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The 2026 US Contact Center Decision-Makers' Guide

18th edition

Research supported by

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“The 2026 US Contact Center Decision-Makers’ Guide (18th edition)”

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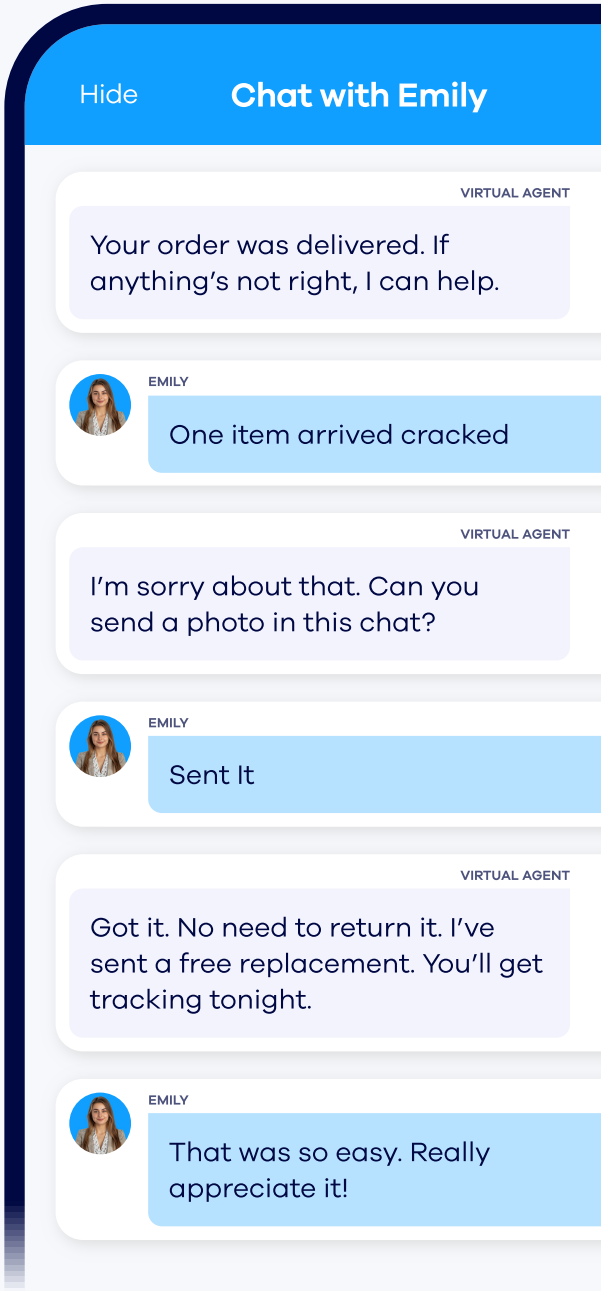

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INTRODUCTION AND METHODOLOGY

The "US Contact Center Decision-Makers' Guide (2026 – 18th edition)" is the major annual report studying the performance, operations, technology and HR aspects of US contact center operations.

Taking a random sample of the industry, a detailed structured questionnaire was answered by 207 contact center managers and directors between November 2025 and February 2026.

Analysis of the results was carried out in March 2026.

The result is the 18th edition of the largest and most comprehensive study of all aspects of the US contact center industry.

HOW TO USE THE REPORT

“The US Contact Center Decision-Makers' Guide” identifies six of the major pain points and issues that affect the contact center industry:

- Improving Quality and Performance
- Maximizing Efficiency and Agent Optimization
- Digital, Cloud and the Customer of the Future
- 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 center 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 center size (agent positions)
- by contact center 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 analyzed data along vertical market (business sector) lines, to highlight the specific issues and environments particular to that vertical industry. Below are the 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
Insurance	Insurance for medical, life, motor, house, corporate, reinsurance, etc.
Manufacturing	Mainly B2B sales and support, along with customer helplines
Medical	Hospitals, pharmaceuticals, medical supplies
Outsourcing	Large full-service outsourcers/BPOs and telemarketing firms
Public Sector	Government (federal, state and city) agencies, 911 / 311
Retail & Distribution	Retailers, home shopping, mail order, parcel carriers, logistics
Services	Non-physical service offerings to public and business
Technology, Media and Telecoms (TMT)	Technology sales and service; Cell and fixed line telco, TV, satellite and cable providers; Broadband/ISP; triple/quad play
Transport & Travel	Transport information, booking, travel agents, airlines, hotels

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 centers 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 CENTER TYPE

Whether a contact center is predominantly inbound or outbound can fundamentally determine how the contact center is run. Therefore, we sometimes analyze data by contact center 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 207 contact centers interviewed in this study were broken down into discrete segments:

Vertical markets

- Finance – 22
- Insurance – 18
- Manufacturing – 12
- Medical – 19
- Outsourcing & Telemarketing – 24
- Public Sector / Government – 26
- Retail & Distribution – 26
- Services – 30
- Technology, Media and Telecoms (TMT) – 20
- Transport & Travel – 7
- None provided / other (not included in vertical market analysis) – 3.

Size bands

- Small (10 to 50 agent positions) - 64
- Medium (51 to 200 agent positions) - 66
- Large (200+ agent positions) – 74
- No response – 3.

Inbound / outbound

- Mostly inbound (75%+ inbound) – 146
- Mixed (between 26% and 74% inbound and outbound) – 44
- Mostly outbound (75%+ outbound) – 13
- No response – 4.

Sales / service

- Mostly service (75%+ service) – 145
- Mixed (between 26% and 74% service and sales) – 45
- Mostly sales (75%+ sales) – 13
- No response – 4.

DISTRIBUTION AND USE OF THIS REPORT

This report is written for the community of people interested in the present and future performance of the US contact center industry.

Amongst others, these may include:

- Contact center managers and directors
- HR managers and directors
- Operations managers and directors
- Customer service directors and those involved in contact center strategy
- IT managers and directors
- Contact center solution providers: hardware, software & services
- Outsourcers
- Consultants
- Training providers
- New entrants to the US contact center industry
- Government bodies
- Academic institutions
- Contact center industry organizations.

