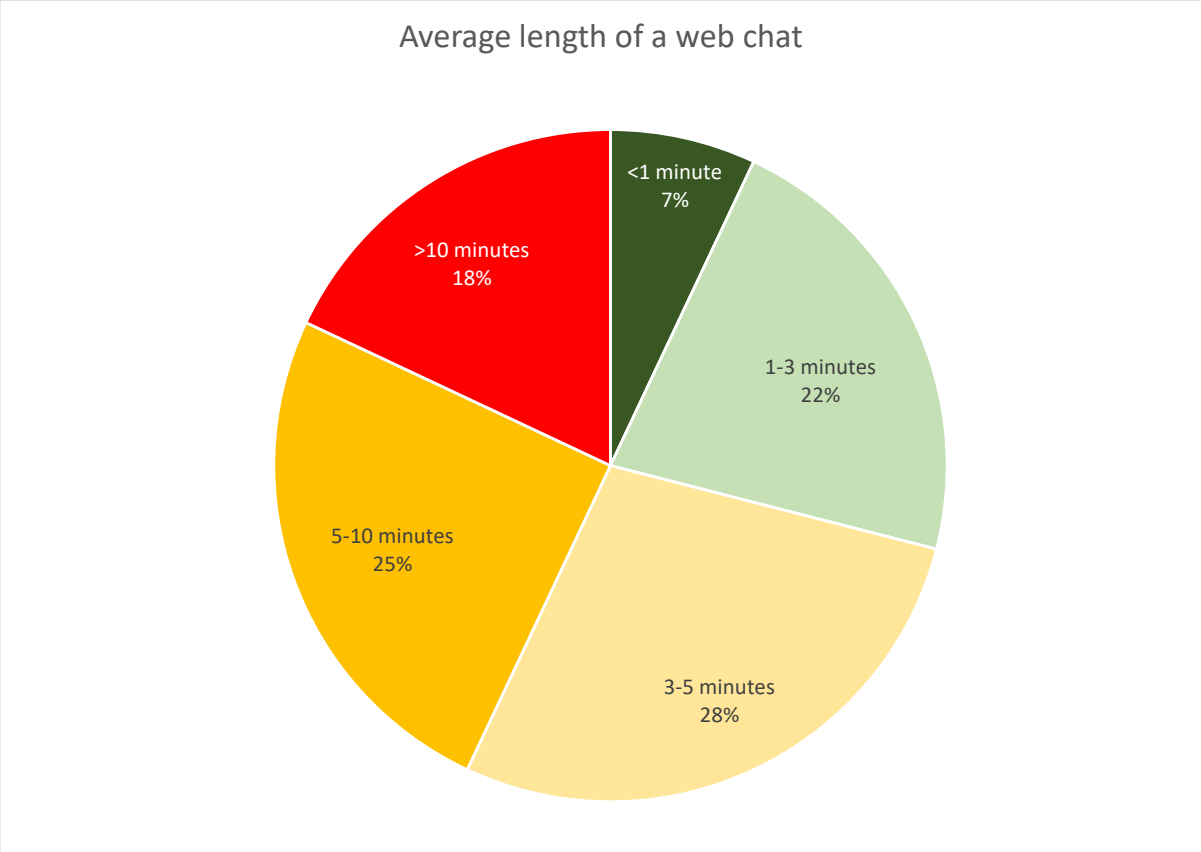
At a socio-economic level, 20% of the AB class would prefer automation, compared to 16% of the DE group, although differences were quite slight otherwise.

Perhaps the most obvious potential use of AI in the customer contact environment is in handling digital enquiries, as many web chats often take considerably longer than comparable phone calls (due to agent multitasking, and typing time) and many email response rates can still be measured in days.

It would be a mistake to compare the content of web chats directly to that of phone calls: web chats tend to be about simple matters, whereas phone calls are often reserved for complex or multiple issues. As such, far more can currently be achieved in a five-minute phone call than a five-minute web chat.

The most sophisticated chatbots or virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyse and search for the answer which is deemed to be most suitable, returning this to the customer instantly. Many virtual agent applications will allow customers to give all sorts of information in any order, and either work with what it has been given, or ask the user for more detail about what they actually meant. Having been unconsciously trained over the years to provide their queries in a way which standard search functionality is more likely to be able to handle (for example, a couple of quite specific keywords), customers must be encouraged and educated to use natural language queries in order for virtual agents to be able to deliver to their full potential.

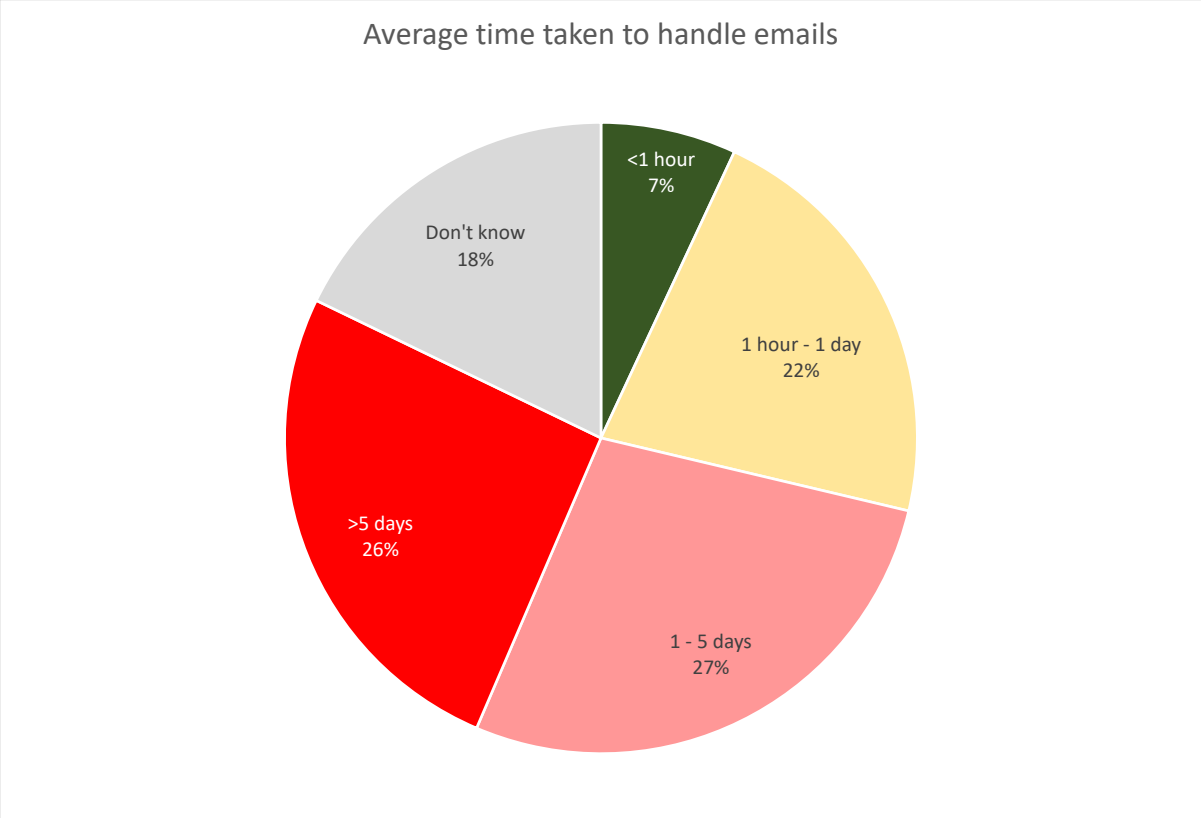
Figure 145: Average length of a web chat



AI can also be used for email to create responses that look as though they have been written by a person rather than a machine, using natural language processing to write content as well as understand it. Emails can be tailored based on the customer's history and behaviour, optimising marketing messages as well as service and sending emails at a time when they have been calculated that they are most likely to be opened.

Personalised emails can be produced by AI, based on subscribers' past email browsing activities to understand the type of content that they actually care about. This is a way in which AI can outperform human agents, who do not have the opportunity or capability to find patterns or draw conclusions from huge amounts of data.

Figure 146: Average time taken to handle emails

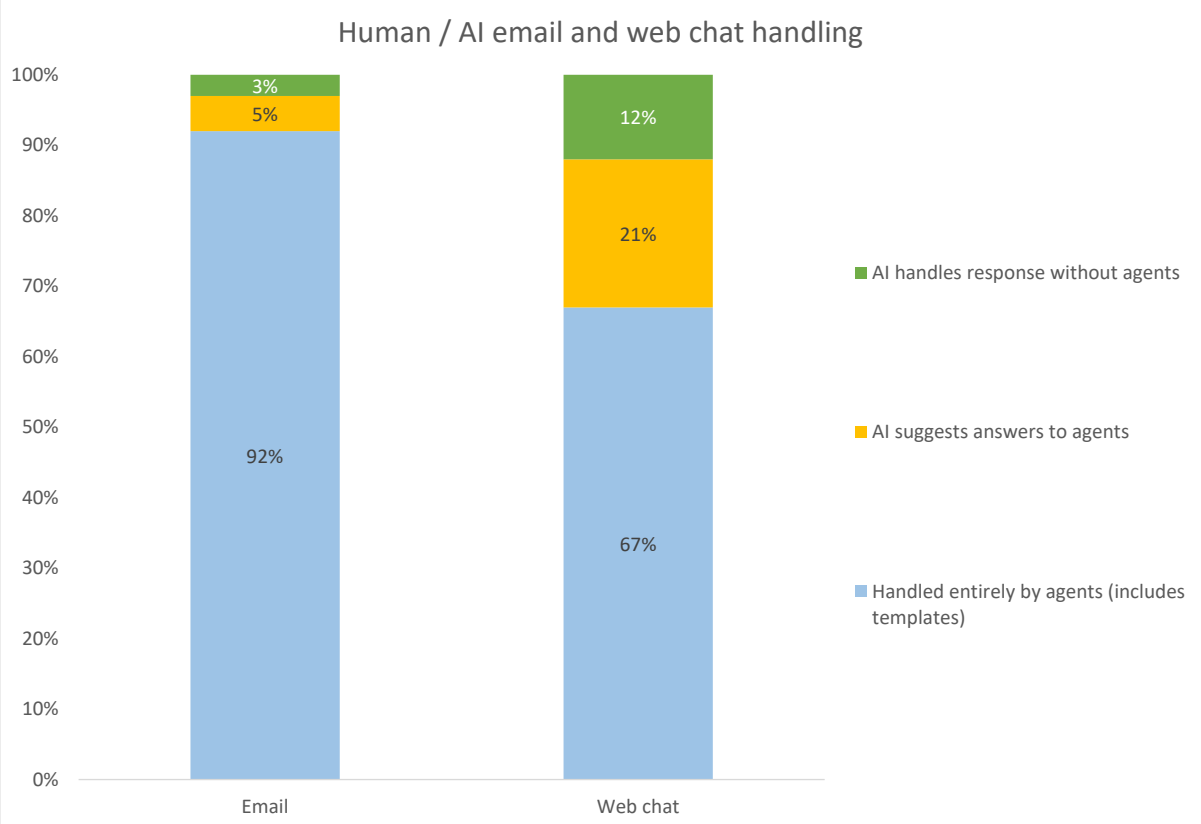


The main reason for this slow response rate and excessive length of web chat and email is that in past years there has been very little automation used in the UK contact centre industry, which also means that the cost of an email or web chat has historically been very similar to that of a phone call.

Digital channels may work quite well for customers, but businesses are not generally seeing the cost savings that automation can bring. Very few emails are handled entirely by AI, although this year has seen a large increased in the proportion of web chats being dealt with by AIs working alongside agents, suggesting responses which agents can then accept or amend. This way of working is most likely to be the norm in the foreseeable future, with the speed of automation and the emotional intelligence of humans providing superior service at a lower cost.

It is worth noting that the proportion of web chats handled entirely by automation has increased from 4% in 2019 to 12% in 2021, and that there has been a significant drop in the average cost of web chats in the past two years. It will be interesting to see if this becomes a pattern in future years.

Figure 147: Human / AI email and web chat handling



The Virtual Agent or chatbot may appear to a browsing website visitor to be a human agent, offering web chat. However, it is an automated piece of software which looks at keywords and attempts to answer the customer's request based on these, including sending relevant links, directing them to the correct part of the website or accessing the correct part of the knowledge base. If the virtual agent cannot answer the request successfully, it may then seamlessly route the interaction to a live web chat agent who will take over. It is possible that the browser will not even realise that any switch has been made between automated and live agent, particularly if the web chat application is sophisticated enough to pass the context and the history to the agent, although as seen previously, many businesses believe it is best practice to identify clearly between virtual and real agents.

Sophisticated AI applications attempt to look for the actual intent behind the customer's question, trying to deliver a single correct answer (or at least a relatively small number of possible answers), rather than a list of dozens of potential answers contained in documents which may happen to contain some of the keywords that the customer has used. The virtual agent application may also try to exceed its brief by providing a list of related questions and answers to the original question, as it is well known that one question can lead to another. Solution providers and users train the system to pattern-match the right words or association of words with the correct result: the application, unlike older forms of web search techniques, does not simply guess what the customer wants, or how they will express themselves. Through 'listening' to what the customers actually say - perhaps through a mixture of large quantities of audio and text – the initial set-up configuration can achieve a good accuracy rate, which really benefits over time as a positive feedback loop is established. Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Virtual agent functionality 'understands' the context of what the customer is asking, with the result being more akin to that of an empathetic human who also has had access to what the customer has been trying to do. For example, if asked "When can I expect my delivery?", the context and the required answer will be different depending on whether the customer has placed an order and is enquiring about its status, or has only a hypothetical interest in turnaround times in case they decide to place an order.

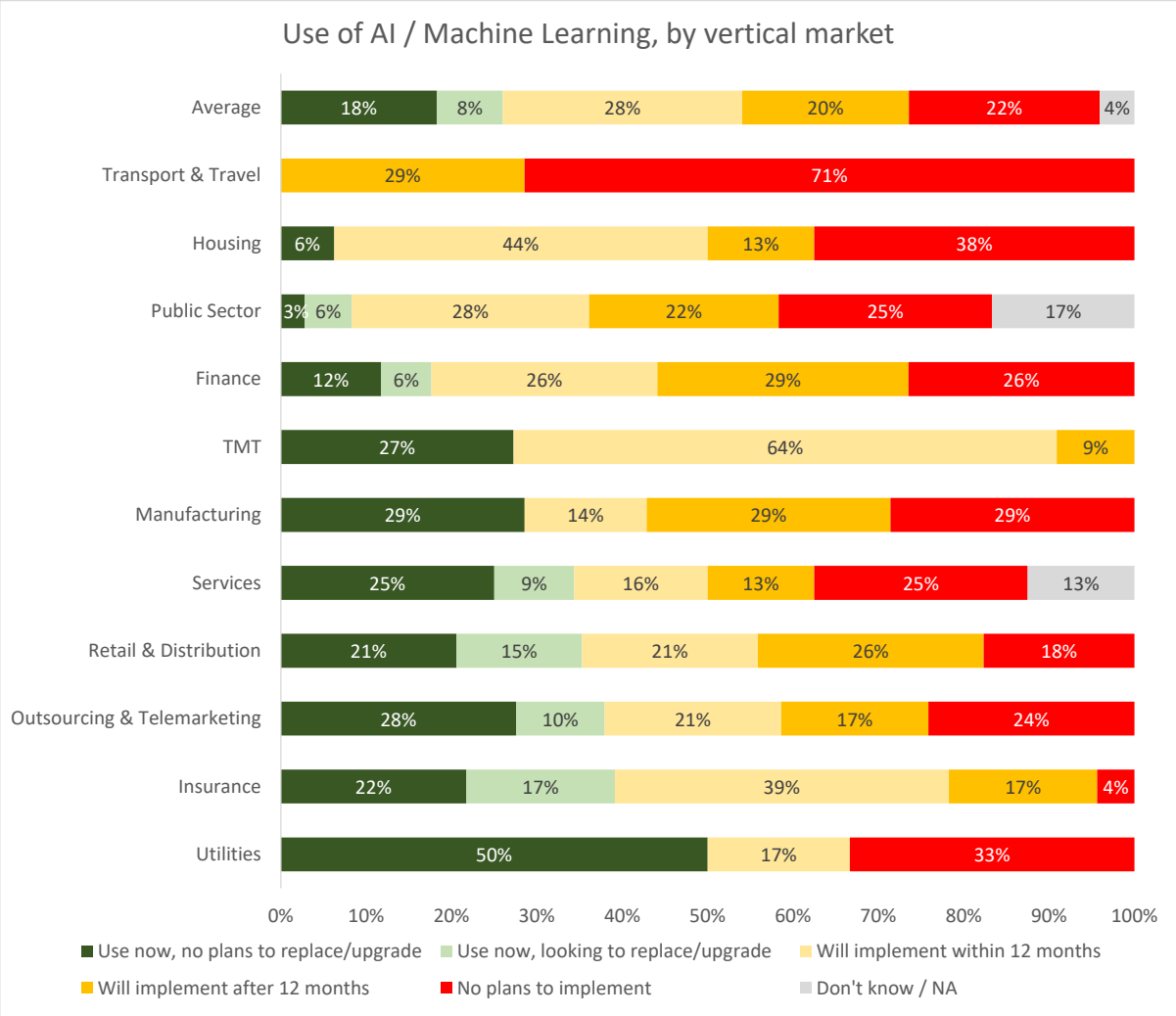
When the virtual agent application has low confidence that it has returned the correct result, it is able to escalate the customers query seamlessly to a live chat agent, who then has access to the self-service session history, enabling a greater chance of a successful resolution without repetition. (It is generally considered best practice that escalations to real agents are not hidden from customers). The eventual correct response can be fed back to the automated virtual agent (and the knowledge base underlying it), which will make it more likely that future similar requests can be handled successfully through automated agents.

CURRENT AND FUTURE USE OF AI

Despite a fairly low current use of AI across industries, there is widespread interest in implementing this solution, with 28% of respondents intending to implement AI within 12 months. While these figures are probably overly-ambitious, it does show real interest from the contact centre industry.

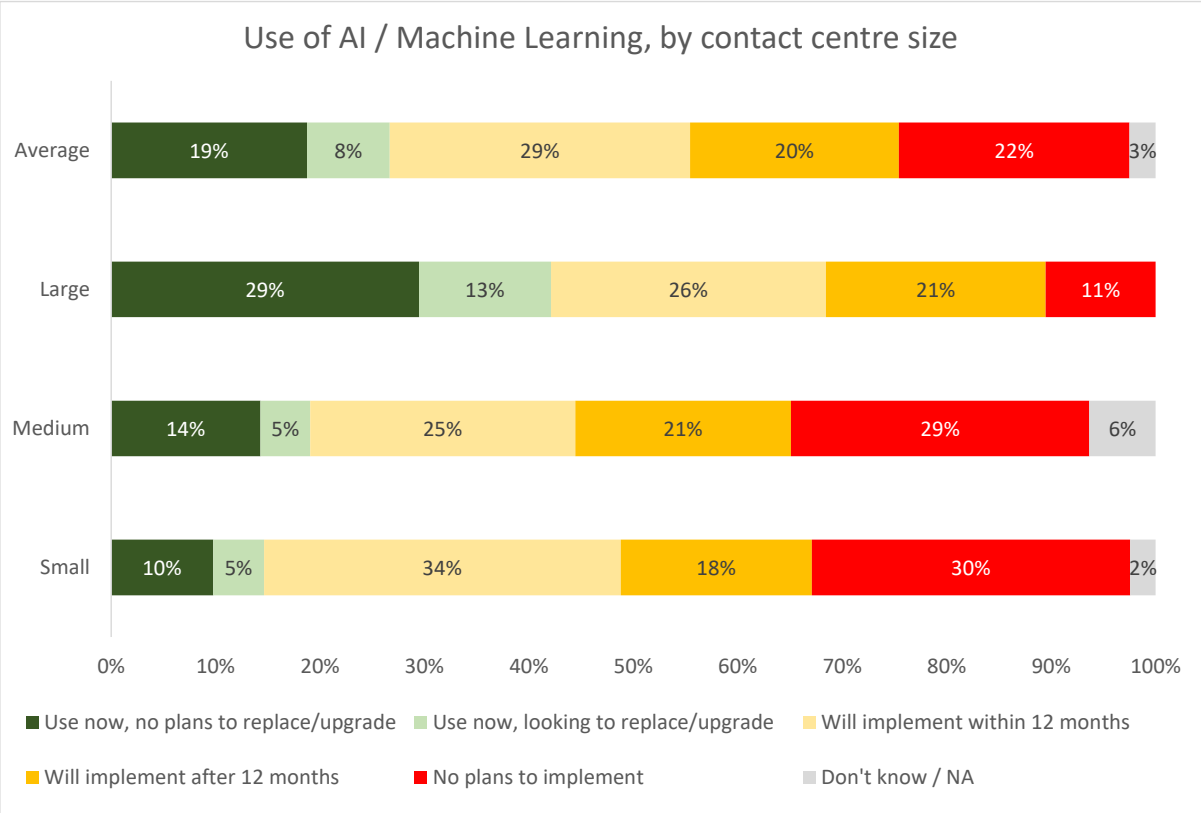
The utilities, insurance and outsourcing respondents report the greatest current use of AI once again this year.

Figure 148: Use of AI / Machine Learning, by vertical market



As might be expected, larger operations are somewhat more likely to have implemented some form of AI, although there is very significant interest even amongst smaller contact centres.

Figure 149: Use of AI / Machine Learning, by contact centre size



Potential uses of AI in the customer contact space include:

- Emails that look as though they have been written by a person rather than a machine, using natural language processing to write content, as well as understand it
- Tailor information based on the customer's history and behaviour for marketing as well as service, sending emails at a time when they have been calculated that they are most likely to be opened
- Increased opportunities for personalisation, as the full customer history can be checked in near real-time, with far more data practically available to the AI than would be for a human agent
- Machine learning will allow AI to go beyond simply what they have been programmed to do, seeking out new opportunities and delivering service beyond what has simply been asked of them

- Use of text analytics to assess not only data held within the company, but also in unstructured, third-party environments, such as social media, comments on websites and public forums, in order to learn and deliver proactive service before it is even requested

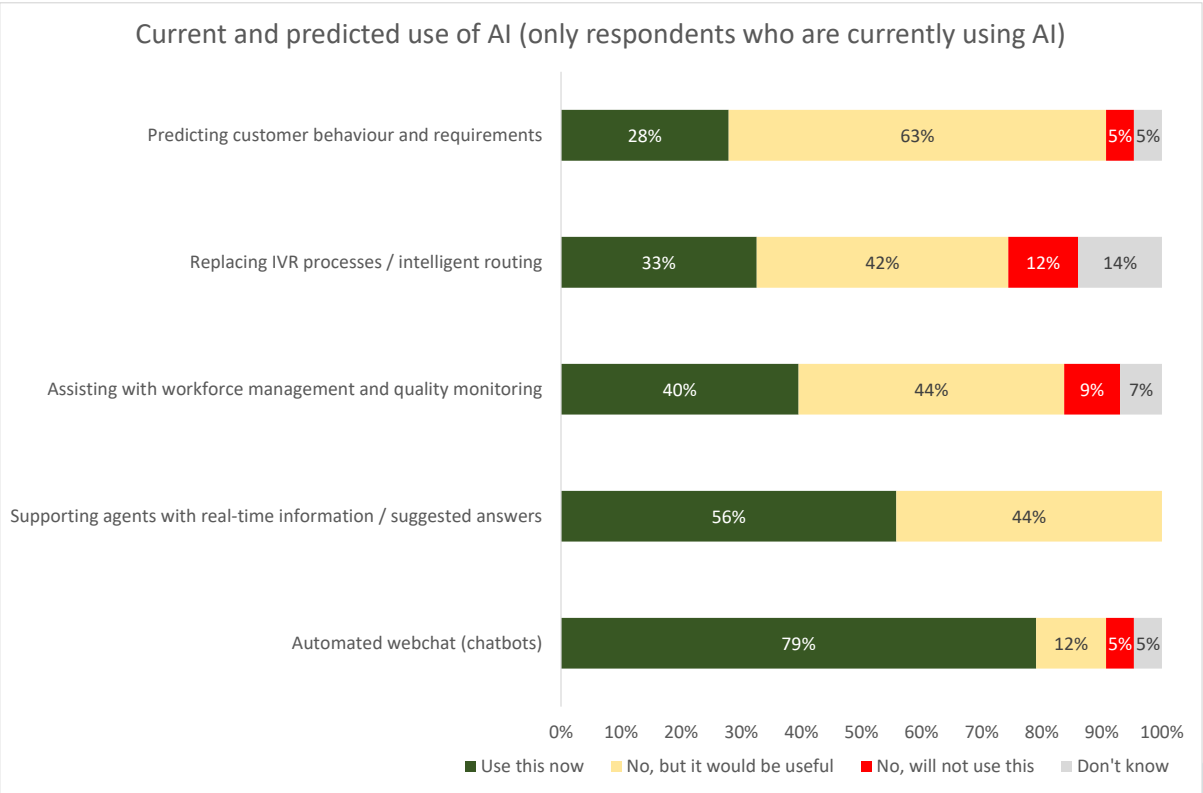
- Text analytics can also be used on inbound interactions such as emails, running an AI triage system to assess the priority and urgency of each request in order to handle these more effectively and in an appropriately timely manner

- Work alongside agents to provide relevant knowledge that may be otherwise take a long time to find, and update the knowledge bases available to humans and AI self-service systems using an automated feedback loop that is constantly improving based on actual outcomes

- Through understanding multiple customer journeys, AIs will be able to predict the next most-likely action of a customer in a particular situation, and proactively engage with them so as to avoid an unnecessary inbound interaction, providing a higher level of customer experience and reducing cost to serve.

Current use of AI is strongly focused upon chatbots, although supporting agents in real-time is also used by the majority of respondents that have implemented AI. There is interest amongst AI users to widen usage to include predictions of customer behaviour, assisting with workforce management, quality and performance monitoring and to augment and improve call routing.

Figure 150: Current and predicted use of AI (only respondents who are currently using AI)



Businesses' interactions with customers will become a highly polarised mixture of the automated and the personalised. Moving a large proportion of interactions onto self-service works for businesses, and is increasingly popular with a customer base that is becoming more sophisticated and demanding in what it expects from self-service. AI takes this a step beyond, offering personalised service without the need for a human agent in some cases.

We can expect to see personal technology applications seeking out the best deals on offer, or interacting with a business on behalf of customers without involving the customer at all. This leads to the conclusion that many customer-agent interactions will be exceptional, such as a complaint, an urgent or complex issue or a technical query that an FAQ or customer community couldn't solve. It is also likely that whole segments of the customer base who don't want automation at all will be handled directly by live agents in many cases.

Many self-service scenarios suggest a world in which customers speak directly to 'intelligent' systems, but an e2e world is becoming more possible, in which systems talk to systems. The customer will delegate many of their business interactions to a pseudo-intelligent device, which will store information such as personal preferences, financial details and individuals' physical profiles. Customers will instruct the device to research the best deals for products and services, and to come back to the device's owner with the best selection. The personal AI would 'call' the relevant contact centre (which could in fact be either a AI or possibly a live agent in some cases) and even purchase the best deal without having to involve the owner in any way. The same principle applies to customer service: using the 'Internet of things' means that, for example, utilities meters would send their own readings to suppliers on request, and a manufacturer can detect when a part on an appliance is about to fail, and organise a replacement part and engineer visit with the customer's permission.

The modern contact centre has a multitude of applications supporting it, with hardware, middleware and networking equipment around and inside it. The traditional method of deploying these resources has been on a CPE (customer premise equipment) basis, with the business's IT resource implementing and maintaining it. Now, the vast majority of this equipment, functionality and supporting resource is available in a third-party hosted environment, through one of the various types of cloud-based delivery.

'Cloud' is the delivery of computing and storage capacity as a service to different business, organisations and individuals over a network. It can be said to consist of Infrastructure as a Service (IaaS) – servers and storage space, Platform as a Service (PaaS) – operating systems and web servers, and Software as a Service (SaaS) – the functionality of software available on demand without the need to own or maintain it. The cloud is characterized by huge scalability and flexibility, (often, but not always) shared resources, a utilities approach to billing (pay for what you use, for example) and an abstraction of obvious on-site infrastructure.

There are various deployment models:

- Public cloud: applications, storage, and other resources are made available by a service provider, often offered on a pay-per-use model. Public cloud service providers own and operate the infrastructure and offer access via the Internet

- Private cloud: infrastructure operated solely for a single organisation, whether managed internally or by a third-party and hosted internally or externally. They require management by the organisation or a third-party

- Virtual private cloud: a deployment model that pulls in public cloud infrastructure-as-a-service (IaaS) while running the application on premise or in a private cloud, in order to improve disaster recovery, flexibility and scalability and to benefit from Opex-based costing while avoiding expensive hardware purchases

- Community cloud shares infrastructure between several organisations from a specific community with common concerns (security, compliance, jurisdiction, etc.), whether managed internally or by a third-party. The costs are spread over fewer users than a public cloud (but more than a private cloud), so do not gain as much from cost reductions

- Hybrid cloud is a composition of two or more clouds (private, community, public or a linked cloud/CPE solution) that remain unique entities but are bound together, offering the benefits of multiple deployment models. By utilising "hybrid cloud" architecture, companies and individuals are able to obtain degrees of fault tolerance combined with locally immediate usability without dependency on internet connectivity. Hybrid Cloud architecture requires both on-premises resources and off-site (remote) server-based cloud infrastructure.

The many factors influencing the uptake of cloud-based solutions can be grouped into several areas, and it is important to remember that a factor (e.g. security) can be both a driver and an inhibitor:

Financial: how does cloud affect the investment and ongoing expenditure connected with technology and the operations of the contact centre? Cloud offers contact centres a way forward without relying on capital investment:

- Businesses can scale down future customer premises equipment (CPE) investment, with a resulting decrease in capital expenditure
- Services are bought using a per-concurrent-user or even per-hour pricing model, which helps to keep operating expenses manageable and controllable
- Outright purchase of equipment isn't for everyone, perhaps for reasons of budget or the ability to maintain the systems
- There is the opportunity to scale up quickly as demand dictates, without purchasing lots of redundant licenses or the hardware to support them
- Low-risk ability to start up, move, expand or trial new functionality without changing existing business plans or budgets
- Business retain the freedom to downscale, change targets and react to meet demand, rather than commit themselves to long-term arrangements needed to justify CPE investments.

Functionality: what is the effect of cloud-based solutions on the functionality available to the contact centre?

- Trial new applications quickly using a low-risk pilot: using a pay-per-use model allows businesses to start a contact centre or move at low risk or increase for a temporary campaign or try out new functionality without having to spend excessive amounts of time and money first
- Future-proof the contact centre: a competitive, open cloud environment should mean that vendors will be motivated to innovate and provide better service, enhancing and developing their services ahead of the mainstream market.

Flexibility & Agility: how can cloud-based solutions help businesses with changing interaction volumes and distributed operations?

- Reduced need for IT support and implementation: having hardware and software based in the cloud means that ongoing system maintenance is significantly reduced, as it is the cloud provider's job to do this
- Larger pool of agents to choose from: cloud enables advanced features to be deployed across sites without complex and possibly unreliable call flows, while offering disaster recovery and risk minimisation. For example, queueing interactions in the cloud allows for the searching and identification of relevant agents based on skill and requirements before the call is routed
- Short-term scalability: cloud offers great flexibility in adding or shedding agents and user licenses, of particular relevance to businesses which have substantial changes in call volumes over a year (such as the seasonality experienced by healthcare providers in the US, retailers and travel agents), or which have to react quickly to handle event-driven call spikes (e.g. an emergency weather situation affecting utilities companies)
- The exceptional event of the pandemic meant that most of the UK contact centre industry had to move to a remote working environment very quickly. For those using cloud-based environment, this proved far easier than for those using premise-based equipment, some of which had to switch off their telephony and rely upon digital channels.

Security: does the cloud bring a greater risk to security, or the opposite? Organisations should expect that data should be at least as secure in a third-party environment that is dedicated solely to providing a high-quality cloud-based service, as this is one of the factors by which the solution provider will succeed or fail.

Potential cloud clients should look for:

- multiple levels of firewall protection
- continuous intruder detection systems
- a two-person rule for changes to code or hardware
- frequent scheduled password changes
- external testing and audit trails
- data encryption used both in storage and in transit, under the control of the user
- additional layers of user authentication and privilege
- vetting of employees with access to sensitive information or hardware
- internal traffic and server monitoring.

Control: can a cloud contact centre change how it operates quickly enough?

- Control, visibility and reporting: loss of control is of as much concern to some businesses as fears over integration. A service provider may not be as responsive as an in-house team, and it may take hours or even days to make changes to the system, so service level agreements should include agreed response times

- Cultural considerations: making the move to cloud is seen as a far bigger proposition than deciding whether to implement or replace a particular contact centre application such as call recording or workforce management. However, many vendors offer options for customers to keep what they feel that they need on-site - for example call recordings and sensitive data - while moving offsite the elements of the contact centre solution that businesses are most comfortable with outsourcing.

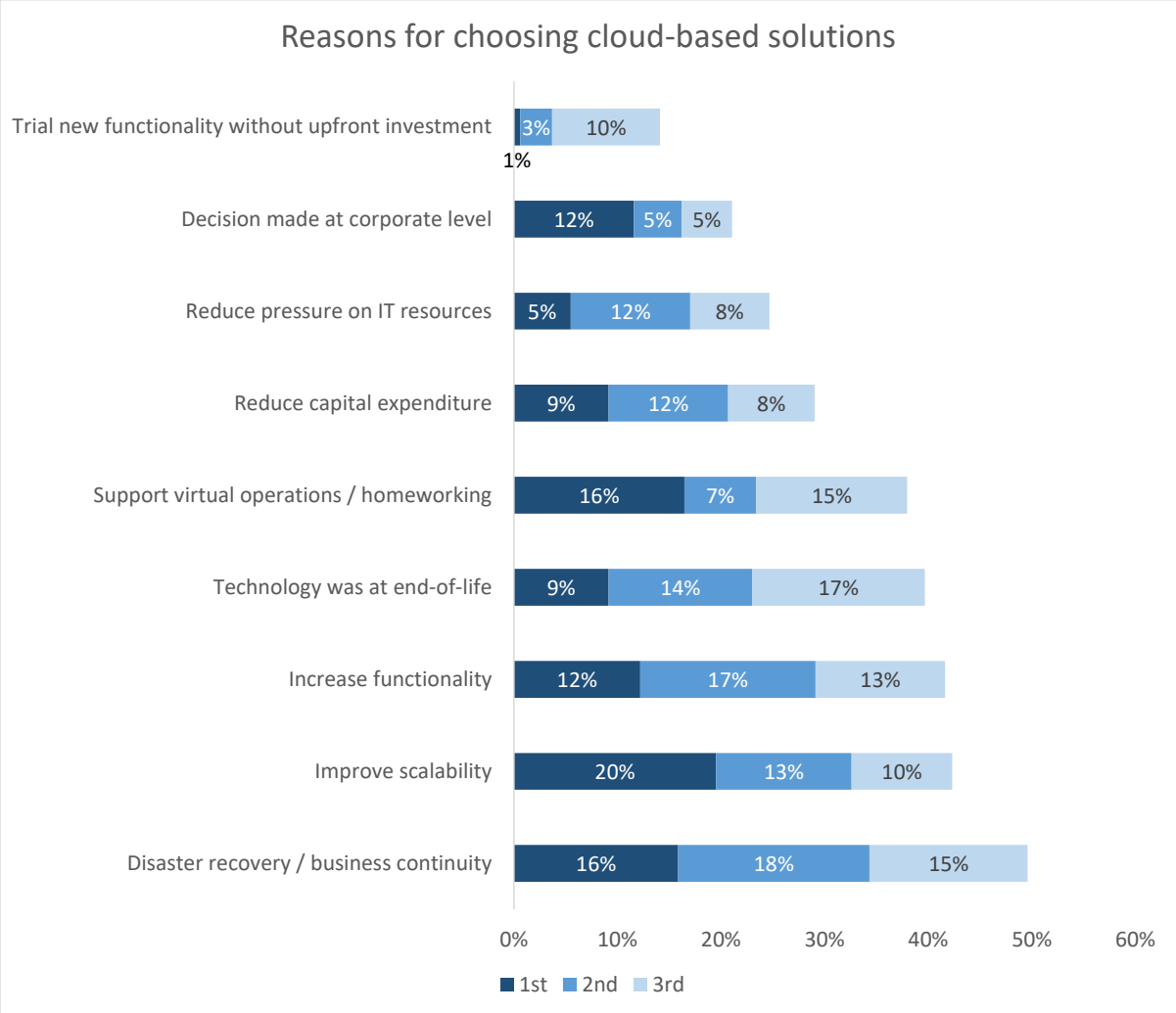
Integration & Customisation: while out-of-the-box functionality can be quick and cheap enough to get things moving, what if businesses need more a personalised approach? Being able to continue using relevant existing CPE systems, and access databases and back-office systems is a minimum requirement for all businesses considering cloud-based solutions. Some solution providers note that the private cloud option is becoming more popular, where a third party is responsible for the management of dedicated infrastructure, especially in environments which require complex integration and customisation.

Performance & Reliability: how does cloud affect the contact centre's ability to deliver its service? Service providers will test their systems on an ongoing basis, and some will guarantee their availability to 99.999% (the '5 9s target of carrier-grade availability), backed by penalties if they do not achieve this. This level of reliability is the standard for very large contact centres which have paid significantly for this in a CPE environment, but is likely to be an improvement on what SMEs are used to, with their much smaller budgets.

The following figure, which looks at the top three reasons to move to cloud, shows that there is no single dominant reason as much depends on the nature of the business and contact centre environment. It is worth noting that disaster recovery and business continuity has more top 3 votes than any other reason, and remote working is placed as no.1 by around 1 in 6 respondents.

The ability to reduce capital expenditure was historically seen by respondents as the most important primary reason to move to the cloud, and while this is still seen as being somewhat important, increasing functionality is placed as a top 3 reason by 42% of respondents, with disaster recovery, improved scalability and the technology being at end-of-life also being viewed as far more important factors than capex reduction.

Figure 151: Reasons for choosing cloud-based solutions



The real finding to take from the chart above is that there are not simply one or two reasons to move to cloud: there are considerable financial, operational and technical advantages for many organisations to do so.

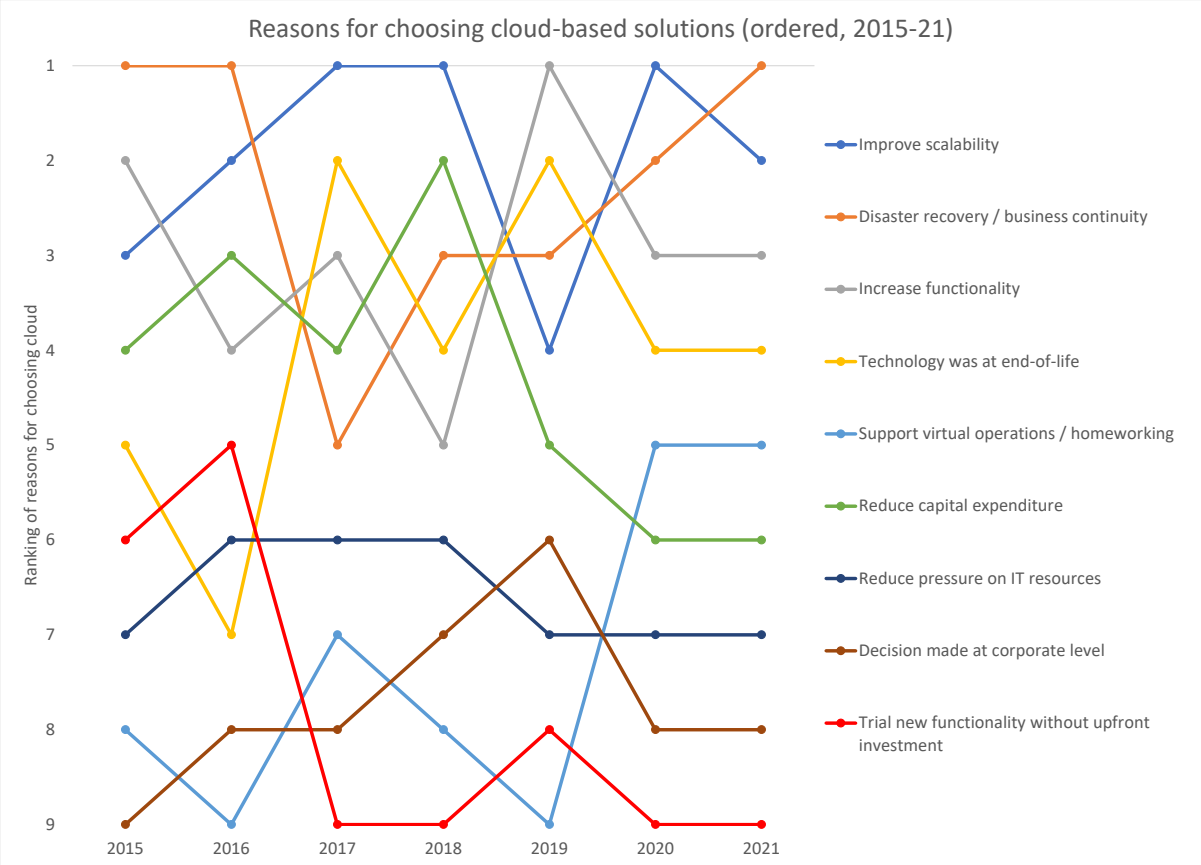
The next chart shows how the importance of these factors has changed.

Over the past seven years, survey respondents were asked how important each of the nine reasons below was for choosing cloud-based contact centre solutions. In order to understand the changing view of the industry, these data were aggregated and ordered from 1 to 9 (where 1 is the most important and 9 is the least important), and are shown in the chart below.

After seven years of data, some patterns are starting to emerge:

- the importance of scalability has increased, being one of the top two reasons in five of the seven years studied
- although disaster recovery was rated as the most important reason for choosing cloud in 2015 and 2016, it dropped to 5th place in 2017. It has rebounded since then to regain 1st place in 2021
- as time moves on, we may expect to see more decisions on cloud being driven by the fact that existing technologies are approaching their end-of-life. The big jump in importance of this reason since 2015-16 may signal that obsolescent technology is now driving many people's decisions around cloud
- less important reasons for moving to cloud include trialling new technology, supporting a decentralised structure and reducing pressure on IT resources. However, this is not to say that these factors are unimportant, as the previous chart has shown.

Figure 152: Reasons for choosing cloud-based solutions (ordered, 2015-21)



Most cloud contact centre solutions only require agents to have a standard telephone/USB headset and an Internet connection from their desktop. Some cloud-based solution providers require software to be downloaded upon the agent desktop, whereas others need only a standard Internet browser.

Security

There are various accreditations and certifications used by providers of cloud-based solutions, some aimed at demonstrating the security of the datacentre (whether physical or virtual security) including ISAE 3402 or SSAE 18 in North America. Others focus on the process of processing payment card data (PCI DSS), whereas others are around information security controls (ISO/IEC 27000 family). Other interested parties include the Cloud Security Alliance, a not-for-profit organisation with a mission to promote the use of best practices for providing security assurance within cloud computing as a whole. Potential customers should look for independent third-party accreditation, proof of investment above and beyond the minimum required by regulation and regular penetration testing.

The solution providers interviewed for this report were confident that the dedicated security procedures and architecture in place within their solutions were likely to exceed those found in their clients' previous contact centre operations, having full-time dedicated security resources and a vested interest in keeping client data safe. A security breach for in-house contact centre is damaging and embarrassing; for a cloud provider to suffer a similar failure would impact very severely on their credibility and the very future of the company. However, security should not be left simply to the solution provider.

Solution providers note that while security concerns are still very much to the forefront of the conversation, the questions that potential customers have are now far more sophisticated and realistically founded compared to a few years ago. There is a great desire across the entire business to ensure all security requirements are met, and much greater detail offered to the solution provider on what is actually needed.

Integration and customisation

Cloud vendors will keep APIs up-to-date, with screen-popping into a home-grown CRM system, look-up of call recordings in a CRM system, and sending reporting and recordings to a third-party application being mentioned as some of the more frequent integrations requested. Some providers have very close relationships with specific CRM vendors, and as a general maxim, cloud-based contact centre solutions can be seen to be following in the footsteps of cloud-based CRM.

Some customisation in existing operations may have come about as an ad-hoc 'work-around' that has over time become the way in which things are done. It is important to revisit the business processes that the technology is there to facilitate, to see if there are easier ways to achieve this rather than reproducing the same method in a cloud-based environment. Concerns over customisation are frequently cited as a major inhibitor to moving to cloud.

Functionality

Solution providers state that moving from a premise-based deployment to the cloud should not reduce the functionality available to users. Potential cloud users are responsible for carrying out an audit of all existing and required functionality, and how it relates to defined business processes, before asking solution providers to guarantee that any move to cloud will include the required depth of functionality. It is not enough simply to accept that solution providers have 'workforce management' or 'outbound' capabilities. There is a great deal of upgrading and increased sophistication happening in the cloud world, which in some cases is from quite basic functionality, so potential users should have a list of specific processes and functionality that any solution should be able to deliver, and make sure that the chosen solution can deliver that, as well as being able to view a product roadmap that is updated on a regular basis (e.g. quarterly), which will project expected functionality a least a year in advance, preferably more.

It is also important to understand the opportunities for **scalability**. Adding and shedding agents when required is one of the big advantages that cloud computing has over its premise-based equivalent. As scalability is seen as the most important driver for cloud, potential users should put real-life scenarios in front of bidding suppliers to make sure that the required level of scalability is possible and that no hidden costs or nasty surprises are associated with it.

Reliability

Multi-location datacentres are ubiquitous amongst cloud providers, providing redundancy and disaster recovery as part of the deal. Stated levels of availability amongst cloud providers are typically 99.99% or higher, and most are backed with performance-related guarantees, with reimbursement of fees if targets are not met. While this is somewhat reassuring, it will do little to assuage the loss of revenue or customer goodwill if the cloud-based contact centre solution is unavailable for any amount of time. Potential clients should investigate the exact levels of redundancy built into solutions, including the use of alternative network providers and mirrored datacentres if the problem occurs outside the software providers' purview.

Solution providers note that quality of service testing is vital to ensure that contact centre network traffic and any associated data processing has sufficient guaranteed bandwidth. For operations using dynamic scripting, it is vital to ensure the fast and immediate reaction of input and response, and guaranteeing network quality of service should be high on the implementation priority list.

Cost

Most cloud solution providers operate a per-agent/per-month option to pricing, with a minimum number of logged-on agents per month being the baseline minimum cost. To this, the cost per minute of calls made or delivered should be added, although many providers will offer this as part of the package, to make fees more predictable. Additional costs for customisation and integration should also be investigated.

Suggested process for choosing a cloud-based provider

The selection of most IT solutions is normally carried out in a similar way, but some steps you may wish to consider for cloud-based solutions include:

- A selection team should be chosen with responsibility for all of the areas affected, including contact centre operations, IT, compliance, back-office, business operations and probably sales and marketing

- While bearing in mind the underlying business processes that the technology supports, select the specific technologies that are to be cloud-based, and also those bespoke applications that are to remain in-house, such as specific complex reports. Take the opportunity to consider 'ideal world' functionality as well

- Research the types of solution available in the market, and understand any actual differences between premise-based and cloud-based functionality. Provide vendors with specific instances of complex functionality and business processes required to meet your own particular requirements and challenge them to prove that they can be met. This should include all instances of existing back-office functionality that the solution needs to integrate with and where possible, a wish-list of functionality in the future

- Investigate publicly available referenceable sites from cloud-based providers that are similar to your own requirements, and submit an RPF (request for proposal) to the long-list. Request a detailed product roadmap along with timescales in order to assess whether this solution will meet your demands along the line. You may wish to invite solution providers informally to demonstrate their product before offering an RFP. Potential clients should look closely at the vendor's financial position and backing to make sure that the quality of service and level of innovation can be maintained in the future, also that they have the technological expertise in-house to keep making these improvements

- Any response to an RFP should include service level agreements over availability, call delivery, voice quality, speed to make requested changes, support hours and availability, details of security and redundancy offered, prices for customisation, contract length options, implementation times, contract cancellation penalties and notice periods.

The outsourcing and TMT vertical markets report the high levels of cloud use this year. The manufacturing and transport & travel respondents were least likely to be doing so.

69% of survey respondents state that they are using at least one cloud-based contact centre solution, the highest-ever proportion.

Figure 153: Use of cloud-based contact centre solutions, by vertical market

Vertical market	Proportion of respondents using cloud-based contact centre solutions
Finance	90%
Technology. Media & Telecoms	88%
Insurance	85%
Outsourcing	82%
Services	75%
Retail & Distribution	71%
Utilities	70%
Housing	60%
Public Sector	55%
Transport & Travel	50%
Manufacturing	45%
Average	**71%**

Historically, there has often been a slight positive correlation in the use of cloud-based contact centre solutions when looking at contact centre size, and again this seems to be the case this year.

Figure 154: Use of cloud-based contact centre solutions, by contact centre size

Contact centre size	Proportion of respondents using cloud-based contact centre solutions
Small	67%
Medium	63%
Large	82%
Average	**71%**

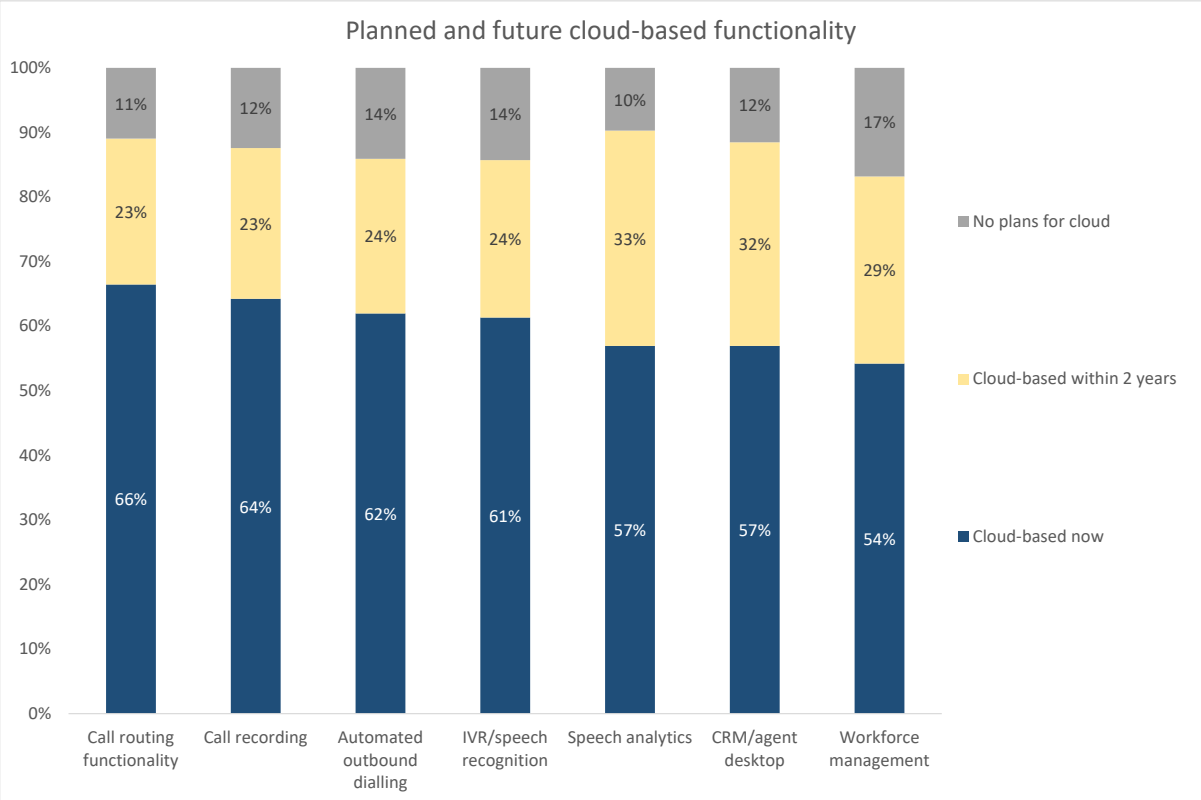
Respondents were asked about the contact centre functionality that they had within the cloud, and what their plans were for the next two years. The chart below shows only those respondents that actually use this technology, regardless of which deployment option they use.