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CASE STUDY

How SPANX Transformed Their Customer Experience (In Real-Time)

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A Perfect Fit: How SPANX® Transformed Customer Experience with UJET

The Business Challenge: Global shapewear leader SPANX faced a critical challenge when transitioning to a new BPO partner. Their legacy telephony system's rigidity created operational bottlenecks, limiting real-time IVR updates and constraining their ability to deliver agile customer service at scale.

Why UJET: After evaluating multiple vendors, SPANX selected UJET for its:

- Real-time configurability without vendor dependency
- Seamless CRM integration
- Global scalability with regional customisation
- Platform stability and reliability

Key Results:

Operational Efficiency:

- Self-service IVR changes reduced from days to minutes
- Eliminated vendor dependency for modifications
- Boosted agent productivity through streamlined workflows

Enhanced Customer Experience:

- Queue-level hold messaging delivers region-specific content
- Personalised messaging based on location and preferences
- Unified CRM view improved first-contact resolution

Business Stability:

- Four years of reliable operations with minimal downtime
- Scalable platform supporting global growth
- Focus shifted from maintenance to strategic initiatives

Executive Perspective: "UJET helps my team sleep at night, knowing we don't have to mitigate constant issues or downtime." - *Kylah Field, VP Global Customer Experience & Insights, SPANX*

Key Learnings for UK CX Leaders: ✓ Platform agility directly impacts operational efficiency; ✓ Self-service capabilities accelerate CX improvements; ✓ Regional customisation essential for global brands; ✓ Stable infrastructure enables consistent service delivery.

Quick Facts: Sector: Retail/E-commerce | **Size:** 400+ employees | **Reach:** Global | **Technology:** UJET IVR

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 optimization technologies and practices which measure and encourage agents to align their behaviors and actions closely with the requirements of the business.

Topics include:

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

MANAGEMENT INFORMATION

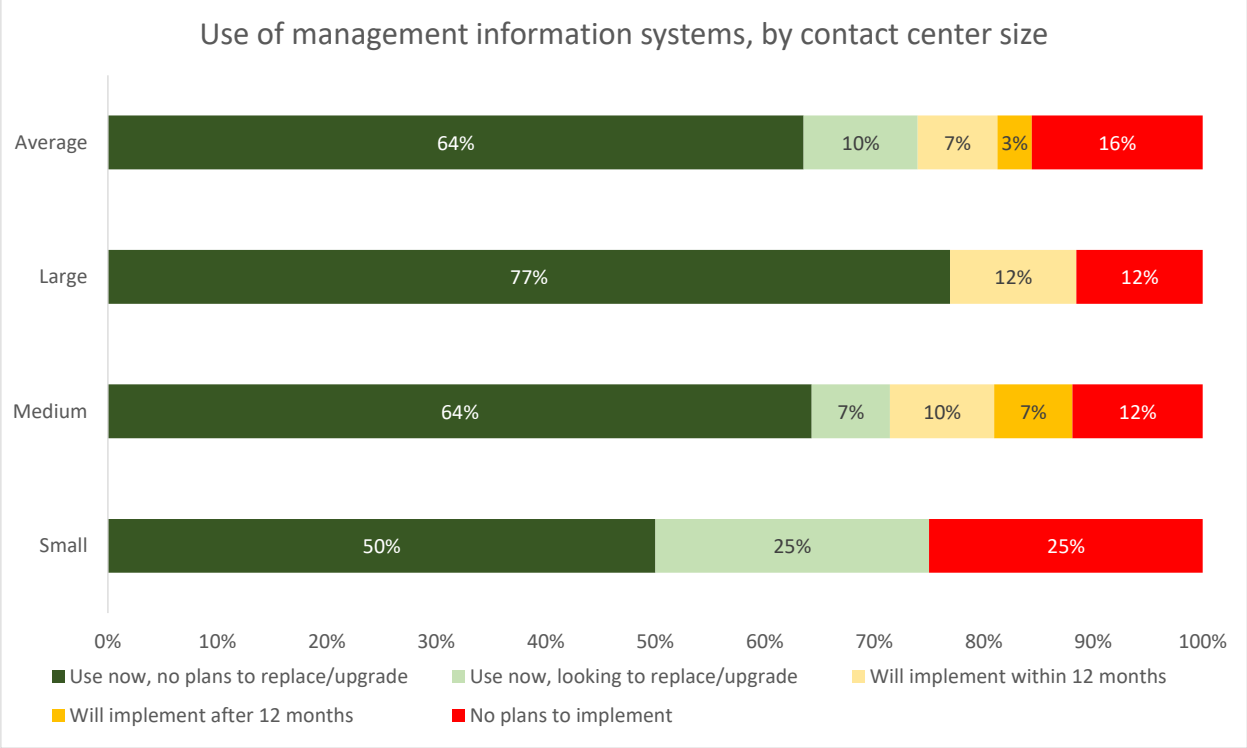
The success or otherwise of contact centers has traditionally been measured by observation of key metrics, usually related to cost and efficiency: average call length, average speed to answer, % of calls answered within a certain time, etc. While these figures are a useful and still widely acknowledged and understood benchmark, times have changed.

Many contact centers 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. 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 center 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.

MIS usage is greatest in larger operations, although even smaller contact centers find the functionality beneficial.

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



PERFORMANCE METRICS

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

Internal metrics

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

More importantly, it impacts directly on call queue lengths: one of the major drivers of customer experience with the contact center and consequently should be seen as being an important metric to understand and improve.

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 long wrap-up time caused by slow back-office systems or lack of agent familiarity with the system 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 centers are now profit centers, understanding the effectiveness of the sales or debt collection efforts is vital to judging the success of the contact center 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 center's labor 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 five years, in a question later in this chapter which asked respondents which were the most important contact center metrics. Surprisingly, it sometimes said stated to be more important than key customer-facing metrics such as first-contact resolution.

Staff attrition rates: A well-publicized cost that senior management are very aware of, high levels of staff attrition are damaging to the effective running of the majority of contact centers, 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 center'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 centers 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 center 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 center 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 center 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 center 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 center cleans up after processes elsewhere in the business go wrong, leaving the contact center to sort them out. As such, it should be viewed with particular 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 debate about how satisfied 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 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 tenet 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 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.

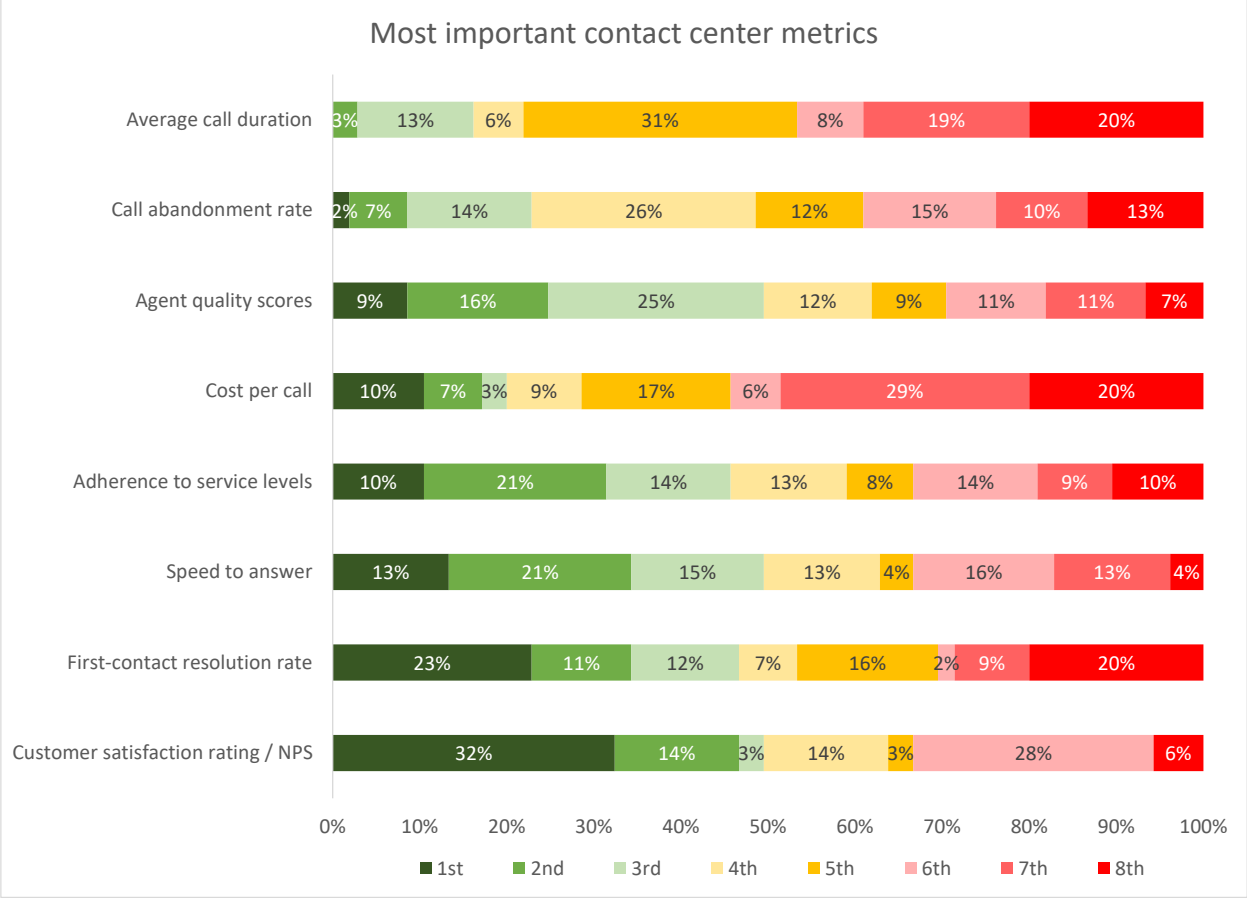
This can be hard to measure, as it is the customer, and not the contact center that should be stating whether the issue has been resolved successfully.

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 center 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.

32% of respondents chose customer satisfaction rating as being the most important measurement that a contact center 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.

Figure 3: Most important contact center metrics



In past surveys, first call resolution has been extremely important, with speed to answer often also chosen as a top 3 metric by many 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. ASA is seen as less important this year.

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 organization 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 center, 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 center performance metrics:

- average speed to answer decreased from 99 seconds to 74 seconds, compared to a historical average of 40-60 seconds
- call abandonment rates have decreased from 8.9% to 7.3%, still slightly higher than the historical average of 5-6%
- mean first-contact resolution rate has decreased from 76% to 70%
- mean service call duration drops from 423 seconds to 392 seconds, but is still slightly higher than the pre-pandemic average of 340-380 seconds
- mean sales call duration increased from 513 seconds to 553 seconds
- mean call transfer rate remains steady
- the mean and median costs of an inbound call are considerably higher than the historical average and have risen very slightly from $7.16 to $7.20
- outbound call costs are also higher than usual.

Figure 4: Contact center performance metrics

Metric	Mean average	Median average
Average speed to answer	74 seconds	60 seconds
Call abandonment rate	7.3%	5.3%
First-call resolution rate	70%	74%
Call duration (service)	392 seconds (6m 32s)	390 seconds (6m 30s)
Call duration (sales)	553 seconds (9m 13s)	565 seconds (9m 25s)
Call transfer rate (excl. receptionists)	9.9%	8.0%
Cost of inbound call	$7.20	$7.35
Cost of outbound call	$9.39	$7.50

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 14 years.

Average service call duration varied little between 2014 and 2019, being around the 360-380 second range. The pandemic saw a rise in average service call lengths to over seven minutes, which has dropped somewhat in 2025.