Call routing functionality is the most likely solution to be deployed through cloud-based solutions, with call recording and outbound dialling also used extensively in the cloud. Most of the functionality surveyed here is now being delivered through the cloud.

Respondents expect to see significant extra amounts of their functionality being delivered in the cloud by the end of 2022. Respondents indicate that their cloud-based deployment of CRM and speech analytics will increase greatly within two years.

There is still a small proportion of call recording users that have no plans to move to the cloud, perhaps as they wish to keep their recordings on-site for security reasons. Around 1 in 6 current workforce management users are also not planning to move to the cloud.

Figure 155: Planned and future cloud-based functionality



RESULTS OF USING CLOUD SOLUTIONS

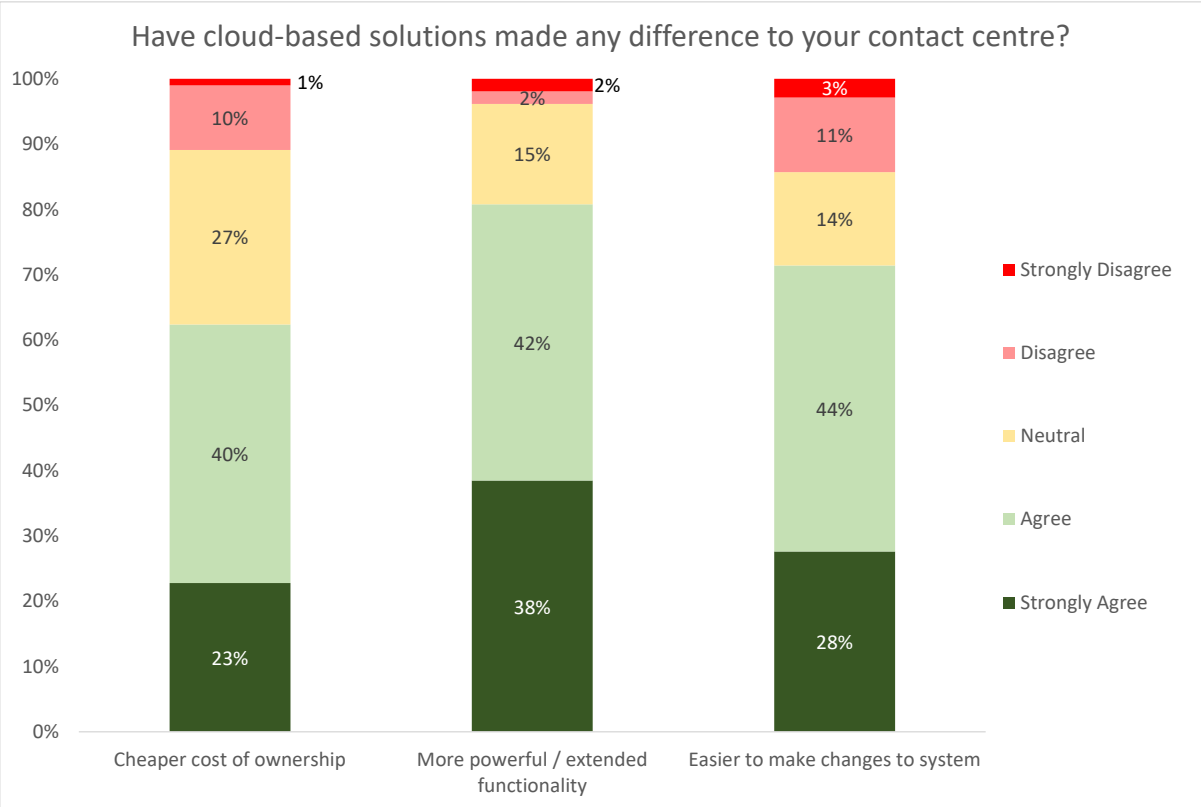
Those contact centre respondents who have actually implemented a cloud-based solution have generally found that it has delivered significant advantages.

63% of respondents stated that cloud-based solutions had given a cheaper overall cost of ownership of their contact centre technology, although 11% disagreed, usually not strongly.

80% experienced more powerful extended functionality in a cloud-based environment, with only 4% disagreeing that this was the case.

72% of respondents stated that cloud made it easier to make changes to the system, with 14% disagreeing.

Figure 156: Have cloud-based solutions made any difference to your contact centre?

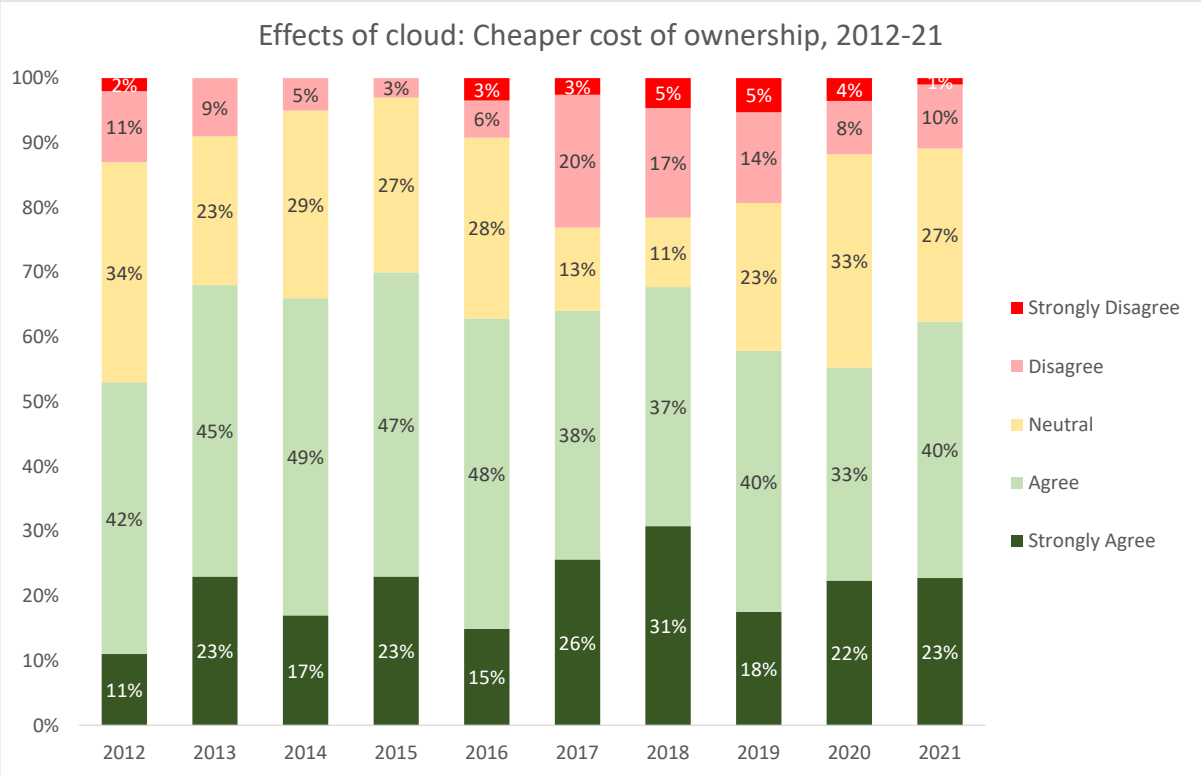


Despite different companies taking part in this research each year, the findings have been consistent for many years and readers can treat these with some confidence.

To show this, the following three charts show how each of these effects has been viewed by respondents over the past ten years' surveys.

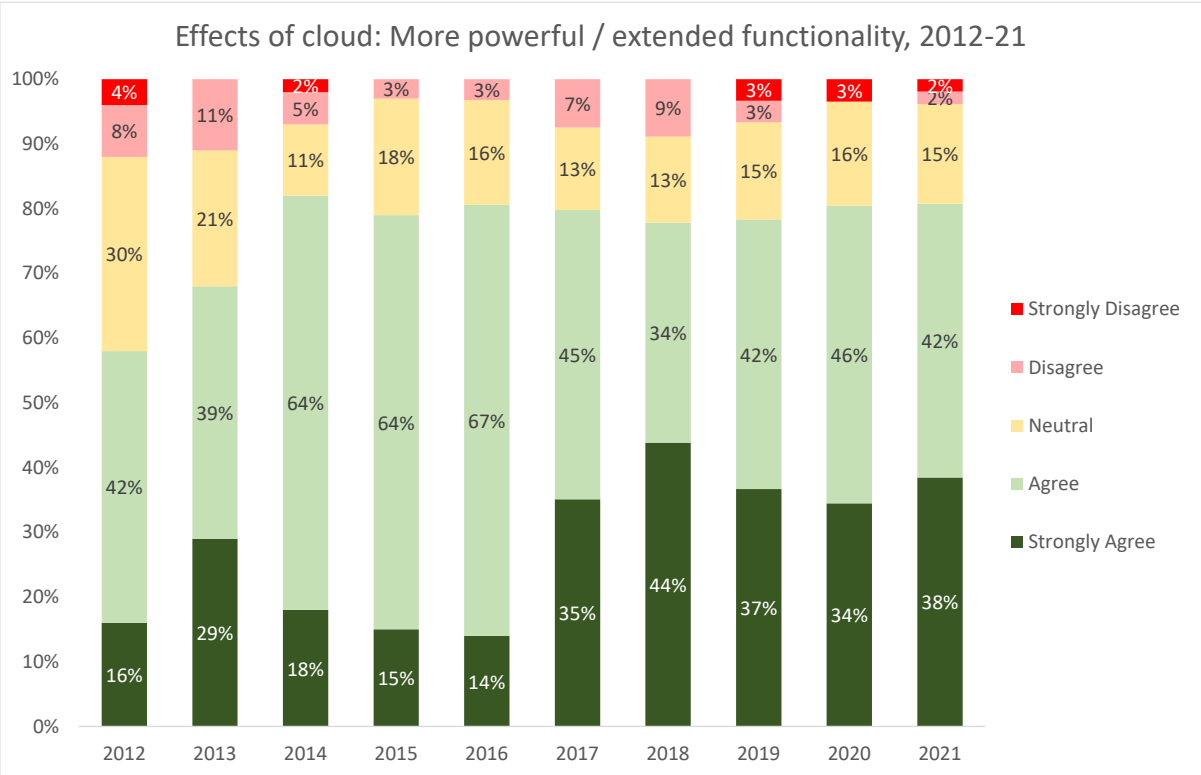
The belief that cloud offers a cheaper overall cost of ownership is fairly consistent, although the relatively high proportion of respondents in 2017-19 stating they disagree was notable. However, in every year, there is a significant net feeling that cloud does decrease the cost of ownership.

Figure 157: Effects of cloud: Cheaper cost of ownership, 2012-21



Looking at the effects of cloud on functionality, there is a very strong feeling that this deployment model offers more powerful and extended functionality, which is especially shown to be the case in the past five years as solution providers have moved focus to the cloud.

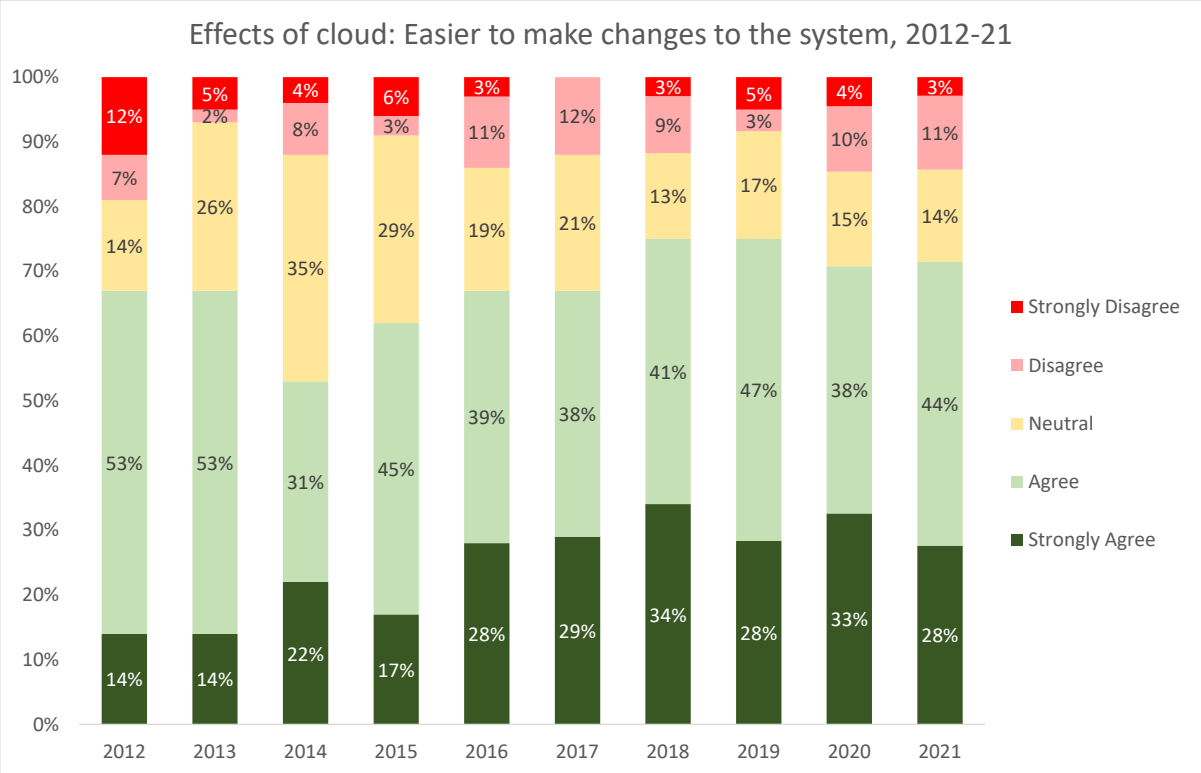
Figure 158: Effects of cloud: More powerful / extended functionality, 2012-21



Over the years there has been a steady feeling that cloud makes system changes somewhat easier, and this opinion has risen every year between 2014 and 2019.

This may be the result of cloud solution providers now offering a quicker and easier method for contact centres to make changes to their solutions, as well as the case that contact centre users have become more familiar and comfortable with making changes in a cloud-based solution.

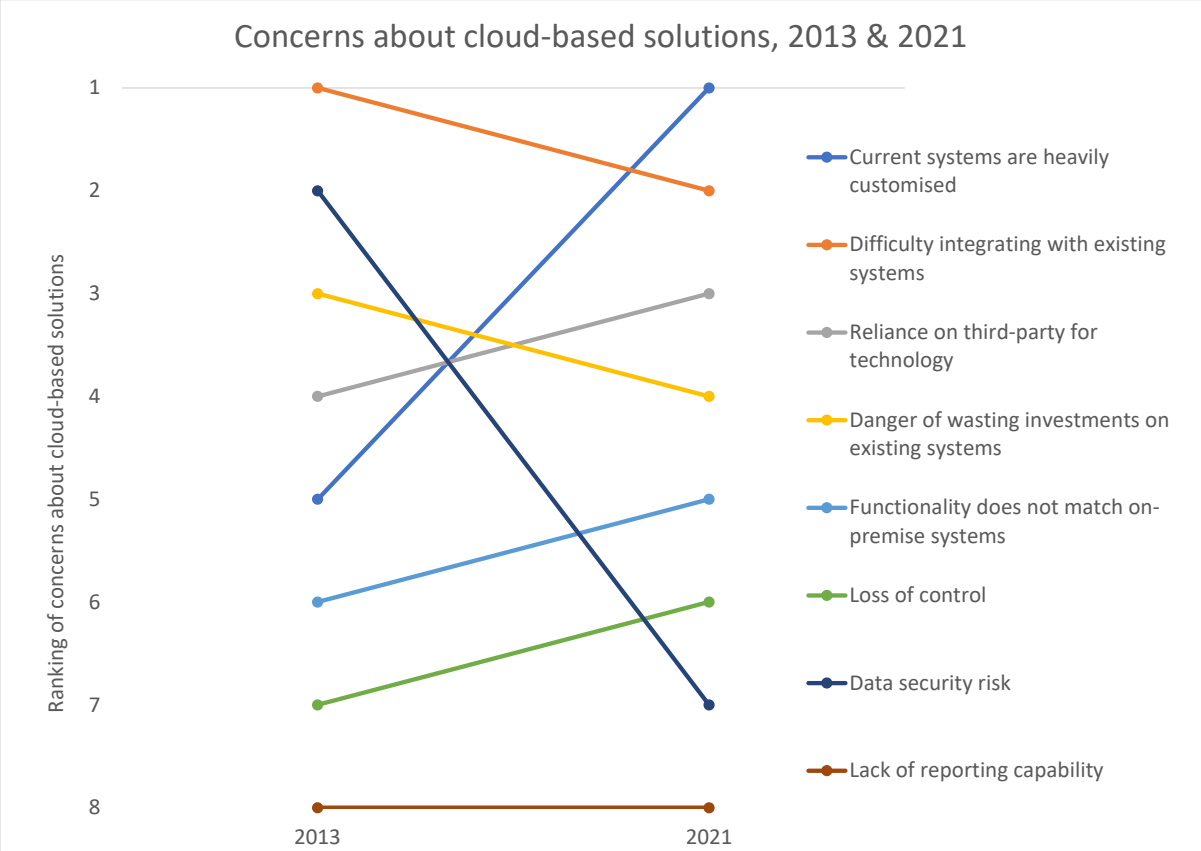
Figure 159: Effects of cloud: Easier to make changes to the system, 2012-21



CONCERNS ABOUT CLOUD-BASED SOLUTIONS

Despite the generally positive experiences that most users of cloud solutions have reported, there have been considerable barriers to implementation that have held back some potential users, connected with the greatest concerns around customisation, integration and investment.

Figure 160: Concerns about cloud-based solutions, 2013 & 2021



The historically major concern that data security will be compromised by allowing a third-party to control customer details has dropped being from the 2nd greatest concern in 2013 to 7th in 2021. Solution providers' efforts to provide greater education and understanding about risks and the reality of this – as well as striving to improve (and prove) the security and reliability of their own systems – seems to have paid off. Some cloud-based solutions allow clients to keep call recordings and sensitive customer information on their own site, whereas most others provide externally audited and accredited dedicated security that can usually surpass most on-premise offerings.

However, there are concerns around whether the levels of existing CPE system customisation and functionality can be replicated in the cloud environment, and whether any new system would integrate fully with their existing environment. Those respondents with concerns that existing investments would be wasted if they were to move to cloud should be aware that many vendors offer a solution that can work alongside existing CPE elements, and in many cases, cloud functionality closely mirrors that available through the CPE model from the same solution provider.

For more information on cloud-based solutions, please download ContactBabel's in-depth, updated report, "The Inner Circle Guide to Cloud-based Contact Centre Solutions."

OUTBOUND, CALL BLENDING AND PROACTIVE CUSTOMER SERVICE

Not only are contact centres under pressure to reduce their costs, but many – either directly or indirectly – are also major revenue-generators for their businesses, and the recent drive to maximise profitability has made many businesses look at whether their contact centres can add more to the bottom-line. Although much responsibility for revenue generation lies with senior management, production and sales divisions, the contact centre also has an important part to play in maximising revenues through selling the right product to the right customer at the right time (aided by a CRM system or similar), and through proactive and efficient outbound service selling.

This chapter considers outbound automation in depth, both through live and automated means.

The traditional outbound call was simply about selling more products to new and existing customers. However, legislation and customer pressure impacted on cold calling, and the past years have seen an increasing proportion of outbound calling being made to existing customers, either to deliver customer care or to inform them proactively about events and circumstances which affect them.

Outbound calling is fundamentally different from inbound, and – facing significant and growing cultural and legislative issues – must be managed sensitively:

- the nature of outbound is intrusive and usually driven by the needs of the business rather than the customer (except in cases of call-back requests and for proactive outbound service)
- this means that customers are more likely to be defensive and wary of the purpose of the call. Trust needs to be built very quickly in order to overcome this negative start point: having the right information about the customer to hand will improve the experience for both agent and customer
- outbound work can be very hard on agents: few people actively welcome most outbound calls, and persistent refusal, lack of interest and rudeness can be very wearing for agents, especially if productivity-enhancing technology such as diallers are being used. Management should consider ways of alleviating agent stress, through sensible scheduling and call blending, judicious use of technology, focused training and improving working environments, amongst other ways
- especially where the technology exists to do so, it can be tempting to treat outbound calling campaigns as an exercise in maximising call volumes and (theoretically) revenues. However, this can result in brand damage and high staff attrition rates through over-pressured and exhausted agents delivering poorer quality interactions
- there has been a tendency to use offshore contact centres for low-value outbound sales campaigns which would otherwise be unprofitable to run. However, the same high standards of training and support are needed by offshore agents to do their job properly: too many businesses simply put the agents on a dialler with an inflexible script in front of them and then wonder why their customers and prospects become negative towards their brand

- tough legislation has emerged which has reduced the amount of cold calling which businesses can do. Cold calling is illegal in Germany, and the Do-Not-Call register in the US and the Telephone Preference Scheme (TPS) in the UK allow customers to opt out of receiving any sales calls at all in theory.

Call blending is an element of outbound calling which has had to fight against the conventional wisdom of the traditional contact centre industry, which implies that the more one can segregate the contact centre into a series of production lines, the better-run the operation will be.

Call blending gives the ability to deliver both inbound and outbound calls seamlessly to the agent, regulating outbound call volume based on inbound traffic. When inbound traffic is low, outbound calls are automatically generated for a specified campaign. When inbound traffic picks up, the dialler dynamically slows the number of outgoing calls to meet the inbound service level. Results can include increased agent productivity, streamlined staffing, and improved customer service. However, this process needs to be understood and managed carefully, as not all agents are adept at dealing with both inbound and outbound calls.

Sales to both new and existing customers are obviously still key reasons why companies carry out outbound calls, and the hybrid method – customer service leading to a cross-sell/up-sell opportunity – is seen a good way of circumventing the increasing numbers of people joining TPS. However, businesses must be careful not to pester customers or abuse the relationship they have built up with frequent calls about products and services that are not tailored to the customer. Increasingly, turning an inbound service call into a cross-sell or upselling opportunity has become a widely-used tactic.

OUTBOUND ACTIVITY

The act of calling customers back about an ongoing issue is the single most popular outbound activity, with in-queue call-backs requested by the customer being somewhat less important.

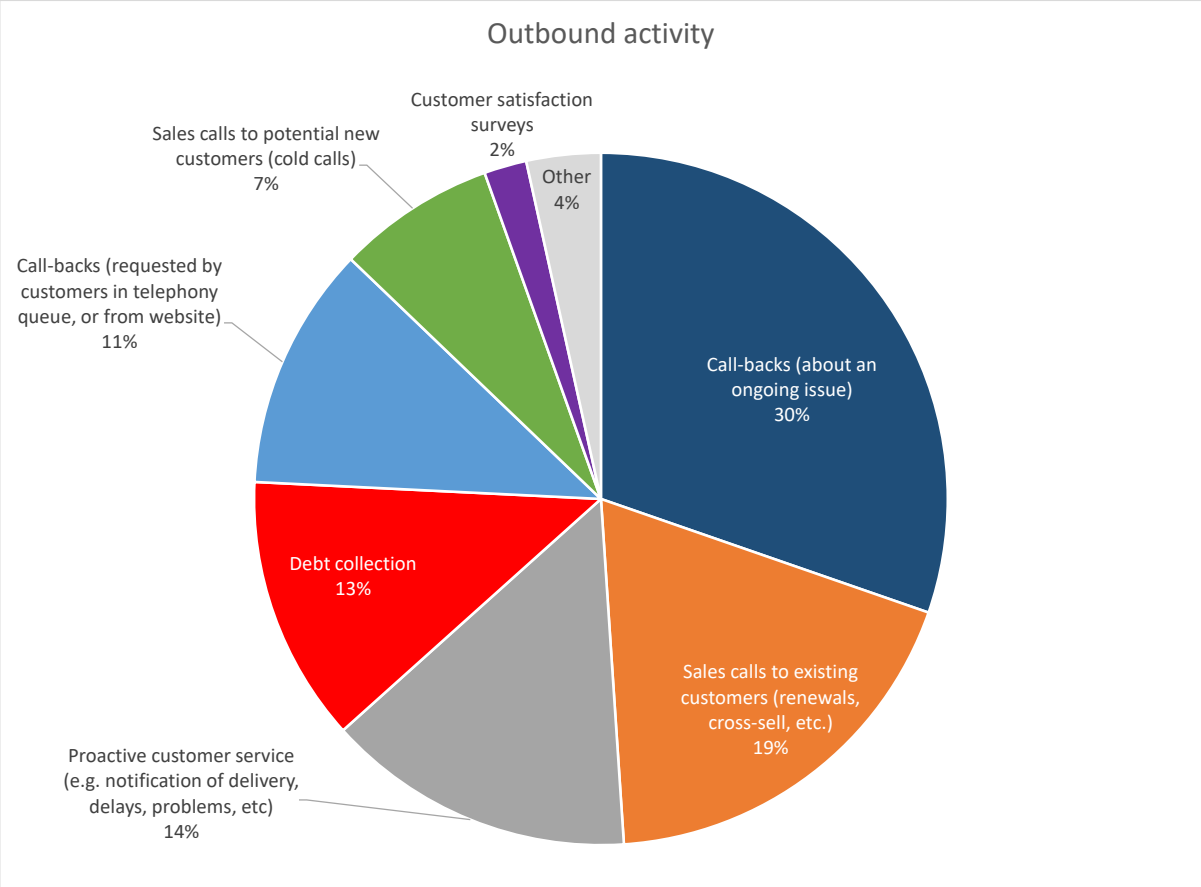
Proactive customer service – calling the customer about an issue without being asked to first – is a strong brand builder as well as an effective call avoidance tactic.

The overall proportion of sales calls has declined from around 40% in the past few years, with cold calling especially low this year at only 4% of outbound activity.

Cross-selling/upselling and renewals continue to be an important outbound activity (and bear in mind that this figure does not include those many inbound service calls that are turned into cross-selling opportunities), with 21% of outbound calls being made for this purpose.

Debt collection has dropped to around 9% of respondents' calls. Customer satisfaction surveys remain very low, with automated processes increasingly preferred.

Figure 161: Outbound activity



82% of respondents carry out some form of outbound calling, with the outsourcing, service and transport & travel sectors leading the way.

The utilities and manufacturing respondents lag a little behind the rest of the contact centre industry in terms of outbound activity, although a majority of even these respondents carry out some outbound work.

Figure 162: Use of outbound calling, by vertical market

Vertical market	Proportion of respondents using outbound calling
Outsourcing & Telemarketing	95%
Services	89%
Transport & Travel	88%
Retail & Distribution	86%
Technology. Media & Telecoms	86%
Public Sector	82%
Insurance	71%
Finance	71%
Housing	71%
Manufacturing	67%
Utilities	67%
Average	**82%**

Vertical market patterns of outbound activity are very different from each other, and there is not even a great deal of homogeneity within sectors, so these figures should be treated with some caution. However, there are some interesting findings to bring out.

Services, utilities and retail respondents carry out significant amounts of proactive customer service, advising of the status of past service requests and providing information up and down the supply chain.

Utilities, manufacturing, insurance and outsourcing respondents report renewals, cross-selling and upselling being by far the most important part of their outbound activity.

Finance respondents report very significant outbound activity connected to debt collection.

Figure 163: Outbound activity by vertical market

Outbound activity	FS	HS	INS	MN	OS	PS	RD	SVC	TMT	TT	UT	Avg
Call-backs (about an ongoing issue)	21%	39%	20%	20%	18%	20%	39%	46%	46%	54%	8%	**30%**
Sales calls to existing customers (renewals, cross-sell, etc.)	12%		58%	80%	33%		13%	5%	16%		34%	**19%**
Proactive customer service (e.g. notification of delivery, delays, problems, etc.)	7%	18%	1%		16%	8%	31%	21%	4%	10%	30%	**14%**
Debt collection	51%		1%		10%	9%	3%	13%	2%			**12%**
Call-backs (requested by customers in telephony queue, or from website)	4%	43%	1%		11%	28%	13%	2%	5%	12%	13%	**11%**
Sales calls to potential new customers (cold calls)	3%		18%		11%		1%	10%	24%		16%	**7%**
Customer satisfaction surveys	1%		1%		1%	7%		3%	3%	4%		**2%**
Other	3%					28%			1%			**3%**

Care should be taken when considering vertical market statistics, as the research sample size may be small. Use only as an indication of relative importance.

In the past, large contact centres were more likely to make outbound calls, but this pattern has disappeared over the past few years.

Figure 164: Use of outbound calling, by contact centre size

Contact centre size	Proportion of respondents using outbound calling
Small	81%
Medium	76%
Large	87%
Average	**82%**

A case could be made that variations in outbound activity are more closely linked to the type of business (i.e. vertical market) than the contact centre size, as few clear patterns emerge when considering activity by contact centre size.

Larger operations seem to carry out a greater proportion of both cold and warm sales calls as well as debt collection, and smaller operations seem more likely to call back customers about ongoing issues and when requested to do so by the customer.

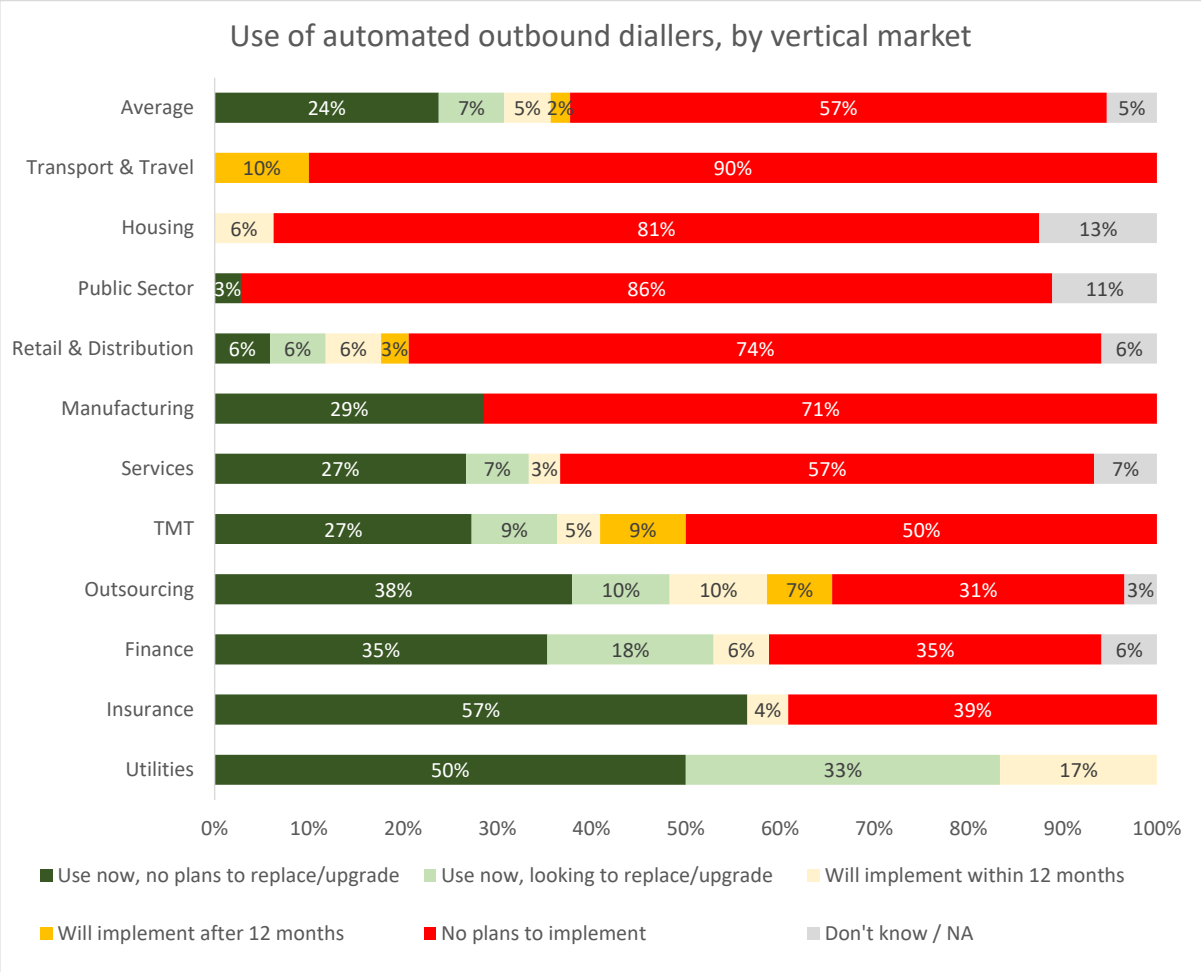
Figure 165: Outbound activity by contact centre size

Outbound activity	Small	Medium	Large	Average
Call-backs (about an ongoing issue)	30%	45%	23%	**31%**
Sales calls to existing customers (renewals, cross-sell, etc.)	13%	13%	27%	**19%**
Proactive customer service (e.g. notification of delivery, delays, problems, etc)	22%	3%	15%	**15%**
Debt collection	7%	17%	15%	**13%**
Call-backs (requested by customers in telephony queue, or from website)	19%	12%	4%	**12%**
Sales calls to potential new customers (cold calls)	3%	5%	11%	**6%**
Customer satisfaction surveys	1%	5%	1%	**2%**
Other	5%	0%	4%	**4%**

Automated outbound diallers are most often found in large operations which carry out reasonable amounts of outbound work, as the efficiencies over manual dialling are so considerable that it will often make commercial sense.

The finance, insurance and utilities sectors tend to have some of the largest operations, and those in transport & travel and housing some of the smallest.

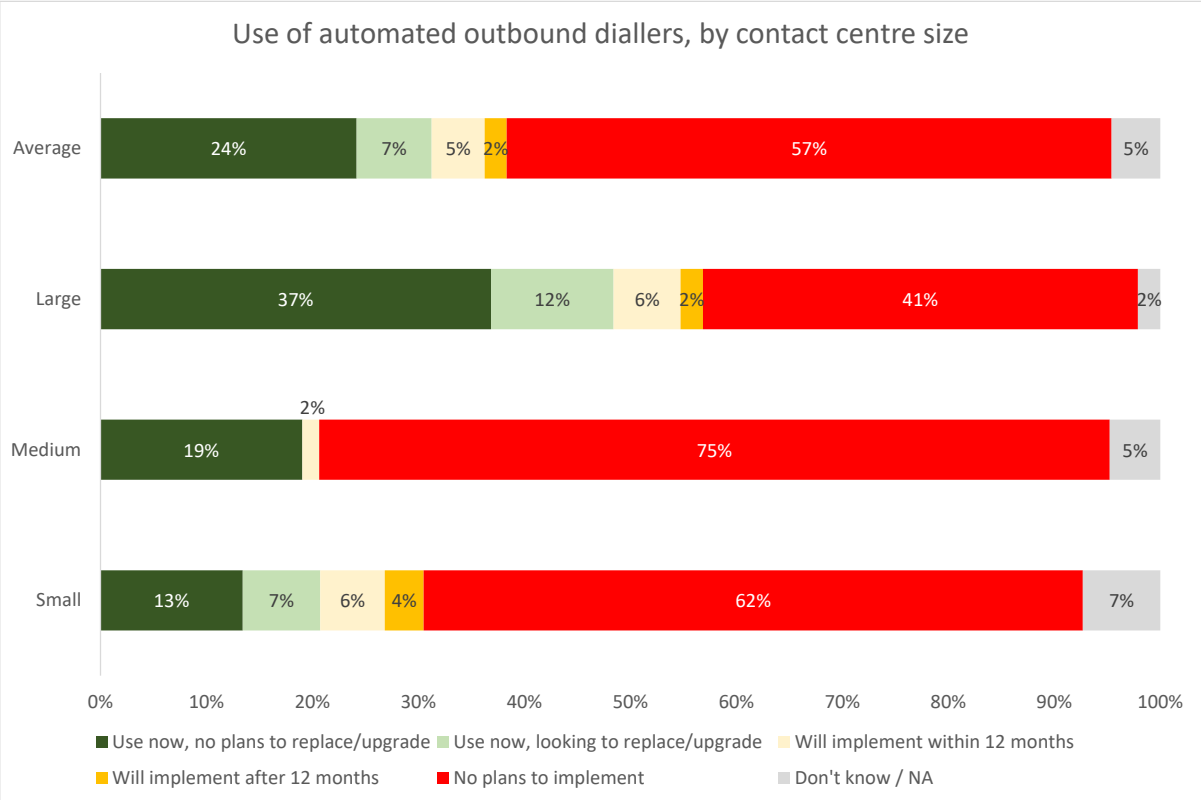
Figure 166: Use of automated outbound diallers, by vertical market



Outbound automation in the cloud is becoming increasingly widely used, and this means the barriers to usage are even less, with smaller operations also showing increased interest. A majority of respondents using automated dialling solutions state that they do so within the cloud, and further information can be found in the Cloud chapter of this report.

Dialler usage in respondents from small contact centres is currently 20%. Many suppliers of this technology are able to offer low-cost, scalable functionality in the cloud for these types of organisation, and this figure has increased in the past couple of years.

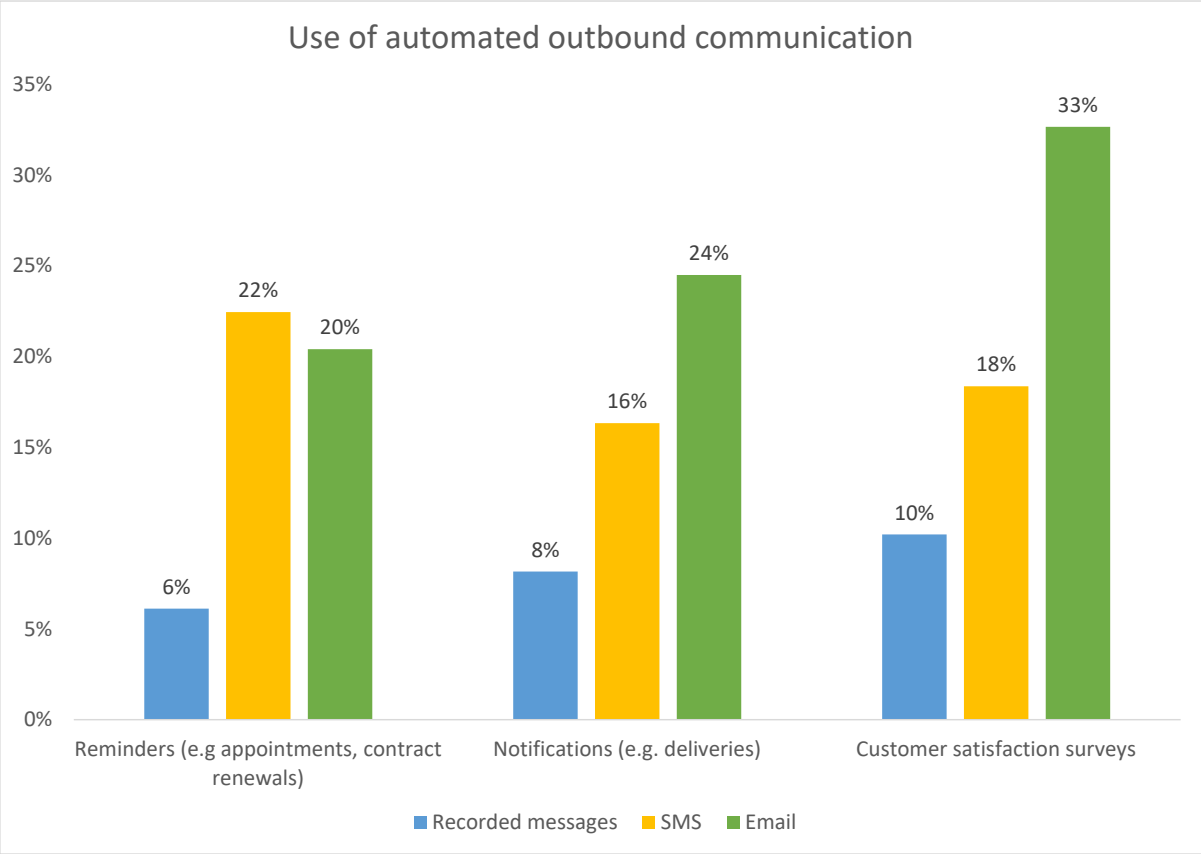
Figure 167: Use of automated outbound diallers, by contact centre size



While the vast majority of targeted outbound contact is carried out by agents, the opportunity exists for automated outbound service to expand – such as sending reminders and notifications to customers through an automated process – thus significantly reducing the cost to the business while improving the overall customer experience. Many customers will choose to seek clarification or a status update at some point in the buying process through making an inbound interaction. By sending a pre-emptive outbound message, the business is proactively assisting the customer to manage their interaction.

Automated SMS messages are used by around one-quarter of respondents this year, mainly for notifications and reminders. Email is used more widely also for notifications, reminders and outbound customer satisfaction surveys. A small minority of respondents use recorded messages (which will usually include an IVR session to capture customer input) for these purposes as well.

Figure 168: Use of automated outbound communication

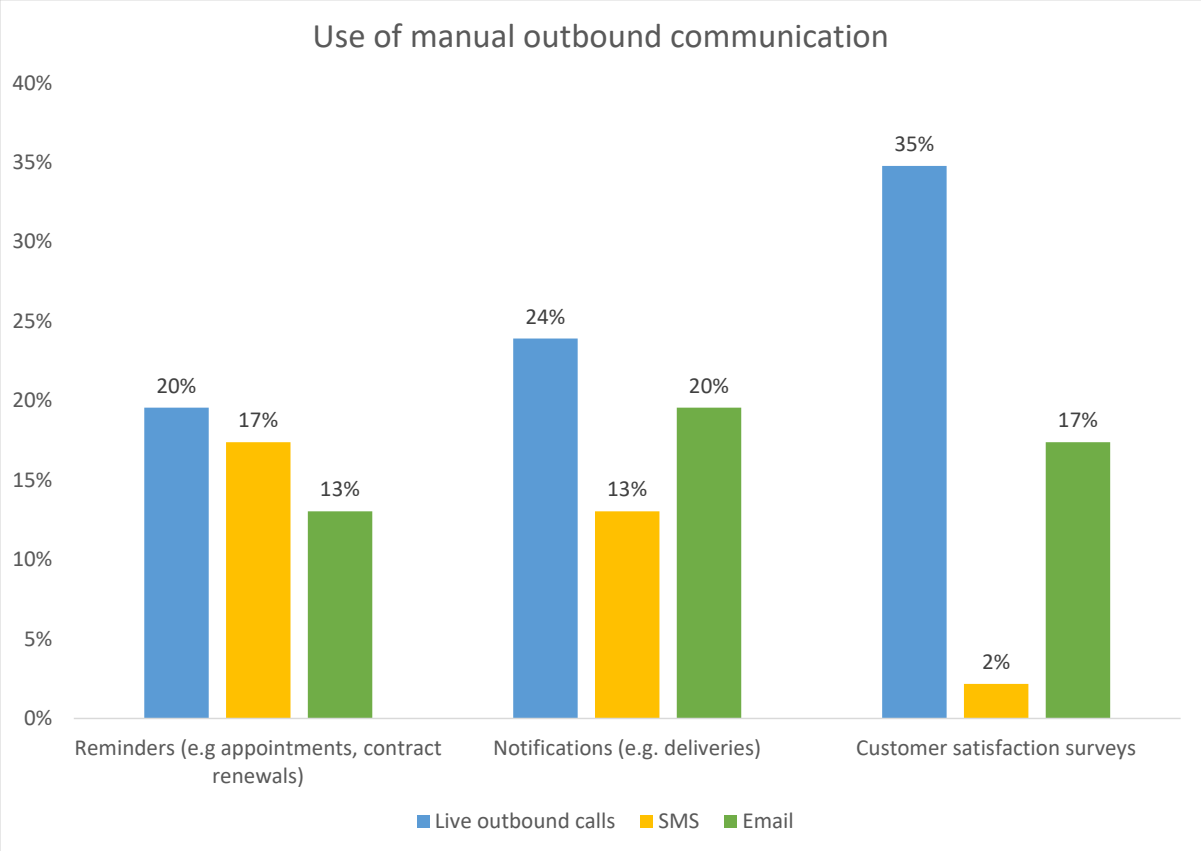


Live outbound calls are much more widely used than recorded calls for reminders, notifications and customer surveys.

17% of respondents allow agents to send reminders to customers via SMS, and 13% notify customers manually about deliveries etc. using this channel.

Manual email is used in around 20% of cases as well.

Figure 169: Use of manual / live outbound communication

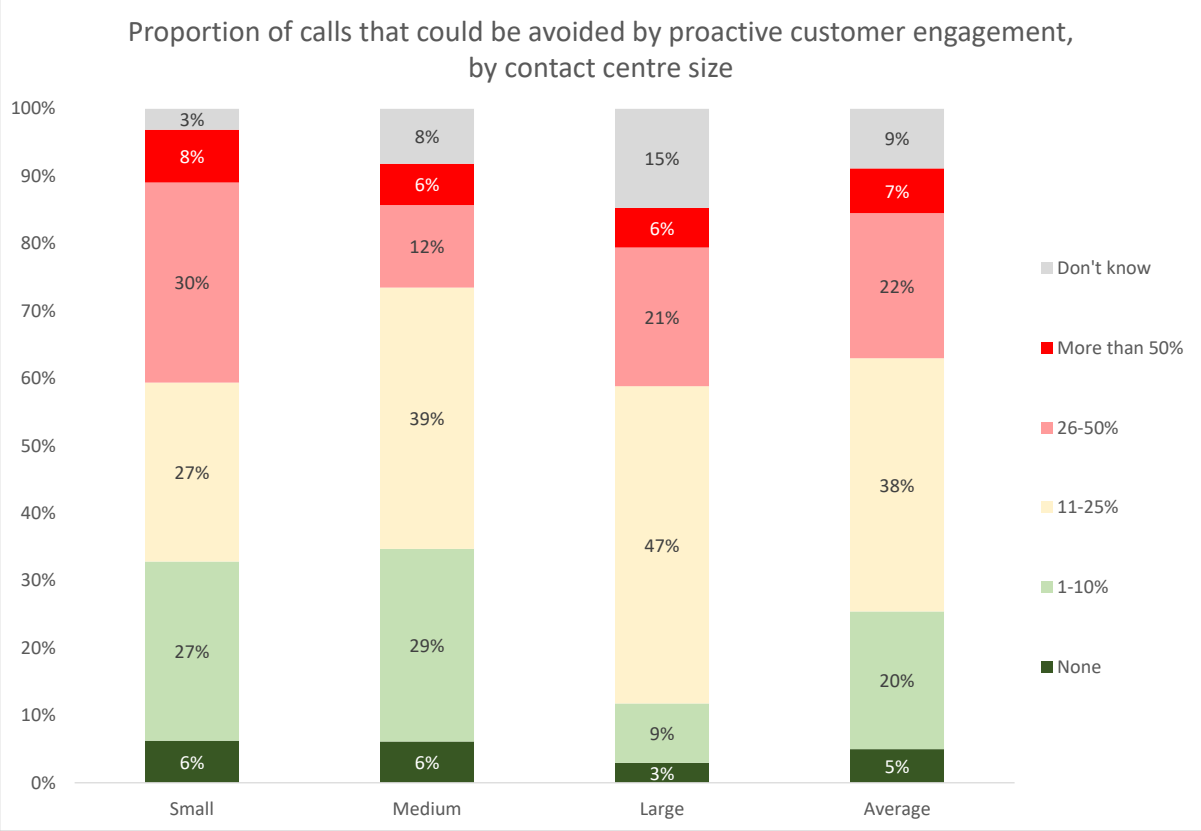


Respondents were asked what proportion of inbound calls could be avoided by engaging the customer before they felt the need to call the business.

29% of contact centres reported that more than a quarter of their inbound calls could be avoided if more proactivity was used, which would make a huge difference to costs (especially through automated outbound communication), as well as having a positive effect on customer experience.

Businesses should be encouraged to analyse the type of interactions that they receive into their contact centre, and to see if there is a cost-effective way of proactively handling these. The opportunity is certainly there for the industry as a whole to manage the inbound demand more effectively than is being done so at the moment.

Figure 170: Proportion of calls that could be avoided by proactive customer engagement, by contact centre size



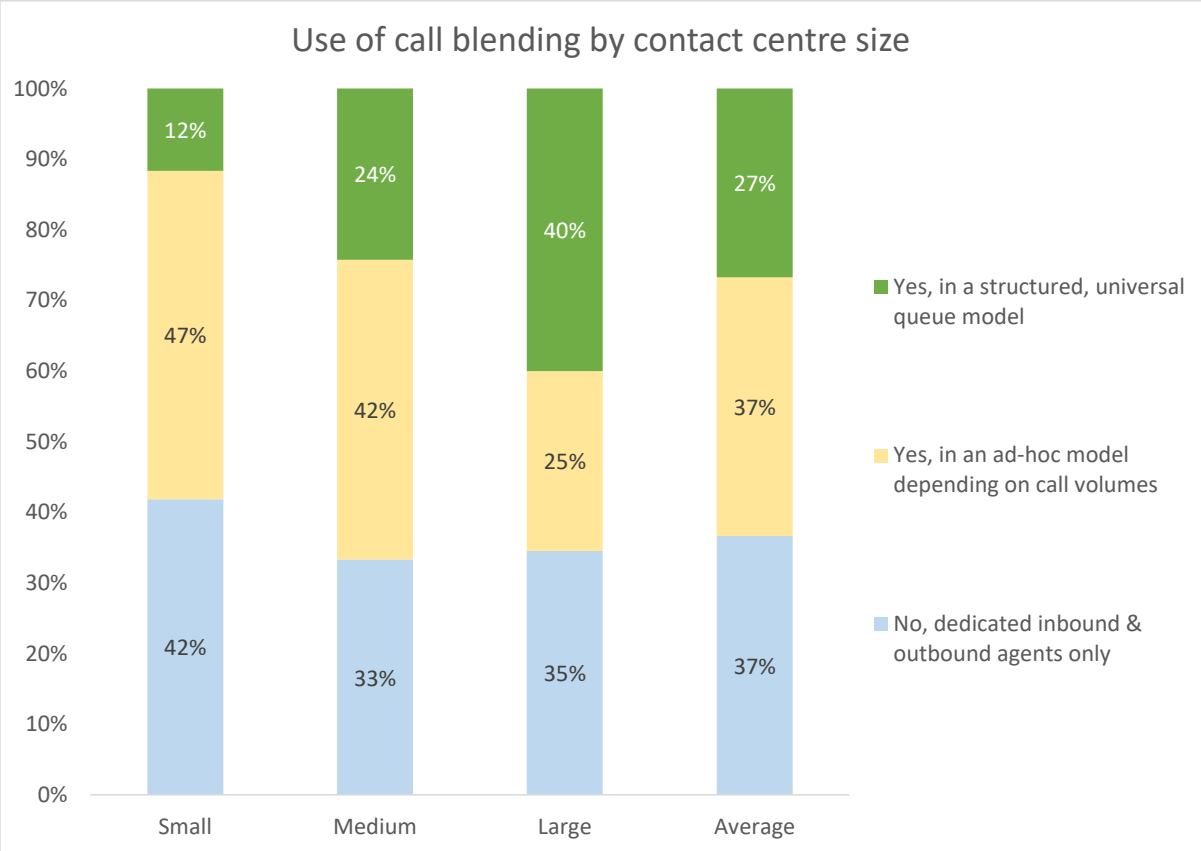
CALL BLENDING

A contact centre handling different processes involving customer service, sales orders, and outbound telemarketing will have different groups of agents with specific skills for these areas. Some agents are more capable and adaptable than others, and can be used as blended agents. For example, these agents may have a primary responsibility to handle inbound calls, but when the inbound call volume drops, the dialler will send a message to these agents indicating that they have been switched to outbound mode and start offering outbound calls to them. Where relevant, systems will prompt a script for the outbound calls to run on the agent desktop and depending on the call volume in the inbound queue, the agents will be switched automatically, improving productivity. However, if there is a constant switching from inbound to outbound and back again, the agent may lose concentration and the productivity may go down.

A structured blended environment, where agents are moved seamlessly and dynamically between inbound and outbound, is used in 27% of this year's respondents' operations. Larger contact centres are much more likely than smaller operations to use this type of approach.

Respondents from small and medium operations are most likely to be moving agents between inbound and outbound on an ad-hoc basis.

Figure 171: Use of call blending by contact centre size



Our research shows that for the vast majority of customers, contacting a business is not something they really want to do.

If we accept this, it makes sense for the customer to choose a channel that they believe will be most painless for them. Of course, each customer is different in terms of their patience, time available, emotional investment in the interaction, the time of day, the device that they are using and many other variables.