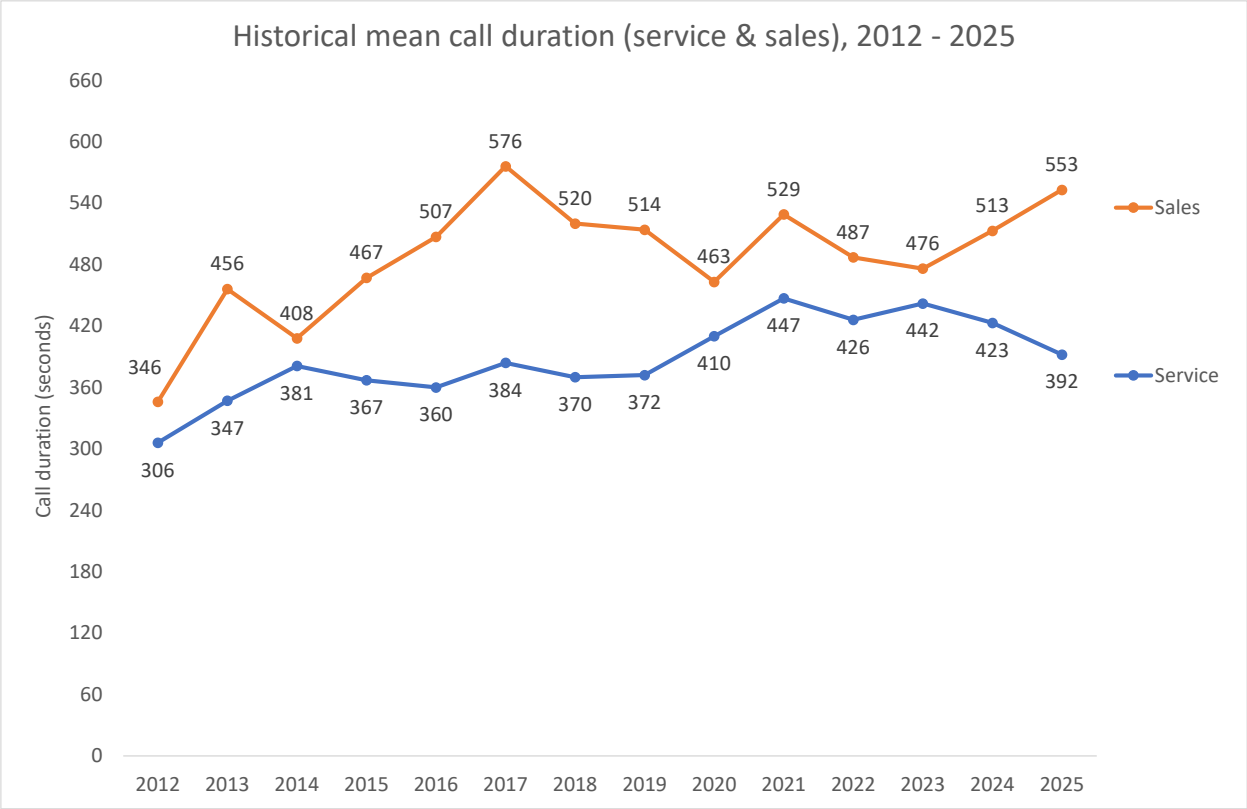
Sales call durations follow a more varied trajectory, probably because the sample sizes for sales calls are smaller than those for service calls. 2017 saw the highest recorded duration for sales calls, and 2025's figure is the highest for many years.

These findings support the results shown elsewhere that show call duration – especially for sales calls – to be a far less important metric in recent times than it has historically been in the contact center industry, as contact centers have allowed call times to increase as customer experience and cross-selling / upselling opportunities become more important, and self-service now takes up a greater proportion of the easier short calls.

However, queue lengths impact greatly on customer experience, and if agents are talking to customers for longer, they can't be taking new calls.

It will be interesting to see if the decline in service call duration persists, and whether this could be attributed to the use of AI agent assistance in calls.