Even taking into account the heterogeneity of the customer, there seems to be one overriding expectation: that the issue is dealt with first time.

Customers seem to accept that sometimes, it may take a long time to solve their problem. They also understand that more than one staff member may be needed, and although they don't want to explain the issue again, it may be necessary. Of course, they do not like a lack of courtesy, and being made to wait - especially when they have no idea how long it will be - is also a major problem for them.

But far and away the most important factor in the customer experience is whether the issue will be successfully dealt with at the first time of asking. This is the contract that the customer makes with the business. Breaking it – regardless of how friendly your employees are, or whether the phone was answered immediately – will massively damage the customer experience.

Solutions and issued studied in this section of the report include:

- Customer Experience Management & Improvement
- First-contact resolution
- Customer Personalisation.

Most businesses say that customer satisfaction is vital to them. Yet this raises more questions: how 'satisfied' do customers have to be? What do customers want from contact centres? Quite simply, they would like to be answered quickly by a person who is able to help them without passing them around, and have the correct answer given to them quickly by someone with whom they feel comfortable talking. Additionally, the business has to deliver on the reason the customer is calling in the first place - by sending out the purchased item promptly, changing the database details or refunding money, for example. So the contact centre does not stand alone: it orchestrates the rest of the business.

Various pieces of research show that the benefits to a business that are made from increasing customer satisfaction are non-linear: if a customer is very happy, they are likely to be worth a great deal in additional direct purchases. Possibly more importantly, they will act as a brand advocate for your company. A customer who is merely 'satisfied' will not have anywhere near the same positive impact on revenues or profits, and is likely to be a good deal less loyal. There is also advice from business consultancies that says customer satisfaction is overrated as a metric, and that organisations should be focusing upon reducing the amount of effort that a customer has to expend to carry out the interaction successfully.

A contact centre can achieve all the operational performance measurements which it sets for itself, without actually being successful. If the customer does not hang up the phone feeling that she has been treated appropriately and that her query has been resolved to her satisfaction, then that counts as a failure, regardless of how good the internal metrics may be. Elsewhere in this report, contact centres state that adherence to internal metrics is of more importance to them than first-contact resolution rate - which is consistently seen as the key to customer satisfaction - so the argument that businesses have moved to a customer centric model is still very much up for debate.

As customers become more demanding and their expectations of what constitutes good service increase, then contact centres are forced to develop greater external focus. This is in part due to the growth of outsourcing, which has introduced a new competitive edge to the business of handling calls. In addition, the greater choice available to customers in terms of suppliers means that customer retention is now as important as customer acquisition. Without knowing what your customer thinks of your service, you cannot legislate for their requirements. A continuous tracking survey hosted by a third party is a useful piece of corporate intelligence. Surveys hosted on a SaaS platform have the advantage of being contact centre provider- and equipment-agnostic. Businesses can continue using surveys non-stop as they outsource, switch suppliers or take their contact centre service back inhouse, hence tracking the impact of these changes.

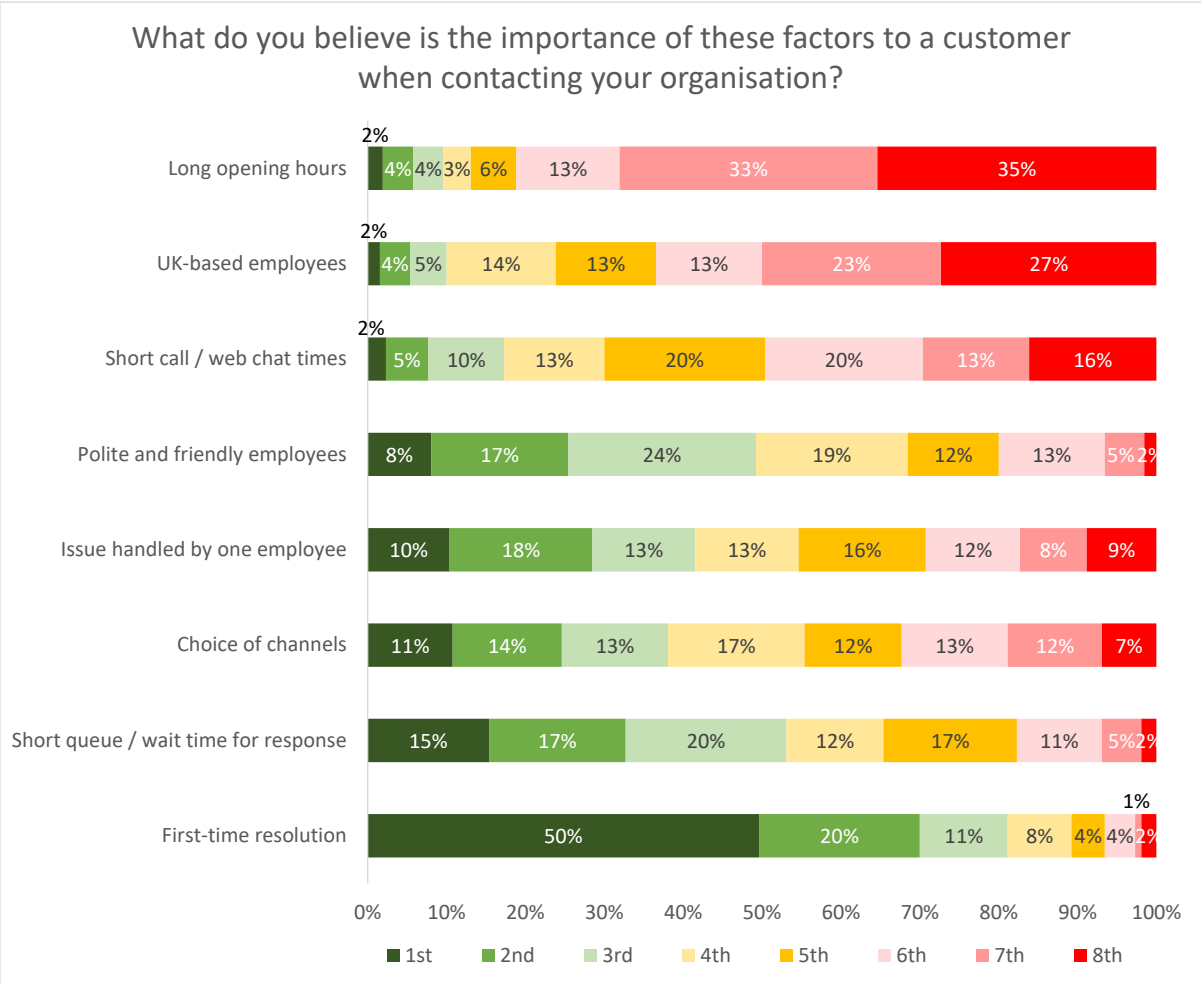
THE VIEW FROM THE BUSINESS

Survey respondents were asked their opinion on which are the three most important factors impacting upon customer satisfaction from a list of eight, with the chart below showing the most popular choices.

As with many past ContactBabel surveys, first-time resolution was clearly seen as being the most important factor impacting upon customer experience, with 50% of respondents ranking it in first place, and a further 31% placing it within the top three.

A short queue time or wait time for a response was also seen as being important, being ranked in the top 3 by 52% of respondents, with polite and friendly employees being ranked in the top 3 by 49% of organisations surveyed. Having the issue handled by a single employee was placed in the top 3 by 41% of respondents, with a choice of channels making the top 3 for 38% of respondents.

Figure 172: What do you believe is the importance of these factors to a customer when contacting your organisation?

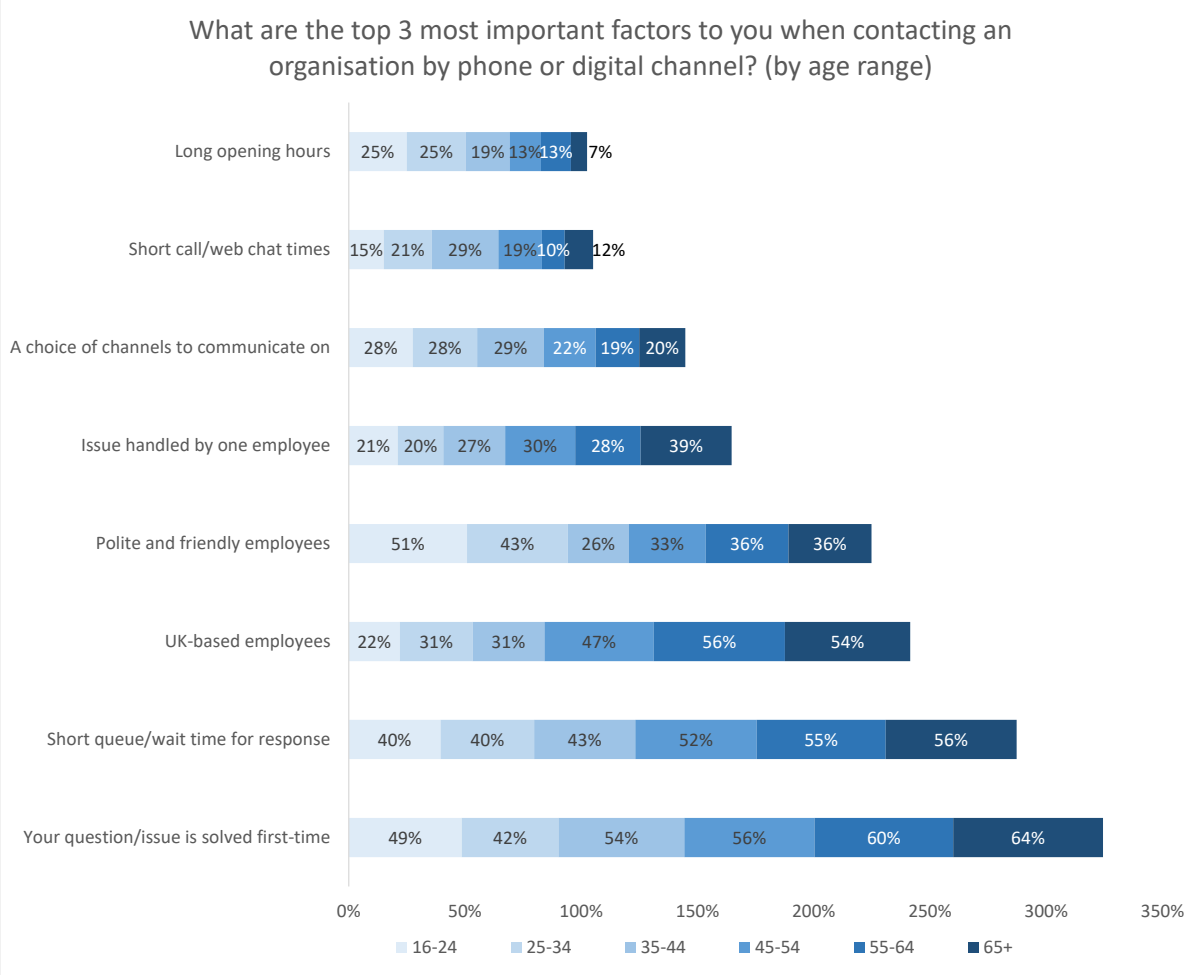


In order to compare businesses' opinions of the most important customer experience factors with those of actual customers, ContactBabel commissioned the research firm Aurora Market Research to carry out a survey of 1,000 UK consumers.

As such, consumers were asked to state which were the top three most important factors to them when contacting an organisation, with the same factors presented to them that had been offered to organisations within the business survey which most of this report is based on.

Figures below are expressed as the percentage of each age group that expressed an opinion.

Figure 173: What are the top 3 most important factors to you when contacting an organisation by phone or digital channel? (by age range)



The previous chart shows the importance of various customer experience factors as an aggregated bar chart, segmented by age so as to show the factors that were of most importance to customers in each age range. Aggregating the results allows an understanding of which factors were placed in the top three overall, while also providing insight on age-related opinion.

For example, 40% of the youngest age group (16 to 24 years old) stated that having a short wait time for a response was one of their top three most important factors, whereas 56% of the oldest age group (over 65 years old) placed this in their top three.

This consumer research has some interesting findings when comparing consumer attitudes to businesses' beliefs:

- both businesses and consumers agree that first-contact resolution is the most important single factor impacting upon customer experience when contacting a business
- a short queue/wait time for response is also seen as being a vital part of the customer experience
- having UK-based employees is seen as far more important to customers than businesses believe, particularly for the older generation.

When considering these findings from the perspective of the various age ranges, the importance of first-contact resolution is much more popular across all age ranges, which is a change from previous years when older demographics felt this to be much more important.

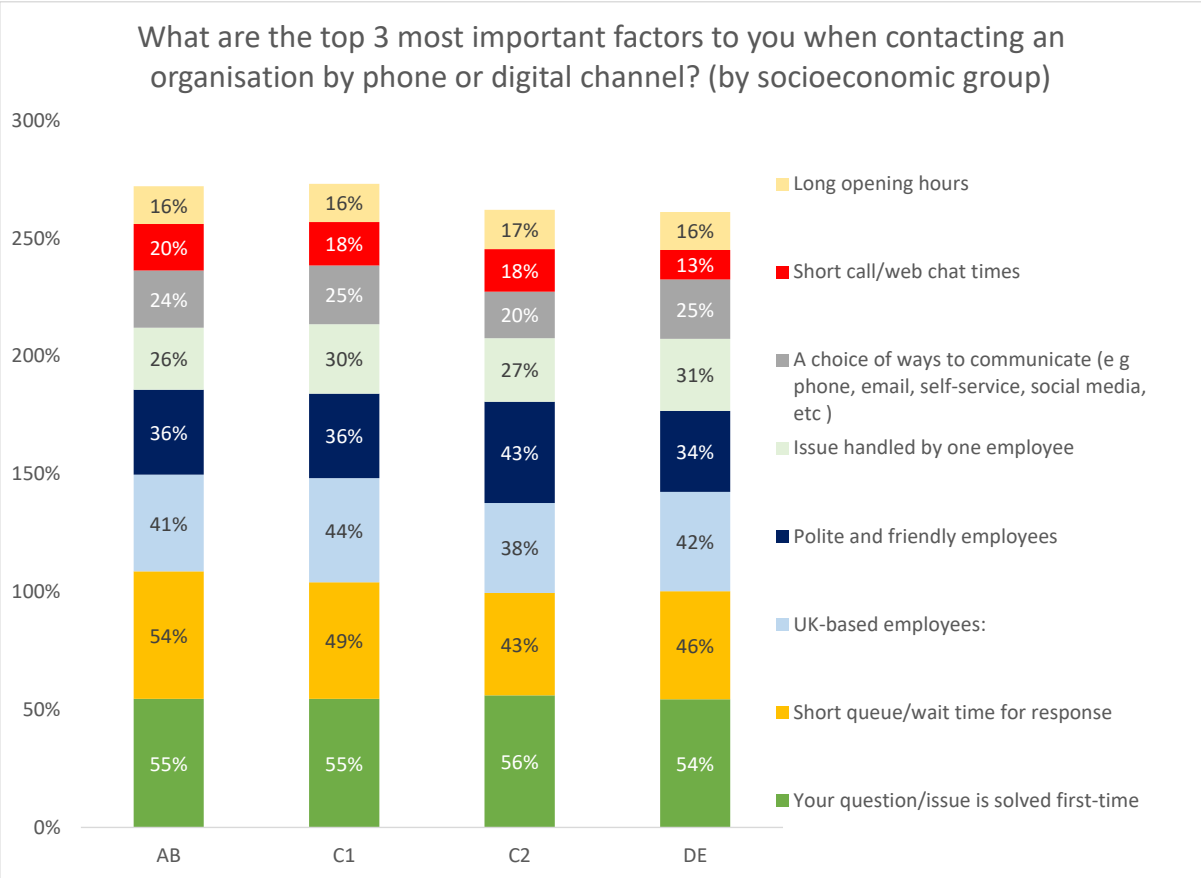
The requirement for UK-based employees has dropped this year, especially amongst the younger demographic. There is also a pattern that older age groups are less likely to be happy with being passed between agents.

Younger customers place more importance than the older generation on longer opening hours, and are also somewhat more likely to value having a choice of ways to communicate with the organisation. Further evidence for younger age groups' valuing of its time can be seen in relatively high importance being placed upon short call/web chat duration compared to the older generation.

However, the youngest age group are certainly not willing to sacrifice courteous service for time saved, as 51% of this cohort place 'polite and friendly employees' in the top three factors, making it their most important factor. This may be because the youngest age group have the least experience of dealing with businesses and contact centres, perhaps lacking some of the confidence that comes with years of speaking with businesses, and to have a friendly and approachable agent seems to be valued very highly.

When segmenting the consumer data by socio-economic group, the AB segment seems to value short queue times and call times somewhat more than other groups, but there is otherwise relatively little difference this year.

Figure 174: What are the top 3 most important factors to you when contacting an organisation by phone or digital channel? (by socioeconomic group)



Customer surveys have been an integral part of most businesses since time immemorial. Recently, there has been a great increase in the number of organisations implementing “Voice of the Customer” programs, often based around large-scale analysis of call recordings, but the more traditional, direct methods of understanding customer experience and requirements are still very much present.

The numerous methods of directly surveying customers include the following:

IVR: at the end of the call, and after agreeing to do so, the customer may be passed through to an automated IVR system, which typically asks a mixture of open and closed questions which can be answered with a combination of touchtone and speech. This has the benefit of immediacy, in that the caller will be able to give an accurate assessment of the call and the agent, and also the business may be alerted in near-real-time to any major problems through pre-programmed automated SMS or email alerts.

The speed and ease with which an agent-invited IVR survey can be implemented gives it a distinct advantage over a survey conducted via outbound calls. The resources and staff time required to make outbound calls often mean that they are conducted erratically and rarely during peak times which undermines the quality and usefulness of the data collated. As agent-invited IVR surveys are automated, they require little staff input and can monitor customer satisfaction whenever the contact centre is open.

Outbound automated surveys are becoming more prevalent, with more than 10m outbound IVR survey calls estimated to be made each year in the UK. After the call has been concluded, the caller's number may be put into an outbound dialler's queue, which calls them and offers an IVR survey. The speed with which this call-back is made is crucial to the take-up rate of the survey, with up to 70% acceptance rate if the call-back is in minutes, but perhaps only 10% if the call is made over 48 hours later.

Written: some businesses ensure that a system-generated letter is posted to the customer soon after an interaction takes place, requesting feedback. Typically, more customers who have had a poor experience will bother to return the questionnaire, skewing the figures, and although some good and detailed learning points can emerge, it's an expensive way to survey customers, and perhaps only appropriate if the customer has engaged very deeply with the business on a number of recent occasions (e.g. completing a mortgage application) or with a demographic that has more time available to them, especially older people. There can be a lack of immediacy, and many people might feel that sending out a written questionnaire to ask about how well a single call was handled is overkill.

A more popular written alternative is to send an email to the customer, which allows immediacy and offers a customer a chance to express themselves more fully, rather than simply with numerical scores. This method also has the advantage that it can be fully automated.

Detailed person-to-person interviews have an important role to play, particularly where the feedback generated can be compared side-to-side with feedback by other methods. Having quantitative and qualitative data provides valuable feedback that can't be achieved by adopting a single surveying method.

Web forms are becoming increasingly widely-used as an increasing number of customers visit a website initially to see if they can find the information or resolve the issue themselves. Online survey invitations that pop up within a couple of seconds of entering a website are widely used, although many customers find them intrusive as they have not yet found the information that they require. Using a little more intelligence around when to offer the survey to the customer would provide far higher take-up rates and more accurate, informed feedback.

Outbound: frequently, the contact details of a proportion of incoming callers will be passed to a dedicated outbound team, who will call the customer back, often within 24 hours, to ascertain the customer's level of satisfaction with the original call. Sometimes customers will find this intrusive, while others will welcome the chance to provide feedback. Additionally, certain companies employ outside agencies to survey customers regularly, which may be useful in benchmarking exercises, since they will apply a more formalised and structured approach to data gathering and presentation. The automated option as mentioned in the IVR section above should also be considered as an option.

SMS: Text messaging has the advantage of immediacy of sending and also of reporting on the results. It is a cheap way of carrying out surveys, and can be linked to a specific agent, allowing the contact centre to use this information for agent performance as well as satisfaction with the business. SMS does not allow detailed or multiple questions though, and businesses will have to collect mobile numbers if they do not already have them. However, take-up rates are better than many other forms of feedback (at around 25-35% on average), and younger and more time-poor customers are more likely to respond, providing a wider universe of responses across demographics. This form of survey can allow the contact centre to identify very unhappy customers and schedule an outbound call to deal with the problem.

Different customers will prefer to be surveyed in different ways and a survey platform should have the flexibility to support IVR, web, text and written surveys and collate the results in a unified reporting system. Not only will this mean that businesses are increasing the number of customers accessed, but a different quality of feedback will be received from each approach.

The table below shows that email is by far the most widely-used survey method, with a minority of companies using the other methods.

Figure 175: Methods of gathering customer surveys (in contact centres using surveys)

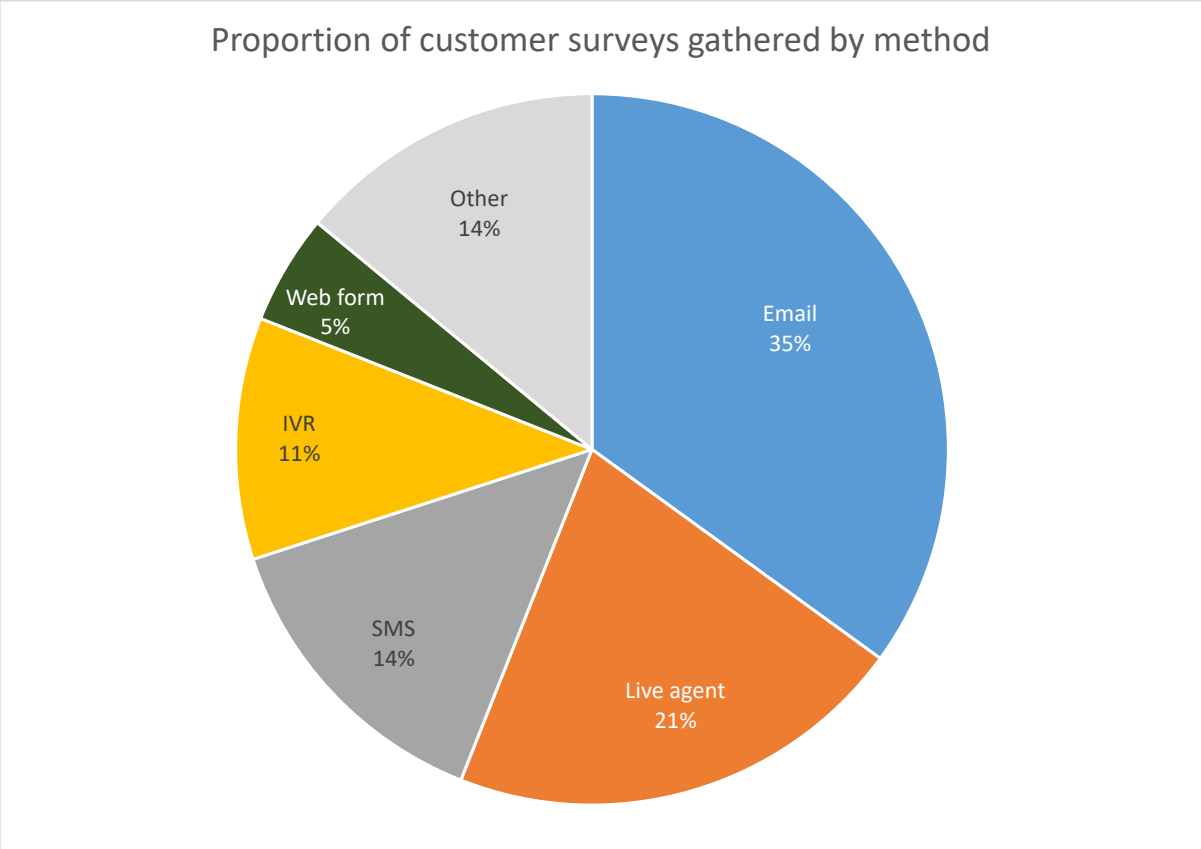
Method	% of respondents using this method to survey customers
Email	56%
Live agent	31%
Web form	21%
IVR	21%
SMS	21%
Other	19%

When considering the volume of surveys collected by each method, email is most popular, with 35% of surveys being collected in this way. Email (usually leading to an online form) allows a mixture of quantitative numerical data to be collected, along with qualitative comments which may highlight issues that would otherwise be unknown. It also has the advantage of immediacy and can be fully automated, requiring little or no additional input from the business. Web forms also allow this mix of numerical and written data to be collected, but the timing of offering the surveys during a web browsing session can be difficult to get right.

Despite the cost, outbound survey calls carried out by live agents are used in 21% of cases, which allow a depth of qualitative information to be collected from which insights can be drawn.

Both SMS and IVR are more positioned towards gathering quantitative information, often aligned to NPS.

Figure 176: Proportion of customer surveys gathered by method



Many companies pay lip service to listening to their customers, but do they actually hear what their customers say? And more importantly do they act upon it to change or improve their processes? There is no point in generating an expectation which the business has no intention of fulfilling. Don't ask the customers for feedback if there is no intention of using it to make the service provided substantially better. The following section on customer feedback examines this in more detail.

Formal surveys of customer satisfaction offer the customer a chance to feed-back, and the business to learn. Setting up surveys involved various elements which should not be overlooked, including:

Defining the purpose and objectives of the survey

- Deciding the approach
- Developing the questionnaire
- Carrying out the survey
- Collating the data
- Analysing the results
- Presenting the findings - and acting upon them.

The point of a customer satisfaction survey is to discover what the company is doing wrong, where improvements can take place, how the company is perceived against its competition and how it can improve. It is important to view the survey from the customers' perspective, rather than checking boxes that just relate to internal company metrics, which is self-serving. Surveys should also be ongoing, to check whether real improvements are being made after the issues have been identified.

Survey forms should be simple and quick to complete, but if possible should carry enough weight to allow the company to change its processes and behaviours if that is what is required, using a mixture of objective questions that can be segmented and scored, as well as free text, especially in telephony questionnaires, where customers can be encouraged to add real value.

For surveying customers' experience of the contact centre, the key to success is to keep the survey fairly short, with a maximum of around 5 questions, which can be range-based (e.g. "strongly disagree", "disagree", "neutral", "agree", "strongly agree", etc.), a simpler 'Yes/No' option and a free-text, 'any comments' question. These questions may include:

- Was the call answered quickly?
- Was the agent polite?
- Were you satisfied with the response?
- Was this the first time you had called about this matter?
- Do you have any comments you would like to make?

Opinion is split on whether surveys should identify specific agents, as although major outlying training and behavioural problems can be identified, many operations are keen to avoid the 'Big Brother' feeling of spying on agents, and prefer to emphasise that surveys are done to identify broken processes, not to criticise individuals.

Regardless of whether surveys identify specific agents or not, a key to success is whether the survey implemented is considered by agents as just yet another form of monitoring, or a genuine attempt to help them provide better service in the long run. Agents tend to respond well to successful customer satisfaction improvement initiatives as they usually make their job easier and more rewarding. Keep the survey process simple, focus on agent engagement and act quickly to provide positive feedback to the team. It's more important to get the survey adopted as a positive part of the company's customer service strategy, than it is to design the academically-perfect survey that has a negative impact on the morale of the team.

It is vitally important before beginning to survey customers, that a business:

- Clearly determines the purpose and aims of the survey
- Considers adopting a variety of question types. Scored questions enable a business to produce statistically significant and representative data. Free comments allow the gain of real insight into customers' perception of service
- Selects an experienced company to set up and host the survey. Businesses will benefit from their expertise and knowledge and avoid potentially costly errors
- Ensures that the survey can be carried out throughout the day, including peak times, to gain a true picture of the customer experience
- Makes sure that the results of the survey can be collated and analysed in a wide variety of ways. It is pointless to amass information if it cannot be evaluated and the results disseminated usefully
- Has procedures in place to act upon the information that it finds. The survey may have uncovered some broken processes in the service which need attention. It will also inevitably throw up disgruntled customers whose specific concerns need addressing. In this instance, the survey platform should provide some mechanism for alerting and following-up to ensure that dissatisfied customers are escalated to the appropriate staff
- Adopts a unified approach across the business to assessing and monitoring customer satisfaction. If a business continues to reward agents based on traditional call performance metrics, it is merely paying lip service to good service. If agents are rewarded based on customer satisfaction ratings, it will increase agent engagement and retention at the same time as improving the service it offers to customers.

More information on this, and other elements of gathering, analysing and acting upon customer feedback can be found in ContactBabel's "Inner Circle Guide to the Voice of the Customer".

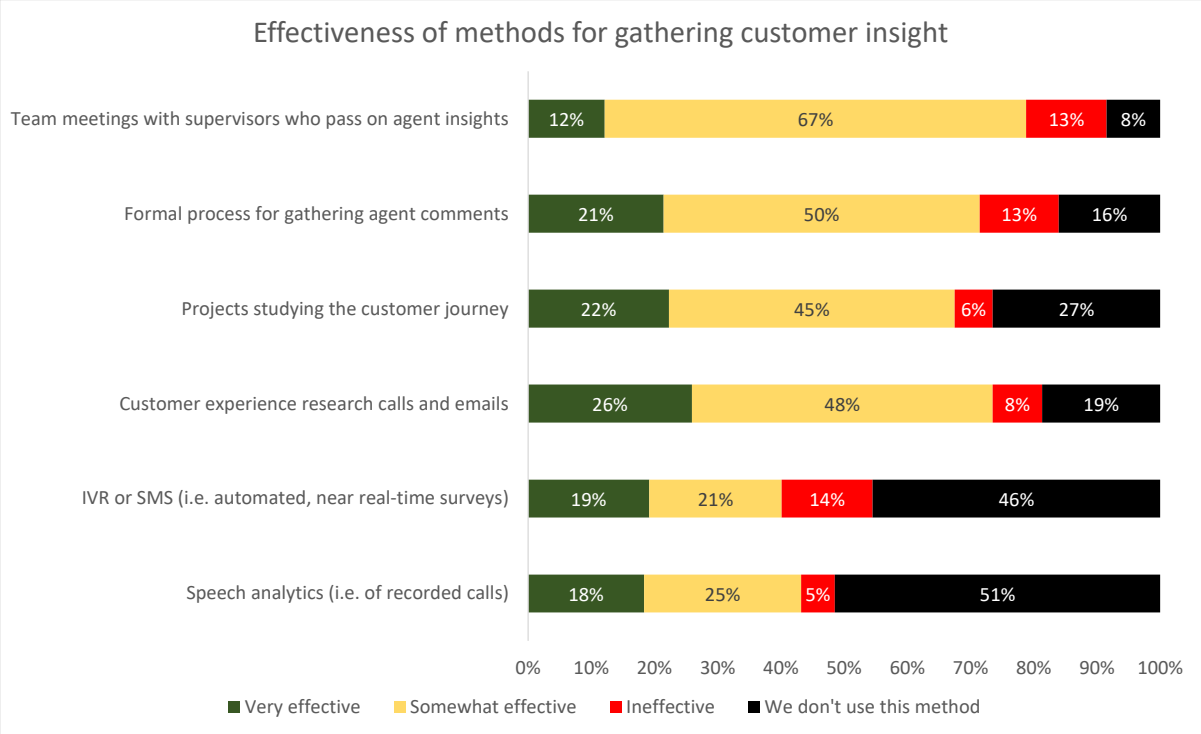
The chart below takes into account the respondents' opinions of the effectiveness of each method of gathering customer insight. It has been ranked in order of "very effective" responses, taking into account the actual use of these methods (e.g. speech analytics was rated "very effective" by 38% of those using it, although 51% of respondents did not use it for this purpose).

Respondents tend to rate customer experience research calls and emails fairly highly, with 32% of those using this method of customer feedback finding it very effective and with 10% ineffective.

Call analytics – which in this case also includes supervisors analysing call recordings as well as the use of automated speech analytics solutions – also gets considerable approval (with 38% of those using this method stating it to be very effective). IVR/SMS surveys are also seen as useful, with 35% of those using them stating that they are very effective.

Despite the higher incidence of their use, the informal gathering of insight from agents via supervisors is not judged as being especially useful, with 13% of those using this insight method stating that they are very effective compared to 14% ineffective. A formal process for gathering agent insights is seen more positively than in past years' research.

Figure 177: Effectiveness of methods for gathering customer insight



Businesses were asked which of four methods that they use in order to measure customer experience and satisfaction.

CSAT (customer satisfaction) scores do not have a fixed and accepted scoring system, but is more generic and wide-ranging. Businesses may decide that they want to track the proportion of customers who report being "very satisfied", score them at 5 out of 5, etc.

Net Promoter Score® [17] , otherwise known as NPS, is an index ranging from -100 to 100 that measures how likely customers are to recommend a company's products or services to others. The question asked to customers is:

"On a scale of 0 to 10, how likely are you to recommend this company's product or service to a friend or a colleague?"

Based on their rating, customers can then be grouped into in 3 categories: detractors, passives and promoters. 'Detractors' score lower or equal to 6, 'Passives' score of 7 or 8 and 'Promoters' answered 9 or 10.

NPS is determined by subtracting the percentage of customers who are detractors from the percentage who are promoters. For example, if 50% were promoters and 10% detractors, the NPS would be 40. This allows businesses not only to focus upon increasing the proportion of people that actively like and evangelise about the company, but also to bear in mind those at the opposite end of the spectrum who are lukewarm or negative.

Customer effort scores look to understand the ease or otherwise with which the customer has interacted with the company on a particular occasion. Often, there will be a five-point scale running from "very easy" to "very difficult", which can be converted into a quantitative metric. Various methods of calculating customer effort scores and pitfalls to avoid can be found within this referenced article[18].

Quality scores differ from company to company, but are based on interaction scorecards on which employees are scored over a number of calls or interactions each week or month, and include factors such as compliance, quality of greeting and call termination, cross-selling and upselling attempts, fluency of communication and other factors deemed important by the business

Complaint analysis is somewhat different from the other metrics considered here, in that it focuses strongly upon understanding negative customer reactions, with a focus upon improving the processes and situations that caused these in the first place.

[17] Net Promoter, Net Promoter System, Net Promoter Score, NPS and the NPS-related emoticons are registered trademarks of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.
[18] https://www.callcentrehelper.com/how-to-calculate-customer-effort-94671.htm

The most widely used customer experience benchmark is the general customer satisfaction rating, which is used by 87% of respondents. First-contact resolution rate is used by 74%, NPS 68%, customer retention rate 56% and agent quality scores 77%. Customer effort score is much less widely used, however is still in place in 36% of respondents.

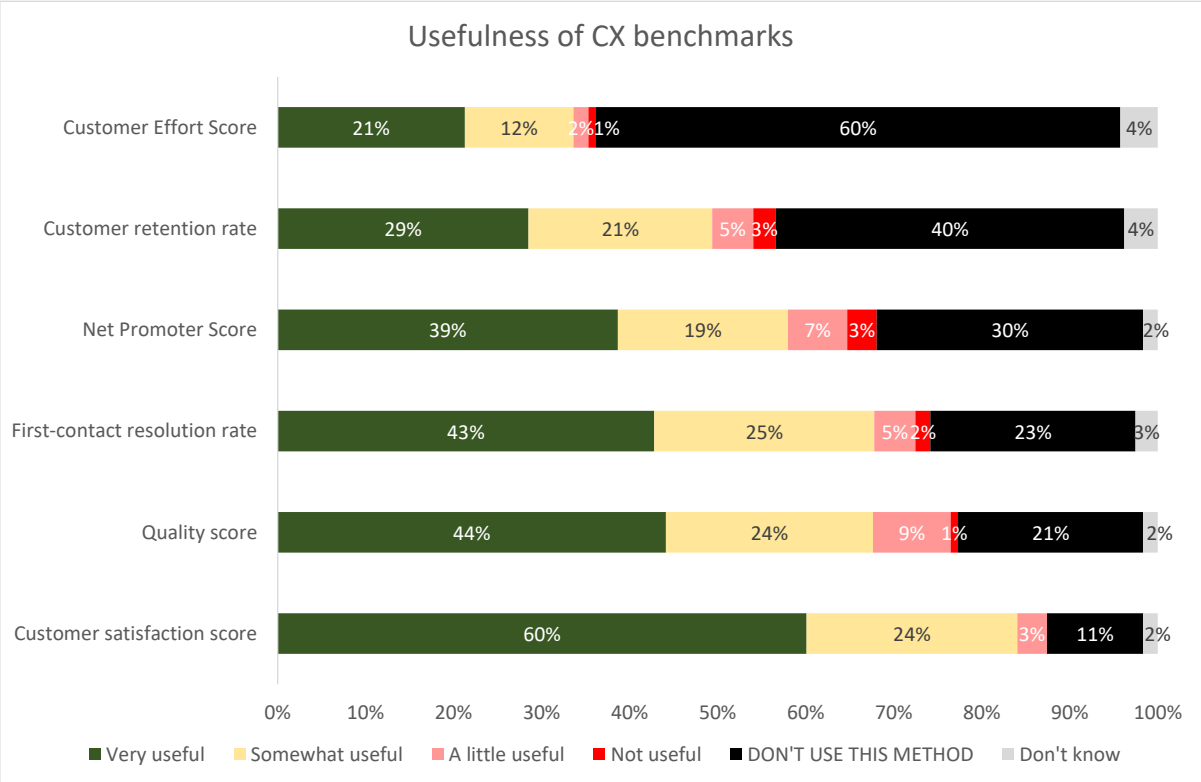
Respondents that used these customer experience benchmarks were asked to rate how useful they were.

69% of respondents that used it stated that they believed that customer satisfaction score was a useful indicator of customer experience, being the highest-rated metric.

Most of the other customer experience benchmarks received very similar scores, with around half of respondents stating that they were 'very useful', and lower proportions stating that they were 'somewhat useful'. Customer effort score was seen as more useful than most.

NPS was rated the lowest, with 57% stating that it was very useful, but 15% saying it was of little or no use.

Figure 178: Usefulness of CX benchmarks

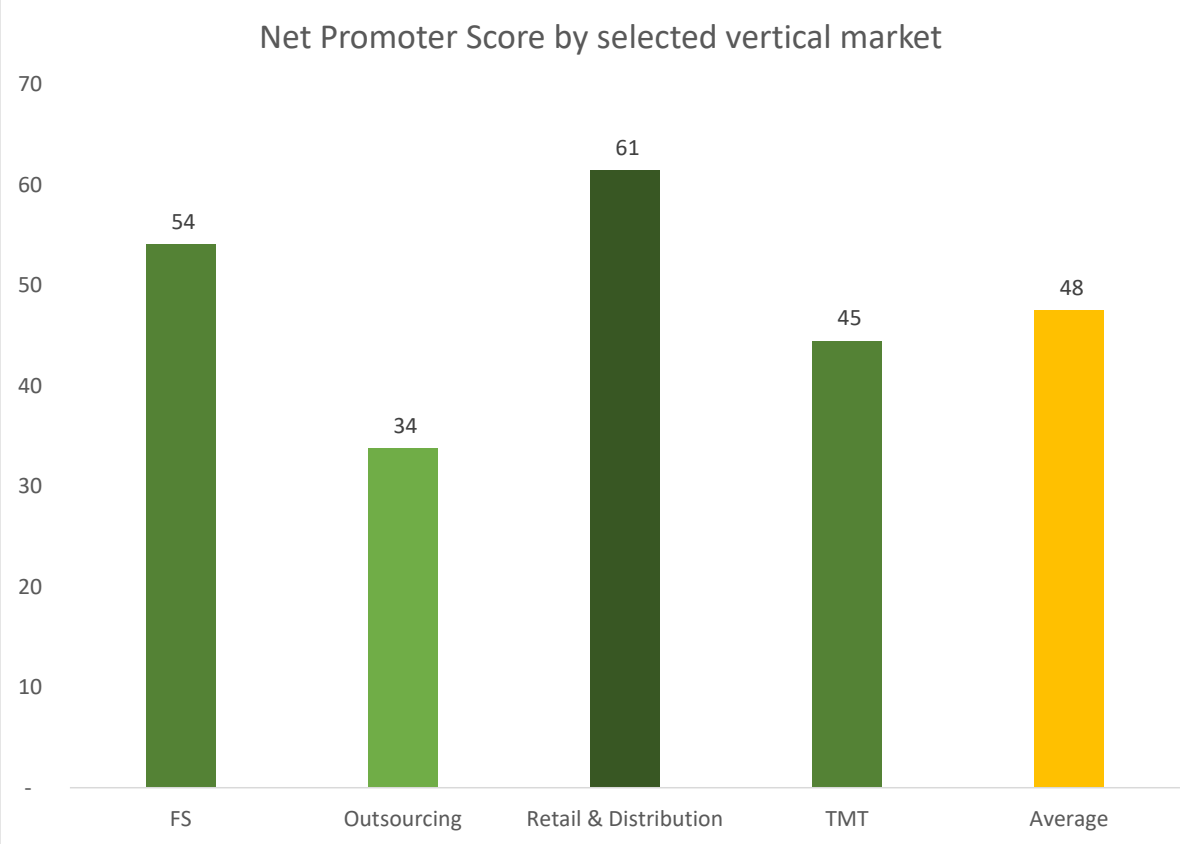


As customer experience benchmarks change from company to company – there is no generally accepted customer satisfaction rating or quality score that allows direct comparison between organisations – only NPS easily allows head-to-head comparison across companies, although there were not enough responses from each vertical market to be able to give a full picture across all sectors.

Apart from the reason of its standardised nature, Net Promoter Score has been included here as it was stated by 31% of respondents in the "UK CX Decision-Makers' Guide"[19] to be the CX metric against which the Board / senior management most judged the success of the customer experience programme, along with the general CSAT score (28%), which by the heterogeneous nature of measurement is very difficult to compare directly across companies.

The other customer experience metrics mentioned previously were seen as far less important: customer retention rate was considered the most important by 10% of respondents, and customer effort score by 1%.

Figure 179: Net Promoter Score by selected vertical market



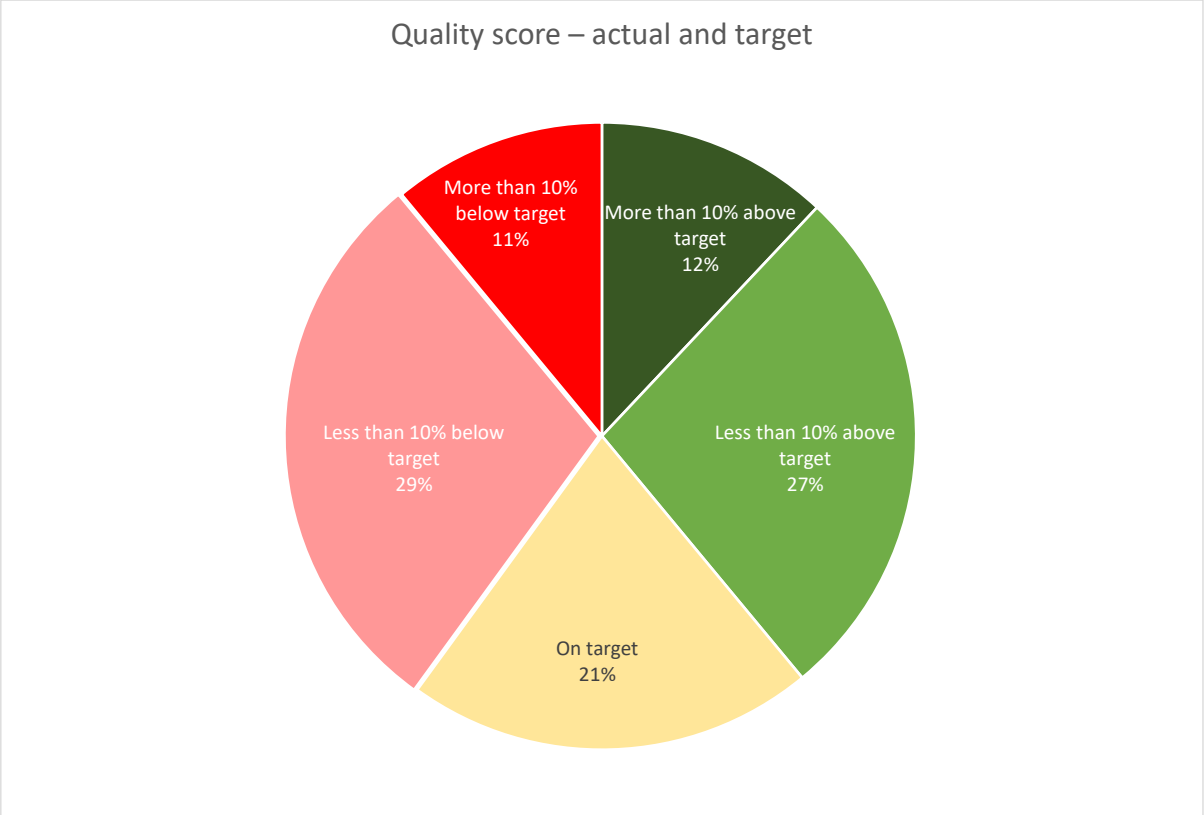
Respondents to this survey generally reported a mix of Net Promoter scores, with a survey-wide average of 48. Those in the retail sector reported the highest average scores, with outsourcing the lowest this year.

[19] "The UK CX Decision-Makers' Guide" is available at www.contactbabel.com free of charge.

Looking at quality scores, the fact that there is no single industry-wide quality measurement score made head-to-head comparisons impossible. Instead, each set of responses was judged on whether it was above target, at target or below target.

While 40% of respondents are currently missing their quality target, most of these are less than 10% below where they want to be. 39% of respondents report beating their target quality score.

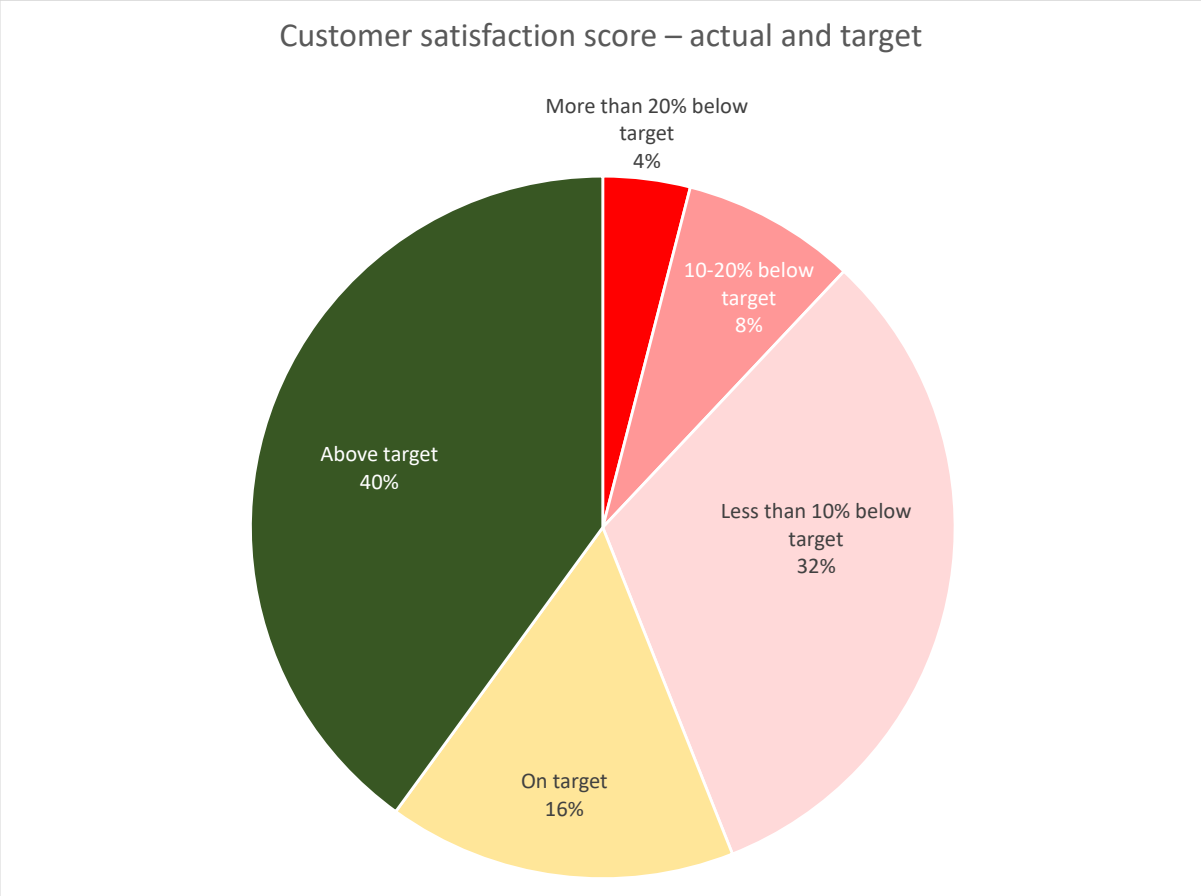
Figure 180: Quality score – actual and target



In the same way as with quality scores, customer satisfaction scores are not necessarily directly comparable between organisations. However, where possible, the data was normalised as a percentage although this should be treated with caution.

Only 12% of respondents were more than 10% below their target, with 40% above it, an improvement on previous years.

Figure 181: Customer satisfaction score – actual and target



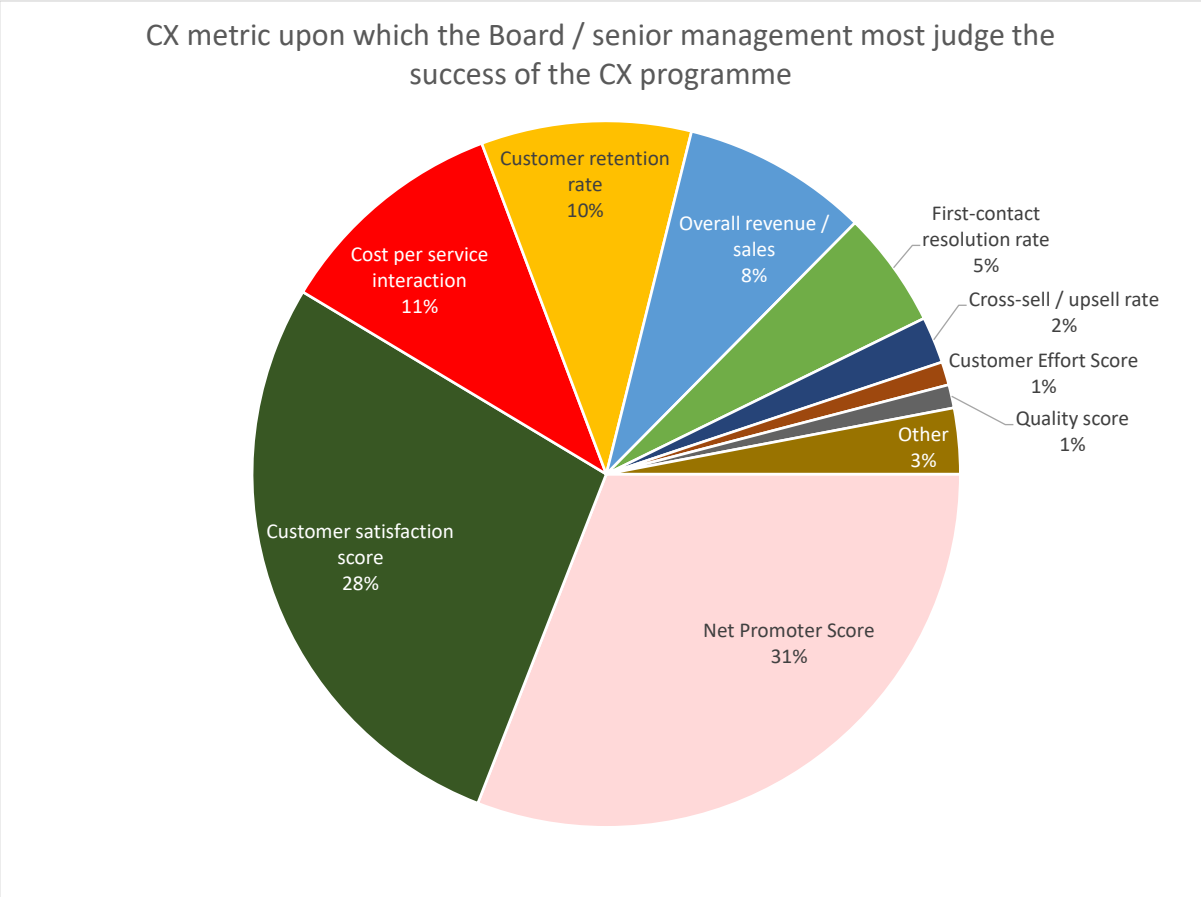
Survey respondents were asked to pick a single customer experience metric upon which their board or senior management team most judged the success or otherwise of the customer experience programme.

There was a wide mix of responses, with NPS and customer satisfaction score accounting for almost 60% of responses.

Interestingly, despite customer effort score being stated earlier as one of the most useful CX benchmarking metrics, only 1% of respondents stated that it was the CX metric considered most important by the senior management team.

Of even greater note is the fact that first-contact resolution rate was identified as being the key CX metric for senior management by only 5% of respondents, despite both the customer and business survey results earlier in this report showing clearly that first-contact resolution was the most important factor in influencing customer experience.

Figure 182: CX metric upon which the Board / senior management most judge the success of the CX programme



John Seddon uses the term "failure demand" to describe calls that are created by the inability of the business's systems to do something right for the customer:

> "A failure to do something - turn up, call back, send something…causes the customer to make a further demand on the system. A failure to do something right – not solve a problem, send out forms that customers have difficulty with and so on – similarly create demand and creates extra work. Failure demand is under the organisation's control, and it is a major form of sub-optimisation."[20]

Seddon cites the instance of the bank where failure demand created almost half of the calls which they had to deal with. Another classic example of failure demand is where emails go unanswered, leading to calls being made (first-stage failure demand). Later, the email will be answered, unnecessarily, as the customer already has their answer or has gone elsewhere (second-stage failure demand). This redundant work will then impact on other (still live) messages in the email queue, creating a vicious circle of failure demand. Redesigning and restructuring the way in which work flows around the organisation, putting the contact centre at the heart of it, rather than treating it as a separate silo, will go much of the way to reducing unnecessary contacts. The customer ends up getting a better service from the whole company, not just the contact centre.

One way in which this can be achieved is to unify and automate the agent desktop, bringing in the relevant data automatically, depending on who the caller is and what they want. At the end of the call, the correct data is written back to the relevant places, and the correct processes kicked off automatically, meaning that the right departments will be provided with the right information, thus reducing the risk of failure demand, unnecessary calls and irate customers. This also takes the pressure off the agents to remember which systems to update and how to navigate through them within the call (which causes long delays, negatively impacting customer satisfaction), or in the wrap-up, which risks agent forgetting to do things, and also decreases agent availability, increasing the queue length, and decreasing customer satisfaction. In cases where multiple processes have to happen in order for the customer's requirement to be met, automated outbound messaging to the customer, whether by email, SMS or IVR is likely to reduce the number of follow-up contacts that the customer feels that they have to make.

Information on failure demand can be gleaned from the contact centre, which can also hold huge amounts of knowledge about what customers' views of the products, services, competitors and company are. Feedback loops will be established in leading contact centres to push information and insights upwards to those who can make a difference in product development, process improvements and customer strategies. Interaction analytics offers businesses the chance to mine huge amounts of data and find patterns and reasons in a timely fashion, and it is vital then to act upon this knowledge, proving to both customers and agents that the business takes them seriously.

[20] *Freedom from Command and Control: A better way to make the work, work*, by John Seddon

Customers who take the time to complain are also taking the time to state what went wrong with your process, product or communication, and this effort should be acknowledged and treated as being important. Businesses have found that fixing the problem for one customer can help many other customers, including the ones who never contacted you. Most customers are not complaining to cause trouble - they want you to know what went wrong, and believe that you can fix it. If one customer makes a complaint, the chances are that there are many more who are experiencing the same thing. A customer that has given up on your company will probably not complain, but go elsewhere and tell everyone who will listen that they are doing so, an issue that is particularly important in today's world of omnipresent social media.

The following charts show the change in the proportion of calls that are complaints, and whether the complaint is about the contact centre (e.g. an impolite agent) or the wider business (e.g. a late delivery, incorrect product etc). In all years, the target of the complaint was usually the failing of the wider business, although 2012-2015 saw 20% or more of complaints being about the contact centre.

For every vertical market, the majority of complaints received are not about the contact centre itself (or its staff), but rather 'failure demand', caused by a breakdown of process elsewhere in the organisation. However, the contact centre has to deal with the dirty work, and further failures within the complaints procedure (or lack of it) can see customers calling into the contact centre again and again, becoming more irate each time, despite the real problem lying outside the contact centre. This is further exacerbated by the multitude of channels available to customers, who may choose to complain initially via letter or email, and follow up with multiple phone calls if these initial channels are not able to provide them with an acceptable response.

There is also the case that there is a blurring of responsibility between the contact centre and the rest of the business so that lines of demarcation over where the fault lies can be difficult to find. For example, a telecoms provider that has taken an order for a new line has to rely on the rest of the organisation to provision and deliver this correctly. If the agent takes the contact email down incorrectly, the customer will not receive any information about their order, which may have a query on it. When the irate customer rings in to complain, the problem may appear to be with the back-office processes where the order has halted, but the fault actually lay with the agent. Whether this is tracked or reported on correctly is not a certainty, so the split above between contact centre / back-office complaints should be treated with caution.

There is also a real risk, especially within large contact centres, that a single agent does not have the capability or responsibility to deal with the customer's issue, which may reach across various internal departments (e.g. finance, billing, provisioning and technical support), none of which will (or can) take responsibility for sorting out the problem.

Until 2016, a clear upward trend could be seen when looking at the proportion of calls that are complaints in general, from less than 4% in 2010 to over 9% in 2016.

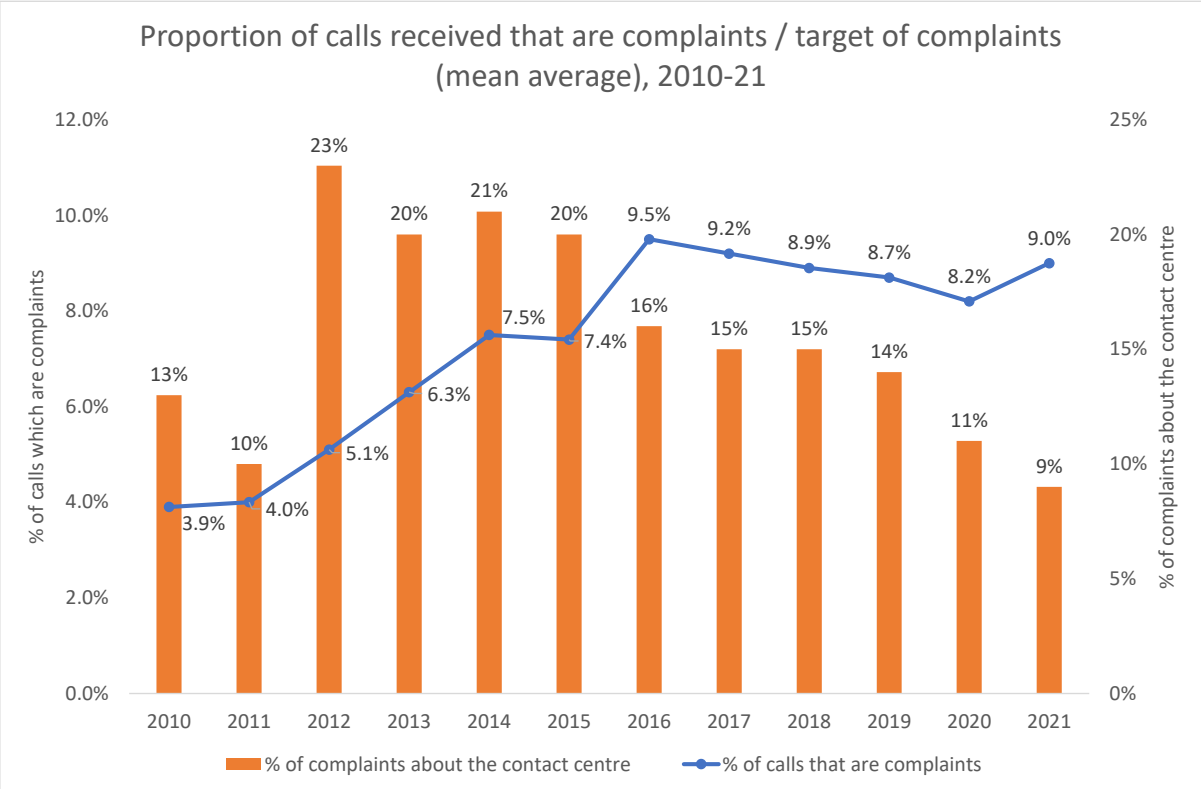
There may have been multiple reasons for this: businesses may have been failing the customers more often; customers may have become more demanding or moved away from the traditional form of complaint – the letter – and preferred to use the phone to complain instead.

Certainly, many contact centre decision-makers state that the most effective channel to use for complaints is the telephone, and it may be that customers found this out for themselves.

However, since 2016, the proportion of calls that are complaints had dropped to around 8%, although rose to 9% in 2021. This may be because email is now seen by customers as an effective channel for complaints, as upset customers can give vent to their feelings and say exactly what they want to without fear of conflict or interruption.

The proportion of complaints that are about the contact centre itself has dropped every year since 2014.

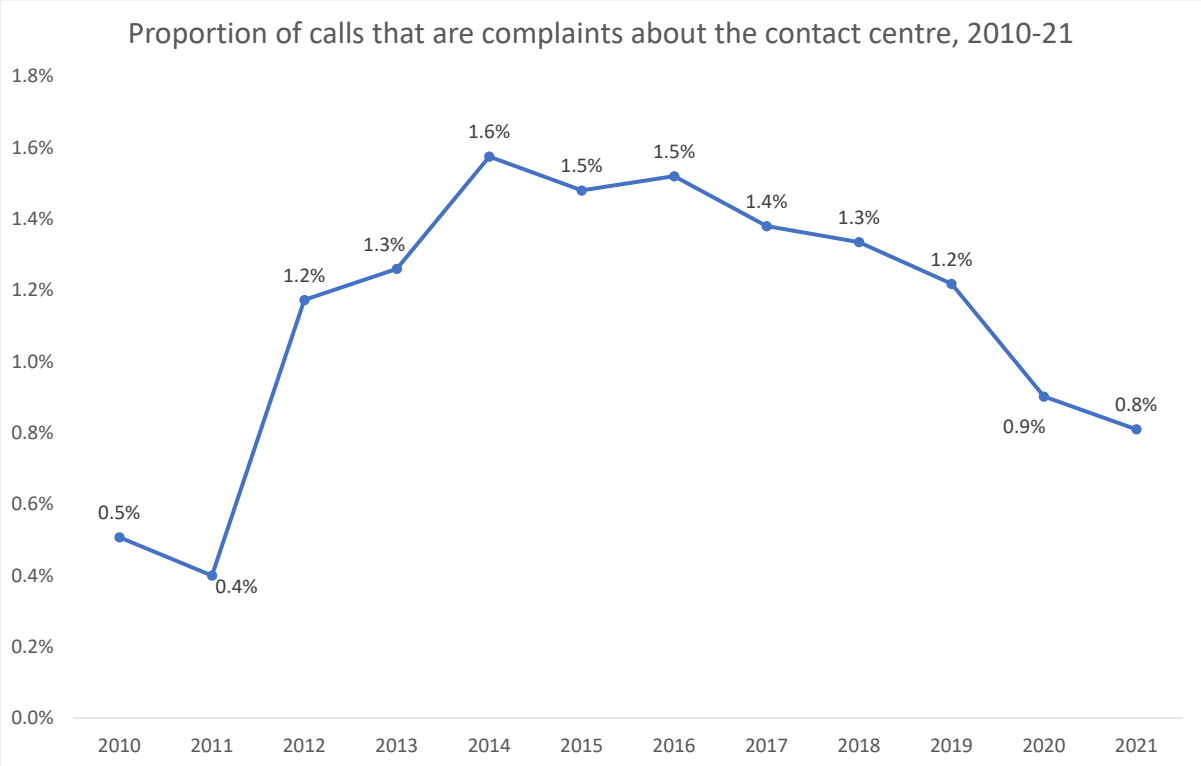
Figure 183: Proportion of calls received that are complaints / target of complaints (mean average), 2010-21



Taking the two sets of data on the previous chart – the proportion of calls that are complaints, and proportion of complaints that are about the contact centre (rather than the wider business) – and combining them, gives the following chart: proportion of calls that are complaints about the contact centre. This is a figure that contact centre decision-makers should be interested in, as these complaints not only cost money to handle, but are in large part avoidable in the first place.

Since 2012, the figure of contact centre complaints has declined somewhat, being only 0.8% in 2021. While this figure may not seem particularly high, with around 6.75bn inbound calls per year and an average cost per call of £5.42, handling the 0.8% of calls that are complaints about the failings of the contact centre costs the industry around £293m per year.

Figure 184: Proportion of calls that are complaints about the contact centre, 2010-21



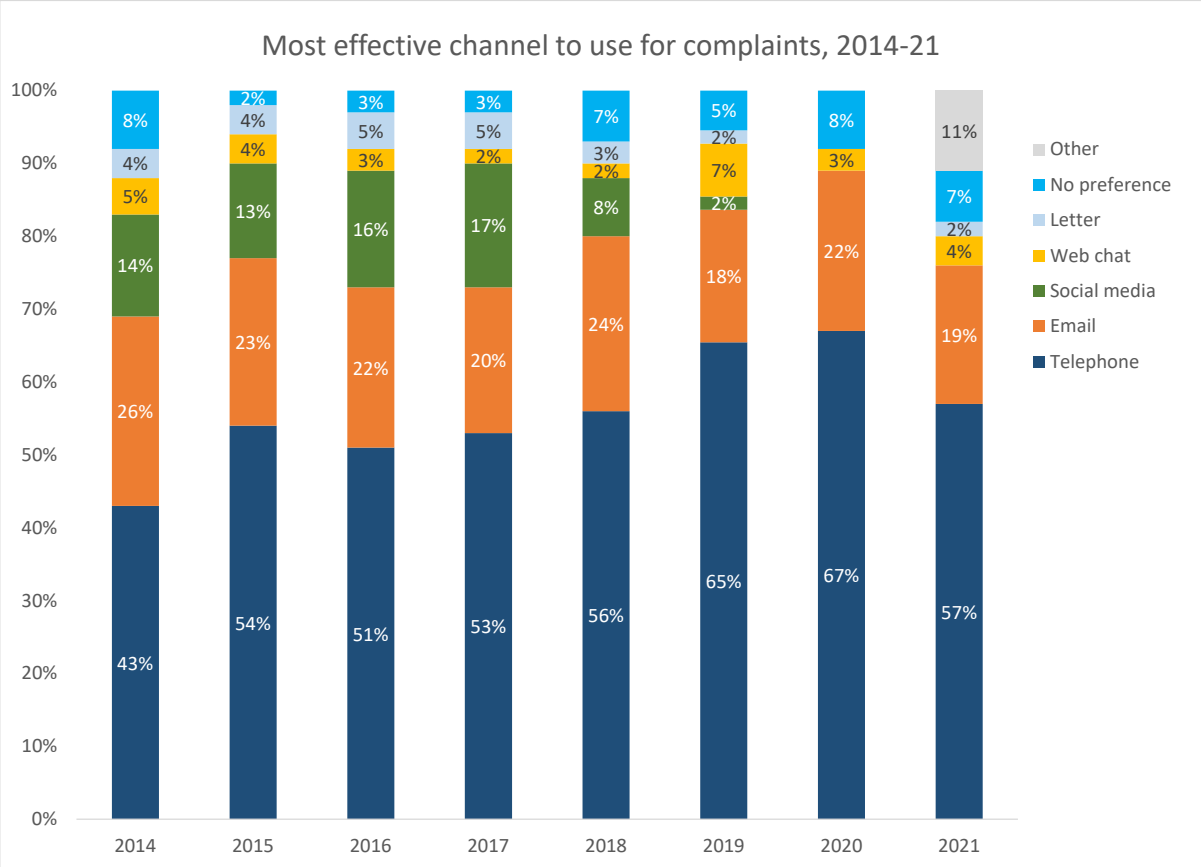
MOST EFFECTIVE CHANNELS FOR HANDLING CUSTOMER COMPLAINTS

Respondents were asked to assess which channel they personally would use if they had a complaint as a customer of their own organisation, and how this has changed since 2014.

Since 2015, a majority consistently say that the telephone would be the best channel, with email also having considerable support (and which is a popular choice with complaining customers). There is little support for writing a letter – which has been the traditional channel of complaint – with web chat also being given very little support as a channel for complaints. Social media grew slightly to reach 17% in 2017 but has dropped very significantly with no respondents in 2021 saying that this was the best channel to use for complaints.

Very few give the diplomatic answer that there would be no advantage to choosing one channel over another within their own organisation.

Figure 185: Most effective channel to use for complaints, 2014-21



For most businesses, there is no fixed agreement on what a successful contact centre looks like: even in similar industries, around half of businesses state that a contact centre is a strategic asset, with the other half seeing it as an operational cost centre. Contact centre managers are tasked to balance factors such as cost, efficiency, staff morale and attrition, call quality, customer satisfaction and revenue - some of which may be mutually antagonistic - in a constantly-changing environment where there is limited opportunity for reflection. Often these contact centres exist on a virtual island away from the rest of the business, not just geographically, but logically as well. Although they belong to the business, and constantly receive insights about other parts of the operation, they may not have the ability to provide actionable insight either for their own benefit or for other departments.

Having said that, most of the contact centre world has moved on from the ruthless focus on call throughput and call duration that characterized many operations a decade ago. A major question being asked today is, "How do contact centres attempt to measure the most important metric of all - first-contact resolution?" ('First-contact' resolution differs slightly from 'first-call' resolution, in that it includes emails, web chat and other non-voice channels as well. In reality though, non-voice resolution rates are much less commonly measured).

It can be stated with some confidence that first-contact resolution is seen as the key to a successful contact centre: while previous ContactBabel research shows that customer satisfaction rating is the most important metric, the vast majority of survey respondents place first-contact resolution as being one of the top 3 metrics that are most **influential** on customer satisfaction, far more important than any other metric. So, logically it seems that to improve customer satisfaction, a business has to improve first-contact resolution rates, which necessarily then decreases the overall effort that a customer has to make in the full course of an interaction.

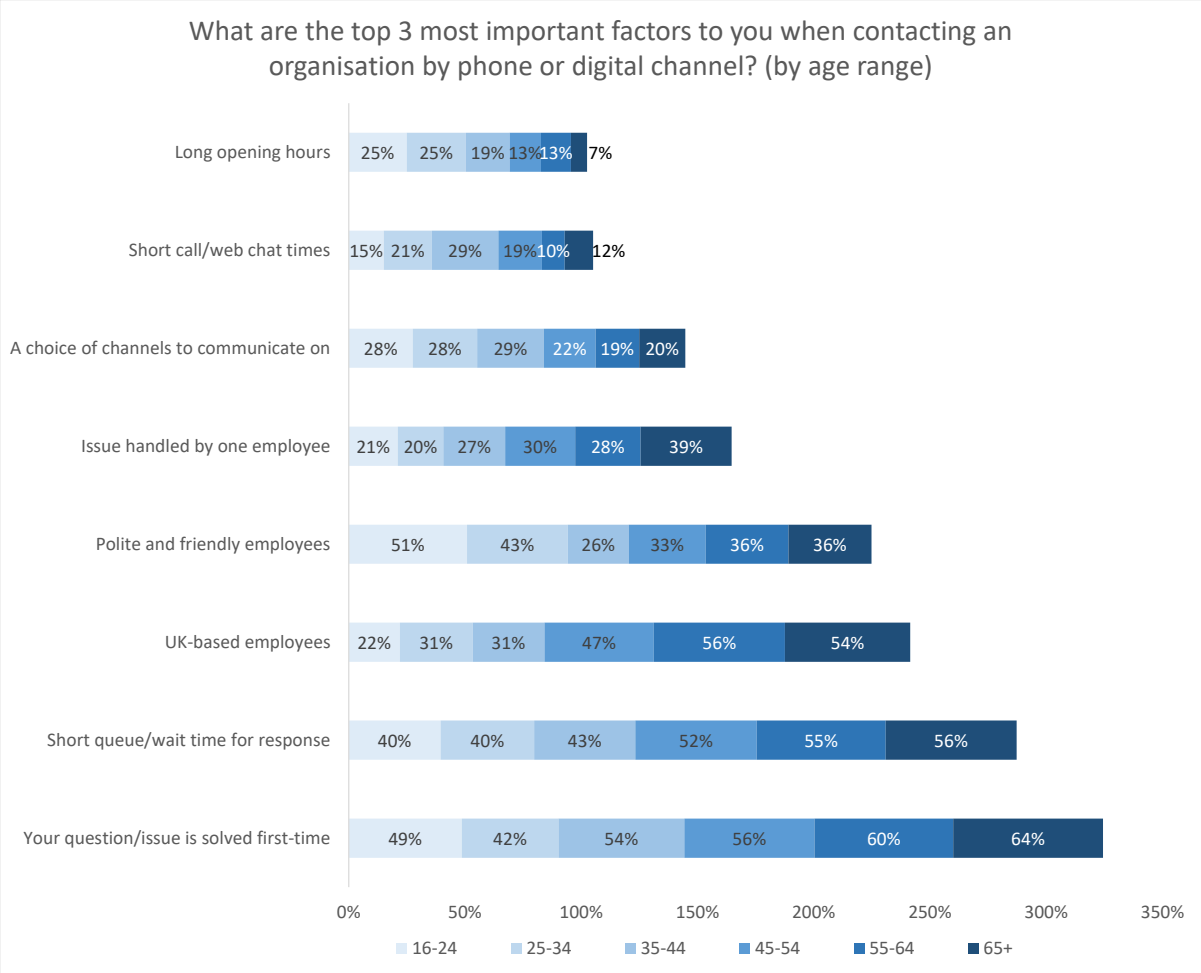
The ability to understand a query and deal with it in a reasonable timeframe at the first time of asking is the key to a contact centre's success, reducing the overall number of contacts while providing the customer with a good experience which will impact on the company's overall performance. It also has a positive effect on the agent's morale (and thus, staff attrition rates), and increases the chances of a successful cross-sell and up-sell being made. Little wonder that the first-contact resolution metric has grown hugely in importance, but it can be problematic to quantify accurately. This risks the metric being downplayed, especially as it is not simply a matter of producing a monthly report from ACD statistics.

ContactBabel commissioned the research firm Aurora Market Research to carry out a survey of 1,000 UK consumers. One of the purposes was to identify any differences in opinion between organisations and customers about what were the most important customer experience factors when contacting an organisation.

As such, consumers were asked to state which were the top three most important factors to them when contacting an organisation, with the same factors presented to them that had been offered to organisations within the business survey which most of this report is based upon.

Figures below are expressed as the percentage of each age group that expressed an opinion.

Figure 186: What are the top 3 most important factors to you when contacting an organisation by phone or digital channel? (by age range)



The previous chart shows the importance of various customer experience factors as an aggregated bar chart, segmented by age so as to show the factors that were of most importance to customers in each age range. Aggregating the results allows an understanding of which factors were placed in the top three overall, while also providing insight on age-related opinion.

The importance of first-contact resolution is very popular across all age ranges, which is a change from previous years when older demographics felt this to be much more important.

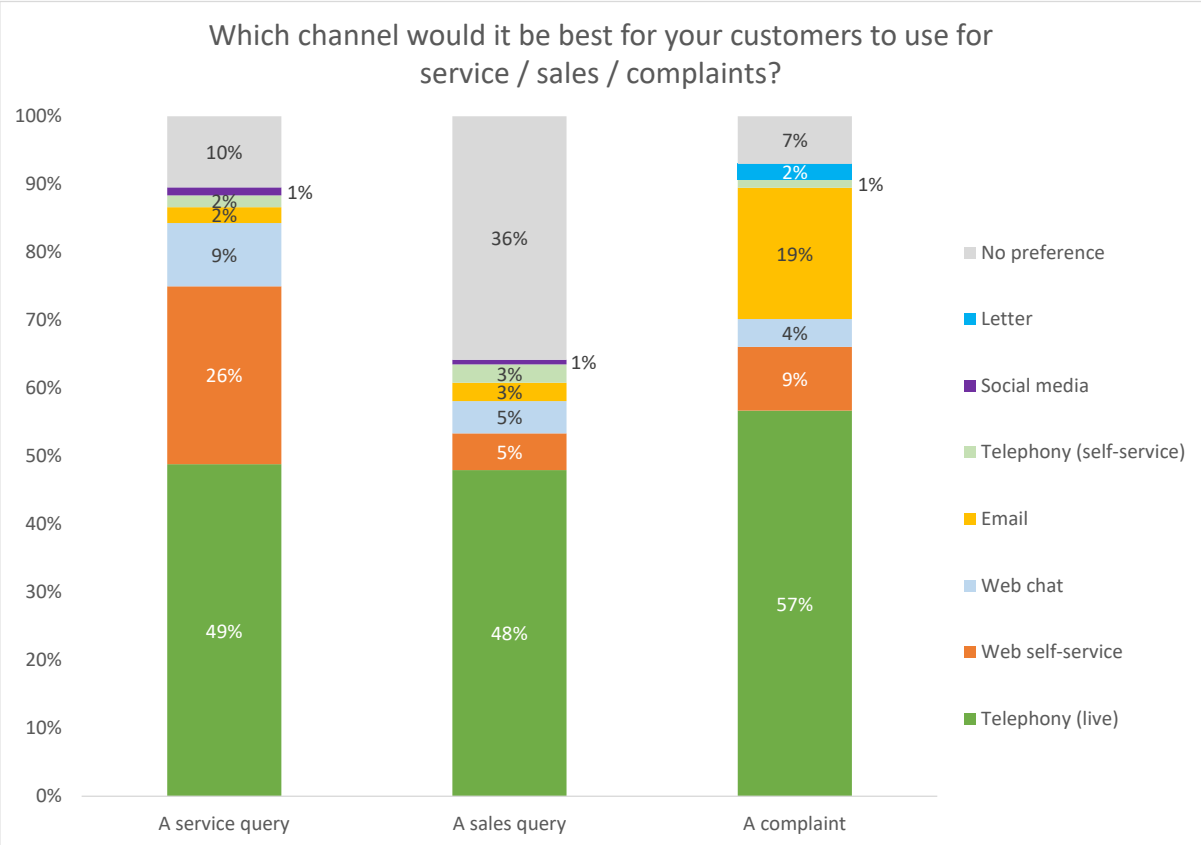
However, the youngest age group are certainly not willing to sacrifice courteous service for time saved, as 51% of this cohort place 'polite and friendly employees' in the top three factors, making it their most important factor. This may be because the youngest age group have the least experience of dealing with businesses and contact centres, perhaps lacking some of the confidence that comes with years of speaking with businesses, and to have a friendly and approachable agent seems to be valued very highly.

Survey respondents were asked to assess which channel they would recommend customers to use if they had a complaint, a sales query or a service query.

Telephony is the most frequently recommended channel in all cases, being particularly strong in complaint handling. A substantial minority of businesses recommend customers to solve their own service issues online, and email is seen by 19% of respondents as the best way to make a complaint.

Few respondents recommend social media to be the best way to get anything resolved, although web chat looks to have its place in a small proportion of operations, particularly around service.

Figure 187: Which channel would it be best for your customers to use for service / sales / complaints?



Summarising, the telephony channel is recommended to customers as the primary channel for most queries, but as the following chart shows, customers often have a different view on what's best for them.

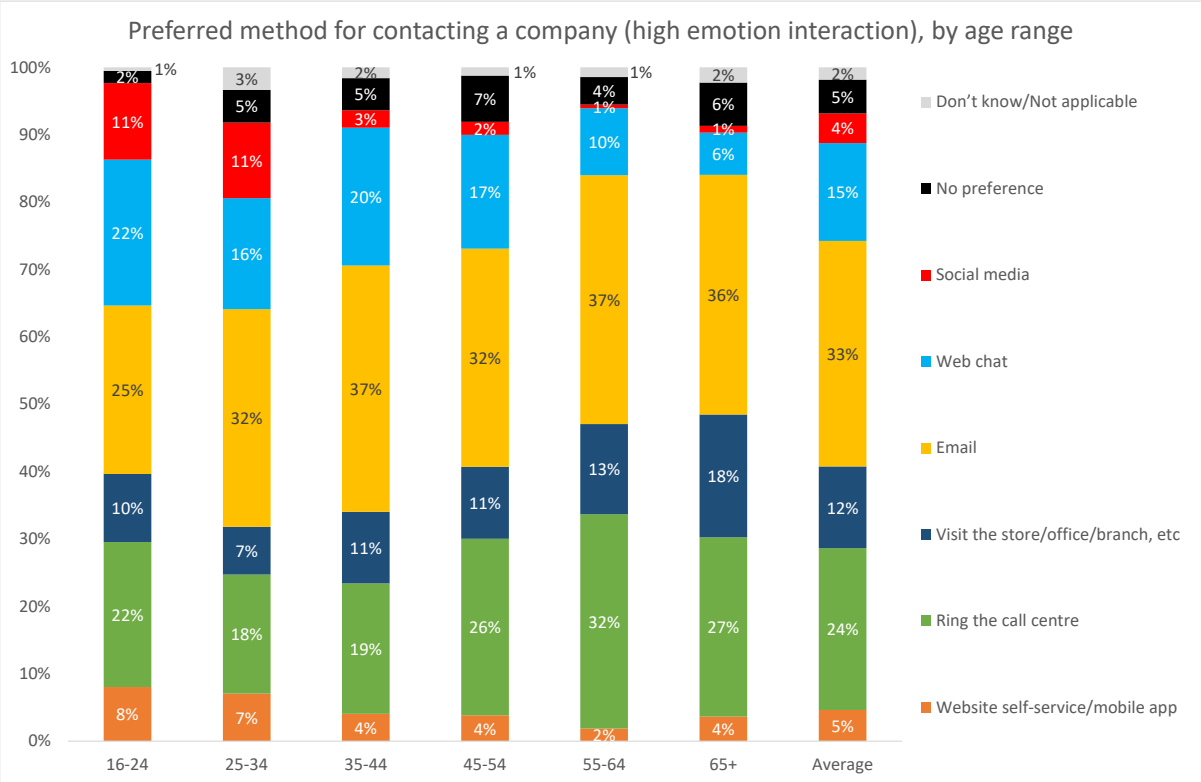
The survey of 1,000 UK consumers carried out for "The UK CX Decision-Makers' Guide" [21] looked at which the channels of preference would be in cases of high emotion, urgency and complexity through presenting survey respondents with three hypothetical scenarios. We have chosen to show here the preferred channels for the 'high emotion' scenario, that of receiving a desired product they had ordered from a company, which was incorrect when it arrived. This was defined as a 'high emotion interaction' as being sent an incorrect item is often frustrating, as not only has the desired product not arrived, but the customer is then left with the problem and effort of returning the item. This is not a particularly complex interaction, and in many cases will not be particularly urgent.

The most popular option was to email the organisation, with 33% of respondents choosing this method. The second most popular, at 24%, was phoning the contact centre, and web chat also made a strong appearance, with 15% respondents choosing this as their preference.

There was a strong pattern based on the age of the survey respondent and their preferred channel: the older demographics were more likely to pick up the phone, although email was popular with all over-24 age groups. Web chat was a very popular option with the youngest demographic, equalling the telephony channel.

11 of the sub-35 year-old age groups would choose social media, which is a major finding for businesses serving these customers.

Figure 188: Preferred method for contacting a company (high emotion interaction), by age range



[21] Available free at www.contactbabel.com

The wide range of channels chosen here looks confusing at first until we understand that what each customer is trying to do is to choose the channel that they believe is most likely to get the issue resolved. Customer effort is more than about simply picking the quickest and easiest channel to hand: few people could argue that choosing a face-to-face meeting over a web chat is a logical choice if customers are simply driven by doing what is easiest – ostensibly, the least effort – for them.

Instead, they choose a channel which they believe will be the least effort to them in the context of the **overall** specific interaction, which will not involve re-explaining the issue to multiple employees, or taking days to communicate back-and-forth over a non-real time channel such as email. Customers do not just choose to use the channel of least effort: they choose the channel which is the least effort to them personally, but only where they are also confident that their issue will be resolved fully. As such, businesses should be aware that customer effort and first-contact resolution are inextricably linked to each other.

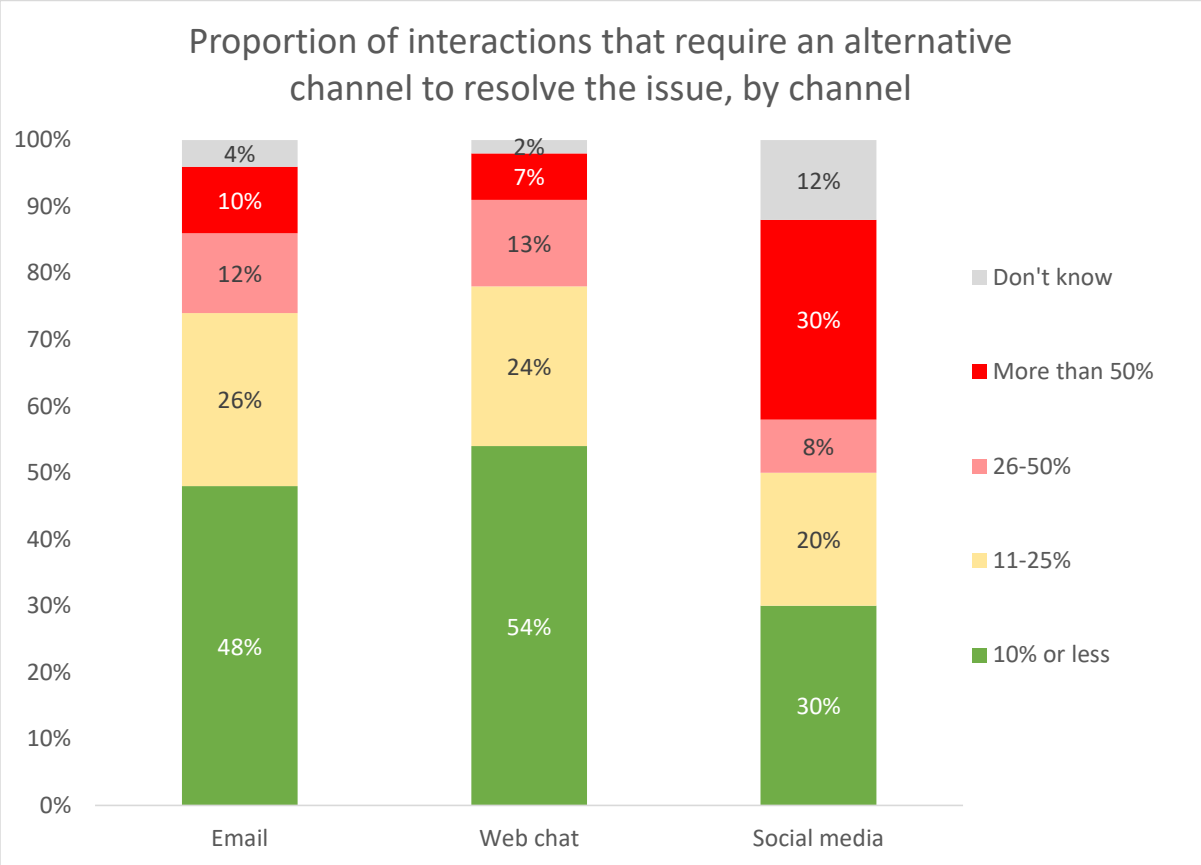
Effort is also not a constant between customers. For some, driving to an office or branch and speaking face-to-face is a major effort: for others, worrying about having to navigate around a self-service application, making sense of jargon, is a bigger effort.

Customers will not all choose the same channel for a job, and will not always choose the most effective channel. It is a fact that, for whatever reason, not all channels will always be able to deliver what is needed. All channels will sometimes fail to deliver, and how that failure is then handled impacts upon overall success.

CHANNEL 'FAILURE' AND CUSTOMER EFFORT

In the course of this report's research, respondents gave their estimates for the success of each channel in resolving customers' issues without having to use another channel. The chart below shows the proportion of interactions handled by each channel which then require alternate channels, usually telephony.

Figure 189: Proportion of interactions that require an alternative channel to resolve the issue, by channel



It can be seen that all digital channels (especially social media) inevitably have their 'failures', and that offering multiple channels means that customers will move between them as they see fit, depending not only on the quality of the channel's service, but also on what they wish to do, their personalities and experience, and many other factors. Therefore, a seamless, contextual omnichannel experience is necessary to reduce customer effort, and make sure they don't have to start from the beginning in the next channel.

First-contact resolution rates are not simple to understand, but have to be viewed in context. An improving business may well see its FCR rate actually decline after it implements process improvements, which is counter-intuitive, but if the business had been handling live calls that were more suited to self-service or avoidable through better marketing communications, getting rid of these 'easy' calls entirely will make the FCR rate decline. If many calls are about the same issue, and are answered quickly and accurately, it improves FCR rates, but of course piles up cost and impacts negatively upon other performance metrics, such as queue length and call abandonment rate.

Businesses should consider the reasons for these unnecessary calls, rather than just focusing upon a single metric, as high first-contact resolution rates may actually be masking underlying problems:

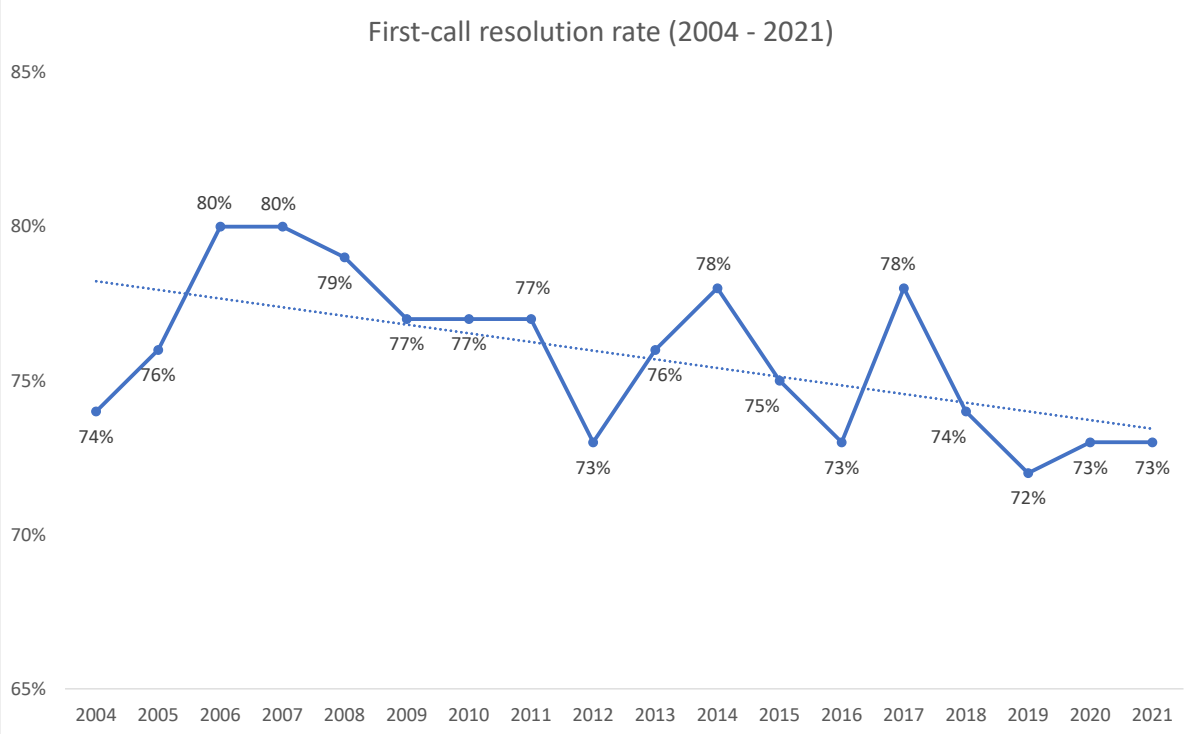
- The contact centre is handling simple and repetitive calls that could be moved to self-service, or which could be addressed on a website and through better marketing communications
- Callers are dropping out of self-service to speak with agents because the self-service application is failing in its task and should be re-engineered
- Unclear marketing communications are causing customers to call
- Calls are being received that are actually driven by mistakes from elsewhere in the enterprise.

When businesses begin stopping unnecessary calls at the source, those left are usually of a more complex nature. This will lower first-call resolution rates initially, allowing a clearer picture of what is really happening in the contact centre to emerge, which can then be addressed more fully.

The overall trend line for FCR is actually declining very slightly: as the easier interactions go to self-service (especially online), the contact centre is left with more difficult and varied tasks – through email as well as phone – which can also be very complicated to categorise effectively using the current tools available to most.

As the contact centre adapts and invests in better ways of handling customer requests, first call resolution rate increases and parity resumes. The exodus of 'easy' work to self-service channels may not be quite balanced by immediate balancing improvements in knowledge sharing and other agent support processes that would mean stable first call resolution rates.

Figure 190: First-call resolution rate (2004 - 2021)



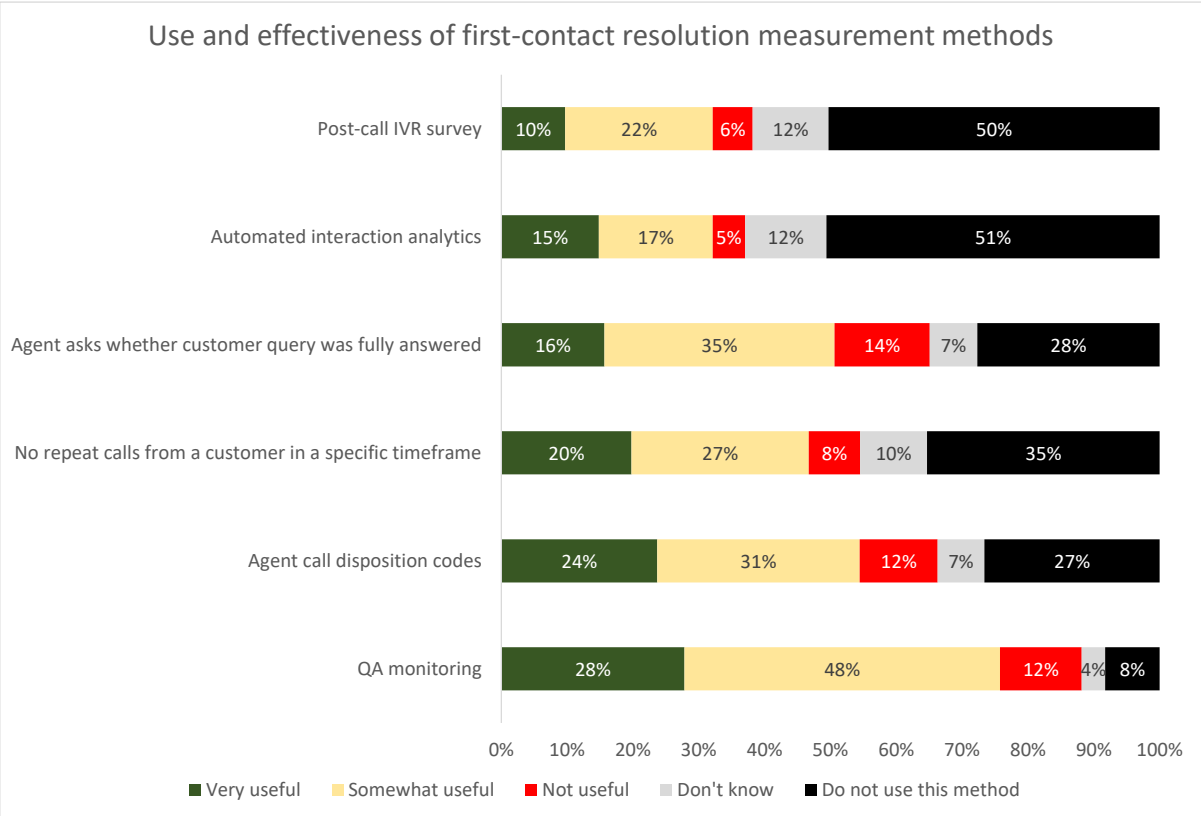
The first-contact resolution rate is an important metric to study, being concerned both with the customers' experience as well as avoiding unnecessary calls. However, it is very difficult to measure effectively, with no single best practice method of getting definitive statistics that are directly comparable to the rest of the industry. This difficulty is shown by the fact that seven or eight years ago, perhaps half of contact centres responding to this survey did not collect FCR performance at all (this year's non-responding figure is only 12%, which is an ongoing improvement).

Of those that do, there are various ways to measure, or at least closely estimate, first-contact resolution rates, all of which are seeing increasing use:

- Agents provide opinions on whether the call was resolved completely, including tagging the interactions with a disposition code at the end of the call (used by 73% of respondents)
- Tracking of issues shows if they are re-opened (65%)
- Supervisors monitor calls and score based on their opinion (92%)
- Customers can be asked their views by the agent (72%) or through an IVR survey (50%)
- Analytics of interaction recordings can be used to see whether the call was actually resolved or more interactions were needed (49%).

The accurate tracking and actionable insight of FCR is one of the biggest challenges to the contact centre industry: it is key to customer satisfaction and cost management.

Figure 191: Use and effectiveness of first-contact resolution measurement methods

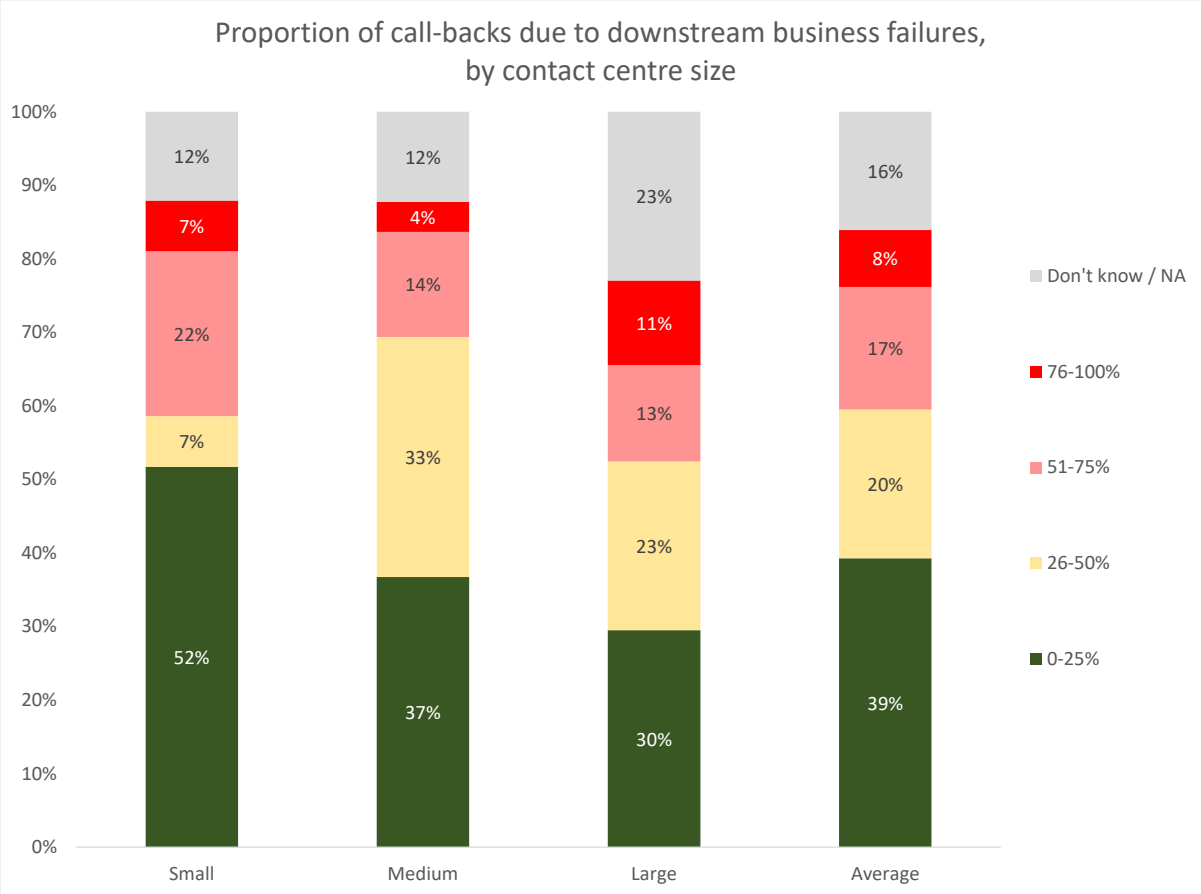


QA monitoring, the most widely-used form of gathering first-call resolution information, is seen as reasonably effective, but automated analysis of call recordings is considered as effective by those respondents that use this method of calculating first-contact resolution, with 40% of users that had an opinion finding it very useful. Other methods have their supporters and detractors, with tracking repeat calls and agent disposition codes also being quite well thought of.

It is worth noting that the majority of contact centres who track first-contact resolution do so **only** based on the initial interaction itself: that is, they do not check whether the action or business process initiated by the contact has been followed through successfully. Most complaints received by a contact centre are about the failings of the wider business (usually around 80-90%), so focusing entirely upon the work done within the contact centre is missing the point of measuring first-contact resolution.

The following chart shows that 25% of respondents report that more than half of their call-backs are due to failures in downstream processes and actions (or lack of them), showing that there is a need for joined-up processes between the front and back-office as well as between channels.

Figure 192: Proportion of call-backs due to downstream business failures, by contact centre size



However, even if FCR can be measured successfully and accurately, this figure is still not necessarily actionable: we do not always know why some calls are not resolved first-time. Without a greater level of insight, contact centre managers may not be addressing the real issues that are impacting on customer satisfaction and the effectiveness of the operation. In the near future, we expect to see a greater use of the power of interaction analytics being directed at understanding why customers contact a business multiple times.

The recent ContactBabel report, "The Inner Circle Guide to First-Contact Resolution", looks in depth at how to measure and improve FCR.

IVR

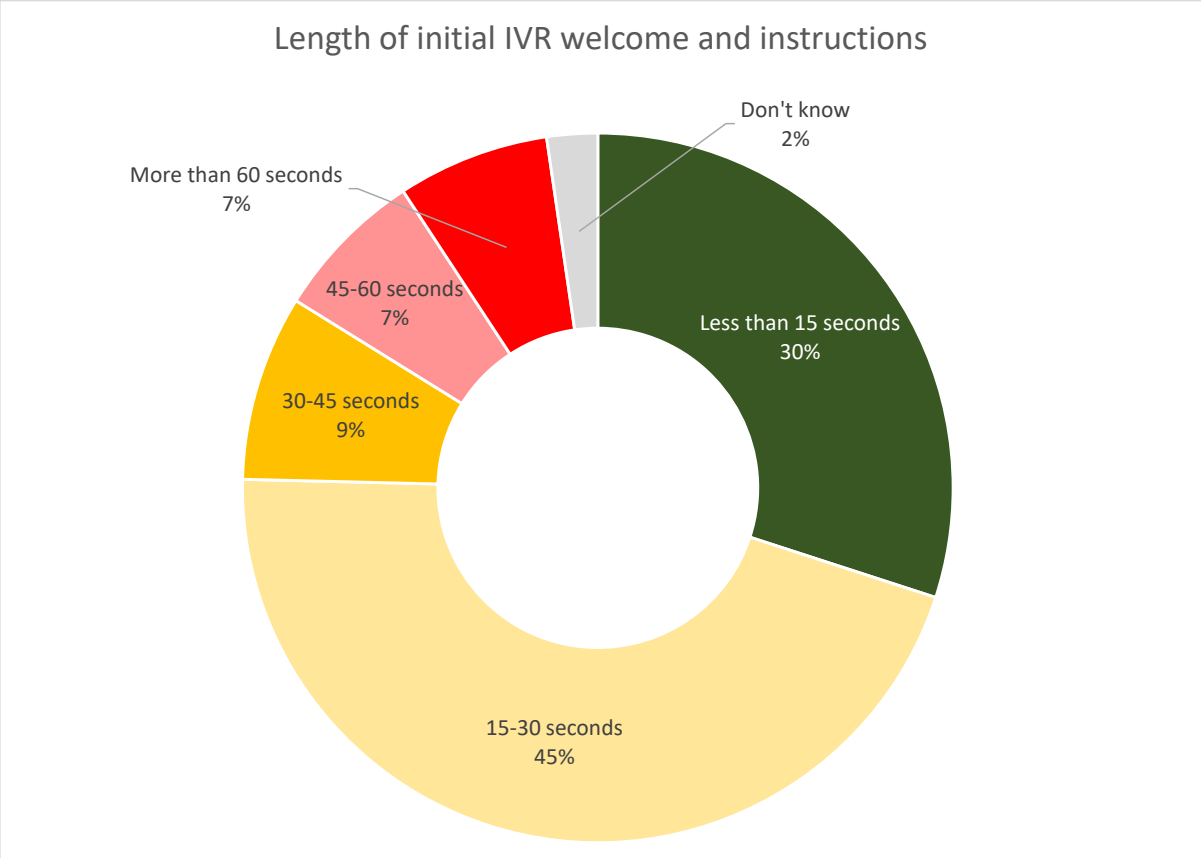
Customer effort is not all about channel choice and the escalation that comes with the failure of the initial channel. Within the call, businesses have put up many blocks and frustrations that can be alleviated.