Figure 5: Historical mean call duration (service & sales), 2012 - 2025

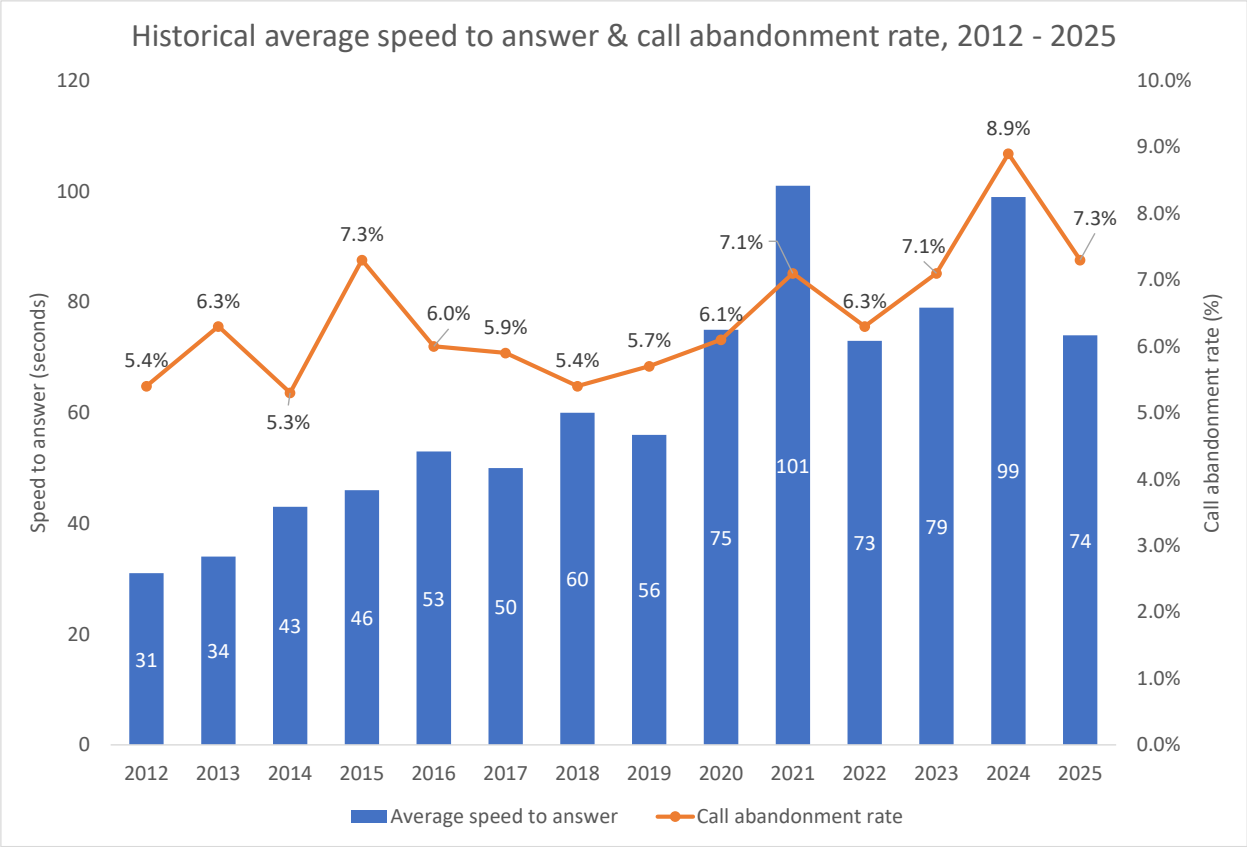


The following chart shows historical figures for average speed to answer and call abandonment rate.

From 2012 onwards there has been a gradual increase in average speed to answer, with a considerable uptick in 2020 and 2021 caused by pandemic-related working practices and an increase in demand experienced by some businesses.

While this dropped slightly in 2022, the rise continued in 2023 and 2024. However, 2025 has seen a drop in both queue lengths and call abandonment, although both are still above historical norms.

Figure 6: Historical average speed to answer & call abandonment rate, 2012 - 2025

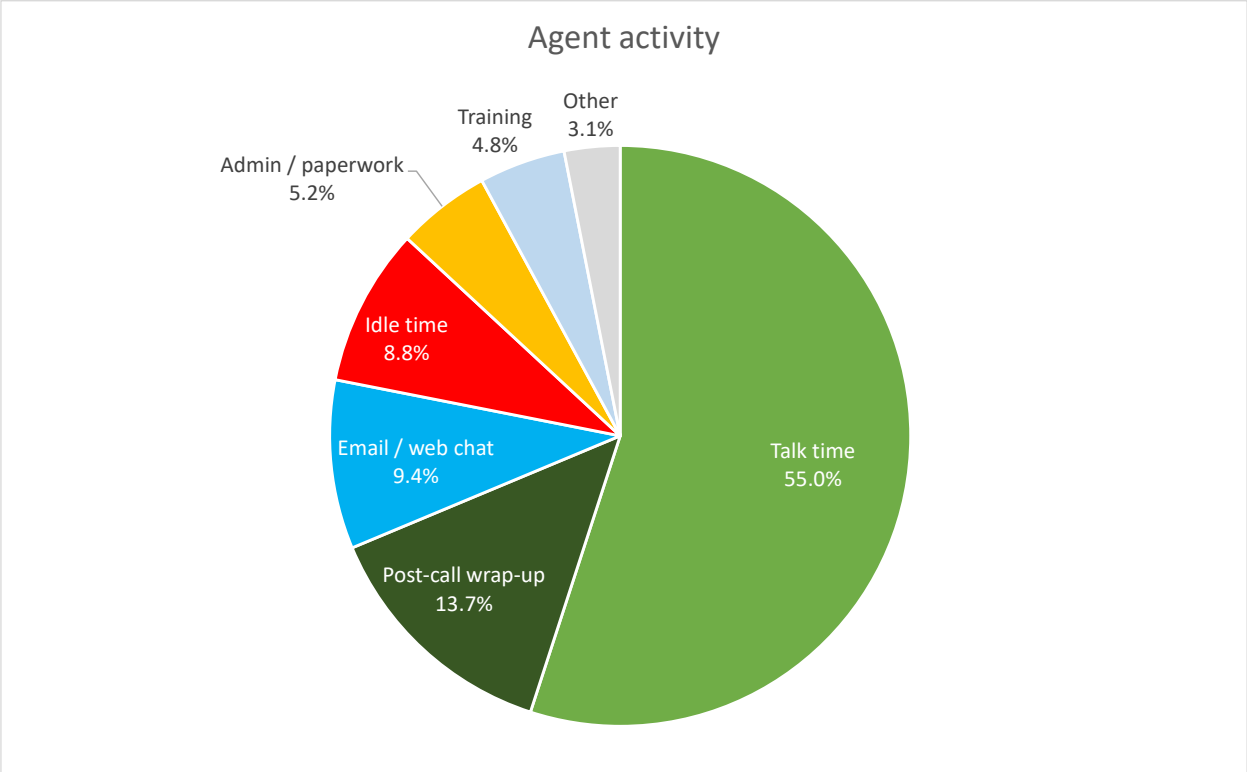


AGENT ACTIVITY

Agent activity per hour is a key structural metric aimed at helping contact center 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 admin and keyboard- or paper-driven work
- Idle time: time spent not taking calls or doing other work
- Other: anything not covered by the previous activities.

Figure 7: Agent activity



Talk time is at 55%, with post-call wrap-up at 13.7% and idle time down to under 9%.

Email and web chat handling time is 9.4%, making the overall agent/customer communication time just under 65%. These communication figures are somewhat higher than last year's.

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 40 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 centers. 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 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.

AI also offers contact centers the opportunity to auto-generate call summaries which the agent can check for accuracy rather than have to type them all in. This offers a chance to trim post-call work considerably.

The average amount of time an agent spends talking to customers has dropped to around 55%. 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, and this year's figures seem to support that.

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

OMNICHANNEL WORKFORCE MANAGEMENT

Workforce management solutions (WFM) can perhaps be seen as the core element to the workforce optimization 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.