Many customer interactions begin with an IVR session. For many customers, IVR is seen as a way for the business to put up a barrier between them, involving a long and tortuous path before actually getting to speak with someone. Yet an IVR session should capture information about the customer's identity and requirements that allows a business to provide an answer or route the call to someone who can actually help, rather than taking pot luck by dropping the call on the next agent available.

The IVR experience will often begin with a generic welcome announcement before offering various options for the customer to choose with a DTMF keypad (the vast majority of IVR is carried out with DMTF rather than speech recognition).

Larger contact centres (usually with more departments, skill-sets and products/services) will tend to have the longest initial IVR announcement.

Figure 193: Length of initial IVR welcome and instructions

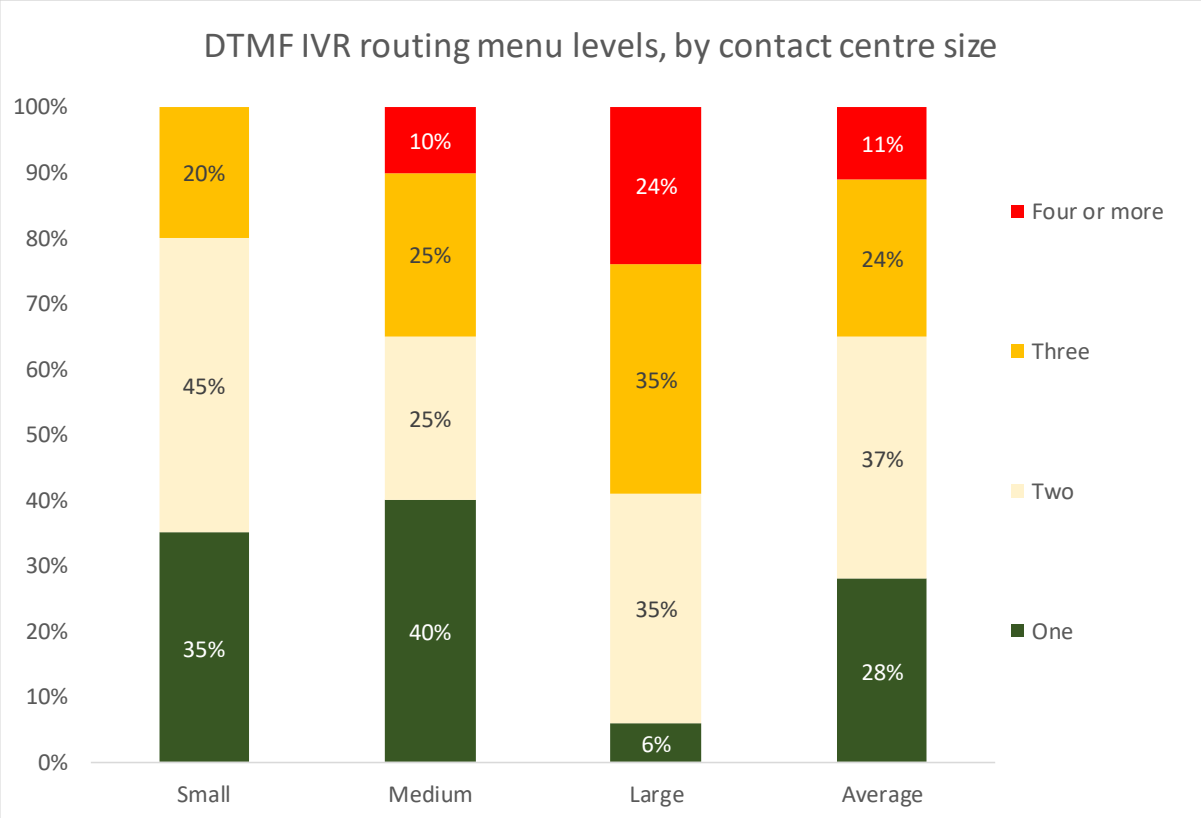


The audio-only nature of DTMF IVR places limitations upon how user-friendly the experience can be for a customer. There has always been a trade-off required between functionality and usability, which manifests itself in the number of menu options and levels that made available within the IVR system. The greater the functionality, the longer the announcements and the worse the customer frustration.

Looking at the number of levels used on a DTMF IVR (i.e. how many key-presses a caller must make to reach their destination), only 28% of respondents keep it simple with a single-level of options, e.g. "Press 1 for Sales; 2 for Service; 3 for Accounts".

24% of large operations present a possible four or more routing menu levels to their customers, a level of granularity that must appear daunting to their customer base.

Figure 194: DTMF IVR routing menu levels, by contact centre size

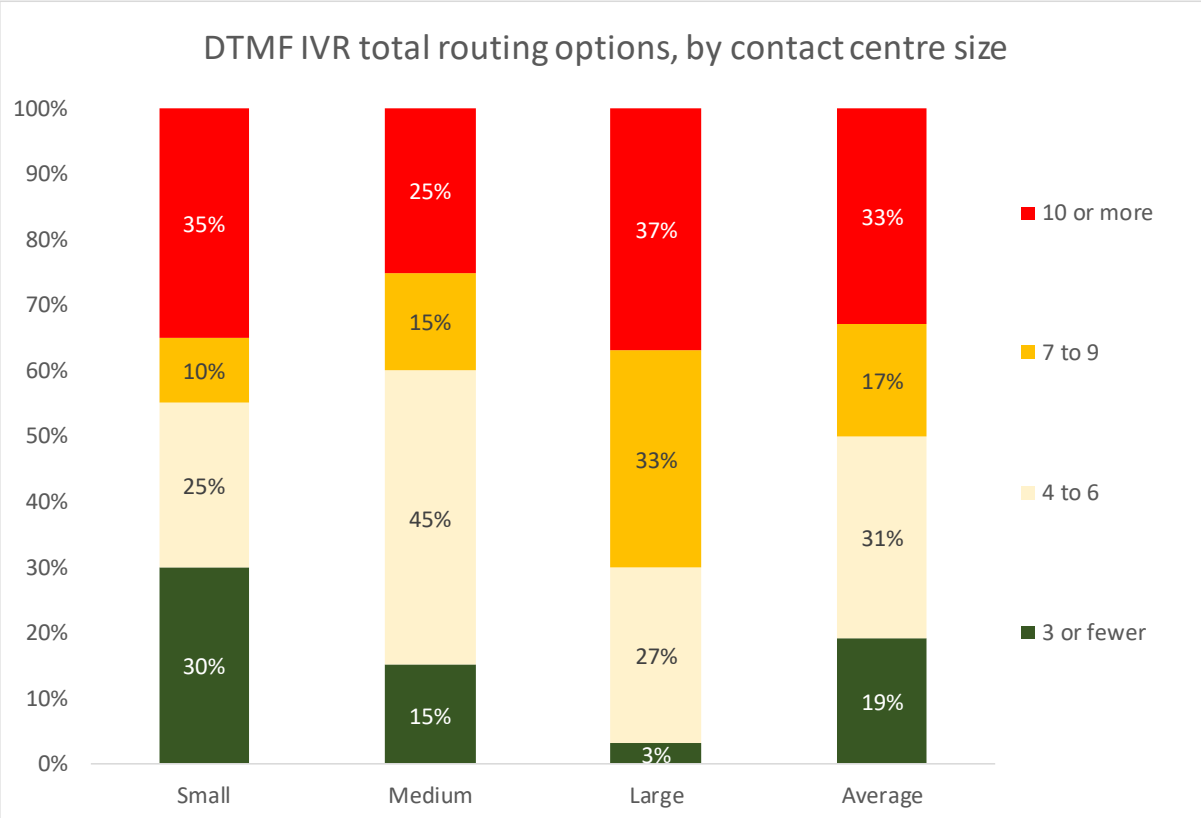


It is not just the number of levels in a menu that can frustrate customers, but also the overall number of options within each level. As the customer cannot see what the options are, but has to listen to each, it can be a very frustrating experience, and one which the movement to visual channels such as web self-service or visual IVR via a smartphone will go a long way towards alleviating.

Respondents report a median of between 6 and 7 options, which can still be a considerable number for a caller to listen to, especially if their preferred choice is the last one in line.

Logically, larger contact centres will tend to support larger businesses, which usually have more departments, offer a greater level of segmentation and have more products and services available to customers. Consequently, there are on average many more menu choices offered in the phone menu of large contact centres, with 70% of these respondents reporting offering seven or more routing options to their customers.

Figure 195: DTMF IVR total routing options, by contact centre size



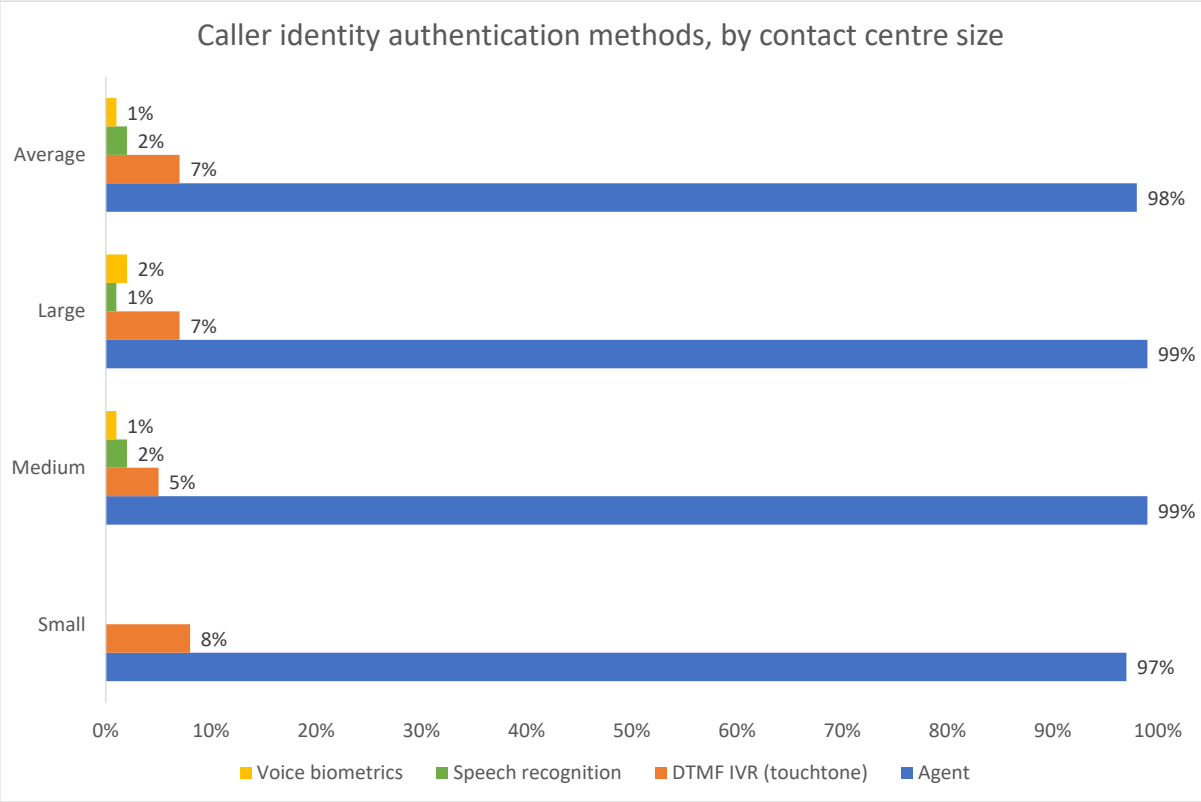
CUSTOMER IDENTITY VERIFICATION

Live agent authentication accounts for 98% of the calls that require customer identity to be proven. 7% of calls are authenticated with DTMF touchtone IVR and 2% use speech recognition to identify the caller, which itself can take around 20-30 seconds. 1% are handled through voice biometrics.

Respondents from large contact centres with far higher volumes of calls have historically been more likely to use some form of automation – usually DTMF IVR – to authenticate customers, with 7% doing so this year, 1% using speech recognition and 2% using voice biometrics. Smaller operations report a significant use of DTMF IVR for customer identification.

However, the vast majority of respondents that use IVR or speech recognition will also use the agent to double-check once the call is passed through, wasting the caller's time and increasing the contact centre's costs. This 'double checking' is the reason for the figures in the chart below adding up to more than 100%.

Figure 196: Caller identity authentication methods, by contact centre size



The mean average time taken to authenticate using an agent has increased to 39 seconds. The figure for authentication using an IVR is slightly less, although the main difference is that the agent's time is not used, so the call duration (from the operation's perspective) and cost per call is reduced. Using voice biometrics to identify a customer within the course of a normal call is an opportunity to reduce the customer effort burden further.

Figure 197: Time taken to authenticate caller identity using an agent (seconds)

	Seconds to authenticate caller identity using an agent
1st quartile	20
Median	30
3rd quartile	60
Mean	39

Customer effort scores look to understand the ease or otherwise with which the customer has interacted with the company on a particular occasion. Often, there will be a five-point scale running from “very easy” to “very difficult”, which can be converted into a quantitative metric. Various methods of calculating customer effort scores and pitfalls to avoid can be found within this referenced article[22]

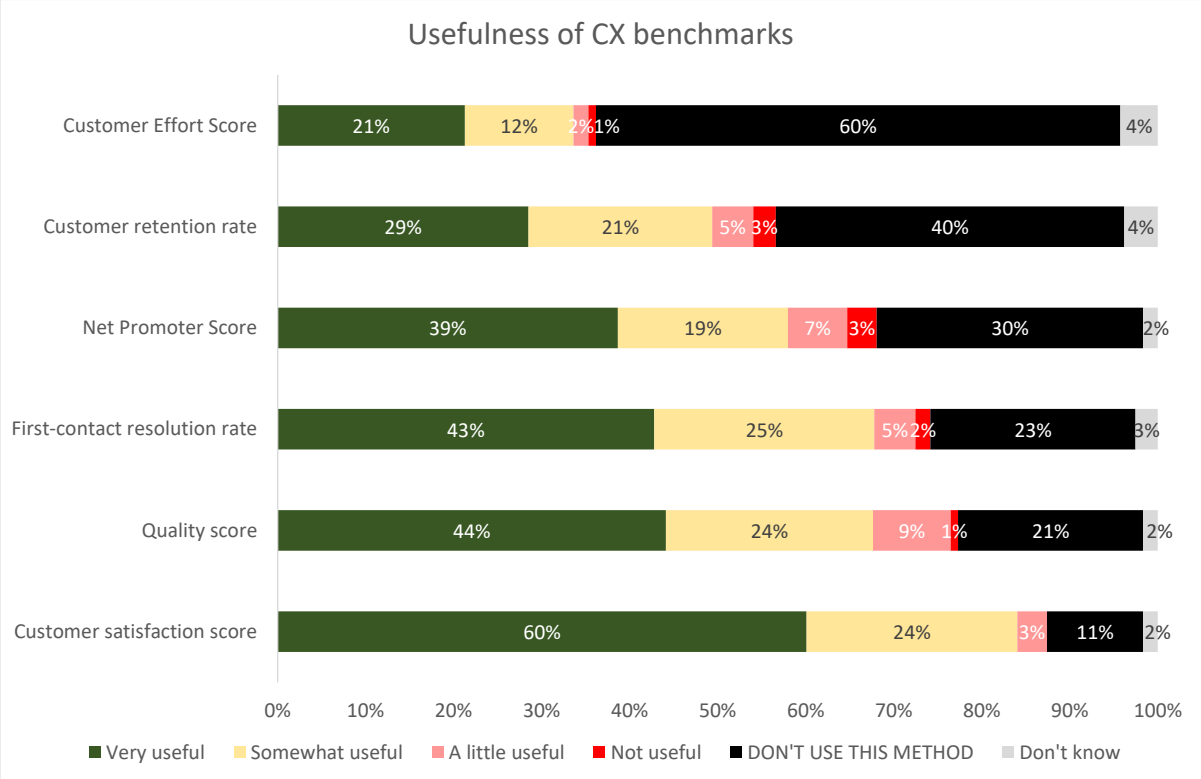
Respondents that used these customer experience benchmarks were asked to rate how useful they were.

69% of respondents that used it stated that they believed that customer satisfaction score was a useful indicator of customer experience, being the highest-rated metric.

Most of the other customer experience benchmarks received very similar scores, with around half of respondents stating that they were ‘very useful’, and lower proportions stating that they were ‘somewhat useful’. Customer effort score was seen as more useful than most.

NPS was rated the lowest, with 57% stating that it was very useful, but 15% saying it was of little or no use.

Figure 198: Usefulness of CX benchmarks



[22] https://www.callcentrehelper.com/how-to-calculate-customer-effort-94671.htm

Yet this acknowledgment that customer effort is important to the success of the contact centre, and the satisfaction of its customers does not yet seem to have struck a chord at the highest levels of most businesses.

Survey respondents were asked to pick a single customer experience metric upon which their board or senior management team most judged the success or otherwise of the customer experience programme.

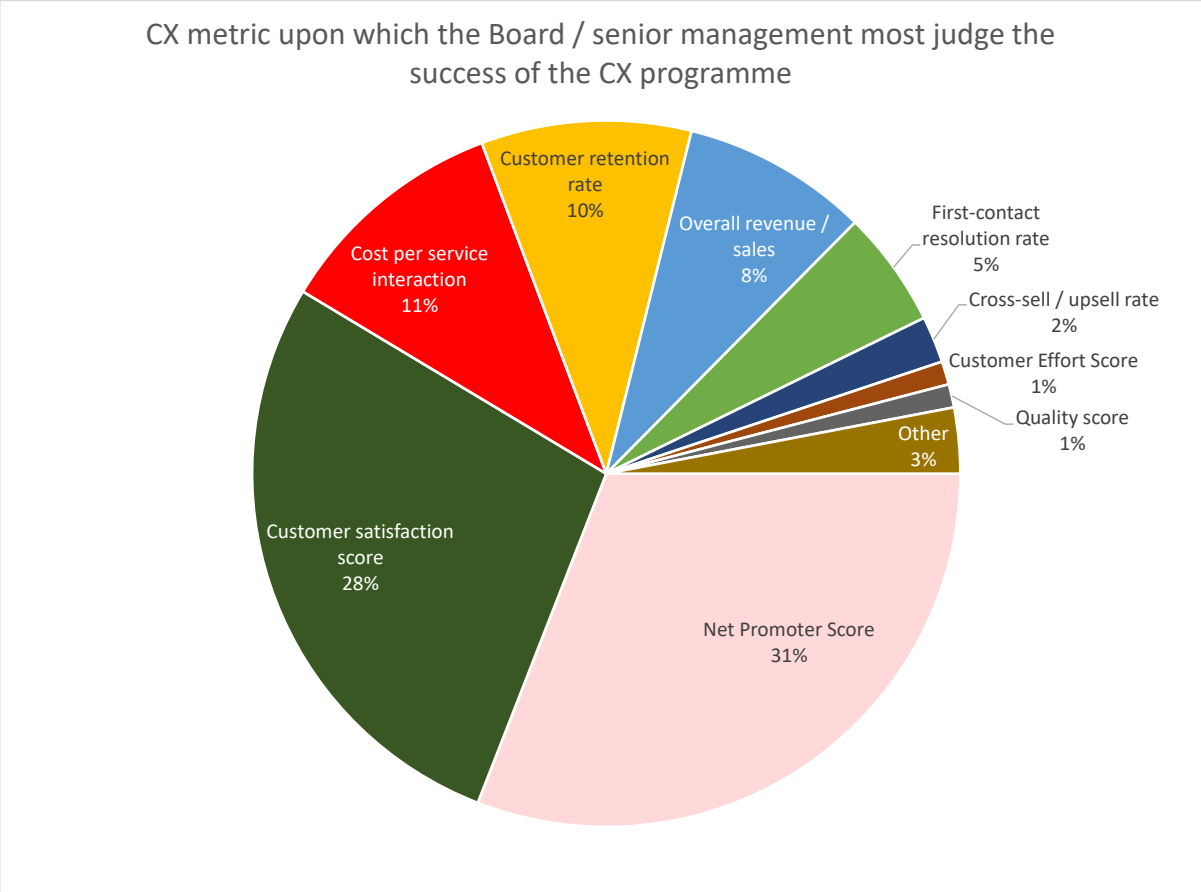
There was a wide mix of responses, with NPS and customer satisfaction score accounting for almost a half of responses.

Interestingly, despite customer effort score being stated earlier as the most useful CX benchmarking metric, only 1% of respondents stated that it was the CX metric considered most important by the senior management team.

Of even greater note is the fact that first-contact resolution rate was identified as being the key CX metric for senior management by only 5% of respondents, despite both the customer and business survey results earlier in this report showing clearly that first-contact resolution was the most important factor in influencing customer experience.

Clearly, customer effort and first-contact resolution still have some way to go in having their importance acknowledged by senior management as well by the contact centre and its customers.

Figure 199: CX metric upon which the Board / senior management most judge the success of the CX programme



CUSTOMER PERSONALISATION

This chapter looks at the ways in which the business can tailor the interaction to the customer's requirements, from identifying who they are and how they prefer to be treated, to dynamic changes within the conversation itself to enable a better outcome.

The chapter includes discussions upon:

- The growing importance of customer personalisation to the contact centre's strategy
- Context- and location-specific service
- Understanding the channel of choice
- Optimising and personalising the IVR experience
- Call routing decisions
- Supporting the agent to help the customer through dynamic scripting, real-time analytics and emotion detection.

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Customer experience
as it was meant to be

Connect with meaning

Personalisation is now an established customer expectation

Today's consumers long stopped basing their loyalty on your product or price alone. To win your customer hearts and minds always think of:

- **Who** your customer is and who they are interacting with, agents or bots.
- **What** your customer wants, needs and prefers; eliminate the irrelevant.
- **When** they choose to interact around their work and lifestyle.
- **Where** you start conversations should reflect the customer journey.
- **How** you communicate should be flexible and meet customers on their channel of choice.

Data management is a foundation for personalisation:

- Eliminate data silos.
- Integrate disjointed histories.
- Interpret with the right goals in mind.
- Fill knowledge gaps with feedback surveys and data collection.

Practical steps:

- Provide straightforward impactful experiences based on your customers' journeys and pain points.
- Experiment and appraise new processes.
- Equip your organisation with a Contact Centre as a Service (CCaaS) solution that can not only help inform personalisation strategies but also assist agents in making them a reality.

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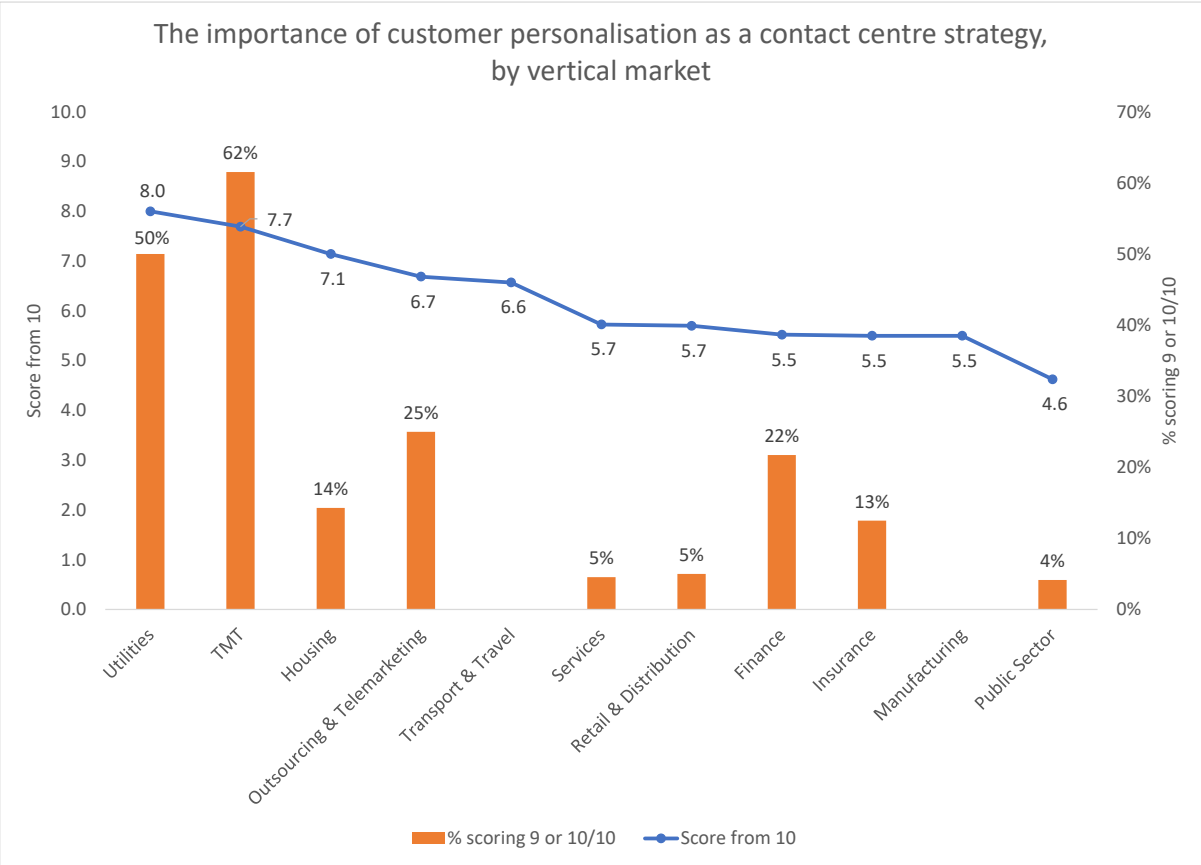
Survey respondents were asked to score the importance of customer personalisation on a scale of 1 to 10, where 10 was 'extremely important'. The proportion of respondents scoring at 9 or 10 – showing a major focus – was also noted.

Many sectors, in particular utilities and TMT, state that customer personalisation is an important part of their contact centre's strategy, and will directly affect the decisions made about the investments made in future.

Personalisation was seen to be somewhat more important for large contact centres, with 31% rating it as 9 or 10, compared to less than 10% of small and medium operations.

More on the importance of customer personalisation can be found in the Strategic Directions section of this report.

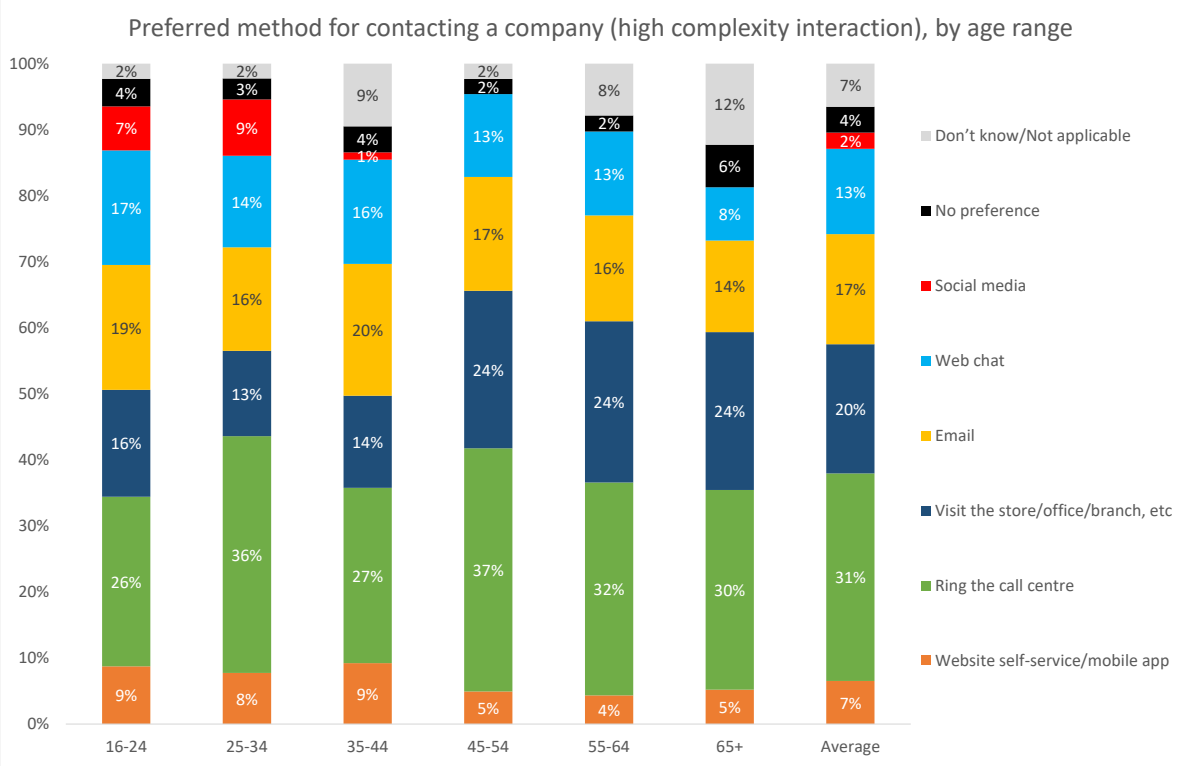
Figure 200: The importance of customer personalisation as a contact centre strategy, by vertical market



The single largest finding from a ContactBabel survey of 1,000 UK customers was that only a minority actually want to pick up a phone to deal with a business despite live telephony accounting for around two-thirds of customer-initiated contact.

The chart below shows the channels of choice for customers who have a complex issue. While it shows some interesting findings – older people value the face-to-face interactions that they are used to from their younger days; the youngest generation are by far the happiest to use a mobile-based app to communicate with the company – the general fact remains that most customers don't want to pick up the phone. And yet they do.

Figure 201: Preferred method for contacting a company (high complexity interaction), by age range



For most customers, being made to pick up the phone puts the customer experience into negative territory, giving the agent an uphill task before a word has even been spoken. For many customers, a truly personalised business experience will not involve them picking up the phone at all.

So, what makes customers do something they don't want to?

The answer is the huge importance that customers place on first-contact resolution. Their experience – not just with a specific business, but in all of their dealings with companies – has shown them that the telephony channel, despite its attendant irritations, is most likely to get the job done first time.

Yet if first-contact resolution is of the utmost importance, we might expect that all other channels would be spurned in favour of telephony. Clearly, with one-third of inbound interactions coming into other channels, this is not the case. Some interactions are simpler than others; some less important or urgent.

It's worth reiterating that, as a rule, customers choose the most painless channel that **also** gets the right result first-time.

This is where things get more complicated: the customer's experience of each interaction is driven not just by what they want to achieve, but also multiple factors such as emotional state, urgency of request, time of day, the device being used and the past experiences of the customer, amongst others. More about this can be found in "The UK CX Decision-Makers' Guide".

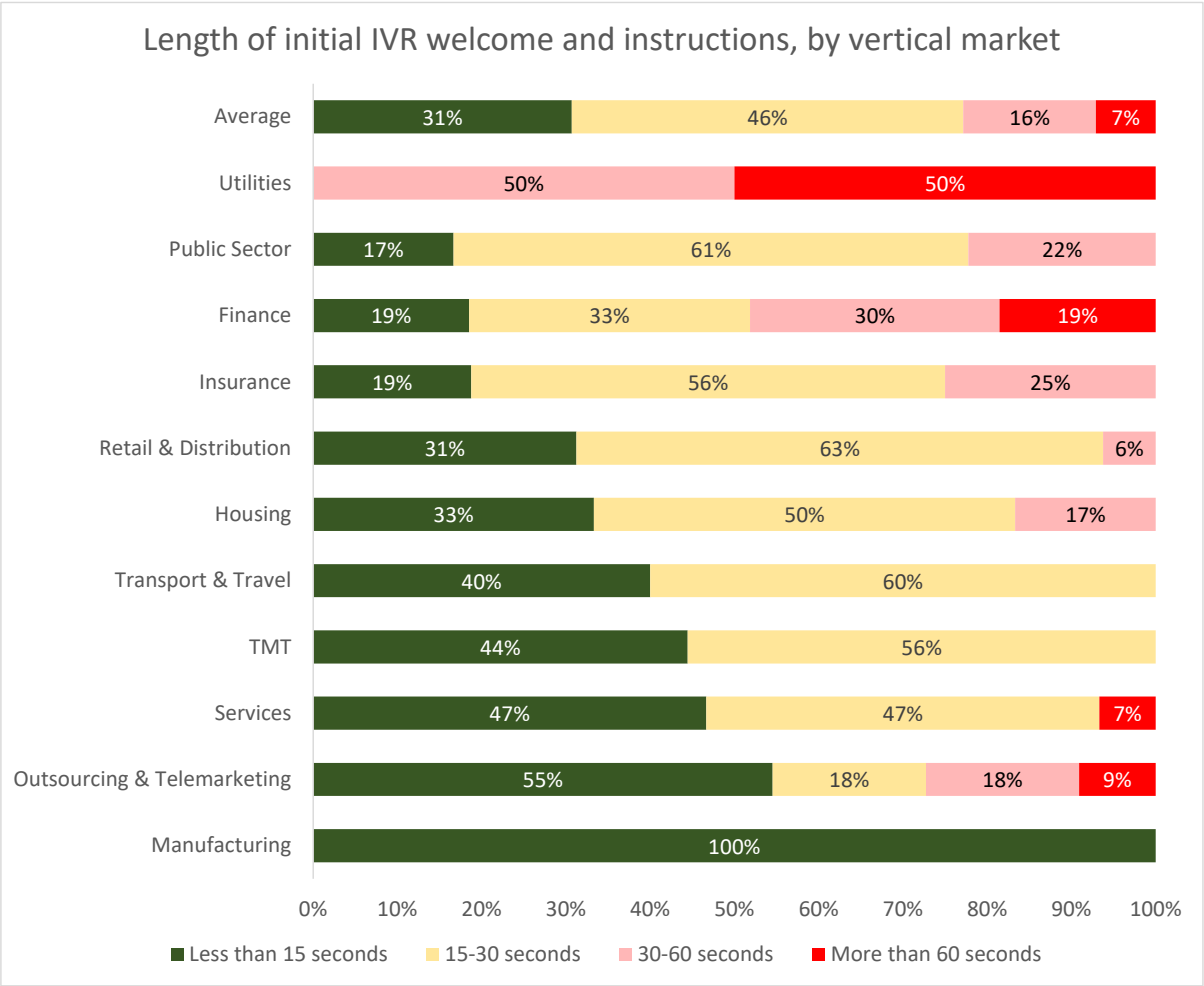
Businesses can reach a better understanding of their customers' requirements by analysing the type of interactions that they receive, and trying to offer the right channels and match necessary resources accordingly. If customers decide that they have to pick up the phone, then the business has ways of making sure that the interaction is effective, painless and customised to the needs of that specific customer, starting from the time that they connect with the IVR menu.

Many customer interactions begin with an IVR session. For many customers, IVR is seen as a way for the business to put up a barrier between them, involving a long and tortuous path before actually getting to speak with someone. Yet an IVR session offers the opportunity to capture information about the customer's identity and requirements, allowing a business to provide an answer or route the call to someone who can actually help, rather than taking pot-luck by dropping the call on the next agent available.

The IVR experience will often begin with a generic welcome announcement before offering various options for the customer to choose with a DTMF keypad (the vast majority of IVR is carried out with DMTF rather than speech recognition).

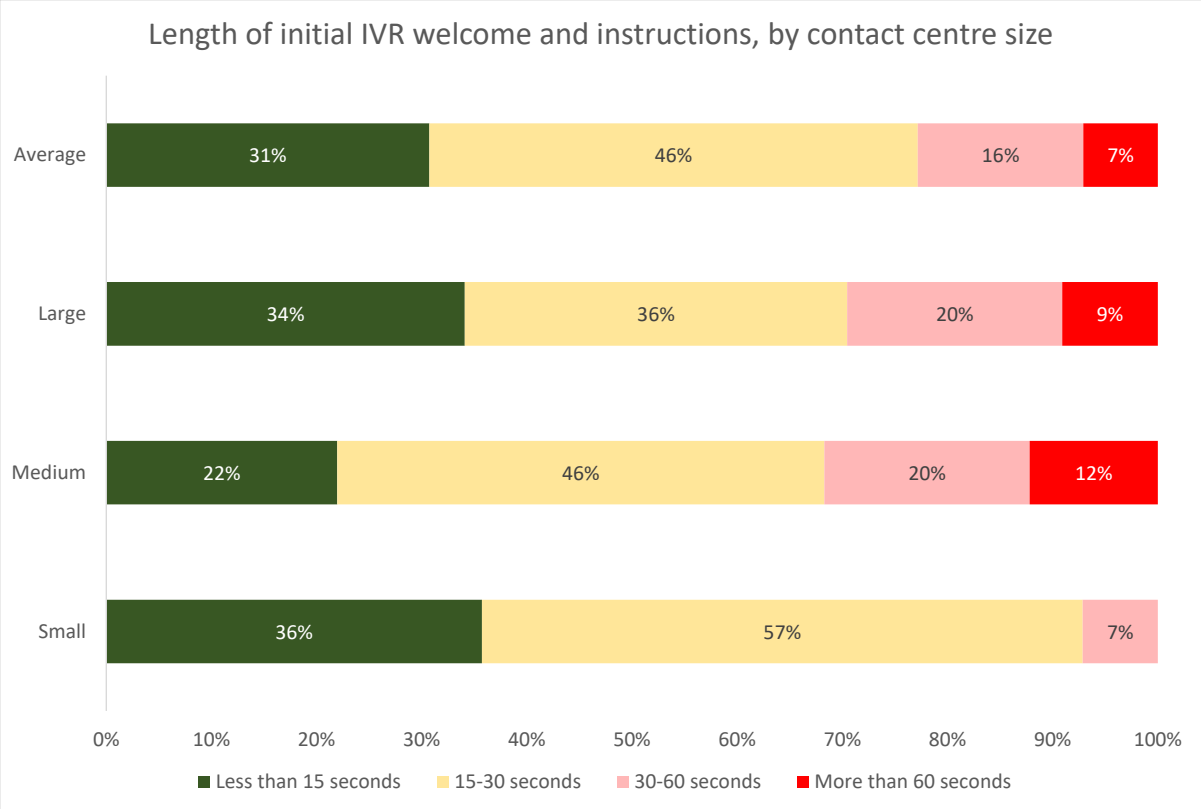
All of the respondents from the transport & travel, TMT and manufacturing sectors state that their IVR announcement is shorter than 30 seconds (the times stated below include the welcome, along with the first set of IVR options). Half of the utilities respondents report very long IVR announcements.

Figure 202: Length of initial IVR welcome and instructions, by vertical market



Larger contact centres (usually with more departments, skill-sets and products/services) will tend to have the longest initial IVR announcement, with 12% of mid-sized operations reporting announcements longer than 1 minute and 29% of large contact centres having IVR announcements of over 30 seconds.

Figure 203: Length of initial IVR welcome and instructions, by contact centre size



The audio-only nature of DTMF IVR places limitations upon how user-friendly the experience can be for a customer. There has always been a trade-off required between functionality and usability, which manifests itself in the number of menu options and levels that made available within the IVR system. The greater the functionality, the longer the announcements and the worse the customer frustration.

The rapid growth in smartphones has meant that it is now possible to offer a visual representation of IVR menus on a device which will then be used to call the business. Because it is far quicker to read text than to listen to text being spoken - some studies show that a caller can navigate a visual IVR menu between four and five times quicker than a DTMF IVR menu - the customer experience is improved without sacrificing any functionality or options. Furthermore, visual IVR can be used to send video presentations while waiting for an agent, for educational or marketing purposes, or to answer the self-service requirement (for example, pushing the relevant YouTube clip in order to show the caller how to do something).

Many businesses that use DTMF IVR have made long-term investments in this technology, and retiring the system entirely is not desirable. Giving existing IVR functionality a visual interface simply means that the IVR's path can be shown as a picture on a website or smartphone, with callers touching the selection that they require without having to listen to all of the options or to go up and down levels or branches. This has the dual benefit for the customer of being far quicker than listening to IVR menu options, and of being significantly more likely to get them the correct information or to be routed to the department most appropriate to their needs. Visual IVR menu systems integrate with existing DTMF structures and reuse the same VoiceXML scripts, meaning that any changes made to the existing DTMF IVR system will be automatically replicated regardless of channel or device.

Visual IVR offers companies the ability to develop value-added applications for their customers, rather than simply providing a visual representation of existing IVR menus. For example, in cases where very specific expertise is required, visual IVR can be used to help the caller self-diagnose where in the organisation they need to be going, rather than having to speak to a front-line agent who will then have to ask them the same questions in order to route the call to the appropriate resource.

It is worth noting that despite the huge uptake in smartphones and mobile apps, it is very unlikely that customers will find it convenient to have an app for every company with which they deal. Like apps, a visual IVR option provides businesses with an opportunity to display corporate branding and deliver an improved customer interaction experience.

Another option is to speech-enable IVR, to increase the features available to the caller. Standards-based languages such as CCXML and VoiceXML support speech recognition and improved access to relevant corporate data, the integration of which into the IVR experience supports text-to-speech and the use of caller profiling to enable personalised IVR sessions based on who the caller is, their history, their contact preferences and any other relevant information that would further assist the self-service session. Smartphone applications and IVR options could be tailored to the preferences and history of a customer. In turn, the business could ensure that customers are only offered options that both make sense to them personally and also optimise business potential. This is analogous to the targeted advertising approach delivered by the likes of Google and Facebook.

By identifying a customer within a self-service process, and by personalising and contextualising offers that they may be interested in based upon their profile, history and what they are searching for now, businesses stand a very good chance of improving their cross-selling and up-selling rate accordingly. There are also wider and longer-term benefits to be had by understanding more about the customer's mindset and personal circumstances.

A key aim of omnichannel is to provide a consistency of customer experience, and this requires access not only to the same master dataset, but also that the same knowledge bases and business logic must be applied equally. There must be real-time data flow and updates between channels and databases, as without this, consistency is impossible. Putting such systems and processes in place will not only allow the seamless escalation of service requests within channels, but also gives the business a chance to use their automated systems to react to an escalation before it reaches a live agent, deflecting the cost while fulfilling the service request more quickly.

For example, analysis of past interactions may indicate that if a particular customer has placed an online order, they are likely to ring the contact centre within 2 days to check on its progress. Making the IVR aware of the customer's history means that this call can be intercepted before it reaches an agent, and a personalised IVR experience (with the option to "Check your order status") will reduce customer effort and the time and cost of the agent who would otherwise handle this. Analysing and predicting customer intent will become a competitive service differentiator within the next few years.

ANALYSING CUSTOMER INTENT

Customer interaction analytics can provide a solid understanding of why customers are calling. Categorising types of calls, and then analysing them for the occurrence of similar types of words and phrases can give an insight into the reasons for customers' calls. For example, a category such as 'sales' might be analysed for patterns, and it is discovered that the words 'delivery' and 'website' are mentioned in a disproportionate number of them. Listening to some of these conversations, it may be found that the website does not highlight delivery times effectively enough, leading to unnecessary calls to the contact centre, rather than the customer purchasing on the website.

The automatic categorisation of calls, based on the types of words and phrases that typically get used within these types of calls, is a starting point. Analytics solutions can then add non-audio data, such as desktop activity or account status, and the tracking of word usage compared with its historical use (e.g. a 300% rise in the use of the phrase "can't log-on" after a software upgrade) can quickly indicate and identify issues that can be handed to the relevant department much more quickly than typical inter-department channels could usually manage. Regular references to competitors and their products can be captured, analysed and passed to the marketing or pricing teams to provide them with real-life, rapid and accurate information upon which to base decisions. This categorisation gives a starting point for analysis, meaning that businesses can listen to the right calls rather than getting them randomly or employing large numbers of people to get insight from customers' calls.

This information can be matched against customer profiles, or those which have recently carried out specific actions, in order to predict why they are calling, and either offer the correct self-service option, or proactively communicate the required solution before they even call.

PERSONALISING THE MOBILE CUSTOMER

This personalised approach is also leveraging the information that mobile and especially smartphone devices can provide. On moving from self-service to assisted service, mobile service applications should gather the browsing history, customer information and the context of the session in order to pass this to a live agent. Smartphones are enabled with GPS tracking, so businesses should look to leverage this capability to deliver better customer experiences where possible. In fact, the inherent capabilities of the mobile device offer businesses huge opportunities to impress their customers, including location-specific information, such as local broadband outages, or the ability to leverage photo-taking functionality on the phone to provide the agent with a clearer picture of the situation (which may be particularly useful for insurance claims, for example).

SMS and outbound calling also offer opportunities for businesses to deliver proactive customer service through the mobile channel, creating a positive attitude. Furthermore, location-specific device information also allows businesses to deliver timely service and relevant marketing messages which can be positives for the customer at that specific place and time.

Contextual data provide a great opportunity for businesses to deliver timely personalised service in a cost-effective and profitable manner. The nature of mobile devices means that businesses potentially have the opportunity to know more about their customers and their specific requirements and preferences than ever before.

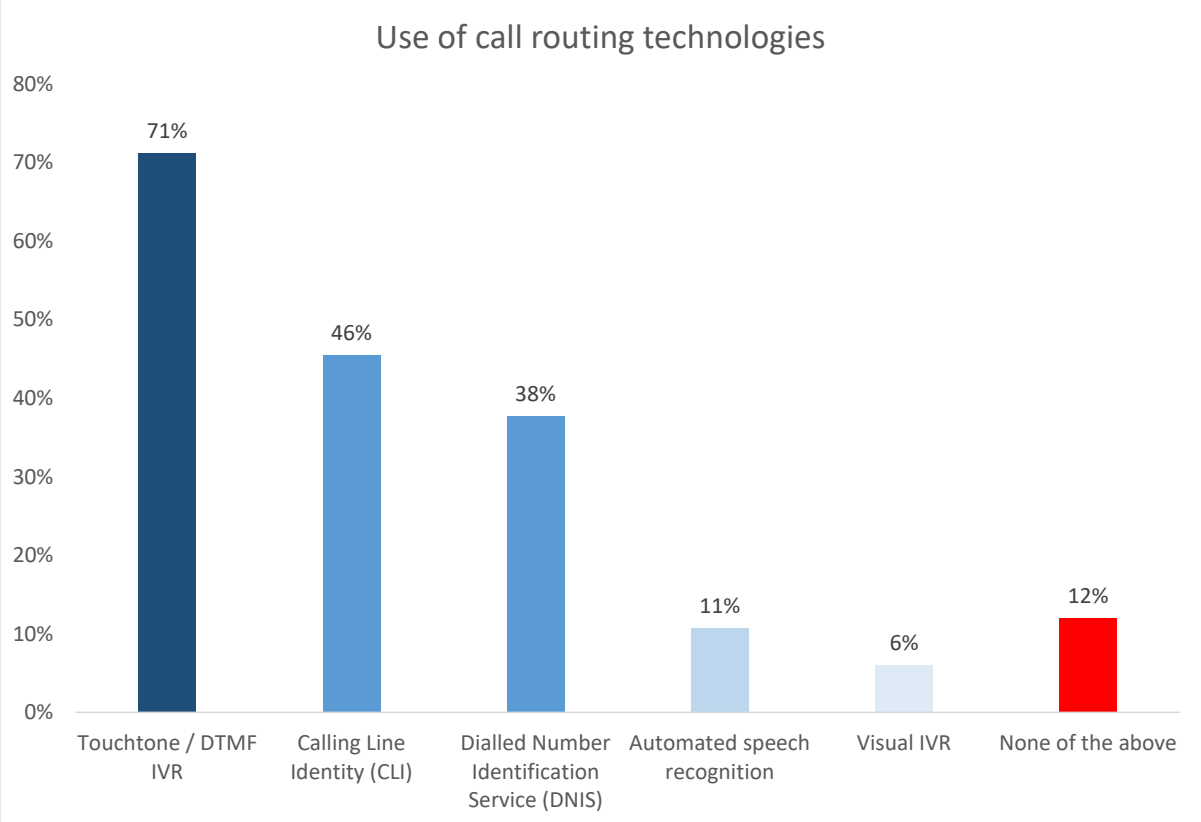
This includes:

- Customer identity: once the customer has identified themselves, such as by logging on, or through the mobile phone number, this allows the agent to access their existing customer history in the same way that would be done so on a phone call into the contact centre.
- Geographical information: smartphones are GPS-enabled, allowing agents to see where customers are, and to direct them to the nearest shop, for example.
- Historical activity: if the customer has been browsing a mobile website or app beforehand, the information that the customer browsed previously may be useful for the contact centre agent to have to hand, in order to see and understand what the customer has already tried to do.
- Stored data: the mobile device may have data stored that identifies the customer, such as account number, that can speed up the interaction and make it more effective.
- Collected information: the mobile device may also be used to capture and share information with the business such as photographs or videos. It may be possible to automate a two-way interaction: for example, a customer may use their mobile phone to scan a QR (quick response) code on a product. Using the information on the code, as well as the customer's input into the app about what they are trying to do, the customer may be directed to the correct place within business's self-service function in order to solve the issue that they have. This can take the contact centre out of the equation altogether, resulting in reduced costs for the business and a quicker and more effective customer experience.

On the occasions when the customer has chosen the phone channel but not had their issue resolved through IVR self-service, the business has had the opportunity to learn who they are, and perhaps gather some information about what they want.

Building on that, there is an opportunity to see what this customer has done before, how they prefer to be addressed and their conversational style, as well as putting all of the relevant information on the agent's screen before a word has been spoken.

Figure 204: Use of call routing technologies



Most of those who use IVR for routing purposes identify the actual caller through one or more techniques, for example using DTMF tones to input account number, through an automated security process or through calling line identity (CLI) which displays the number that the customer is calling from, allowing a database lookup. This may be the used for a screen pop, or to automatically route the customer to a specific department or office. (Some businesses may use CLI to identify a region or country and route appropriately without looking up who the customer is, and these are not included in this figure).

More than half of respondents use this information or other sources (for example, identifying the language that the customer is using via speech recognition) in order to identify the skills that the call may require, and use this to route the call appropriately.

46% understand something about the subject that the customer wants to discuss (this could be as simple as pressing '1' for sales and '2' for service), and 37% actually identify the customer, with only 29% then accessing the records within the CRM system in order to deliver this to the agent desktop.

Only 11% identify whether the agent who last spoke to this customer is available, an option which could be used to personalise the call and develop the relationship and understanding between the customer and business.

31% of contact centres do none of these things, and the caller is faced with explaining who they are and want they want. At the opposite end of the spectrum, some contact centres attempt to match the customer with an agent based on personality types and communication preferences, and this is discussed in the next section on predictive behavioural analytics and routing.

Figure 205: Pre-call personalisation actions

Method	% of respondents using this method
The subject that the customer wants to discuss	46%
Identify the skills and capabilities that the agent answering the call is likely to need	37%
Identify the customer	37%
Access the customer's records and history in the CRM system	29%
Identify whether the agent that last talked with this customer is available to take the call	11%
None of the above	*31%*

Predictive analytics is a branch of analysis that looks at the nature and characteristics of past interactions, either with a specific customer or more widely, in order to identify indicators about the nature of a current interaction so as to make recommendations in real-time about how to handle the customer.

For example, a business can retrospectively analyse interactions in order to identify where customers have defected from the company or not renewed their contract. Typical indicators may include use of the words “unhappy” or “dissatisfied“; customers may have a larger-than-usual volume of calls into the contact centre; use multiple channels in a very short space of time (if they grow impatient with one channel, customers may use another); and mention competitors’ names. After analysing this, and applying it to the customer base, a “propensity to defect” score may be placed against each customer, identifying those customers most at risk. Specific routing and scripting strategies may be put in place so that when the customer next calls, the chances of a high-quality customer experience using a top agent are greater and effective retention strategies are applied.

A branch of predictive analytics, predictive behavioural routing uses insights gathered from historical calls and the analysis of customer communication types in order to choose the agent whose skills and characteristics are most likely to achieve a positive response from the next caller in the queue.