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

WFM 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
- The right level of experience and empowerment for the customer (e.g. “gold-card” customers may demand single-call resolution, meaning senior agents must take the call)
- Language skills (both in domestic and international markets)
- Ability to deal with digital 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 center 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 center, 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.

FORECASTING

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 center. 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 optimization 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 center 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 30% of a typical contact center'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

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 centers 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 center operations no longer work on strict shift patterns of a fixed length, as flexibility can be of benefit both to the organization and the agent: the organization 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 rise of remote and hybrid 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 centers 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 center 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 center 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 center 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 center 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 organization 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 underutilized 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 labor: 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 center).

'What-if?' scenario planning can help contact centers model and predict scenarios where for example the absence rate quadruples, enabling the organization 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 centers 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 centralized contact center 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 favoritism, as well as protecting the performance of the contact center.

Contact center 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 center 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 centers 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.

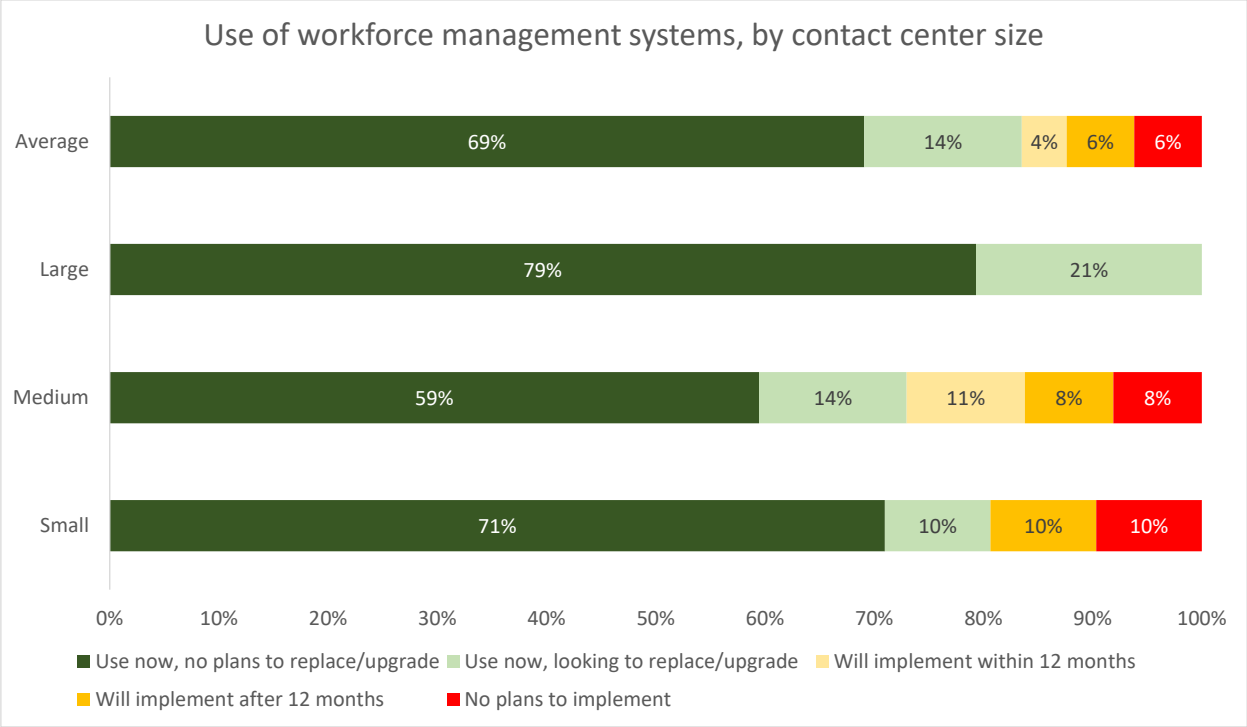
The low take-up of third-party workforce management tools was almost certainly down to cost, the fact that the time taken to create a manual schedule for 10 agents is far less than for 100 agents, and that the manager of a small contact center does not need the flexibility or capabilities that a large operation can benefit by, as their labor 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 center 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 centers, with a penetration rate of 73% amongst our survey respondents.

Of the current WFM users, 19% are actively looking to replace their WFM solution, although only 4% of respondents indicate that they are likely to implement a system for the first time in the next 12 months.