Predictive behavioural routing uses millions of algorithms to decode the language used by agents and customers, in order to understand their state of mind, personality, communication style, engagement levels, empathy and transactional attributes (such as ability to overcome objections, willingness to sell, success rates, the number of times supervisor assistance is required, etc.). Through analysing historical interactions, each customer can be matched against a specific personality style. When this customer calls again, they are identified through the IVR or the dialling number, and the call is then routed through to an agent whose performance when interacting with this specific personality type has been seen to be positive. This increase in empathy and the matching of communication styles has seen these matched agent-customer pairings get significantly higher sales closure rates and better customer satisfaction scores.

Predictive behavioural routing has its roots in communication-based psychological models for assessing personality type and identifying behavioural characteristics. One vendor’s solution, for instance, is based upon a personality model developed in the 1970’s to assist NASA with astronaut selection; the premise of this model is that individual personality type can be derived from a person’s use of language. By understanding the type of customer, calls can be routed to agents who are best at handling the caller. Agents who are skilled at handling many types of callers' personality styles can be saved for callers whose character type is unknown, perhaps as this is the first time that they have called.

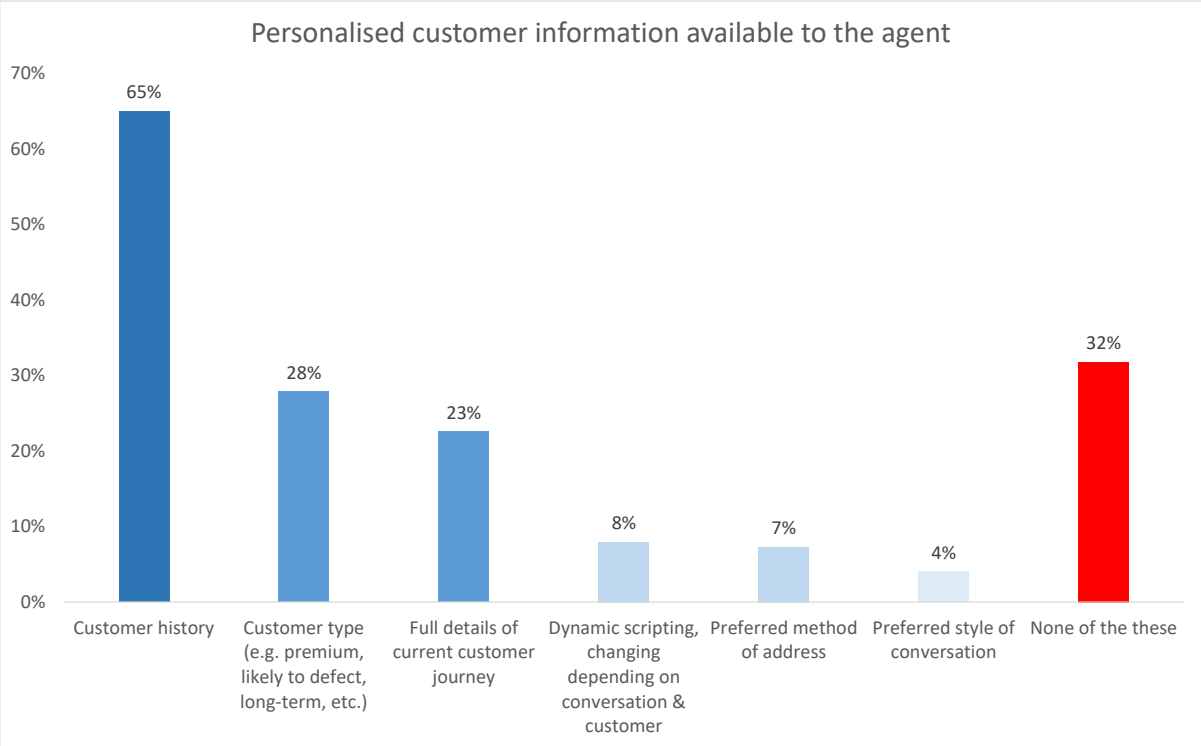
By tracking agent performance across various personality types, information can be fed into the performance management process to help that agent improve, and agent capabilities are regularly reassessed to promote optimal routing.

HELPING THE AGENT TO HELP THE CUSTOMER

Once the customer has been identified and the call has been routed to the agent, greater personalisation of the interaction becomes possible. Agents need relevant information about the customer and the issue they wish resolving to be available at a glance, without having to search manually for it, or keep the customer waiting while they try to understand the situation.

Integrated desktop solutions can remove the need for agents to log into multiple applications, assist them with the navigation between applications within the call, and make sure that customer data is gathered from the correct places and written consistently back to any relevant databases without the need to navigate through multiple systems. This not only increases speed and accuracy, but allows the agent to concentrate on the customer, and on any alerts or suggestions that the desktop application is making about where to take the conversation next.

Figure 206: Personalised customer information available to the agent



65% of contact centres report that the agent has a full view of the customer history, including any non-voice interactions.

Very few respondents state that their agents are provided with hints and tips on how the customer prefers to be addressed or their style of conversation (relaxed, formal, chatty, etc.), meaning at best that callers receive the same neutral, generic form of address as everyone else.

Only 8% of this year's survey respondents use dynamic scripting, which helps the agent to provide the right information at the right time, seamlessly linking with multiple back-office applications and databases, providing only what is relevant onto the agent's screen. Depending on the experience or profile of the agent, what the customer is trying to do and any regulatory inhibitors, on-screen buttons can be enabled or disabled, or access to fields limited according to business rules. Furthermore, adherence to business processes can be assured by making the agent complete all of the required steps in the transaction (for example, adding call notes, reading disclaimers, etc.).

Dynamic scripting can be supported by the use of real-time analytics, which should perhaps be more accurately referred to as 'real-time monitoring and action'. Analysis ("a detailed examination of the elements or structure of something[23]"), refers to the discovery and understanding of patterns in data, and is currently something that by definition only happens post-call when all data are fully present. Real-time monitoring on the other hand, looks for and recognises predefined words, phrases and sometimes context, within a handful of seconds, giving the business the opportunity to act.

For some businesses, real-time analytics is an important and growing part of the armoury that they have to improve their efficiency and effectiveness. There is potentially a great deal of benefit to be gained from understanding automatically what is happening on the call, and in being able to act while improvements are still possible, rather than being made aware some time after the call of what has happened.

Real-time analytics can be used in many ways:

- monitoring calls for key words and phrases, which can either be acted upon within the conversation, or passed to another department (e.g. Marketing, if the customer indicates something relevant to other products or services sold by the company)
- alerting the agent or supervisor if pre-specified words or phrases occur
- offering guidance to the agent on the next best action for them to take, bringing in CRM data and knowledge bases to suggest answers to the question being asked, or advice on whether to change the tone or speed of the conversation
- escalating calls to a supervisor as appropriate
- detecting negative sentiment through instances of talk-over, negative language, obscenities, increased speaking volume etc., that can be escalated to a supervisor
- triggering back-office processes and opening agent desktop screens depending on call events. For example, the statement of a product name or serial number within the conversation can open an agent assistant screen that is relevant to that product
- making sure that all required words and phrases have been used, e.g. in the case of compliance or forming a phone-based contract
- suggesting cross-selling or upselling opportunities.

[23] http://www.oxforddictionaries.com/definition/english/analysis

Many solution providers have worked hard to bring to market new or improved solutions to assist with real-time monitoring and alerts, and recognition of key words, phrases, instances of talk-over, emotion and sentiment detection, pitch, tone, speed and audibility of language and many other important variables can be presented on the agent desktop within the call, triggering business-driven alerts and processes if required.

The speed of real-time is crucial to its success: long delays can mean missed, inappropriate or sub-optimal sales opportunities being presented; cancellation alerts can show up too late; compliance violations over parts of the script missed-out may occur as the call has already ended. However, it is important not to get carried away with real-time, as there is a danger that businesses can get too enthusiastic and set alert thresholds far too low. This can result in agents being constantly bombarded with cross-selling and upselling offers and/or warnings about customer sentiment or their own communication style, so that it becomes a distraction rather than a help.

The concept of 'emotion detection' is becoming more frequently mentioned in relation to real-time analytics. Emotion or sentiment displayed on calls can be extremely difficult to track accurately and meaningfully, as everyone has their own way of expressing themselves, words and feelings may not match up, or external irritations not related to the topic of conversation may intrude. Some vendors argue strongly that detecting emotion on each call is a useful tool - for example, by passing irate customers to a supervisor - and further developing their ability to detect voice-stress on a call in order to flag these to a supervisor, with some real time monitoring solutions measuring indicators such as speed of speech, volume, use of key word triggers, instances of talk-over or silence, etc.

There is another viewpoint, taken by those that offer solutions based on the analysis of masses of recordings, that says that the real value comes from looking at very large samples of data to identify those agents, processes and circumstances where emotion (often negative) runs highest, and taking into account the outcome of the call as well. While emotion detection has had a relatively low profile for many solution providers, recently there has been a great deal talked about the benefit of sentiment detection in both real time and historical analytics solutions.

Against this however, is the feeling that this is one thing that humans can do far better than machines: do agents really need to be advised on a call when somebody is being sarcastic, or is upset? It may be that sentiment detection is more suitable for large-scale historical analysis of calls, where emotional content can be correlated with the outcome of the call, and the spoken use of a word can be ambiguous when seen as text (for example, in the use of sarcasm).

Another viewpoint is that real-time sentiment analysis may be useful for offshore agents who have a different cultural and first-language background to that of the caller.

Some solution providers have recently noted that it is not only what we might consider the keywords within the conversation that indicate sentiment (e.g. "upset", "disappointed", "recommend"), but also the filler words (for example, if the inclusive "we" changes to "you", which may indicate estrangement from the brand.

Away from live phone calls, using artificial intelligence (AI) for analytics will allow the business to provide customers with personalised service before they even require it. AI will be able to predict what the customer is likely to meet next, based upon analysis of other customers with similar circumstances in the past. This move to proactive customer service is a step further than what is currently widely-used – automated emails or SMS providing an update about delivery times, for example – anticipating sources of frustration or the need for assistance before the customer has even realised it, on a personalised basis. Machine learning – which will be able to identify patterns within data automatically, without requiring an analyst to direct it – will give analytics even greater scope and power.

HR MANAGEMENT

With staffing accounting for up to 75% of a contact centre's operational cost, issues such as attrition, recruitment and training are always towards the front of any contact centre manager's mind.

This section looks at how time and money are spent on the human element to contact centres, how contact centre decision-makers view their agents' performance and morale, and what they are doing to support their agents' performance.

This section contains information around contact centre HR benchmarks such as attrition and absence.

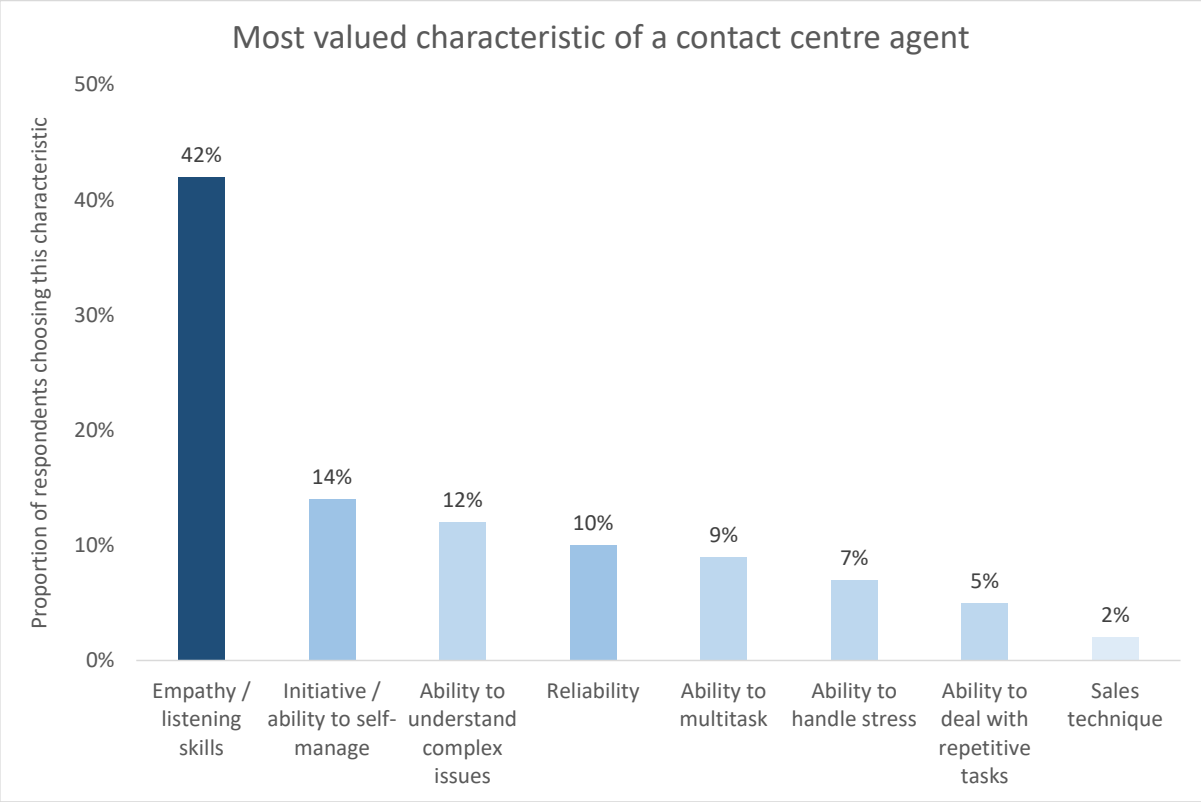
"The 2022 UK Contact Centre HR and Operational Benchmarking Report" also gives detailed analysis of salaries, bonuses, training methods and costs, segmented by vertical market, contact centre size and contact centre activity type where relevant. Historical trends are observed with a view to predicting what future standards will look like.

The report also contains operational benchmarks such as speed to answer, call abandonment rates, call duration, call transfer rate, cost per call, agent occupancy, target service levels and first-call resolution rates.

42% of respondents this year's survey state that the most valued characteristic of a contact centre agent is their ability to listen and empathise with the caller. This ability is seen as being far more important than initiative, being able to handle stress, multitask, sell effectively or understand complex or technical issues.

While some people naturally have this skill, experience and directed training can maximise it in others. As self-service and AI-enabled solutions handle increasing amounts of straightforward customer interactions, those that are left to be handled by a telephony agent will be of a more complex nature and/or of a type where the customer needs reassurance and empathy. This can be seen by the very significant increases in average call duration with the typical inbound service call rising in length by around 80% since 2003.

Figure 207: Most valued characteristic of a contact centre agent



ATTRITION

While many operations' attrition and absence rates are not dramatically high, it should be noted that over one-third of survey respondents agreed or strongly agreed with the statement "HR issues – attrition, absence, skills and recruitment – are preventing our contact centre from achieving its aims and potential."

As such, the contact centre requires different people than has traditionally been the case, with skills and behaviours aligned to the modern customer, and the business's desire to improve the customer experience. With contact centre salaries creeping upward at a glacial rate (and actually dropping in real terms), finding and keeping people of the right calibre is more difficult than ever.

Throughout the studies that ContactBabel has carried out over the years, whether in the US or Europe, staff attrition has consistently been quoted as one of the major worries of contact centre management. Along with staff absences, high levels of unexpected attrition can cripple a contact centre's ability to provide even an acceptable level of service, raising costs and creating a negative customer experience, as well as placing massive stress on those agents who remain at work.

For many years, attrition has been one of the greatest challenges facing the industry, and one which has rarely been addressed with much in the way of a truly radical approach. The recession reduced attrition greatly, but recent years' data shows that this was a temporary respite, with attrition remaining around 20% on average, and 1 in 6 operations experiencing annual attrition of over 30%.

Staff attrition in small doses can be good for a contact centre, bringing in fresh blood and enthusiasm. However, high levels of staff attrition have some serious side-effects:

- Increased recruitment and training costs
- Decreases the average agent competency as there are so many 'learners'
- Can decrease the quality of the customer experience, as the agent may not know how to answer the query correctly first-time
- Adverse affect on contact centre performance indicators, including first-time resolution, call transfer rates, queue time and call length
- Bad for the morale of the remaining staff
- Inexperienced staff are more likely to miss cross-selling and up-selling opportunities
- Increased pressure put on team leaders and experienced agents
- Difficult to bring on-board new systems and ideas, as the agents are struggling with what is already in place.

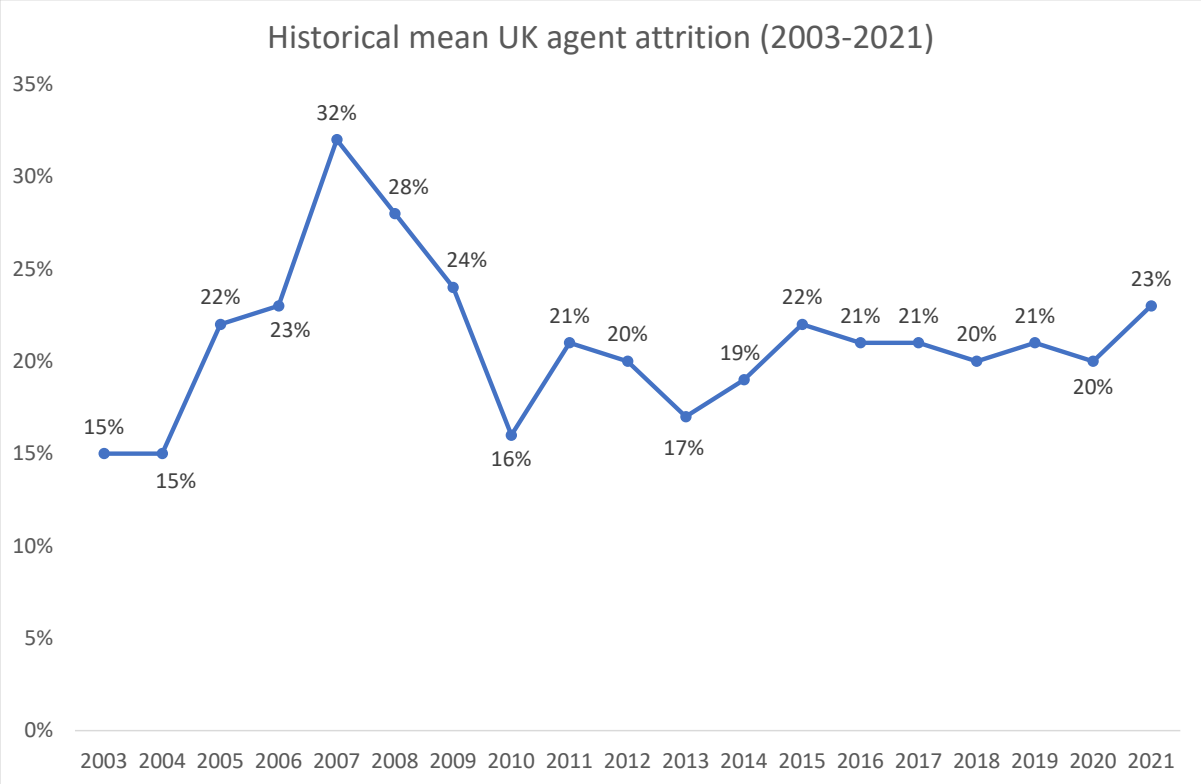
Attrition rate in this report is defined as the total number of agents leaving the contact centre in a 12-month period, divided by the average number of occupants during the same 12-month period, expressed as a percentage.

In the mid-2000s, staff attrition rates jumped from the mid-teens to well over 30%. Driven in large part by the drop in alternative employment driven by the widespread economic downturn and banking crisis, attrition dropped sharply for a number of years, slackening to a mean average of 16%.

In 2011, respondents reported attrition rising, to a mean of 21% and median of 15%. Since then, the mean has steadied around 20%.

However, 2021 has seen a rise in attrition to 23% which may be related to the unwinding of the furlough scheme and the record number of job vacancies UK-wide offering alternative employment.

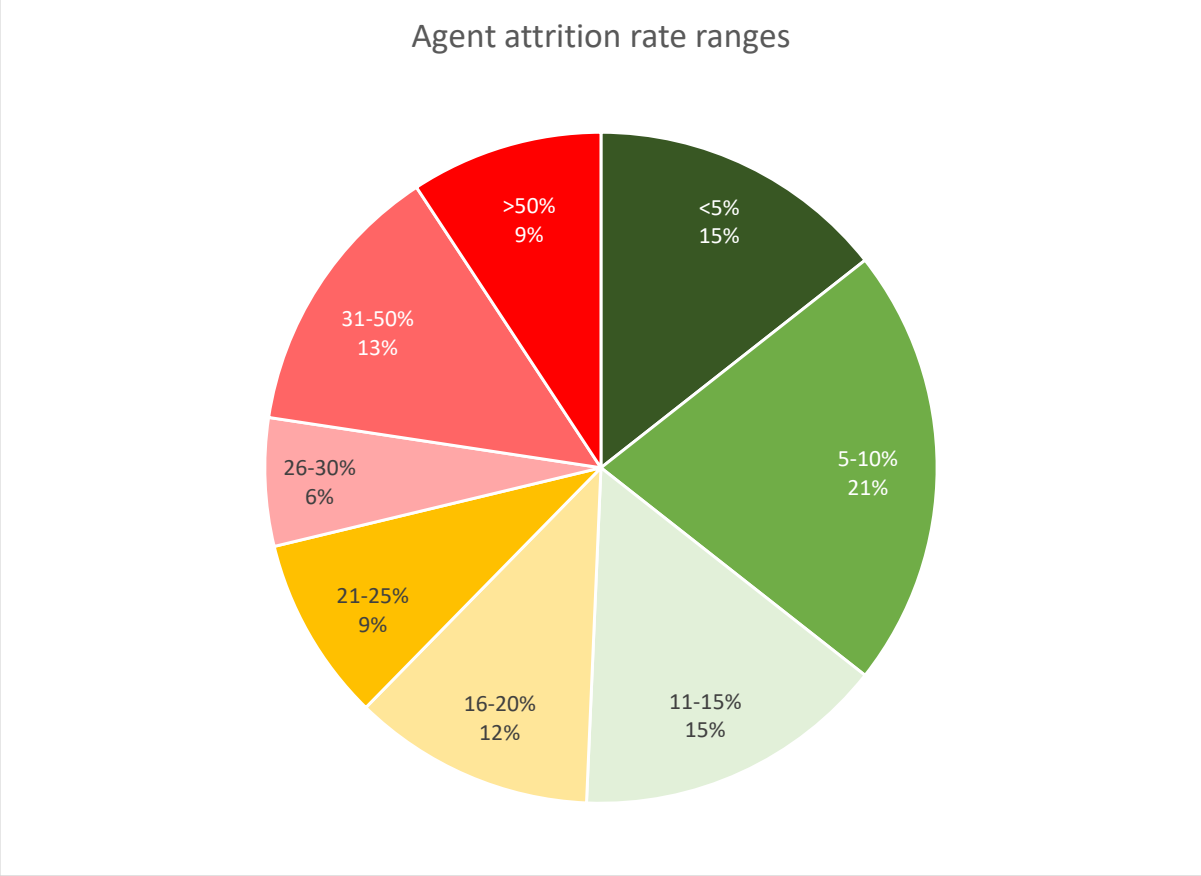
Figure 208: Historical mean UK agent attrition (2003-2021)



There is a very wide spread of attrition rates across the industry, with 22% of respondents having to deal with attrition rates of over 30%, compared to only 16% in 2020.

15% of contact centres report exceptionally low levels of attrition, at less than 5%.

Figure 209: Agent attrition rate ranges

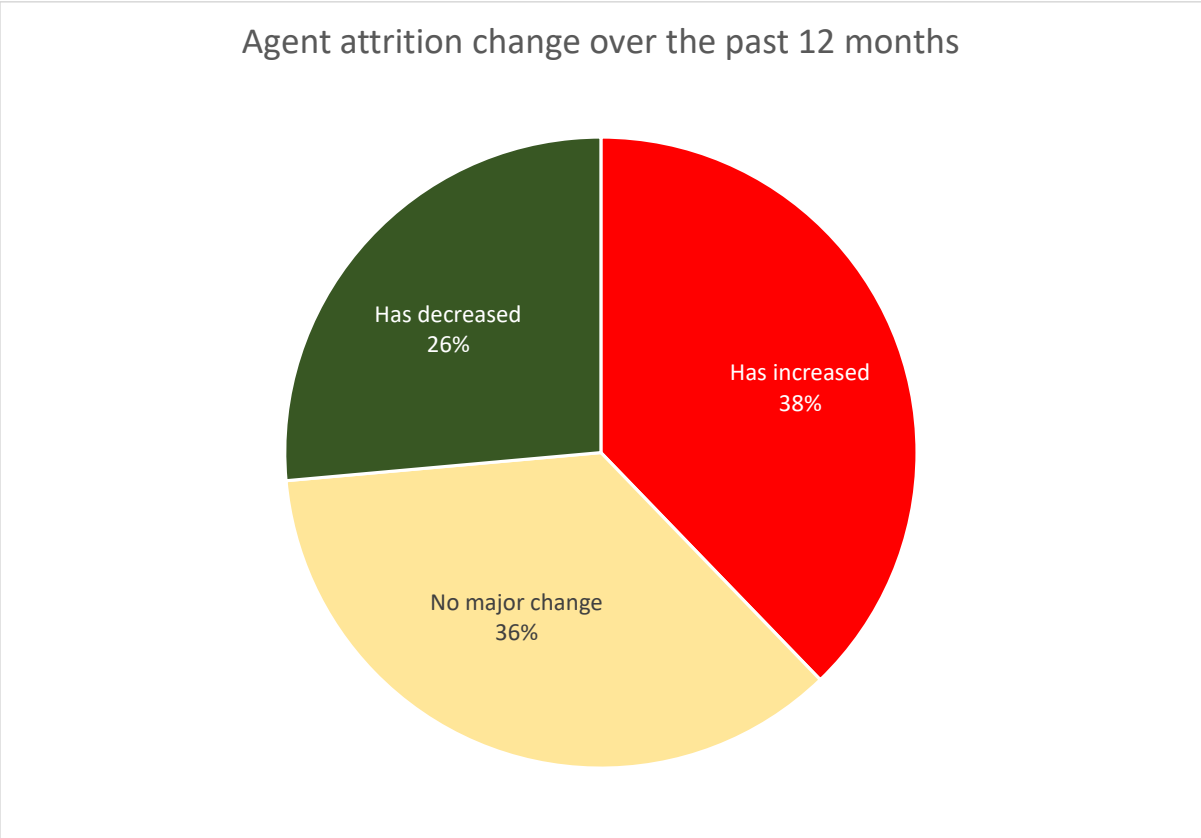


One of the difficulties with tracking metrics such as attrition over time is that the companies responding to the research programme may be different year-on-year, meaning comparing like-for-like is difficult. As such, the question was asked, "How does your current attrition rate compare with 12 months ago?", giving a consistent view of changes at a company level.

While 36% of respondents say that there has been little real change (compared to 39% in 2020), 38% say that attrition has increased, with 26% saying it has decreased (2020's figures were 14% and 45% respectively).

This suggests that any change in attrition across the industry is likely to be upward.

Figure 210: Agent attrition change over the past 12 months



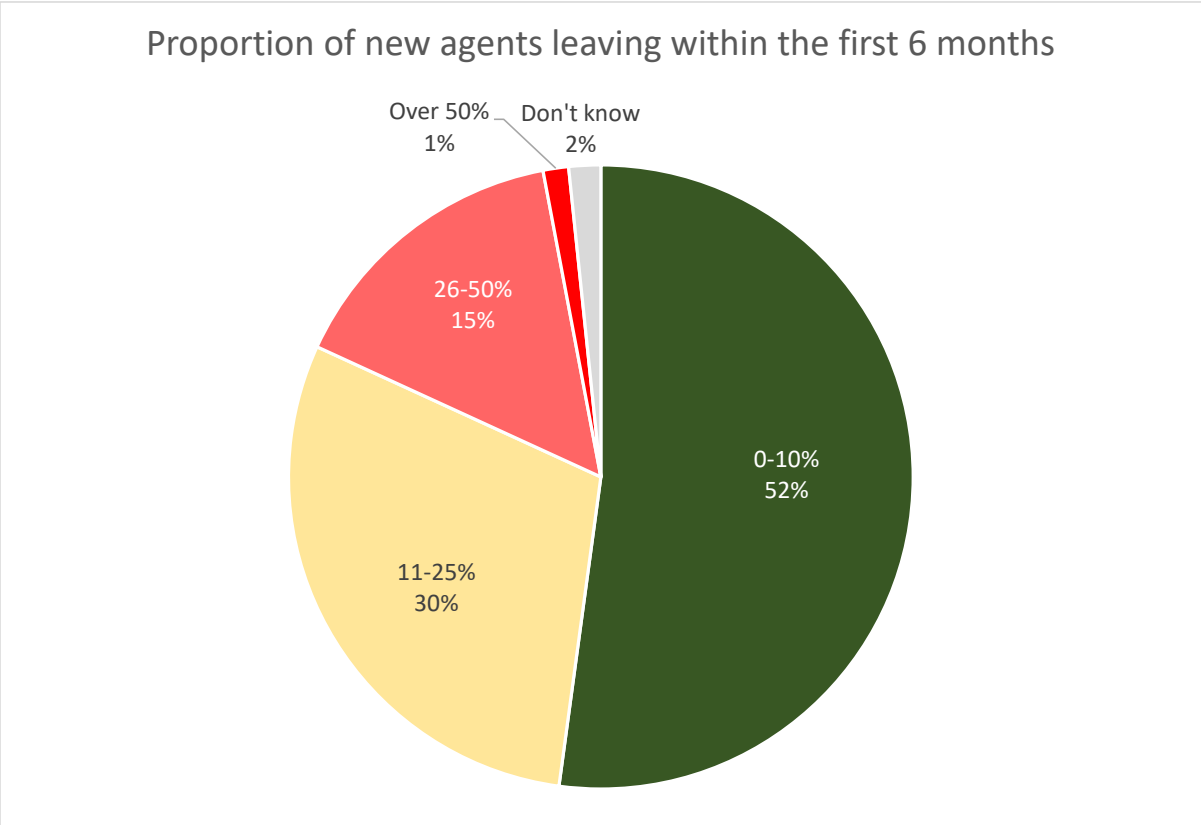
The reduction of attrition has two main drivers: that the successful candidates are suited to, and competent for the work which they will undertake, and that the work and conditions in which they find themselves will be conducive to a long-term stay.

A high level of early attrition strongly suggests that errors are being made in the type of people employed, who are all but doomed to failure by their unsuitability for the task. Businesses should collect information on the sorts of behaviour and characteristics of people likely to do well in each role - preferably analysing the people who are successful in the roles already - and pre-screen applicants against those criteria.

Getting a high proportion of the right sort of people through the doors and onto the induction course can greatly reduce early attrition: attrition is something that should be focused upon at the recruitment stage, rather than leaving it until the candidates are already in the business before noticing the problems.

While around half of respondents report few problems with early attrition, 13% have more than one-quarter of their new agents leave within the first six months. There has been little change in these figures over the past year, which suggests that any rise in attrition is not usually down to a greater proportion of new agents leaving. This is likely to indicate that even if new agents have been introduced to the contact centre through remote working, that this induction has been as successful as the traditional method.

Figure 211: Proportion of new agents leaving within the first 6 months



Looking at the causes for attrition, the stress of the work and the repetitive nature of some contact centre activity were cited as key by a significant proportion of respondents in survey carried out ten or more years ago. While they remain important, contact centres seem to be giving a collective shrug by consistently putting 'just the wrong type of person for the job' into no.1 position, as if there's nothing they can do about it.

Psychometric and competency testing at the recruitment stage – whether in-house or through a recruitment agency - and the assessment of behaviour and character will go a long way to stopping the wrong type of person for the job at source, with consistent support especially within the early stages of the role being vital to reducing short-term attrition.

Figure 212: Reasons for agent attrition (ranked in order) – aggregated historical data

Rank	Reason for staff attrition
1st	Just the wrong type of person for the job
2nd	Lack of promotion or development opportunity
3rd	Repetitive work
4th	Low pay
5th	Excessive pressure or stress
6th	High numbers of temporary / seasonal staff
7th	Competition from other contact centres
8th	Abusive or unpleasant calls
9th	Poor working environment and conditions

The lack of opportunity to move up the career ladder is marked on average as being the second-greatest cause of staff attrition.

As for other causes, much of the repetitive work is increasingly being alleviated by using self-service (whether voice-driven or web-based), and the blending of tasks (especially inbound digital and voice, rather than inbound / outbound voice) has been shown in many previous reports to show a positive correlation with lower levels of attrition.

ABSENCE

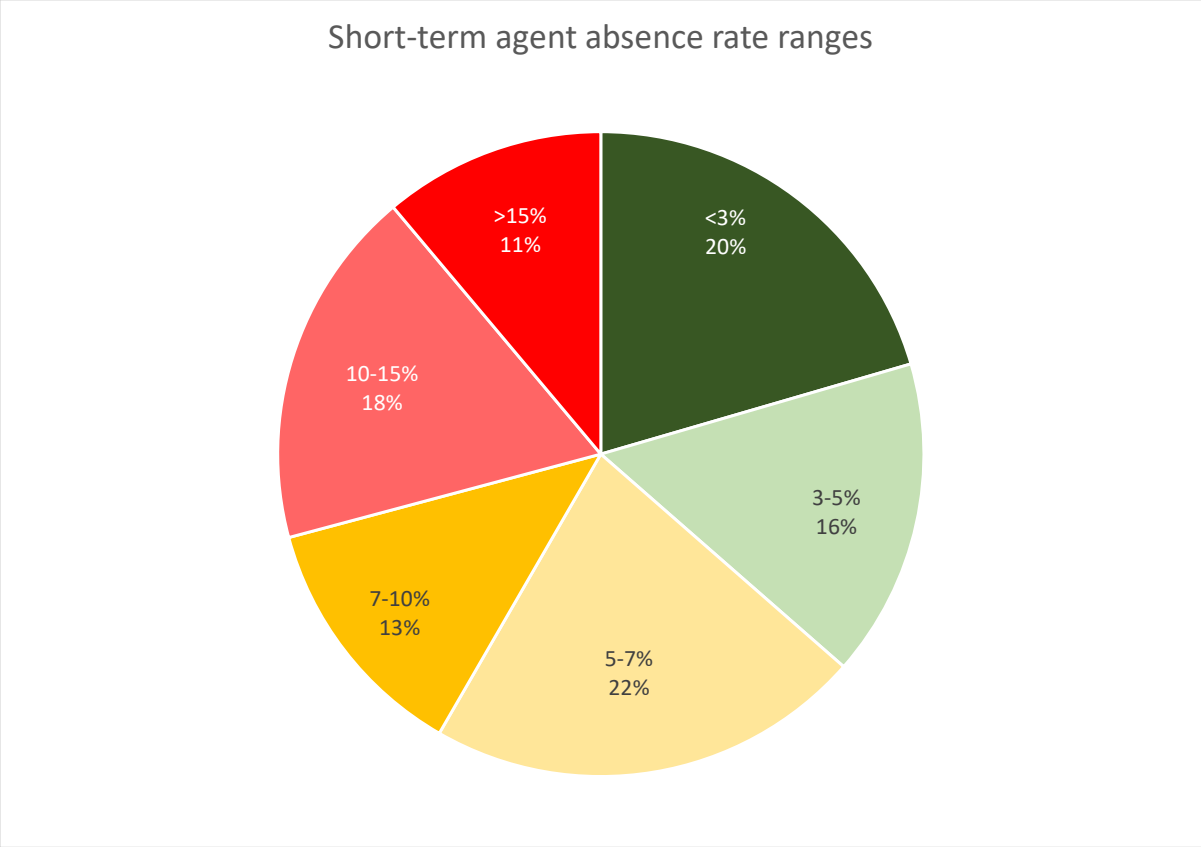
In a tightly-run operation like a contact centre, where costs and performance are closely managed, significant levels of staff absence can cause major problems with contact centre performance and the customer experience. Even just a slight increase in absence rates can mean a major difference to how well the contact centre performs on that day. Staff end up overworked and stressed, and more likely to take time off as a result. Morale suffers, which increases staff attrition, overwork and thus, further absence.

Short-term (no-show) absence: this is the average number of agent days lost through short-term sickness and unauthorised absence as a percentage of contracted days annually. Top-level information is included in this report and detailed information by vertical market and contact centre size is available in UK Contact Centre HR & Operational Benchmarking Report.

Long-term absence includes long-term sickness, maternity leave, sabbaticals and other long-term absences where the business is able to expect and plan for the absence. This is not included in this report but is available in the UK Contact Centre HR & Operational Benchmarking Report.

The mean average for staff absence is 7.6% (2020: 5.7%), with a median of 6.0%.

Figure 213: Short-term agent absence rate ranges



NB: a range of "3-5%" includes all results from 3.00% to 4.99%. "5-7%" includes all figures from 5.00% to 6.99%, etc.

Contact centre managers were asked for their experience of how effective a number of recruitment methods were. There is a definite pattern: the closer you get to the candidate (through competency based assessments, personality tests and face-to-face/telephone interviews), the more likely the recruitment team is to make the right decision. The average contact centre role is changing into something requiring higher skills – a high level of IT, business and communication abilities are needed in many contact centres now and this trend will certainly continue – yet agent salaries are not taking this into account. Coupled with this is the popular view of contact centres as career dead-ends, not helped by the biased and erroneous media view of contact centres (and by extension, their employees) as an unpopular and unloved part of modern life. Improving the contact centre "brand" is a vital part of the industry's future success, which will feed directly into the recruitment process.

While most contact centres do not admit to having problems with staff recruitment, many of the same operations have problems with staff attrition, although this is temporarily less of an issue. The case could be made that high-attrition operations do have a problem with recruitment, but they just don't realise it. Having filled their job roles, the recruitment process is deemed to have been a success, but how many of these new recruits turn out to be no-shows, leave before the induction course is complete, or shortly into the job? These recruits are gauged to be part of the attrition problem, when in fact, they are indicative of a recruitment problem. As such, businesses should try harder to understand what skills and attributes successful agents are already demonstrating in this role - empathy, resilience, reliability, sales technique, technical capability, etc. - and seek to recruit more people with this specific factors and behaviours.

Recruitment has traditionally been about asking the question "Can the applicant do the job?". Having the skills to carry out the task is obviously important, but most skills can be learned, and in an environment such as a contact centre - where both tasks and environment are not suited to everyone - other factors are perhaps more important. This is borne out by consistent research findings, which indicate that the main reason for staff attrition was that they were just the wrong type of person for the job.

Firstly, the business must understand the competencies, characteristics and behaviours that are most suitable for the contact centre positions that they are trying to fill, for example:

- empathy
- dependability
- customer focus
- problem-solving
- the ability to understand and follow instructions
- a focus on a goal.

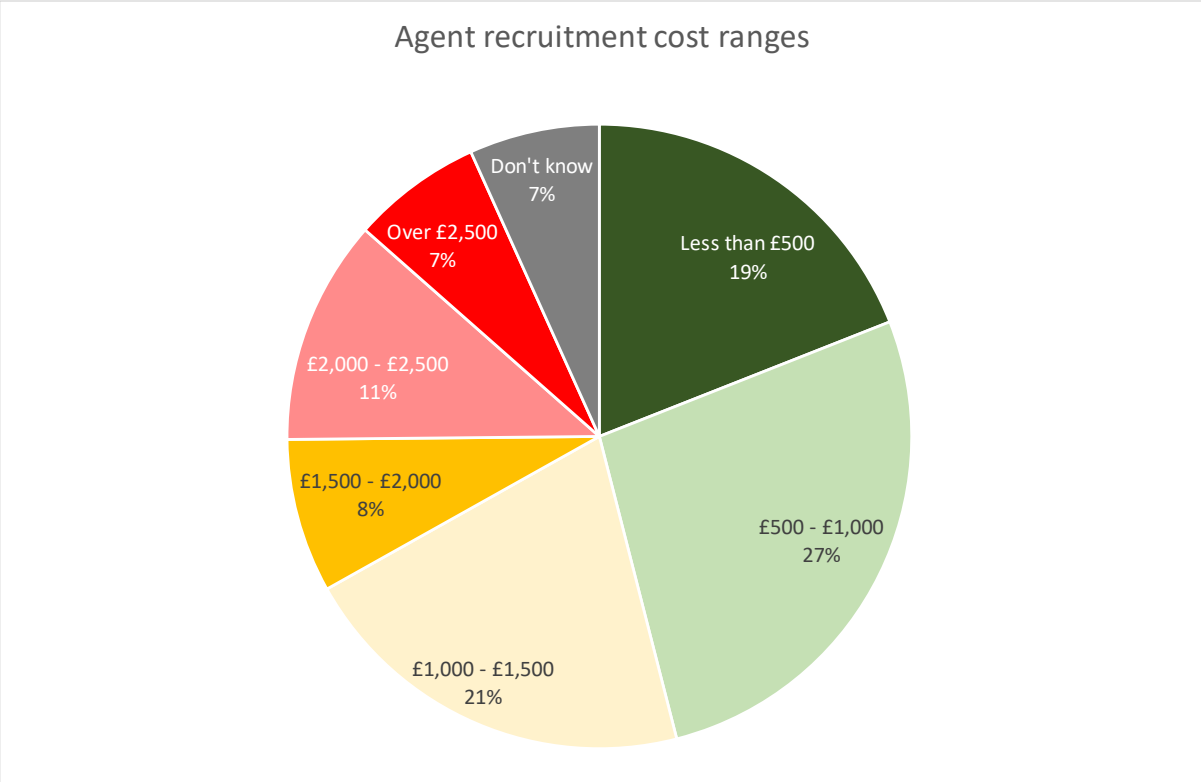
Successful agents will also require some hard skills, although many of these are more easily-learnt. Through judging competencies objectively, and using a combination of processes (for example, telephone and face-to-face interviews, with upfront psychometric analysis to determine the likelihood of the prospect being a long-term success in the contact centre), the business reduces the risk of high attrition and growing costs, and can focus upon its strategic goals.

The most effective form of recruitment method is consistently said to be a face-to-face interview, with assessment centres, contact centre simulations and skills-testing also effective. There is a definite split between how directly the company interacts with the candidate and how successful the recruitment method is. Those that keep the candidate at arm's length – through standard application forms and CVs – have a lower success score, with studies having shown that half of applicants admit to stretching the truth on their CVs, and 10% lie outright.

The relatively few contact centres using personality testing tend to report high levels of success through this method, reflecting the awareness that it is the type of person at least as much as what they can do that is crucial to being a successful agent. Many contact centres employ large numbers of recent university graduates, whose biodata and work experience may not show much of the applicants' abilities. In such cases, getting a better scientific idea of what makes the candidate tick, and being quite sure about their personality traits will reduce the high risk associated with recruiting straight from higher education.

By tracking the in-job performance of applicants who scored either well or poorly in pre-job assessments, businesses can improve their ongoing recruitment techniques. For example, agents who have high assessment test scores often have higher revenue-per-call ratios, lower average call lengths and lower attrition rates than those who scored lower in pre-job character and personality assessments. The behaviours, personality traits and characteristics that a top agent is most likely to have can then be identified, and the results fed back into the top of the recruitment process. This allows the recruitment process to seek out the types of people who have already been proven to succeed in that role.

Figure 214: Agent recruitment cost ranges



SALARIES

New agent salaries are reported to have increased by 5.2%, with a lower increase reported in the salaries of experienced agents.

At a team leader level, average salaries were reported to have risen by 4.5%, and respondents' average contact centre manager salaries showed a 3.6% rise in 2021.

Figure 215: Mean contact centre salaries and changes

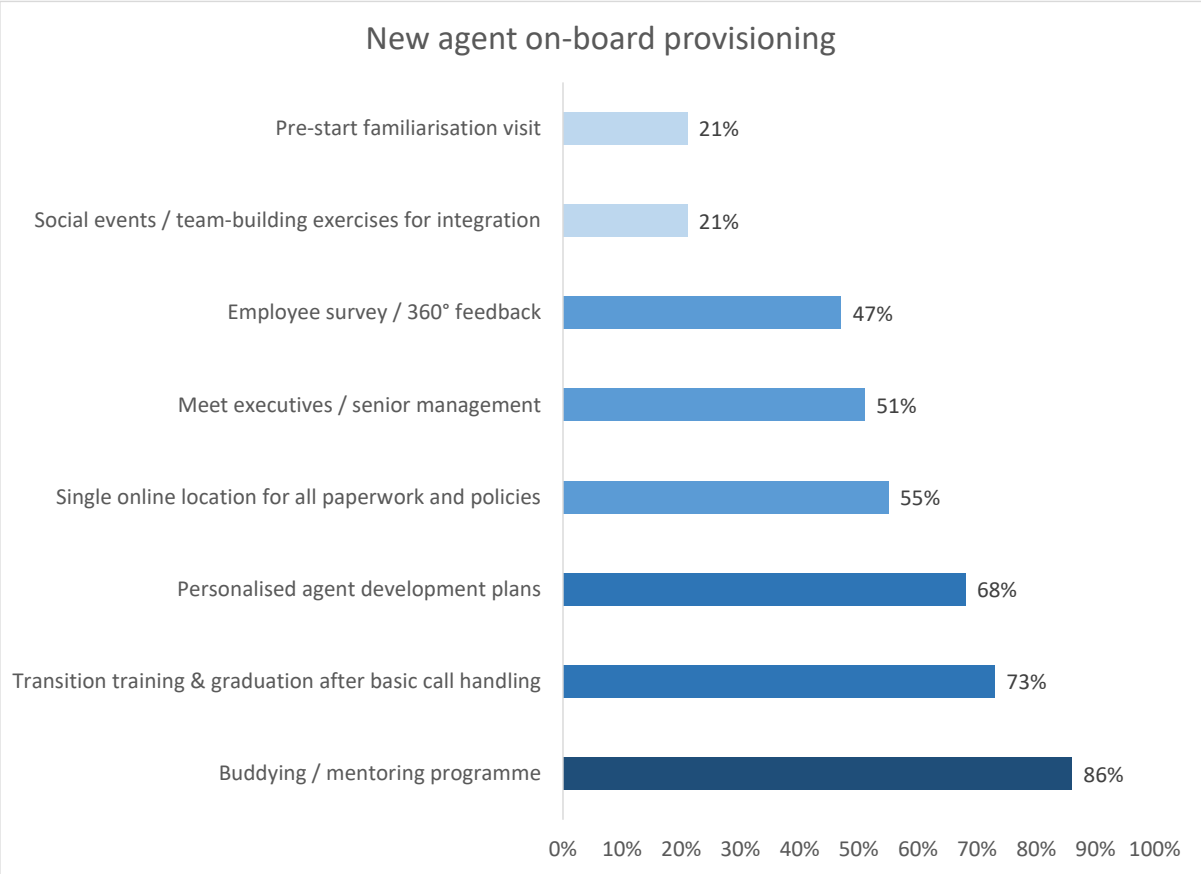
Role	2021 mean average salary	Change 2020-2021
New agent	£19,934	+5.2%
Experienced agent	£22,608	+3.6%
Team leader / supervisor	£28,934	+4.5%
Contact centre manager	£43,552	+3.6%

Detailed analysis of salaries, including historical patterns and segmentation by vertical market, contact centre size, region and activity type is included in "The UK Contact Centre HR and Operational Benchmarking Report (2022)"

ENGAGING THE NEW AGENT

An agent joining a new organisation has a lot to take on board – culture, systems, expectations, new products and services – and this becomes even more difficult if this is the first time that the agent has worked in a contact centre environment. Businesses have numerous ways of introducing (or 'onboarding') new agents to their work in order to build engagement with their role and team, shown in the following chart.

Figure 216: New agent on-board provisioning



Most respondents have a buddying / mentoring programme, and some form of official 'graduation', easing new agents into the real work after basic call handling training. Social events and senior management introductions usually feature quite highly, although the pandemic obviously severely reduced the opportunity for the former. 68% provide individual agent training plans, which is growing each year.

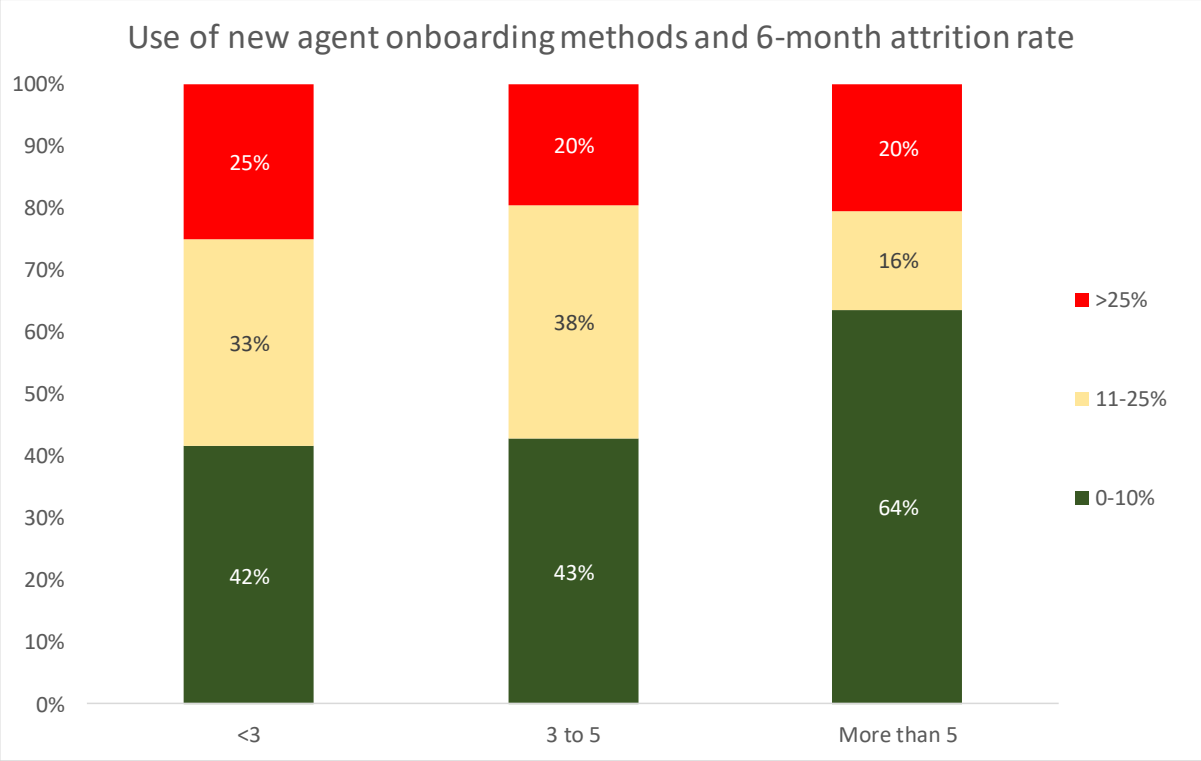
Just under half of respondents seek 360 degree feedback from new agents (which would provide vital information about the reality of the agent onboarding process that could be used for improvement), and 55% offer a single portal containing all of the paperwork and internal administrative tasks that a new employee requires. Only 21% have pre-start familiarisation visits (a drop from 36% pre-pandemic, for understandable reasons), the other 79% dropping the agent in at the deep end on their first day.

It was hypothesised that high levels of agent onboarding and support would reap benefits through lower new agent attrition levels. The chart below shows three ranges of new agent attrition (leaving within 6 months) – 0-10%, 11-25% and 25%+ – and investigates how many types of onboarding methods were used by respondents within each group.

While correlation does not prove causation, it is clear that a higher proportion of those respondents using more onboarding methods had a lower short-term agent attrition rate: 64% of those respondents offering five or more of the onboarding methods described above had low new agent attrition, compared with only 42% of contact centres which offered fewer than three. It may well be that agents receiving more onboarding support in their first few weeks adapt to the work and culture more quickly, become more confident and feel more empowered.

It should also be taken into account that while large contact centres tend to offer more onboarding methods, they also have higher than average attrition rates in any case, which will tend to dilute the positive effect of onboarding.