Figure 8: Use of workforce management systems, by contact center size



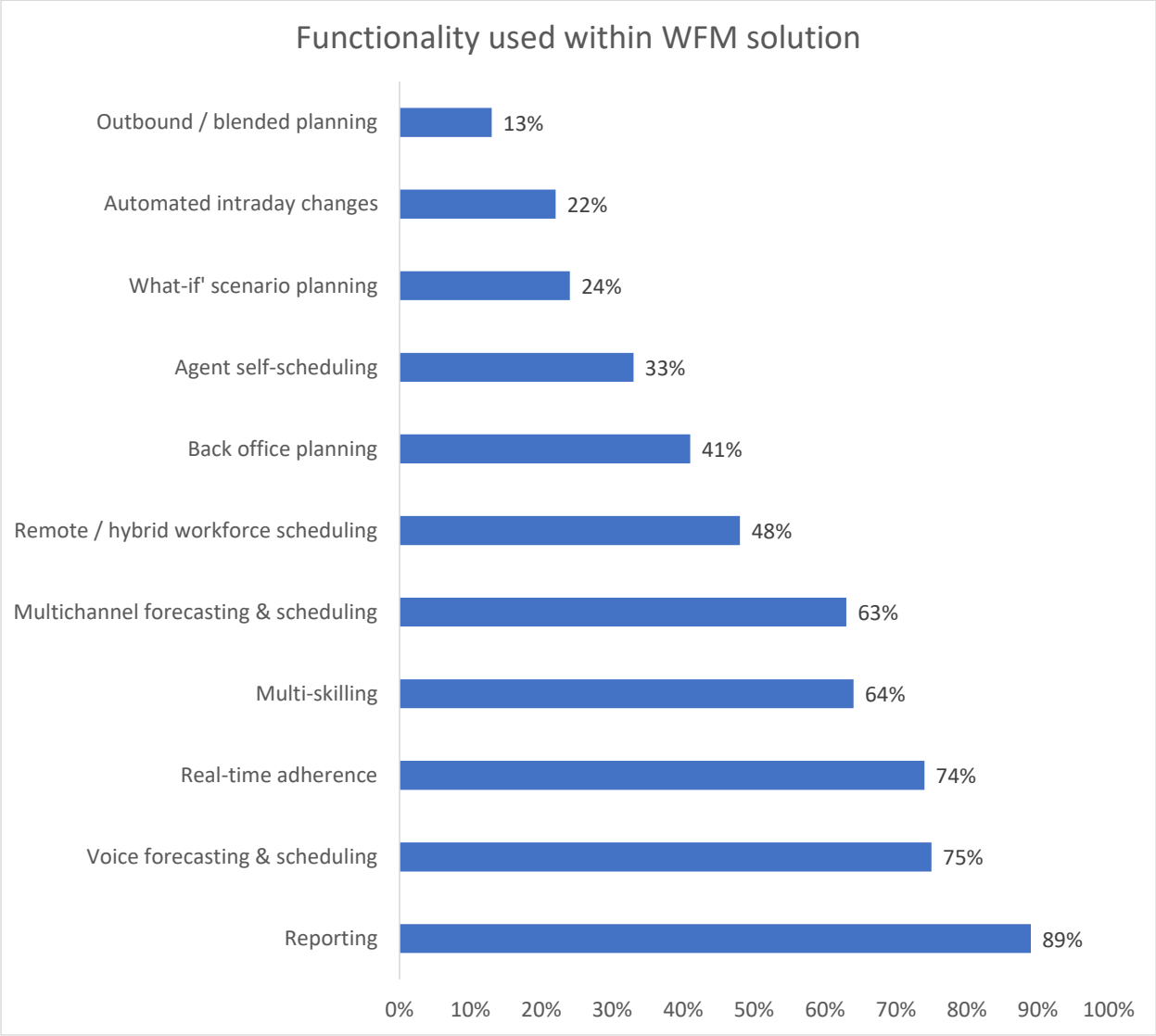
Large operations are far more likely to use dedicated third-party workforce management applications into which historical data can be fed to provide a far more accurate schedule.

Small contact centers 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 centers.

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 9: Functionality used within WFM solution



Reporting and real-time adherence to schedule scored highly, with multichannel / remote working scheduling also seen as being very useful in larger contact centers, along with voice scheduling, and multichannel planning.

Agent self-scheduling is under-used, being 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.

Workforce management solution providers are keen to expand out of the traditional contact center, with the **back offices and branches** of large organizations being seen as potential goldmines.

Far more employees work in these spaces than in the contact center, 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 center 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 center workforce management and apply it in these new areas.

The industry is likely to see back office and contact center workforce management systems integrate further, or even to work as a single centralized function that can track and analyze 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 center functionality, as the back office has somewhat different requirements to the contact center – for example:

- lack of automation for tracking inbound/outbound work
- handling deferred workloads
- the assumption that forecasts built on contact center 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 center 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 recognize that the problem is not going to go away, and look to invest in new workforce management solutions.

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 organizations 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 real-time is highly prized.

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 call lengths have increased considerably as queries are more complex. It is often the case that customers who have waited a long time in a queue may want to ask more questions or receive greater reassurance so that they won't feel the need to call back.

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 including simplified interfaces and the use of remote apps.

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 centers as a whole are now certainly less centralized than in the past: **virtualization and homeworking** have recently become well-entrenched in many organizations, 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-optimize areas such as call blending.

Customer journey analytics, which includes looking at workload necessary in back office operations to fulfil the overall transaction, will also 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 center 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 centers 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, behavior and motivations in order to match agents with the predicted type of work and customers that they would handle best.