Figure 217: Use of new agent onboarding methods and 6-month attrition rate



ENGAGING THE EXPERIENCED AGENT

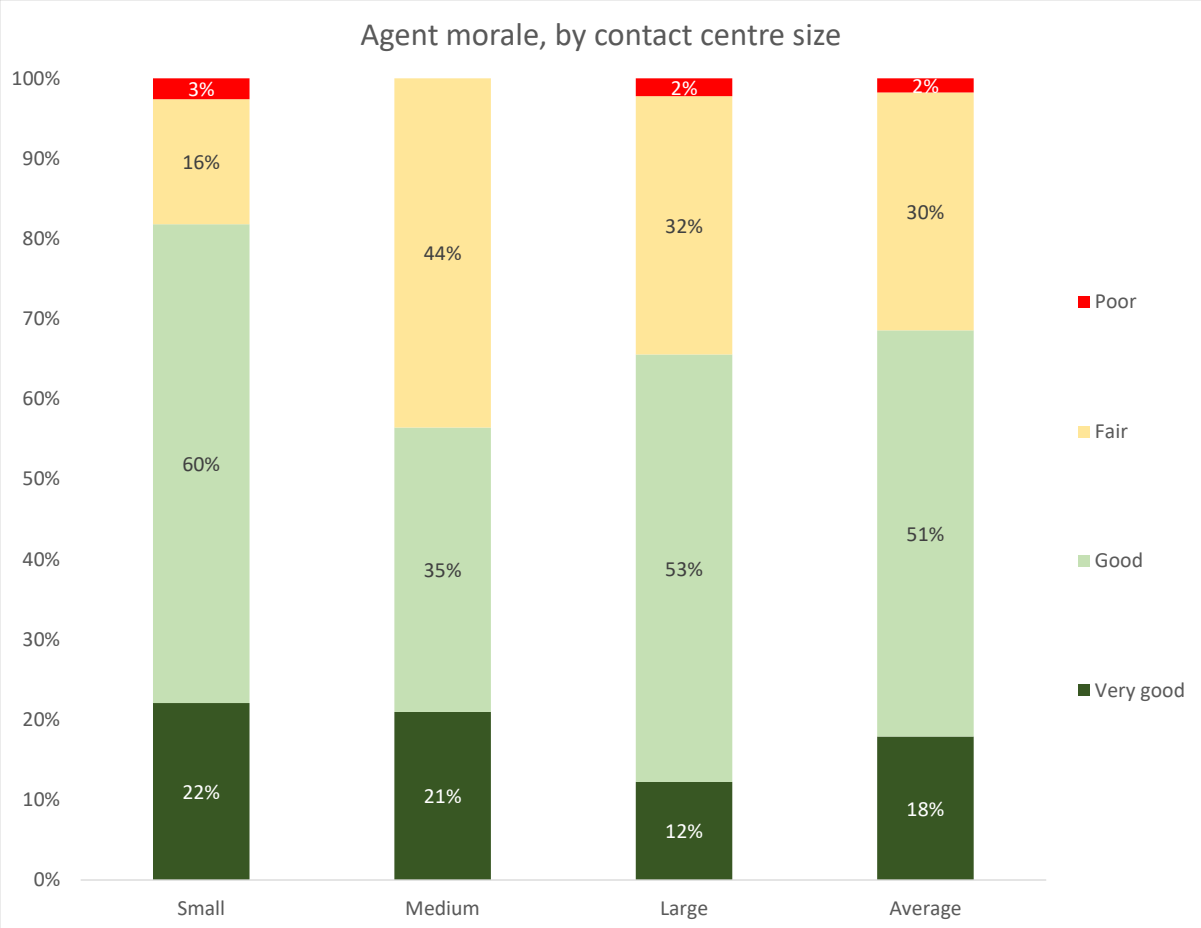
Motivating and keeping good agents in a working environment that is often stressful, sometimes repetitive and usually not particularly well-paid is a challenge the contact centres have had to face since their inception. As the nature of contact centre work becomes increasingly complex, and customers' expectations of what constitutes good quality service becomes ever higher, the agent's job is now rarely just reading something off the screen: they have to be empathetic to the customer, use their initiative to solve the issue and remain focused on answering the next call just as effectively.

When considering how attrition and absence issues can be alleviated, bonuses and incentives are generally felt by most businesses to be a possible solution.

AGENT MORALE

Agents with low morale engage with customers less, provide lower quality work, take more unauthorised absences and end up leaving the company. Improving morale is good for business, and also good for other agents and the entire working environment: no-one wants to go to work in a miserable place.

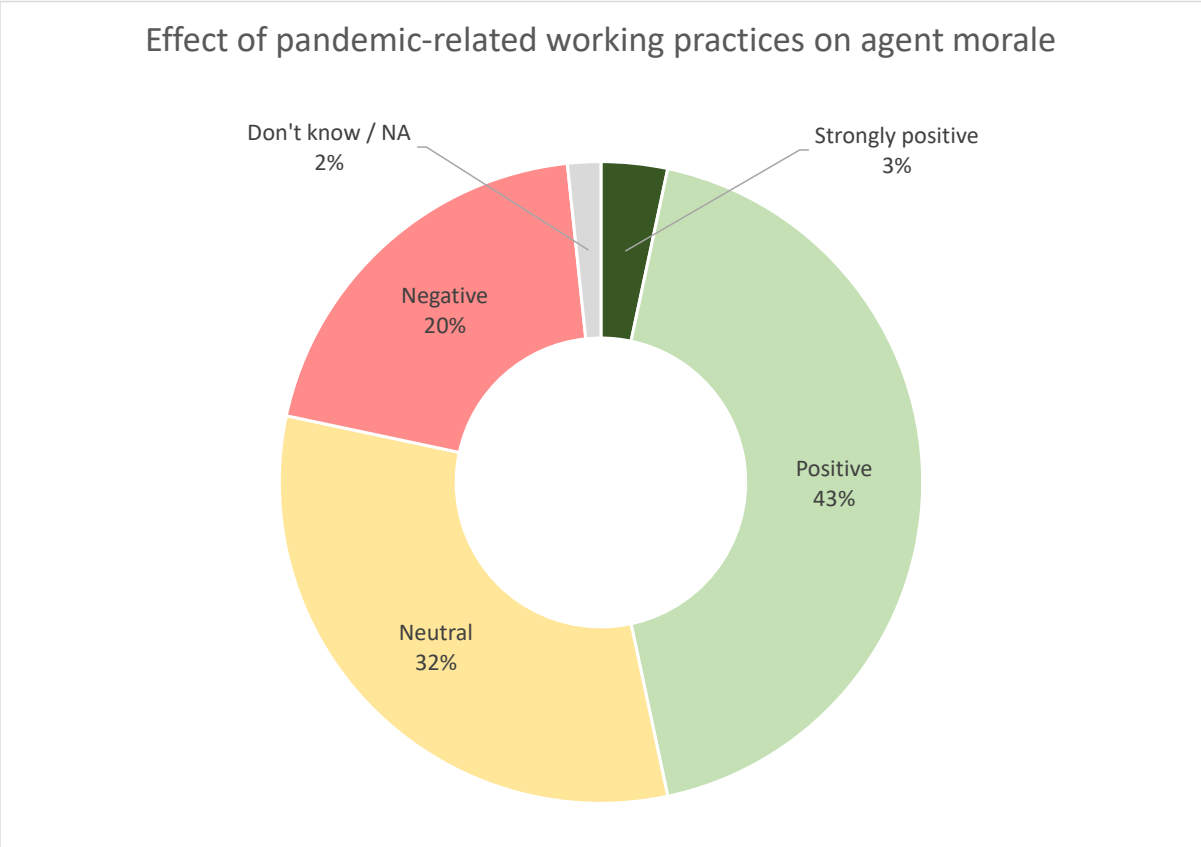
Figure 218: Agent morale, by contact centre size



Looking at the previous chart, it seems that contact centre morale is generally seen to be positive, with 69% of respondents stating that their contact centre enjoys “Good” or “Very Good” morale, although this is less the case for mid-sized (51-200 seat) operations, where 44% of respondents report morale as being only “Fair”. Very few survey respondents reported “Poor” morale this year.

Despite the widespread move to remote working, with the risk of isolation and the attendant difficulty in supporting agents, only 20% of respondents felt that it had a negative effect on agent morale, with 46% stating that it had been positive in some ways.

Figure 219: Effect of pandemic-related working practices on agent morale

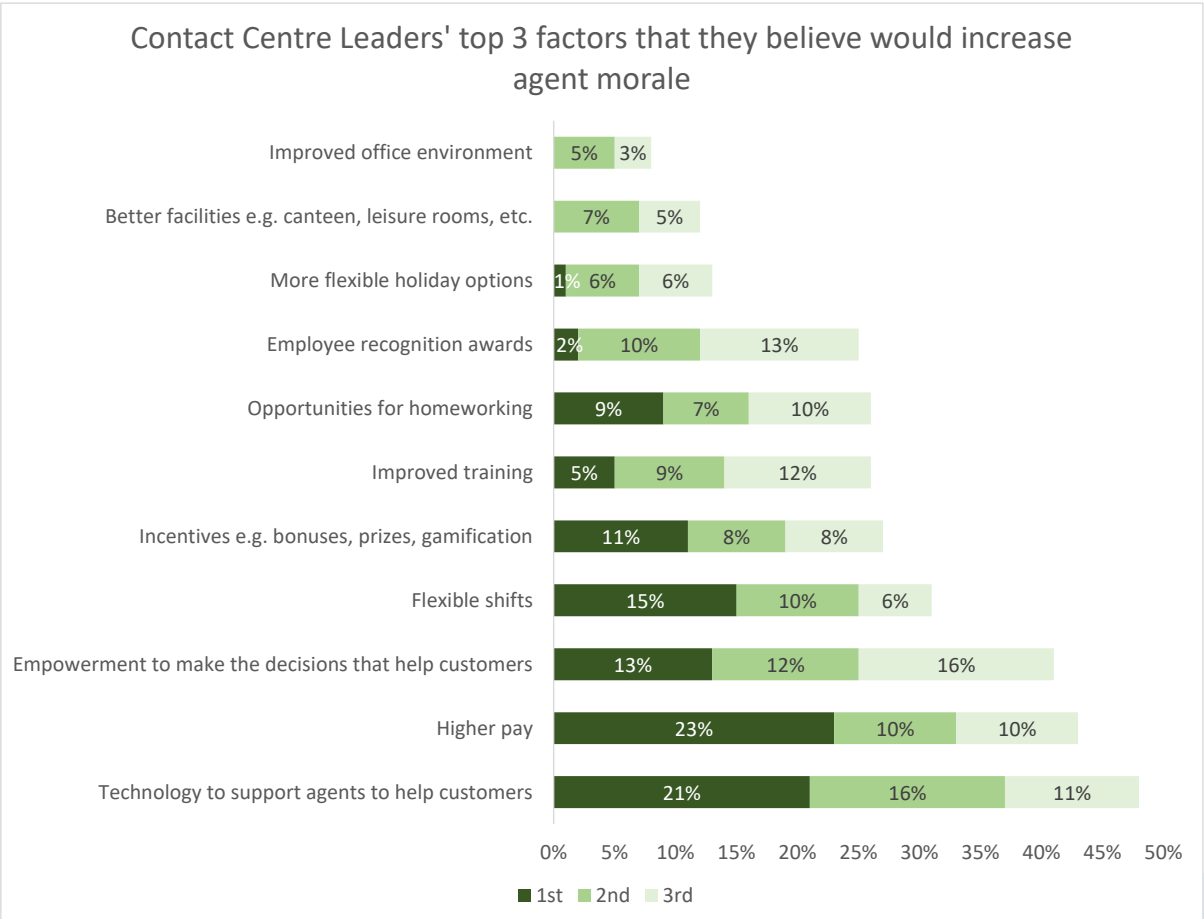


11 options to improve morale were set before respondents, who were asked to pick the top three that they thought were most likely to improve morale (although this question does not ask the agents what they themselves think of this). Although the most popular no.1 choice – increased salaries – may not be a realistic choice for most contact centres, there is a correlation between salaries and attrition (and by extension, morale). Contact centres with less than 10% short-term attrition (i.e. within the first six months) pay new agents an average of 10% more than those contact centres with a short-term attrition rate of over 25%, a pattern that is consistent over the years.

Giving agents the empowerment to make decisions that help customers is seen as having a very positive effect on morale, with 41% putting it in their top three overall. Empowerment – the support provided by the systems, processes and organisational culture required to help an agent solve the customer's query – is closely linked first-contact resolution, which as we have seen is key to customer satisfaction. First-contact resolution rate directly impacts upon morale: if agents are unable to help customers, they become discouraged which leads to higher levels of agent attrition and absence, as well as a greater number of callbacks and call transfers, which impact negatively upon contact centre cost, performance, quality and customer satisfaction.

Respondents were strongly of the opinion that improving the technology available to support agents would make a positive impact upon agent morale. Solutions such as knowledge bases, dynamic scripting, a 360° view of the customer and a single unified desktop also empower the agent to deliver a successful resolution first time.

Figure 220: Contact Centre Leaders' top 3 factors that they believe would increase agent morale

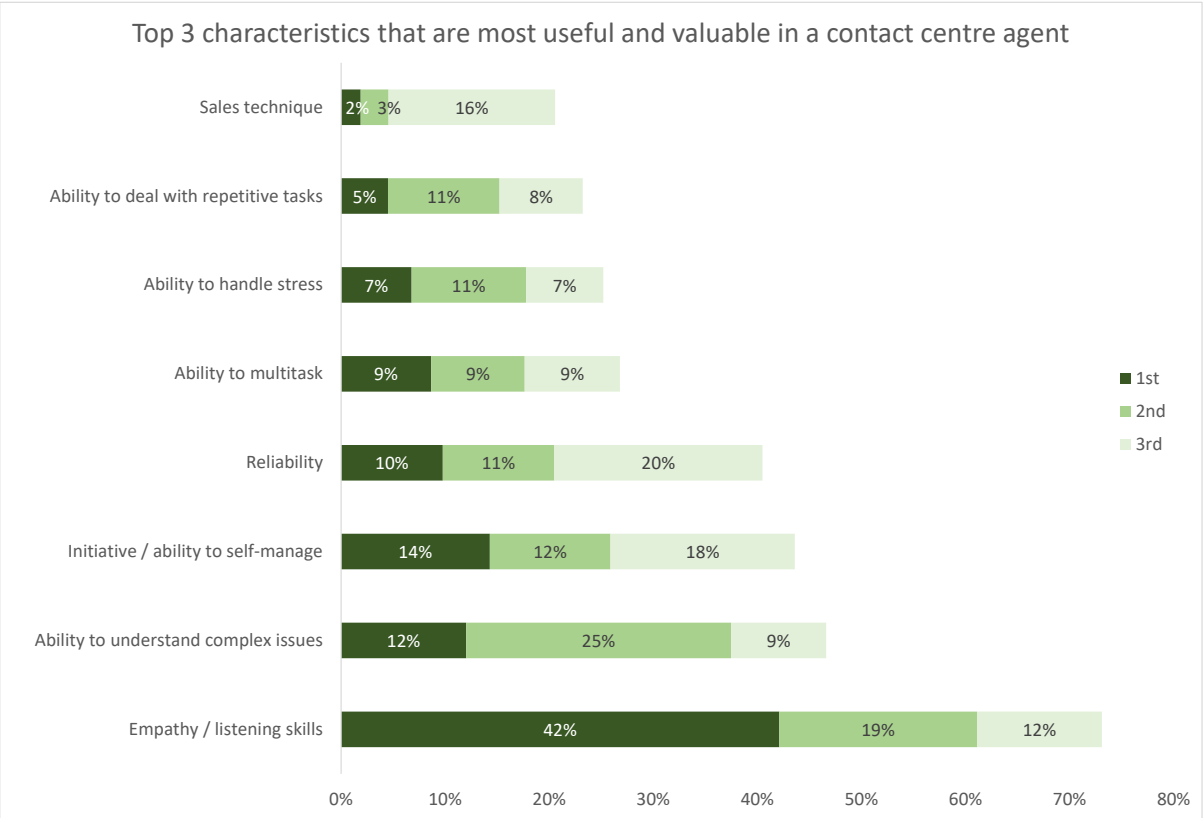


Survey respondents were asked to rate the attributes that they believed were most useful and valuable in contact centre agents.

By far the most important factor was empathy – the ability to listen, understand and help customers – which was placed in no.1 position by 42% of respondents. Of course, empathy is only really useful when the supporting systems and processes allow and empower the agent to handle the interaction as they need to: there is no use in valuing empathy in an agent if they are not permitted to spend the time required to fulfil the customer's request, or the systems prevent them from achieving their goal.

An ability to understand complex issues is also very valued, and will probably increase in importance as self-service handles more of the straightforward customer requests, leaving more complex and tricky work for human agents. Initiative and self-management is also seen as vital, and is of particular value in remote working environments where self-starting is an asset, and where outside help may be more difficult to access.

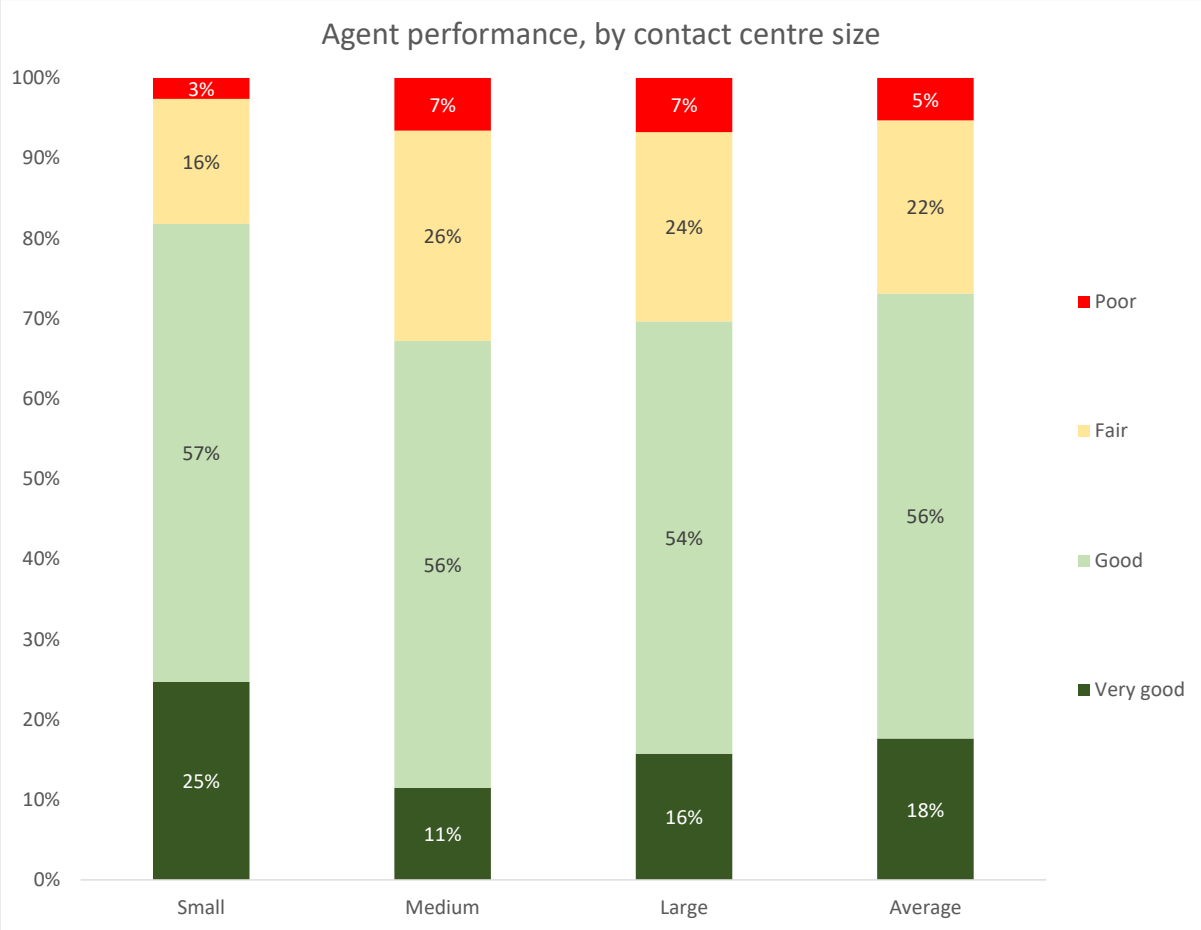
Figure 221: Top 3 characteristics that are most useful and valuable in a contact centre agent



Looking at agent performance, survey respondents in larger contact centres tend to be more likely than others to feel that there is room for improvement.

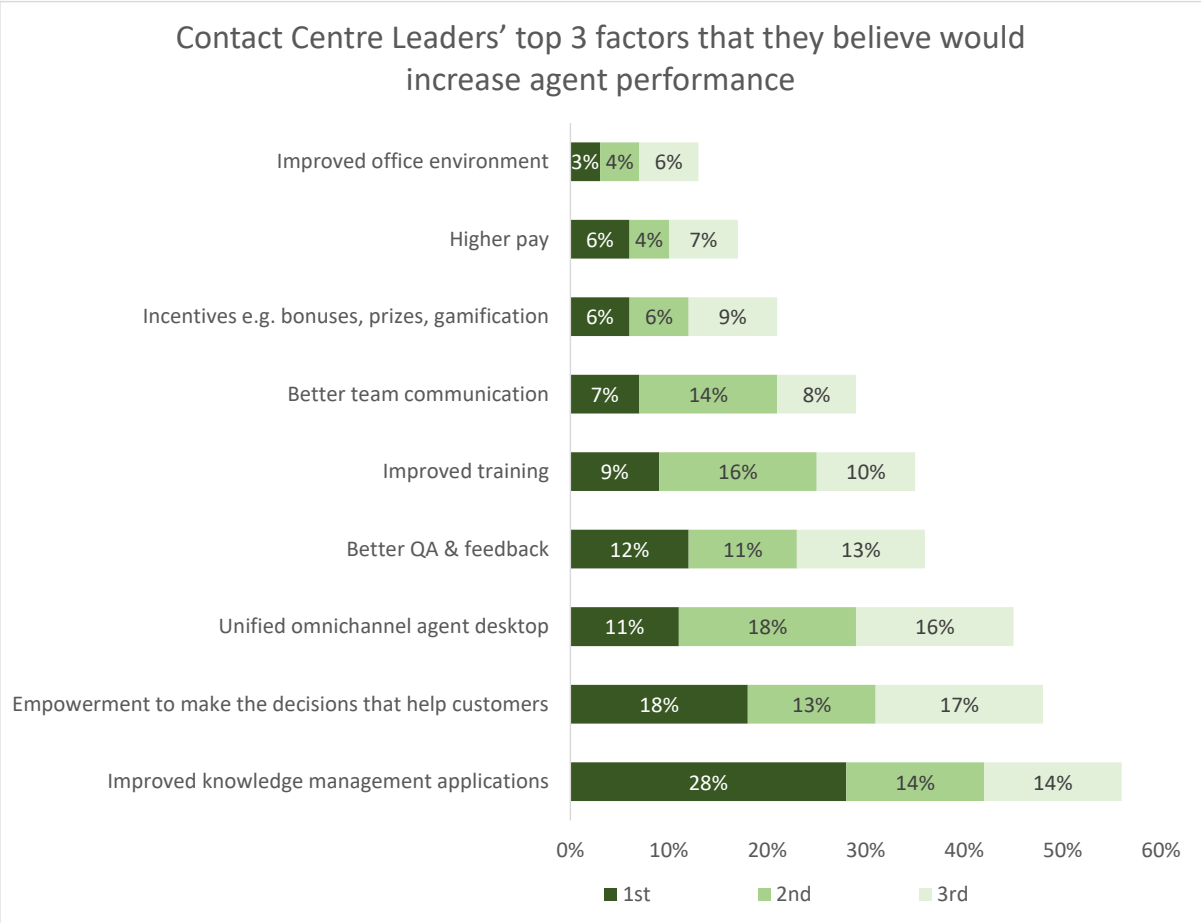
Although 18% of those surveyed felt that their agent performance was “Very Good”, 27% stated that theirs was either only “Fair” or “Poor”.

Figure 222: Agent performance, by contact centre size



As with agent morale, respondents were presented with a list of factors that could improve agent performance and were asked to give their top three.

Figure 223: Contact Centre Leaders' top 3 factors that they believe would increase agent performance



Empowering agents to make decisions that help customers – which increases first-contact resolution rates – was once again an important factor in increasing agent performance. As respondents also stated that this would improve agent morale, contact centres should focus upon the tools, processes and culture that supports agent empowerment. Improved knowledge management applications – the most popular top 3 factor – help with this, as they attempt to provide the agent with the information required to solve the customer's request while on the call, rather than requiring call transfers or callbacks.

A unified omnichannel agent desktop, providing agents with all of the information that they require on a single screen, also empowers agents and help solve the customer's issue first-time. Improved training was ranked in the top 3 by 35% of respondents.

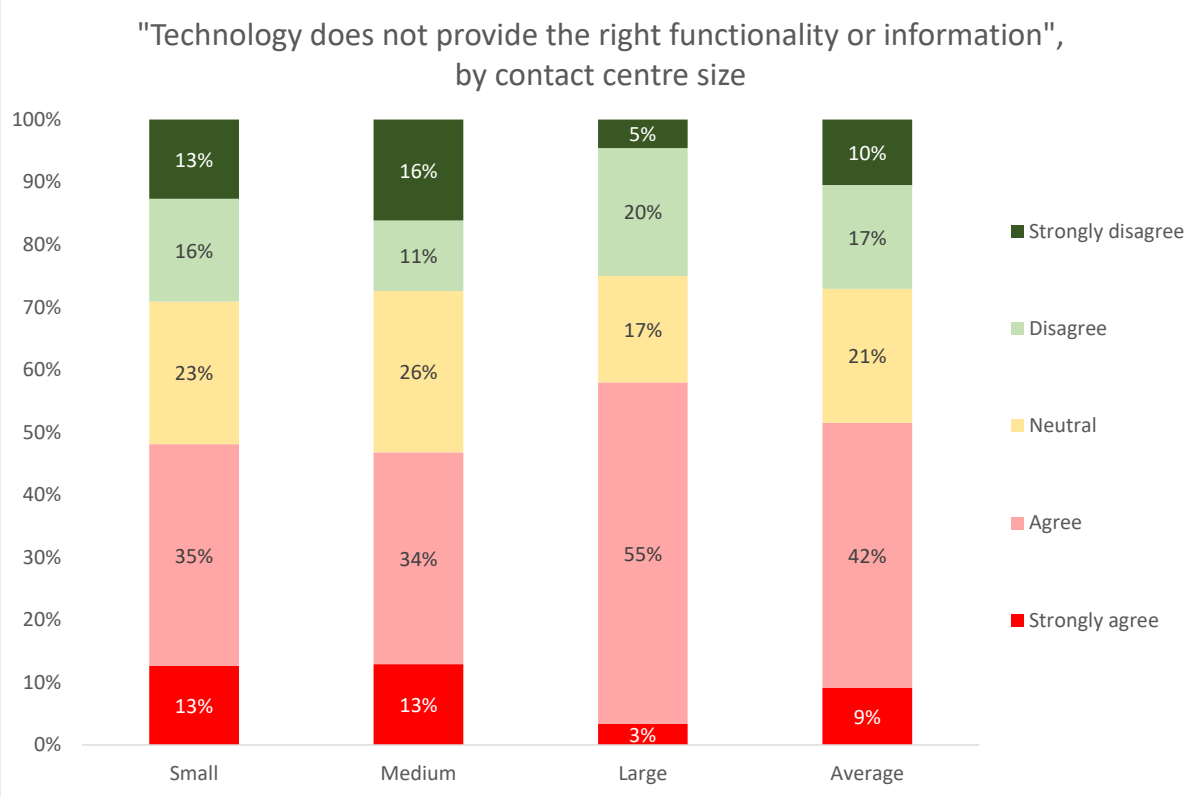
Higher pay, despite being viewed as a major boost to morale, was not seen as an effective way to increase performance: keeping the same staff, technology and processes while paying agents more won't make any major difference to performance. Incentives were also viewed as improving morale rather than performance, although they are useful in particularly high attrition environments such as many of the largest contact centres and those running outsourcing operations.

Being seen as key to both morale and performance, agent empowerment – the ability to make the decisions and carry out the actions that would actually help customers – requires the business to trust the agent to do the job to the best of their ability, supporting them through culture, process and technology as needed, and is closely linked with first-contact resolution, which as we have seen elsewhere in this report is key to customer satisfaction.

By far the most important factor restraining agent empowerment is that technology does not deliver the required functionality or information, preventing even the most capable and empathetic agent from reaching their potential.

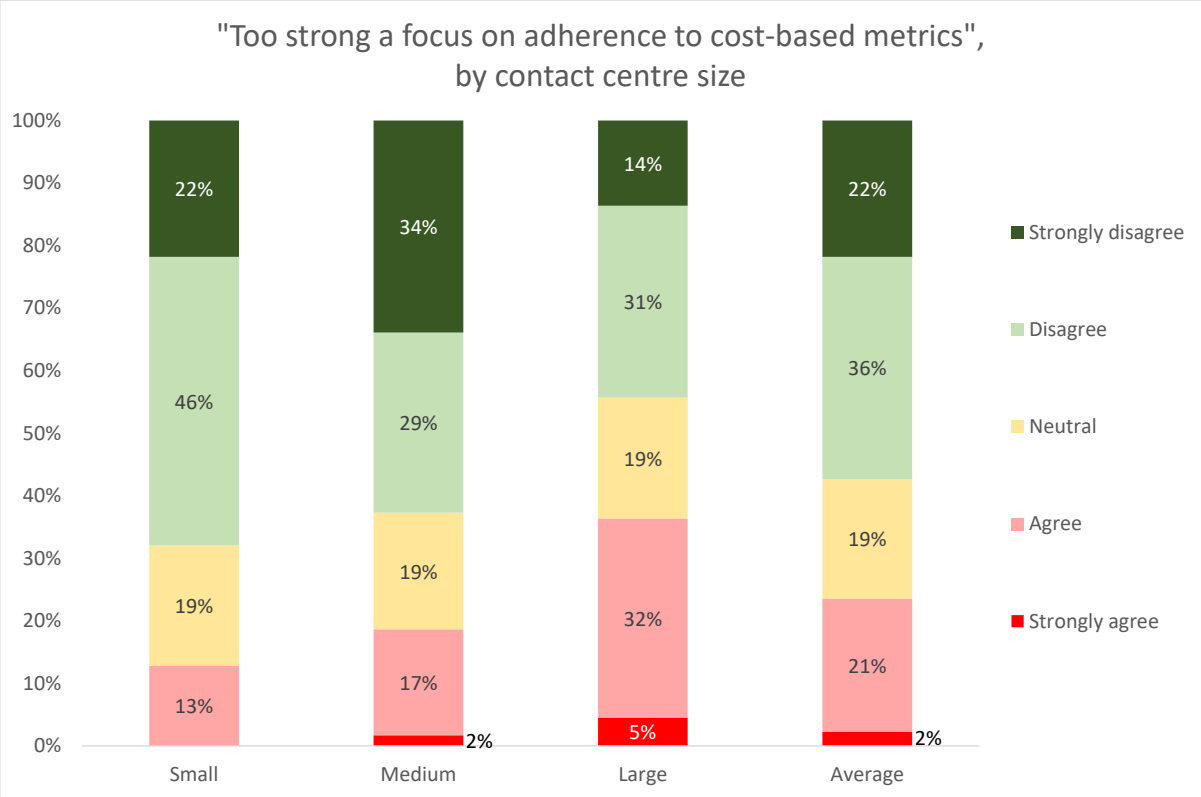
58% of respondents from large operations agreed that this was the case in their contact centre.

Figure 224: Factors holding agents back from being empowered: "Technology does not provide the right functionality or information", by contact centre size



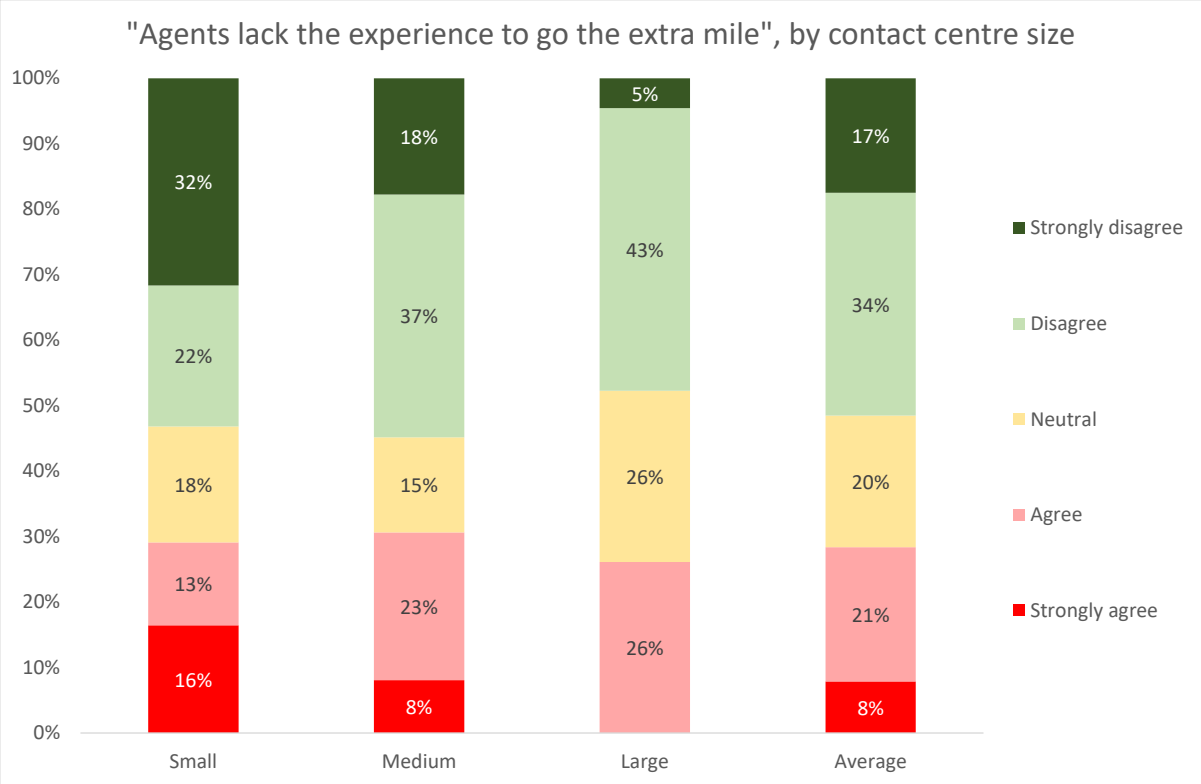
23% of survey respondents blamed the contact centre's excessive internal focus on hitting metrics such as call duration and throughput for not empowering agents to make the decisions and carry out the actions they need to in order to serve customers most effectively.

Figure 225: Factors holding agents back from being empowered: "Too strong a focus on adherence to cost-based metrics", by contact centre size



29% of respondents, spread across all contact centre sizes, believe that agents lack the experience and capability to go beyond what they already know how to do. Agents need to be trained on how to do this, and encouraged to do so by the culture of the contact centre.

Figure 226: Factors holding agents back from being empowered: "Agents lack the experience to go the extra mile", by contact centre size



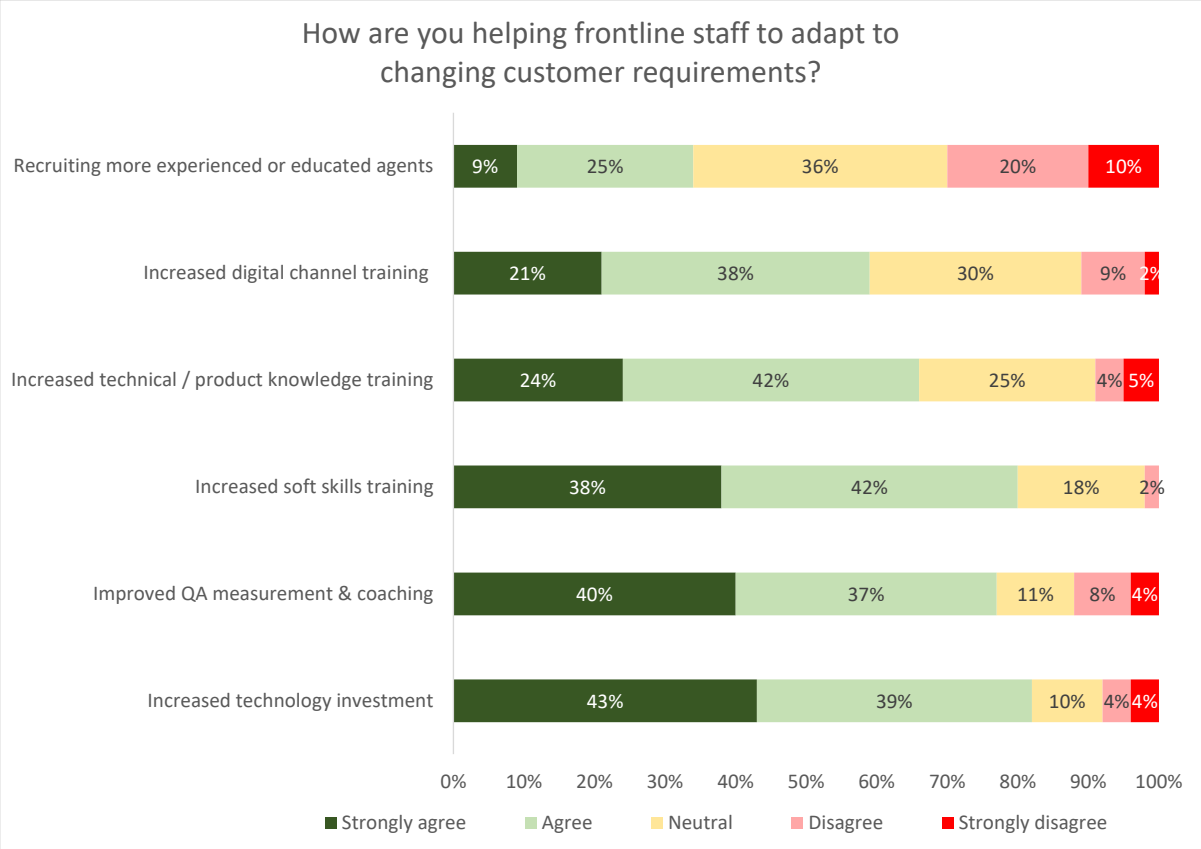
So how can agents become empowered? A few elements are:

- System support to answer any query, with access to the customer's history across every channel
- Desktop applications that provide all of the relevant information in one place, without requiring agents to hunt it down
- Intelligent support to suggest answers to agents, and make sure that they comply with regulations and achieve the quality controls set by the business
- Recurrent queries are identified and answers disseminated via knowledge base / alerts
- Skills and capabilities, via ongoing training
- Trust and culture from senior management, including giving agents the time they need to handle the query without excessive pressure to meet internal metrics at the expense of solving the customer's issue.

SUPPORTING FRONTLINE STAFF

Contact centre decision-makers were asked how they are helping their agents adapt to changing customer requirements, whether through recruitment, training or technology.

Figure 227: How are you helping frontline staff to adapt to changing customer requirements?



Only 34% of respondents are actively recruiting more experienced and educated agents to handle changing customer requirements, which implies that the typical contact centre strategy focuses upon improving the skills of existing agents, as well as any supporting technology and processes.

An increase in training is generally seen as one of the keys to increasing agent performance, and the majority of contact centres state that they are doing this, especially for soft skills and to a slightly lesser extent, technical and product knowledge. There seems to be less focus on training agents to handle digital enquiries, despite the general acceptance that the growth in digital channels is driving contact centre strategy. As digital channels have become more important this year, the survey shows an increase in this type of training compared to in other years.

The majority of contact centres acknowledge the need to improve quality measurement, which then leads to more targeted and effective coaching.

There was a general feeling from the contact centre decision-makers interviewed for this survey that suboptimal contact centre performance can usually be attributed to processes and especially technology, rather than the calibre of their agents.

While this shows an admirable confidence in their agents' current capability, contact centre leaders themselves say that increasing training is one of the most important methods of improving agent performance, and the great majority of them state that they are increasing the amount of training and coaching – for both hard and soft skills – in order to keep up with the changing nature of the job and the growing expectations of customers.

Decision-makers see technology as being a crucial part of this (particularly knowledge management tools), not for its own sake, but as a way to inform and empower agents to carry out their work more effectively. Unlike the traditional call centre, where cost and efficiency were priorities, most technology solutions now being implemented aim to help the agent deliver a higher level of customer experience. Technology in itself can't do this: it must be aligned with a culture of agent empowerment and learning in order to raise and maintain the overall quality of customer interactions.

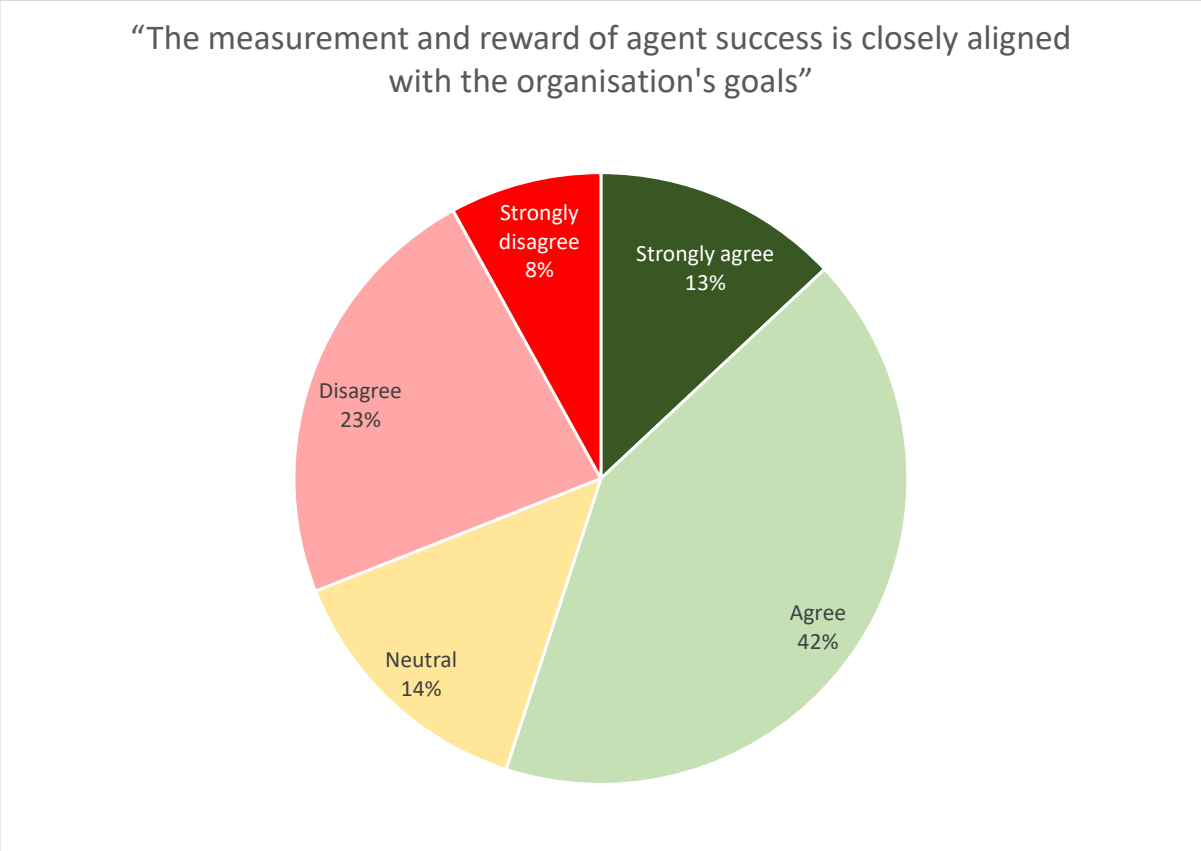
Contact centre leaders view this investment in technology to be an important but not the only method of helping frontline staff adapt to changing customer requirements, with the unified omnichannel desktop being seen as one of the most important solutions enabling and empowering agents to deliver high quality customer service.

It should be noted that most agents are already running close to capacity – time spent idle is usually under 10% for most operations – and that call lengths are increasing as work becomes more complex. Getting agents to work 'harder' (i.e. a greater interaction throughput per hour) is counter-productive to quality and customer outcome: agents need to be supported to work smarter and become more aligned with the contact centre's and wider business's strategy.

ALIGNING THE AGENT WITH THE BUSINESS

Only 55% of survey respondents believe that agent work is actively aligned with the strategy of the wider business, with more than 1 in 5 respondents in medium and large operations actively believing that there is a misalignment: that agents are measured on metrics and outcomes that are not in line with what the organisation actually wants to achieve with its contact centre.

Figure 228: "The measurement and reward of agent success is closely aligned with the organisation's goals"



It might reasonably be expected that the agent engagement/reward programme will directly support those characteristics and achievements that are most highly valued by contact centres and businesses: specifically, customer satisfaction, attendance and punctuality, and customer service-focused metrics such as first-contact resolution rates.

The following table compares the agent characteristics and achievements that are **encouraged and required**, and are shown, in order of importance, on the left. The characteristics and achievements on which rewards are **actually based**, are placed on the right.

It would be expected that the most encouraged and desired characteristic would be that which was also the most important when considering how to reward agents: in this way agents would be rewarded closely based upon how much they aligned with the needs of the contact centre and the business.

High customer satisfaction scores are stated to be the most important, and are said to be rewarded the most often, which is as it should be. Other characteristics that are encouraged and rewarded do not quite match exactly, and there are two elements that particularly stand out.

The greatest discrepancy, and one that is cause for worry, is that key customer-focused service metrics such as first-contact resolution rates are seen as being the 2nd most important characteristic to be encouraged, but only rated as the 5th most important characteristic to be actually rewarded, putting this out of alignment with what the contact centre and business itself deem necessary for success. On the other side, traditional contact centre metrics such as average handle time are rewarded more than they are said to be valued, despite an excessive focus on such metrics being potentially detrimental to the customer outcome.

Figure 229: Comparison between characteristics encouraged, and characteristics rewarded

Rank	Agent characteristic encouraged	Agent characteristic rewarded
1st	High CSAT / customer feedback scores	High CSAT/customer feedback scores
2nd	Other service metrics (e.g. first-contact resolution rate)	Good attendance and punctuality record
3rd	Good attendance and punctuality record	Other performance metrics (e.g. short average handle time)
4th	High adherence to schedule / availability	High adherence to schedule / availability
5th	Sales / conversion rates	Other service metrics (e.g. first-contact resolution rate)
6th	Other performance metrics (e.g. short average handle time)	Sales / conversion rates
7th	Other financial metrics (e.g. high % of promise to pay)	Other financial metrics (e.g. high % of promise to pay)

The difficulty in keeping agents engaged, understanding and focusing upon the behaviours, actions and characteristics that are most helpful for the contact centre and the business, and the limited budget which most contact centres have for incentive programmes create a situation whereby an alternative approach may need to be considered.

Gamification is an approach taken to improving agent engagement, aligning behaviours and characteristics with those of the contact centre and wider enterprise: at the most basic level, it involves making work tasks into games. The contact centre is a particularly rich potential environment for this approach, as it contains many of the factors that can make gamification successful:

- opportunity for achievement, reward and recognition at an individual level
- the possibility of team-based and goal-based quantified success
- a large pool of competitors and team members, that can be segmented appropriately to make competition and teamwork more manageable
- clearly defined tasks and metrics that can enable direct comparison between individuals and teams, over time, with measurable improvements possible.

The next section considers gamification in more depth.

Many contact centre agents work in stressful environments for relatively low pay, doing work which may sometimes be repetitive. Depending on the nature of the calls, they may be dealing mainly with customers who have negative experiences of the company, which is unlikely to make the agent happier about representing the enterprise, especially over time.

The new agent, while often feeling uncertain about their ability to do tasks, is usually willing to learn and is engaged in their work. Assuming that the initial training period is effective, their competence will increase but there is a danger that some will become bored and cynical, which may in the longer term lead to high levels of agent attrition and correspondingly lower levels of operation-wide competence. As such, there is a twofold problem: lack of engagement at agent level leading to lower quality and productivity, and the corresponding costs associated with unnecessary agent attrition.

Gamification looks to meet these twin challenges with two solutions of its own: making work a more fun place to be, while encouraging the behaviours, competencies and characteristics that most closely aligned with the enterprise's own requirements through giving agents real-time feedback about their performance, the opportunities to improve themselves and to be seen positively by peers and managers with the attendant social and material rewards.

Through the process of awarding badges, points and achievement levels, gamification gives agents an opportunity to show their achievements and compete as individuals and part of the team. The goals in mind are set by the business, and these require a great deal of thought, as any agent behaviours and actions must be closely aligned with where the business wants to go. This is an area of particular potential risk for businesses: taking a simple example, rewarding agents based upon average call handling time so as to reduce cost could obviously lead to them dropping difficult calls or not answering customers fully in order to meet these targets. There is also a risk that the novelty of games will wear off, with rewards having to have a higher and higher tangible monetary value in order to keep people's motivation, so ongoing efforts must be made by management to keep games fresh and goals relevant.

It is also important to note that gamification – while providing feedback and rewards to agents on an individual level – should be used as part of a team or community experience, encouraging high performing agents to share their best practice and for all agents to be continually challenged and pushed to learn new skills and improve their own performance.

Contact centres that use gamification frequently report that most agents go beyond the required training schedule, completing extra units and developing skills further in order to accumulate more points and badges. In a heavily incentivised sales environment, encouraging agents to take time off revenue generating activity to take training can be difficult, and this is a potential solution.

Gamification looks to increase agent engagement through:

- providing immediate feedback to the agent, who does not have to wait until the scheduled supervisory review to see how they are doing
- improving *esprit de corps* through the pooling of knowledge and collaboration within a group in order to achieve specific goals for which all will be rewarded
- cutting down on the amount of time required for new agents to become competent, providing real-time feedback in order to encourage positive behaviours
- reducing the amount of management time required to run incentives programs, and delivering them more fairly and objectively
- focusing upon and reward those characteristics and behaviours that are most closely aligned with the contact centre's and enterprise's own requirements.

This final point – encouraging agents to do what benefits the business – should be a key goal of gamification. As seen earlier in this report, many organisations are rewarding agents for behaviours which are not closely aligned with where the business needs to go, while ignoring those attitudes and characteristics that would actually support them in their journey, often because these latter are more difficult to measure.

Gamification can help businesses to support their objectives, and to achieve specific results. For example, steps to make gamification assist with achieving a company's business priorities could include:

- clarifying the enterprise's objectives
- identifying contact centre metrics that directly impact upon these objectives
- identifying the agent characteristics, behaviour and actions that impact these metrics the most
- developing a gamification strategy that can measure and improve these metrics, through motivating the agents to act in ways that support this goal.

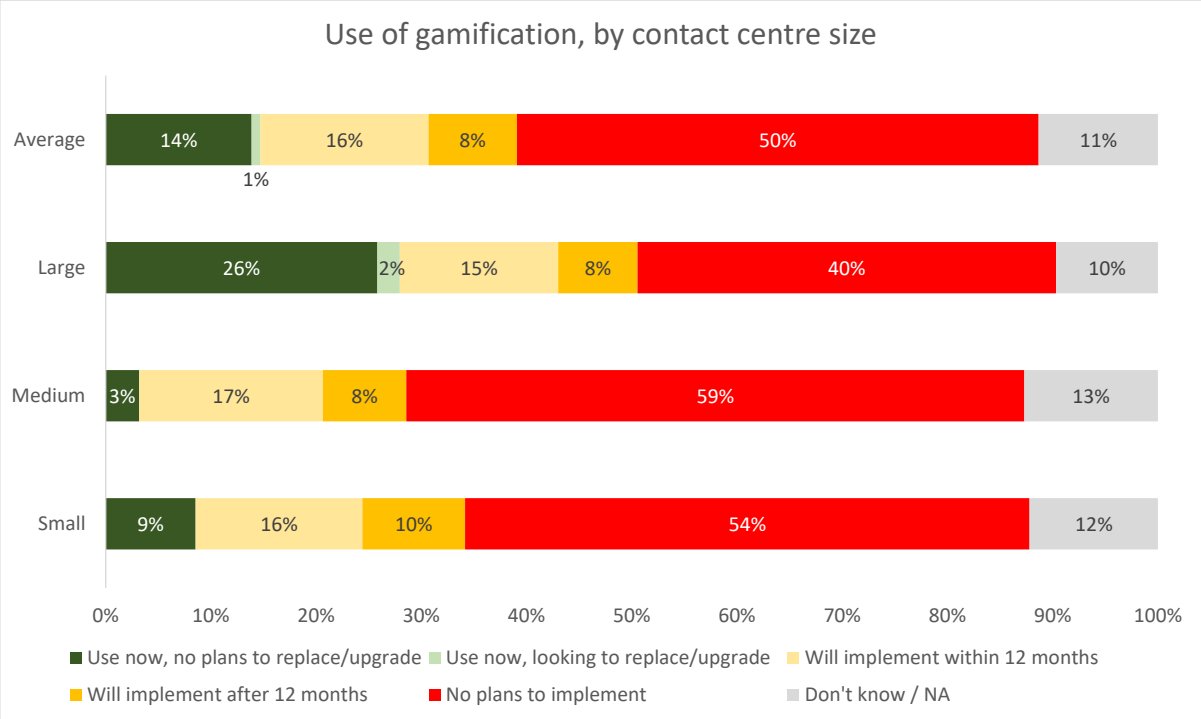
For businesses which want to achieve specific results, gamification can assist through:

- increasing the skills and competencies of new agents more rapidly, decreasing time to productivity by switching from formal, classroom lecture-based training into structured real-life work tasks
- further developing the skills of agents through encouraging and rewarding the completion of extra training courses and activities beyond what is required
- cutting agent retention through increasing agent engagement, and recognising and rewarding positive behaviours and characteristics.

15% of respondents currently use gamification within their contact centre operations, and a further 16% believe that they will implement this within 12 months.

The use of gamification is considerably higher within large contact centres, where 26% of respondents from large operations currently use it and a further 15% intend to implement it within a year.

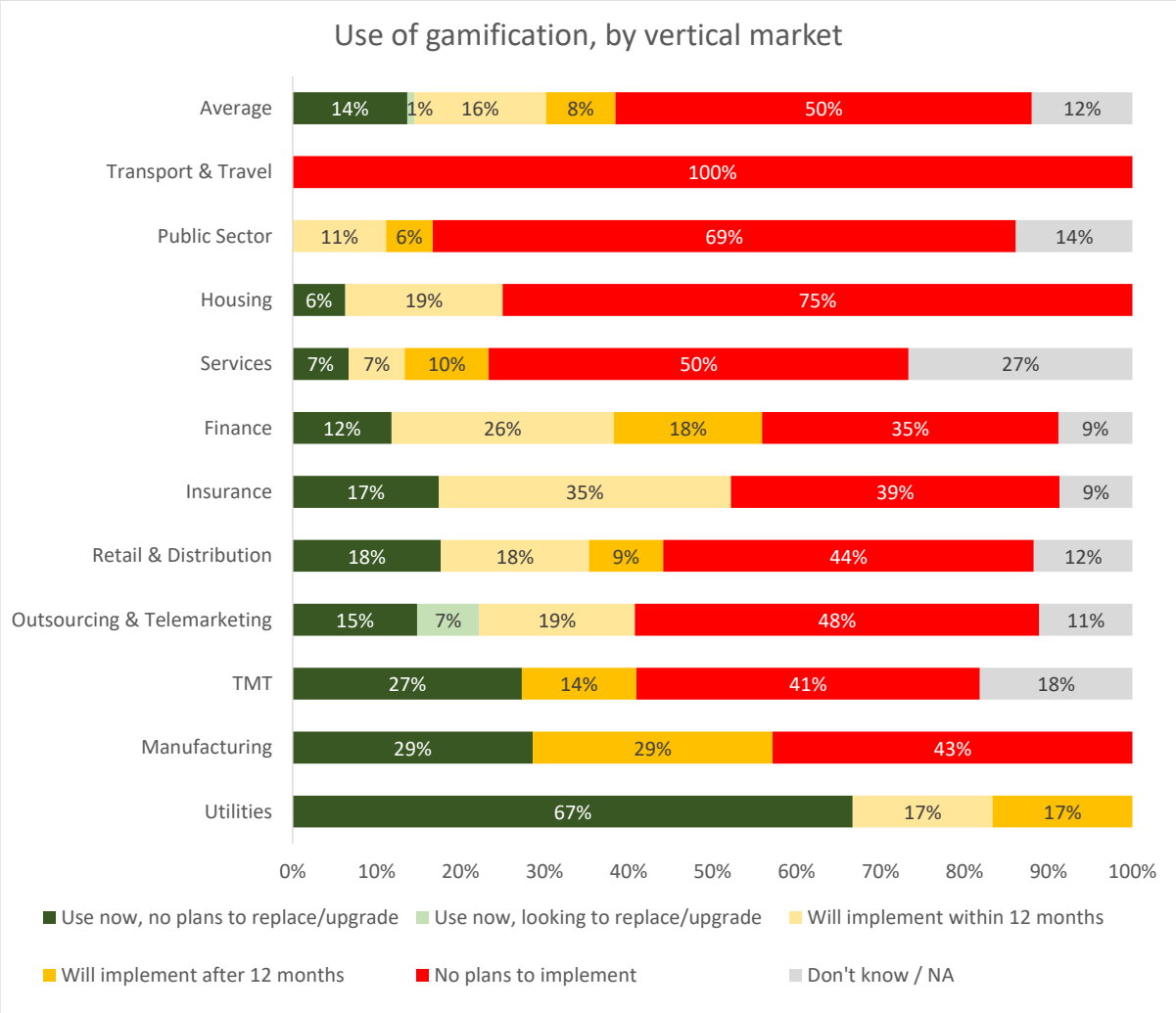
Figure 230: Use of gamification, by contact centre size



There is a danger in over-analysing data where the segments are too small, and this can be the case when considering vertical market implementations of a nascent solution.

However, it is interesting to note that the utilities respondents from this year's survey are the highest current users of this solution, and the insurance and finance sectors report the strongest interest in implementing gamification.

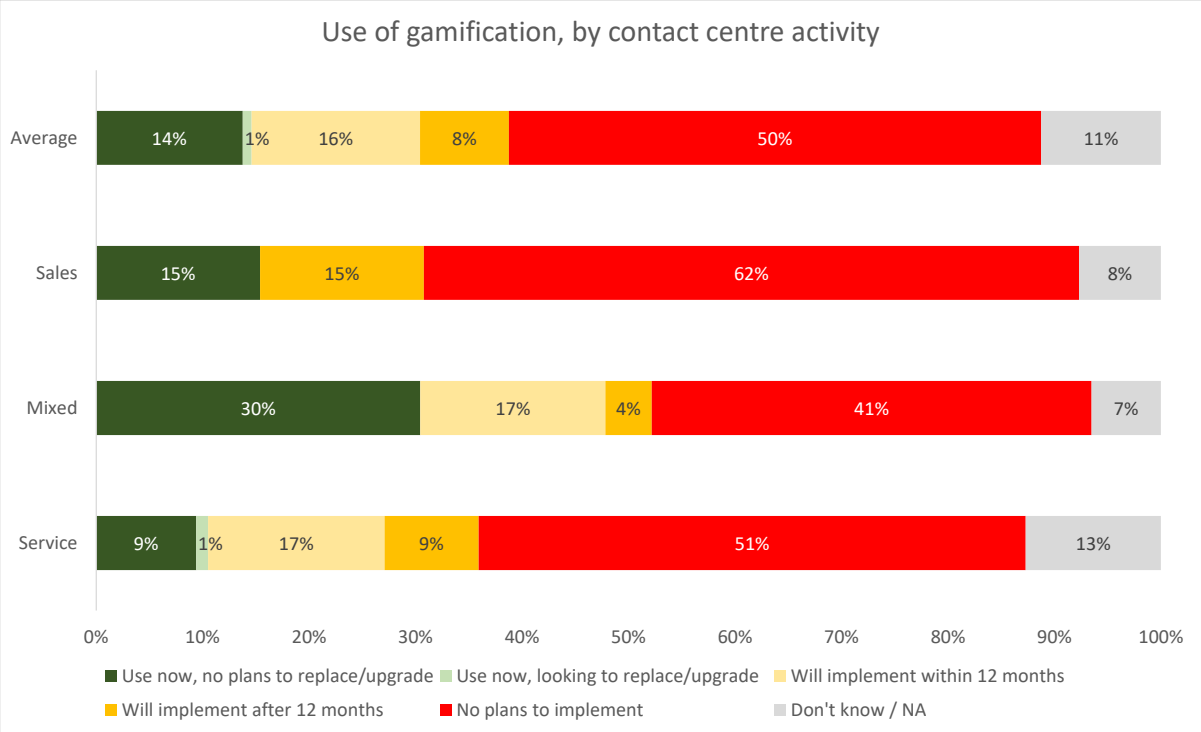
Figure 231: Use of gamification, by vertical market



Looking at the activity type of respondents, those working in the sales or mixed sales/service environment (which are already culturally used to the public, competitive practice of sharing sales targets and achievements) are much more likely to be using gamification today, although the relatively small sample size of pure sales operations involved in this survey should be considered.

However, as this pattern is also found in US contact centres, it may well be the case.

Figure 232: Use of gamification, by contact centre activity

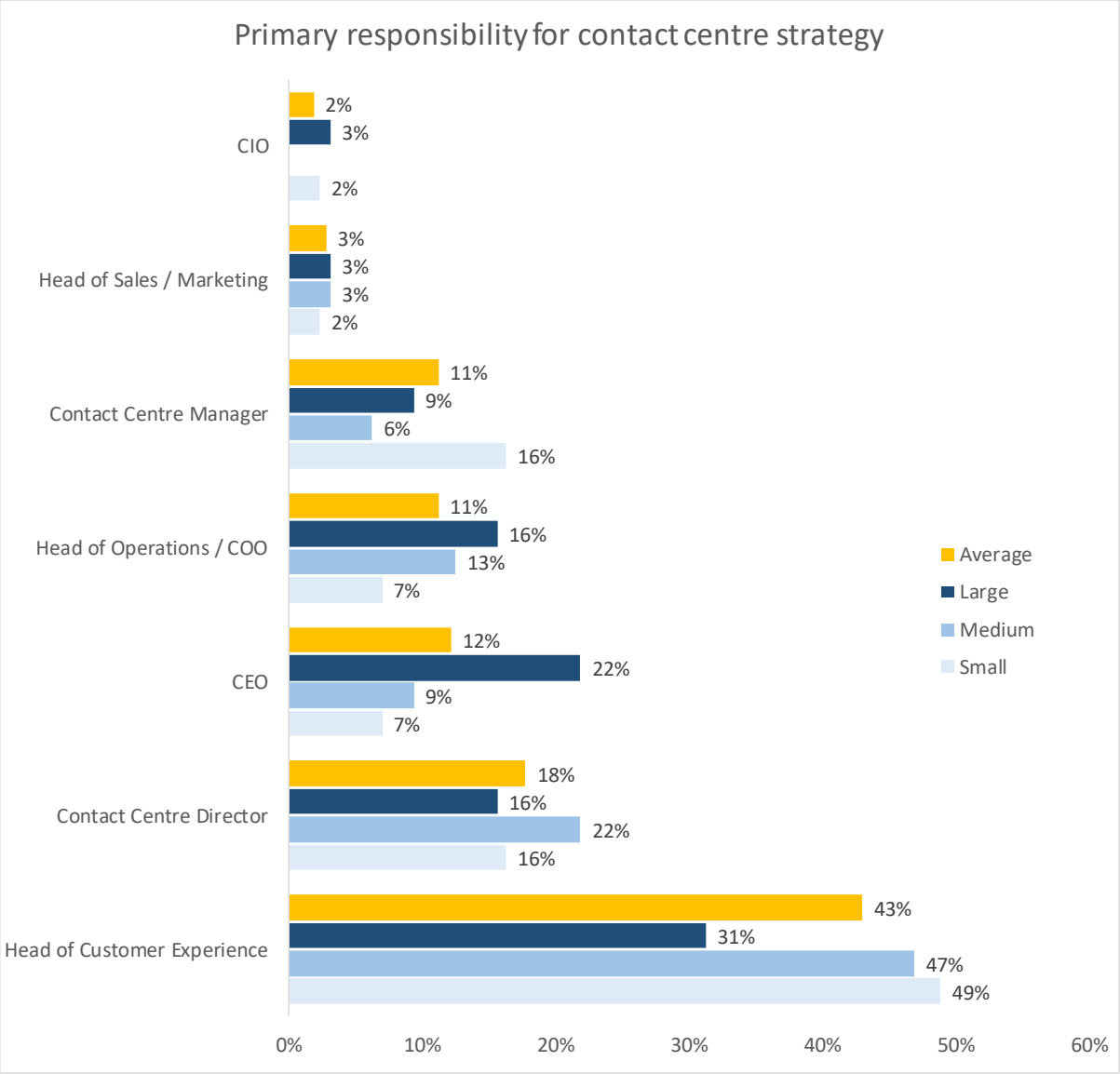


More information on strategies and methods to promote agent engagement and empowerment can be found in "The Inner Circle Guide to Agent Engagement & Empowerment", available free from www.contactbabel.com.

STRATEGIC RESPONSIBILITIES

For many businesses, especially those with sub-200 seat contact centres, the main responsibility for contact centre strategy belongs to the relatively new job role of customer experience director. The rapid rise in senior customer experience professionals comes as a result of businesses finally understanding that their customer contact is key to their business's overall success, rather than simply viewing the contact centre as an unwelcome cost.

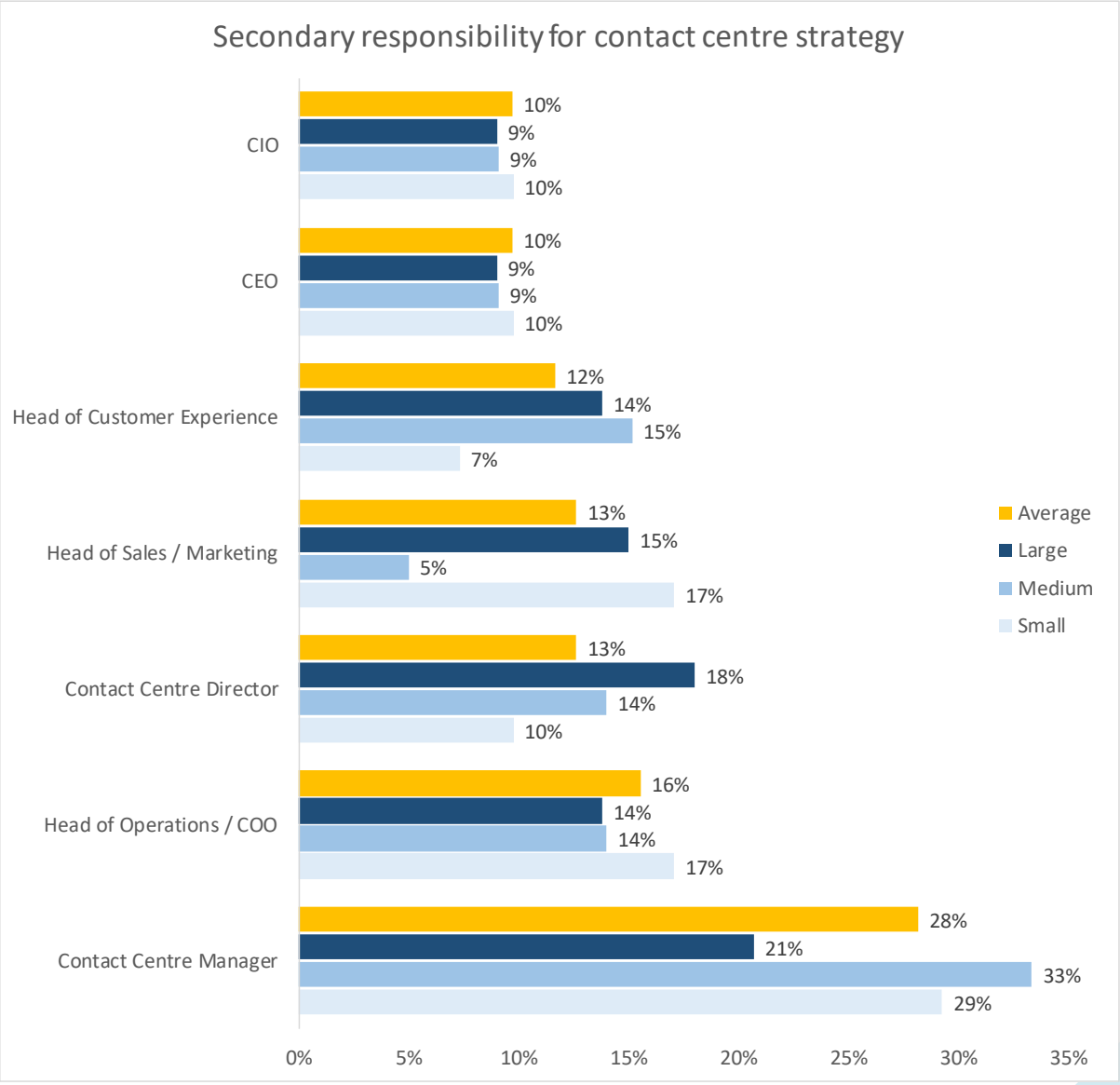
Figure 233: Primary responsibility for contact centre strategy



For large (200+) seat contact centres, 22% of respondents state that their CEO has primary responsibility for contact centre strategy, it being a large part of the overall customer experience. The equivalent figure for sub-50 seat contact centres is only 7%. The COO is also more likely to have primary responsibility in larger contact centres than smaller ones.

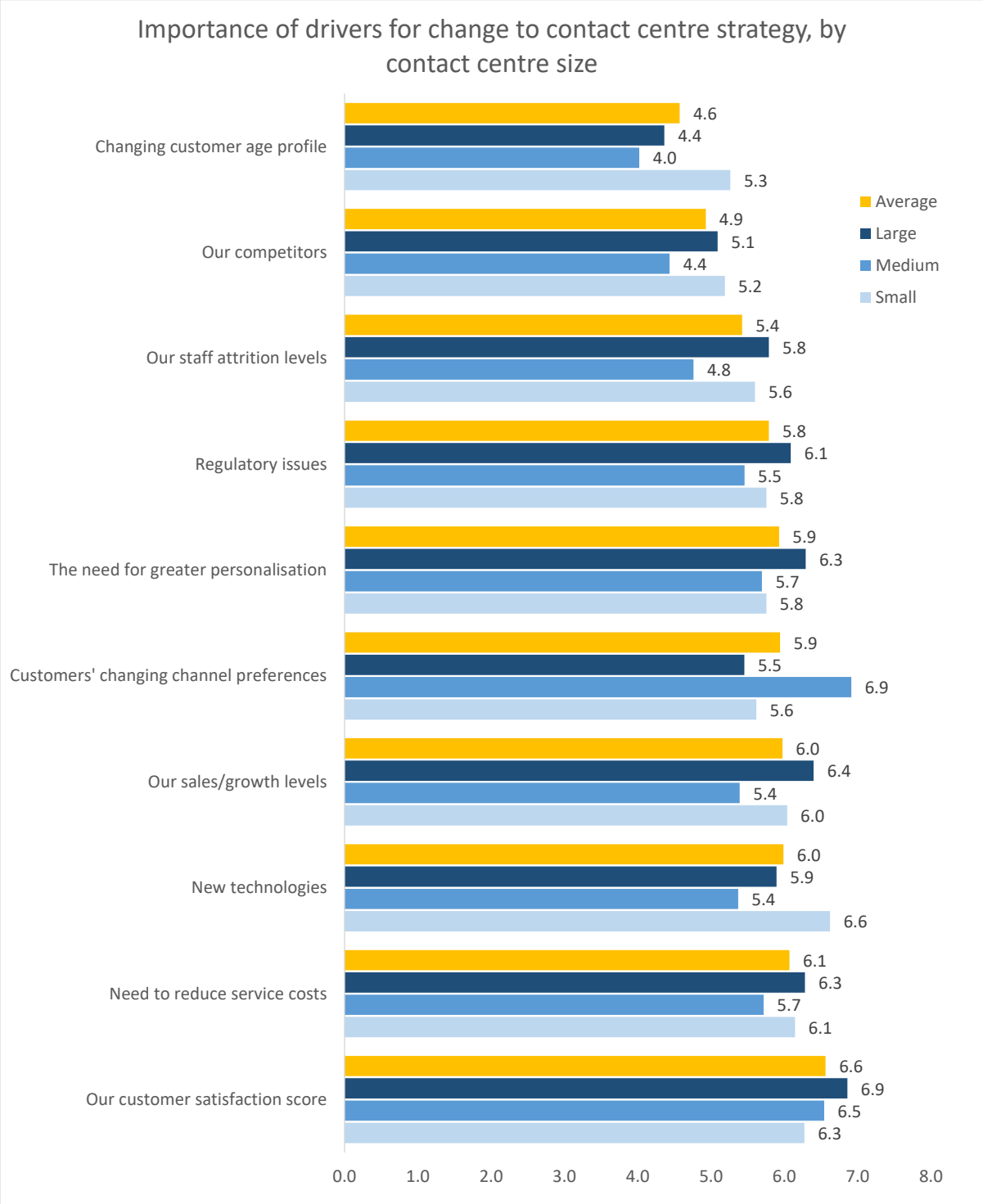
Contact centre managers are far less likely to have primary responsibility for strategy in 50+ seat operations. Few contact centre managers are stated to hold primary responsibility, yet these are the people with direct day-to-day responsibility for the contact centre's performance. Even when looking at secondary responsibility, only 21% of large contact centres entrust the contact centre manager with this role. It seems questionable that so many businesses with large contact centre operations have divorced operational and strategic responsibilities: as a general rule, the larger the contact centre, the more senior the primary strategic decision-maker will tend to be. While this will help to make change actually happen, it would make sense for businesses to understand more fully how strategy will actually translate into action.

Figure 234: Secondary responsibility for contact centre strategy



The chart below shows the average score that was given by respondents to the question: “How important are these drivers for strategic contact centre change, where 1 is very unimportant, and 10 is vitally important?”.

Figure 235: Importance of drivers for change to contact centre strategy, by contact centre size



The raw scores previously shown are ranked below in importance to give a clearer picture of what each size band states is most important to their strategic decisions. This year saw a less unanimity across the size bands than usual, although customer satisfaction scores and the need to reduce service costs placed respectively in second and third places across the small and medium size bands.

Small operations considered new technology to be the major driver for them, with mid-sized operations most focused on customers' changing channel preferences. Respondents from larger operations thought that the need for greater personalisation would be an important driver for their contact centre strategy.

Figure 236: Importance of drivers for change to contact centre strategy, by contact centre size (ranked)

Driver for change	Small	Medium	Large	Average
Our customer satisfaction score	2nd	2nd	1st	1st
Need to reduce service costs	3rd	3rd	4th	2nd
New technologies	1st	7th	6th	3rd
Our sales/growth levels	4th	6th	2nd	4th
Customers' changing channel preferences	7th	1st	8th	5th
The need for greater personalisation	5th	4th	3rd	6th
Regulatory issues	6th	5th	5th	7th
Our staff attrition levels	8th	8th	7th	8th
Our competitors	10th	9th	9th	9th
Changing customer age profile	9th	10th	10th	10th

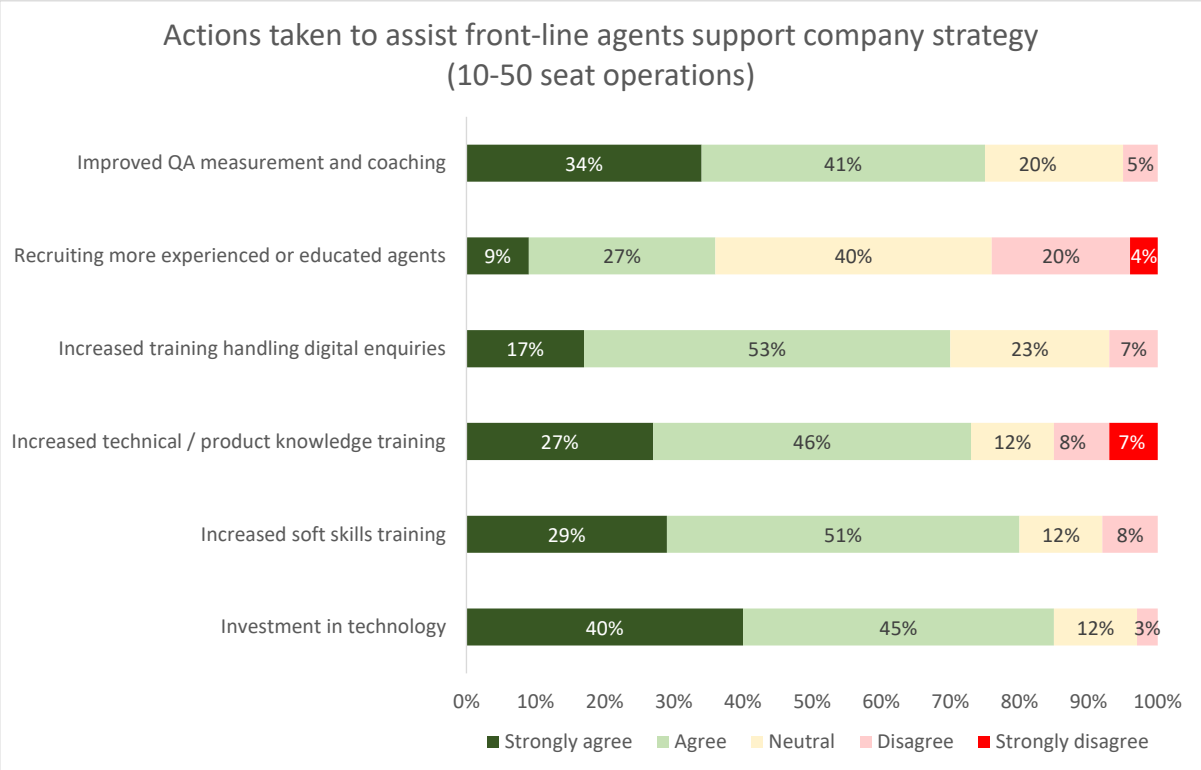
The following three charts show the actions being taken to assist front-line agent support a company strategy, regardless of what it is. This demonstrates where the efforts and investments are being made in agents' ability to do their job.

For the smallest operations in the survey, the greatest proportion of respondents strongly agree that investment in technology is happening, with 85% of respondents feeling that this is the case to some extent.

There also seems to be widespread activity to improve both the technical and soft skills of agents, with more than three quarters of respondents stating that they are actively doing this.

On a more negative note, 26% of respondents in small operations are not actively looking to improve quality assurance measurement and coaching, a figure that is far higher than in medium and large contact centres.

Figure 237: Actions taken to assist front-line agents support company strategy (10-50 seat operations)

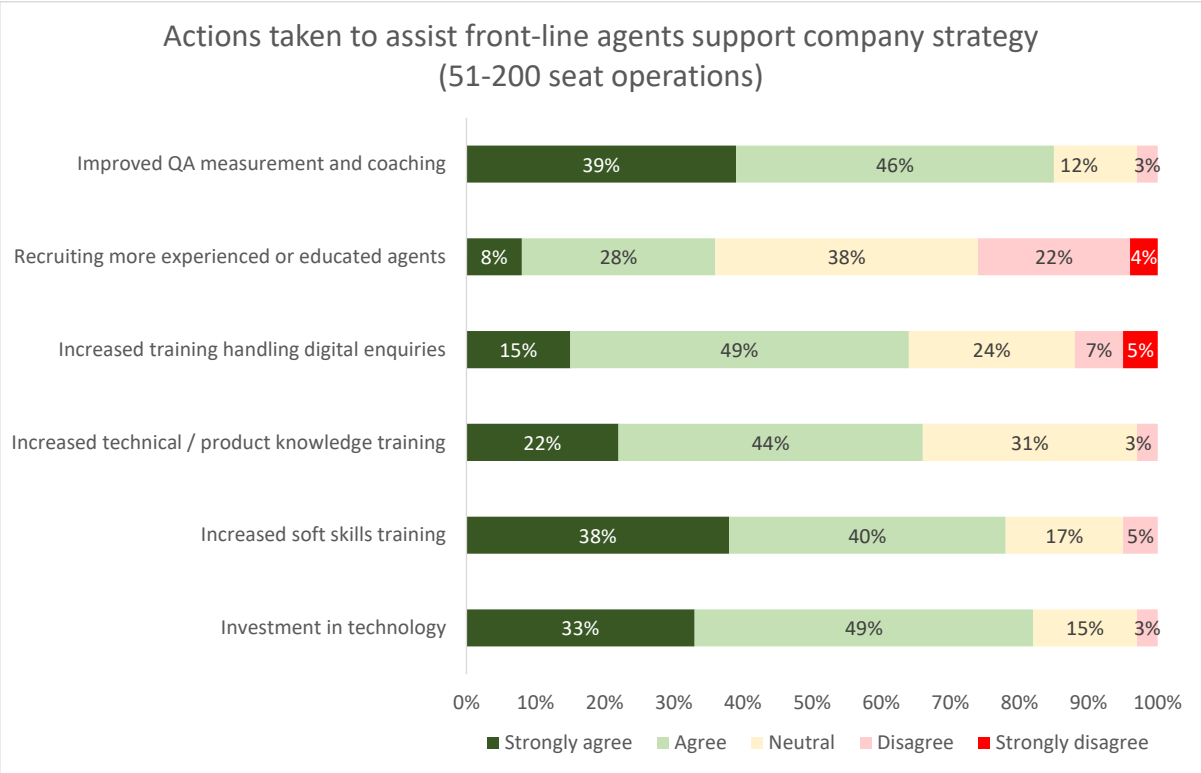


Considering mid-size contact centres, close to 80% of respondents state that they are improving QA measurement and coaching, investing in technology and also improving their agents' soft skill training in order to support the company strategy.

Mid-size contact centres are much less likely to be increasing the amount of training that their agents receive to handle digital enquiries, despite a widespread agreement that changing customer channel preferences is driving strategy.

51-to-200 seat contact centres are somewhat more likely than large operations to be looking to recruit more experienced and educated agents (51% versus 33%).

Figure 238: Actions taken to assist front-line agents support company strategy (51-200 seat operations)

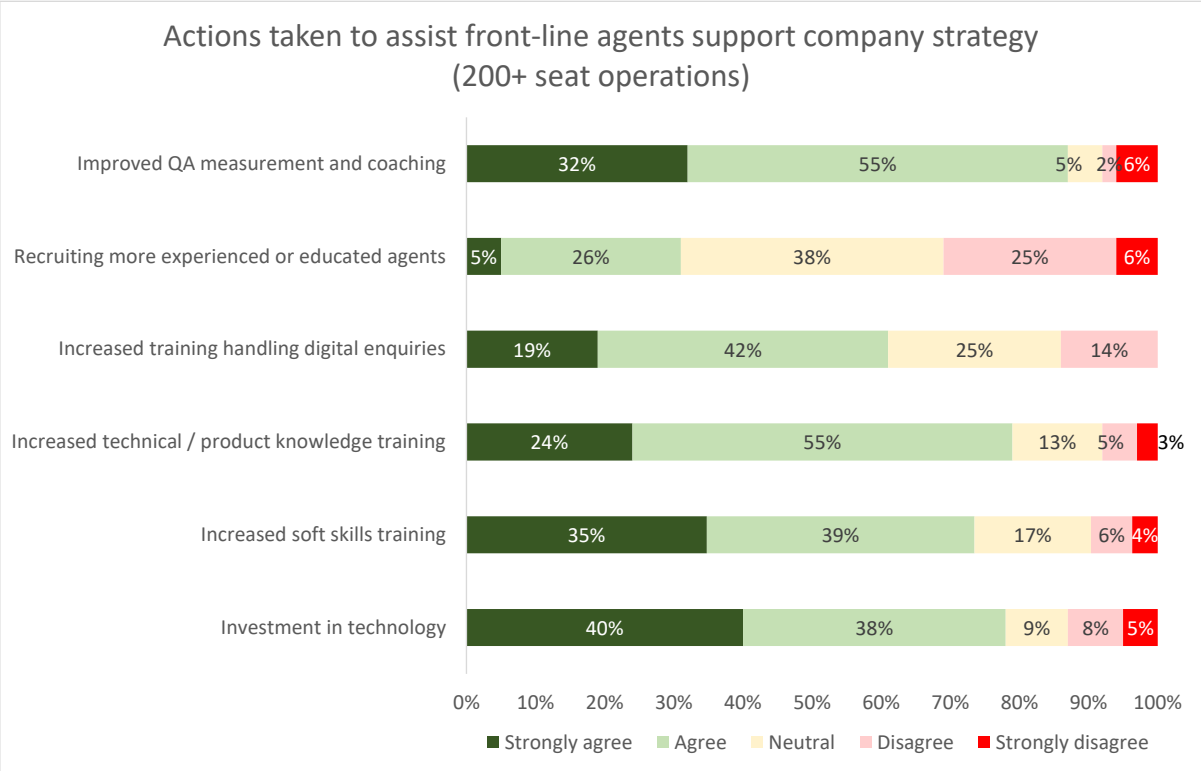


Within the large contact centre sector, the vast majority are looking to improve quality assurance measurement and coaching, as well as increasing both the technical and soft skills capabilities of their agents in order to support company strategy.

Probably due to the recent rise in digital enquiries, more contact centres are training their agents to handle a growth in digital enquiries, although there is no great enthusiasm to recruit more experienced and educated agents into their operation, preferring to improve the skills and capabilities of the agents that are already there, through training investments. Perhaps due to the problems with staff attrition that many large contact centres have reported, the focus is upon improving the ability of their agents rather than simply accepting a higher-than-desired attrition rate.

Almost 80% of respondents from large contact centres state that they are actively investing in technology in order to support their agents in line with the company strategy.

Figure 239: Actions taken to assist front-line agents support company strategy (200+ seat operations)



Traditionally, HR issues such as attrition have been what make contact centre managers most concerned, but the past years have seen a growing feeling that the technology in place is letting the operation down, or at least, preventing it moving forward to the extent that it needs. Many solution providers note that as part of their sales engagements, they will typically carry out a business process review. They often find that staff are typically committed and capable, but are hamstrung by legacy applications, data systems and inefficient processes. Contact centres are also aware that they have to modernise their processes as well as the technology, but - as ever - cost, time and the need to keep the operation running smoothly make this sort of strategic thinking very difficult, especially in a situation where some contact centres still do not have much in the way of a champion at the higher levels of the business.

The need to measure and improve customer experience and satisfaction, and its impact upon profitability, has become an obsession throughout the industry, which is positive for customers and businesses. The explosive growth in digital communications has made all contact centres realise that effective customer contact cannot exist in a siloed environment, but only as part of an omnichannel contact strategy.

Driven by digital communication, the industry is still growing in terms of increased volumes of interactions, although headcount has stalled, and more needs to be done to increase the effectiveness of agents, particularly as the move from live voice to digital service means learning new ways of operating. Voice self-service levels have been low across much of the industry for some years, although have picked up significantly in the past years. With the intense interest in AI, far more is being done via web self-service, taking low-value work away from agents and freeing them up to do more profitable, valuable and difficult work, not just through the voice channel, but also via high-value email and web chat interactions. Technology discovery projects will typically highlight several opportunities for self-service and call deflection, but the customer satisfaction element of a poorly implemented self-service application also needs to be considered. Businesses have to ensure that they choose the right areas to self-serve, and then do it well.

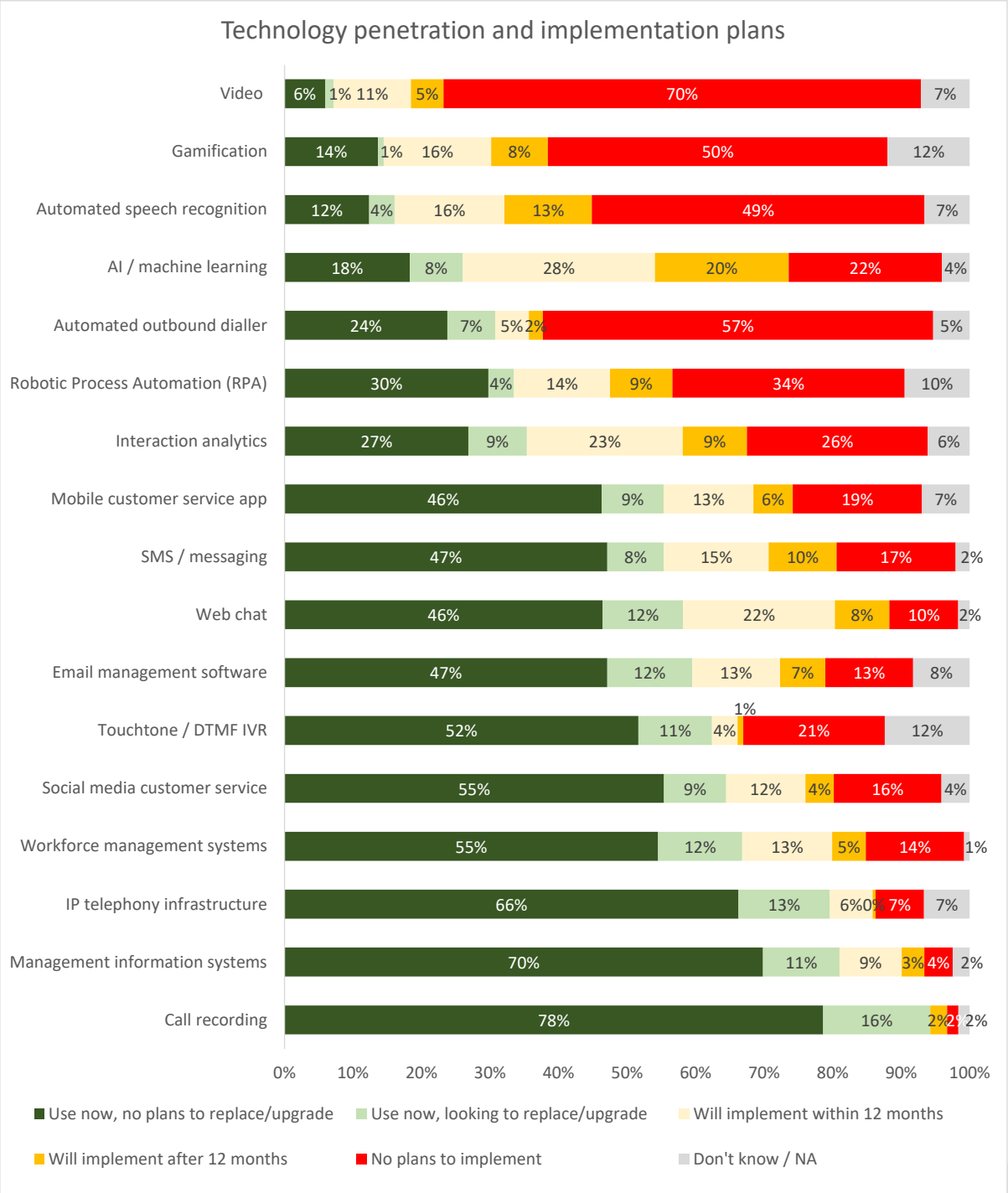
For businesses where self-service is not seen as a viable option, many opportunities still exist to trim unnecessary elements of the calls, from identity verification through system navigation to post-call wrap-up: consistently high levels of wrap-up time and non-call time is worrying: often 40% or more of an agent's time is spent doing something other than communicating with customers. Agent desktop optimisation - putting the right things on the desktop at the right time in the conversation, without disrupting the underlying system functionality – has gained in popularity, especially in very large contact centres with multiple, complex processes and legacy systems, and this is leading to a greater focus on optimising associated back office processes. Interaction analytics offers businesses a major opportunity to understand why customers are calling, and to gain real commercial insight that will impact at the heart of the business, and with AI-enabled analytics very much in vogue, the opportunity to increase functionality and insight has never been higher.

Open systems and infrastructure now make the implementation of automated identity verification and CTI-like processes far more cost-effective and simpler to deploy. Linking with cloud-based CRM applications, the agent desktop can unify all of the legacy applications within a single customer view, significantly reducing agents' post-call wrap-up activities and overall call handling time.

Customer satisfaction and improved customer experience is the common ground where senior executives and contact centre operations can now meet and discuss how to head in the right direction together. Much of what respondents to this survey have talked about is coloured by improving customer satisfaction and reducing customer effort, the drivers of where the contact centre industry is headed long-term.

The following chart shows respondents' current and future use of specific contact centre solutions.

Figure 240: Technology penetration and implementation plans



Call recording, IP infrastructure, email management, web chat and workforce management and web chat are amongst the most likely to be upgraded or replaced in the next year. Many legacy call recording solutions are moving to the cloud, removing the need for on-site storage and maintenance, security management and improving operational flexibility, and the opportunity to upgrade recording systems while implementing analytics is also being taken by many contact centres.

In terms of new implementations, AI dominates, with web chat and analytics also receiving serious interest. There is also significant interest in video.

In the longer-term, AI, speech recognition, messaging and analytics were seen by respondents as likely investments. This may show that businesses are serious about these solutions, or alternatively it may be viewed as something that businesses would like to do, but find it difficult to get around to as they have more pressing tasks in the meantime. Budgetary issues may also play a large part in this.

Recognising that the reality of contact centre investment does not always match the intention shown in the previous chart, the following table gives closer analysis of IT investment priorities.

Figure 241: Top 5 most important areas of contact centre IT expenditure in the next two years (proportion of contact centres placing solution in their top 5, 2015-21)

Technology solution	2015	2016	2017	2018	2019	2020	2021
Omnichannel (i.e. getting channels to work together)	42%	50%	55%	41%	56%	51%	51%
Artificial Intelligence	n/a	n/a	n/a	n/a	43%	42%	50%
CRM / Agent Desktop Software	48%	56%	53%	63%	43%	32%	40%
Web Self-Service	12%	18%	19%	32%	36%	36%	36%
Homeworking	14%	9%	11%	26%	16%	28%	31%
Email Management	41%	37%	31%	27%	23%	25%	30%
Workforce Management	19%	29%	24%	17%	18%	27%	28%
Performance & Quality Management	26%	25%	25%	14%	29%	29%	27%
Web Chat	38%	31%	29%	28%	33%	33%	25%
Management Information Systems	30%	25%	22%	25%	31%	26%	24%
Cloud	18%	17%	16%	25%	22%	18%	21%
Back-Office Integration	39%	45%	48%	31%	22%	22%	20%
Desktop Automation & Analytics	19%	25%	27%	22%	13%	18%	17%
Interaction Analytics	9%	8%	13%	17%	19%	16%	15%
Telephony Self-Service (DTMF IVR, Automated Speech Recognition, Visual IVR)	8%	12%	14%	25%	21%	18%	13%
Call Recording	19%	6%	12%	16%	10%	12%	11%
Telephony Infrastructure (including IP)	10%	12%	7%	13%	8%	10%	12%
Social Media	21%	20%	18%	27%	12%	7%	9%
Gamification	8%	9%	11%	6%	9%	8%	8%
Hardware (including PCs & servers)	19%	13%	12%	14%	5%	8%	7%
Virtual Contact Centres	7%	10%	8%	2%	3%	7%	7%
Interaction Routing (including ACD/CTI-like functionality)	17%	14%	14%	3%	3%	5%	6%
Video/Web RTC	0%	4%	2%	0%	0%	5%	4%
Voice Biometrics	4%	3%	3%	6%	7%	3%	4%
Mobile Service	15%	13%	19%	13%	9%	8%	3%
Headsets	7%	3%	2%	2%	4%	5%	3%
Outbound Automation	6%	5%	5%	6%	4%	1%	1%

The percentages in the previous table are based on the proportion of respondents over the past five years placing the specific solution within their top 5 from a list of 27 possible contact centre solutions (AI was only added as an option in 2019). By showing this historical data, patterns will emerge showing the solutions that are gaining the most interest over the years, and those which are losing their appeal.

Omnichannel – which has been defined within this part of the survey as getting the various channels to work together – is placed within the top 5 priorities by 51% of respondents again this year. The various supporting applications, such as web chat and email management systems still have significant proportions of respondents placing them within the top 5. The interest in social media as a customer contact channel has dropped dramatically since 2018.

CRM (including improvement to the contact centre agent desktop and contact management system, as well as company-wide CRM) was in no.1 position for a number of years, although it lost its no.1 spot in 2017 to omnichannel. Artificial intelligence cements its place towards the top of the chart, with half of respondents choosing this as a top 5 priority for them.

After some years of relative stagnation, interest in web self-service has grown significantly since 2018, driven in large part by the promise of artificial intelligence and chatbots providing a superior self-service experience than had previously been the case.

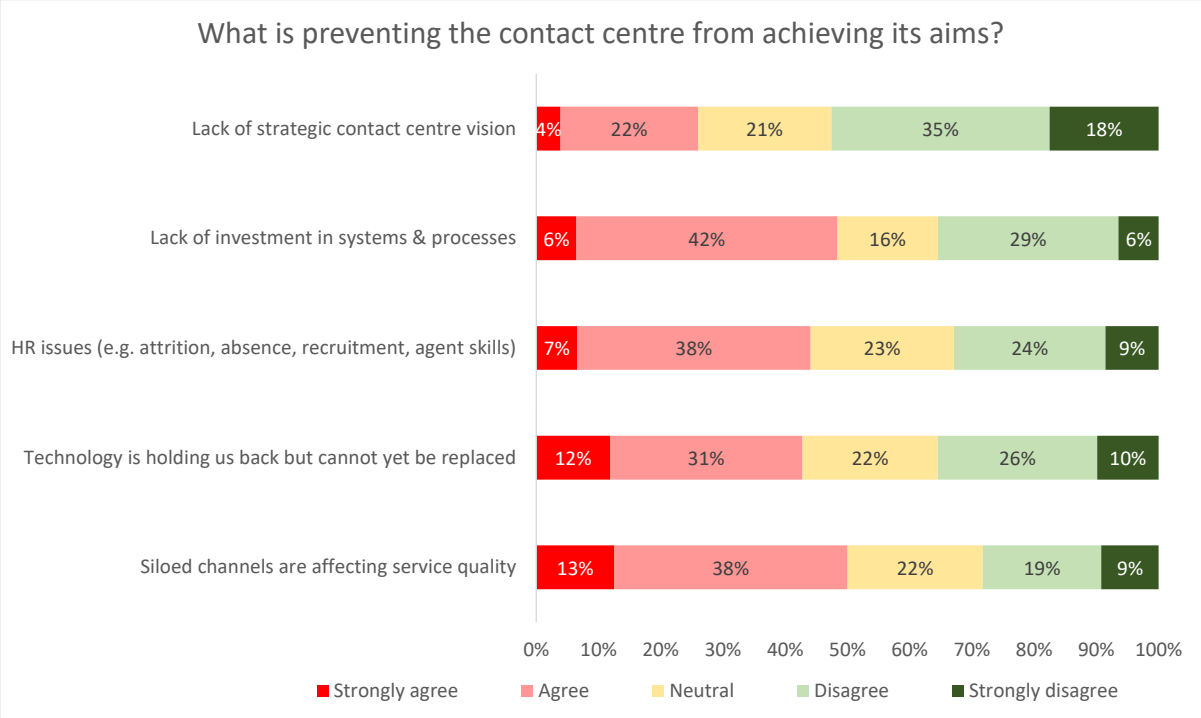
Back-office integration has dropped in importance again this year, and is now the 12th highest priority rather than the 4th, as it had been for some years. While respondents are still very aware of the need to underpin the entire customer contact infrastructure – both front and back office – with a robust, stable and non-siloed infrastructure that allows a single view of the customer, the resurgent interest in omnichannel and new enthusiasm for AI-enabled self-service has pushed this down the list.

Unsurprisingly, homeworking has maintained its high priority for many businesses, being seen as a top 5 priority by 31% of survey respondents.

HELPING THE CONTACT CENTRE ACHIEVE ITS AIMS

Respondents were asked to give their views on what was preventing the contact centre from achieving its aims, assuming that there was a gap between what was being achieved and what would be ideal.

Figure 242: What is preventing the contact centre from achieving its aims?



43% agreed or strongly agreed that irreplaceable technology was a problem. This lack of ability to change or upgrade its systems may be around a lack of investment, or maybe more to do with the highly-customised and bespoke legacy environment that the business feels it requires to operate.

51% of respondents admit that siloed channels are affecting how they can provide customer service: most of these channels were added and integrated in a piecemeal fashion, and require the re-engineering of underlying infrastructure and business processes in order to provide the omnichannel experience which many respondents feel is necessary to improve the customer's experience significantly. This is another drop on previous years' figures and may signify that these issues are slowly being resolved.

48% agree that systems and processes are holding the contact centre back from achieving its aims. There was a rise in the proportion of those concerned about the limitations of their HR, possibly driven by the difficulties around remote working.

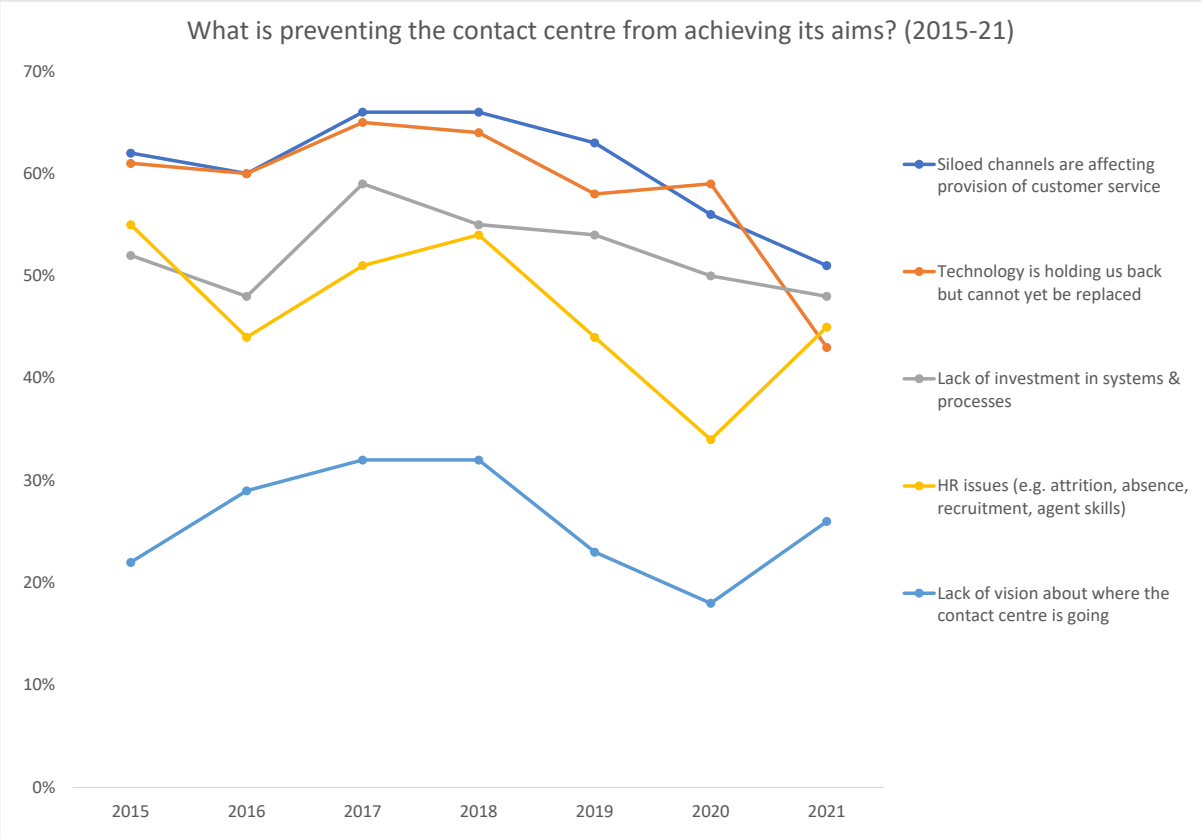
Respondents were also asked for any other issues that they felt were preventing their contact centre from achieving its aims that had not already been mentioned. Responses included:

- Budget constraints
- Fast-moving changes to the business and increased complexity
- Too little time to carry out all of the improvements identified
- Declining revenues in markets that are changing, meaning investment in the contact centre becomes less
- Reluctance to change existing, traditional working practices, which includes trying to get the non-contact centre part of the workforce to improve customer communication.

The following chart considers historical data as well as 2021's figures, showing the proportion of respondents that agree or strongly agree that these issues are preventing the contact centre from achieving its aims.

Concern about the lack of vision from senior business figures and HR issues are both seen as growing in importance after recent declines. However, it seems that legacy technology is becoming less of a problem, as are siloed channels preventing omnichannel and a single view of the customer.

Figure 243: What is preventing the contact centre from achieving its aims? (2015-21)



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We help US and UK contact centres compare themselves to their closest competitors so they can understand what they are doing well, what needs to improve and how they can do this.

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