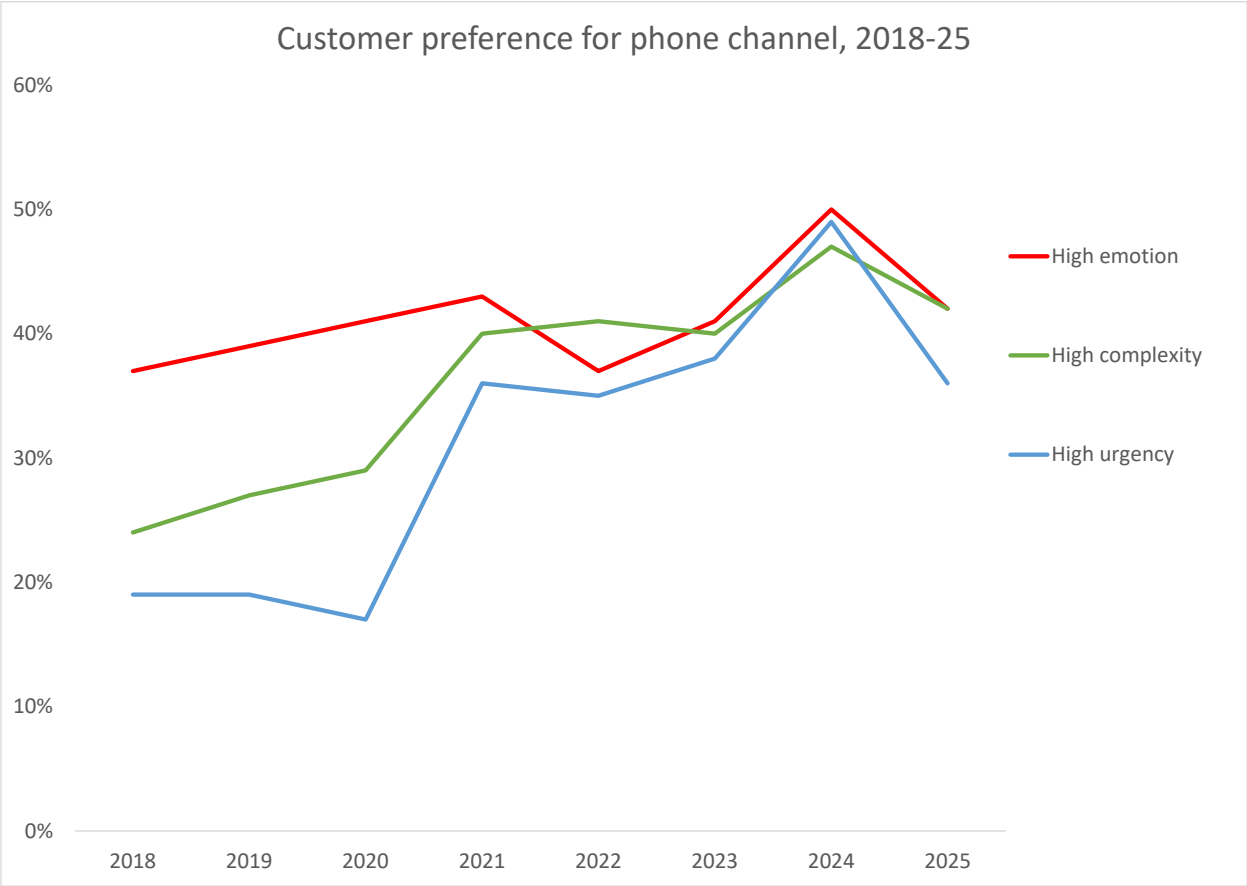
PHONE REMAINS THE GOLD STANDARD

Considering that the prevalence of digital channels and self-service has increased so much in recent years, it is a surprise to see that the preference for the phone channel as the first port-of-call has risen so much, particularly for complex and urgent matters.

The timing suggests that the initial change may be pandemic-driven (although the 2020 figure does not reflect this as the survey was carried out in early Q2 before the full impact hit).

Regardless of the reason – a greater need for reassurance, or less opportunity to have a face-to-face meeting in a physical environment such as a shop – it should be noted that customers' preference for the phone channel still remains higher than before, even after the lockdowns are now only a memory.

Figure 10: Customer preference for phone channel, 2018-25



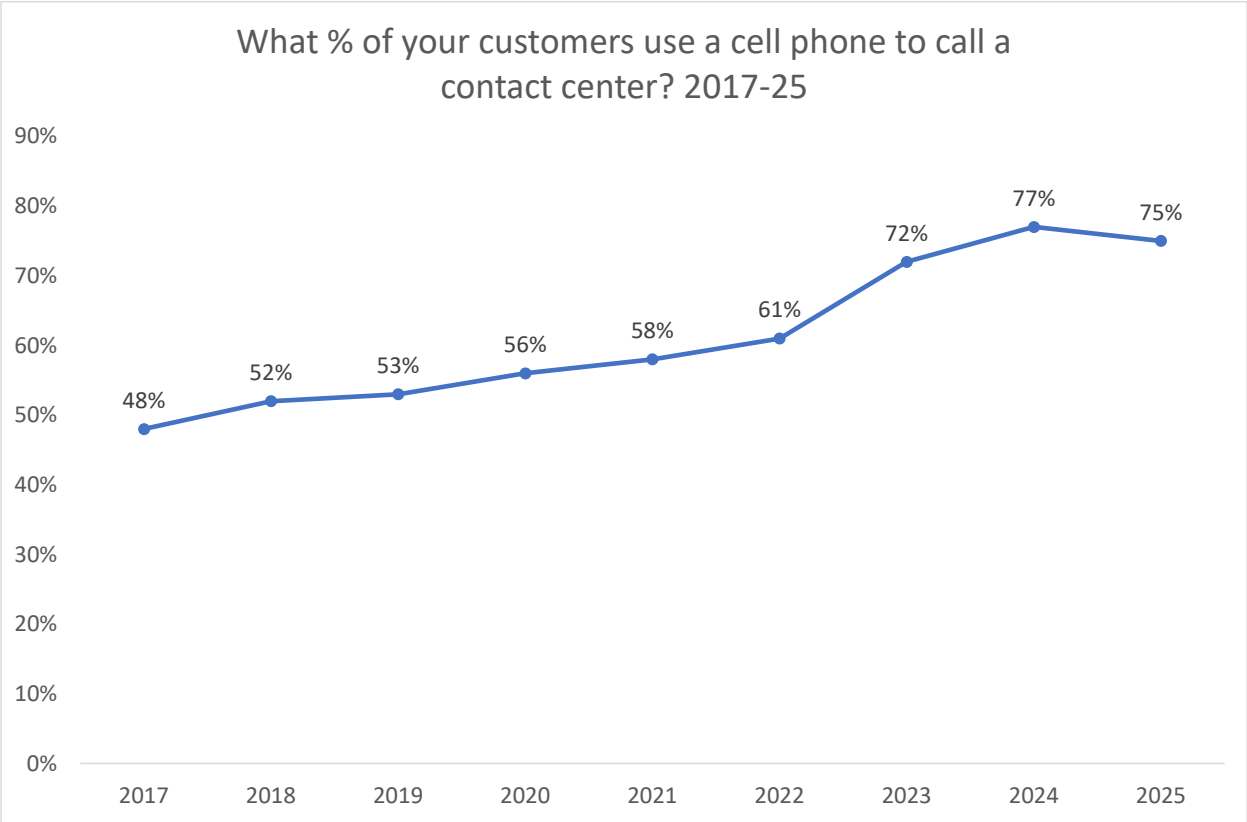
These findings, and the fact that live telephony still accounts for over 60% of inbound interactions means that this channel isn't going away. So how can businesses make it less of an effort for customers?

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 organization, 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. The switch-off of the PSTN will hasten the movement from landlines to mobile telephony.

On average, 75% of customers use their cell phone to call the contact center, offering huge potential for value-add services such as video, visual IVR and other mobile-related functionality.

Figure 11: What % of your customers use a cell phone to call a contact center? 2017-25



However, the rise in mobile telephony means that the typical call is likely to have far more background noise from the customers' end of the conversation, which needs to be managed.

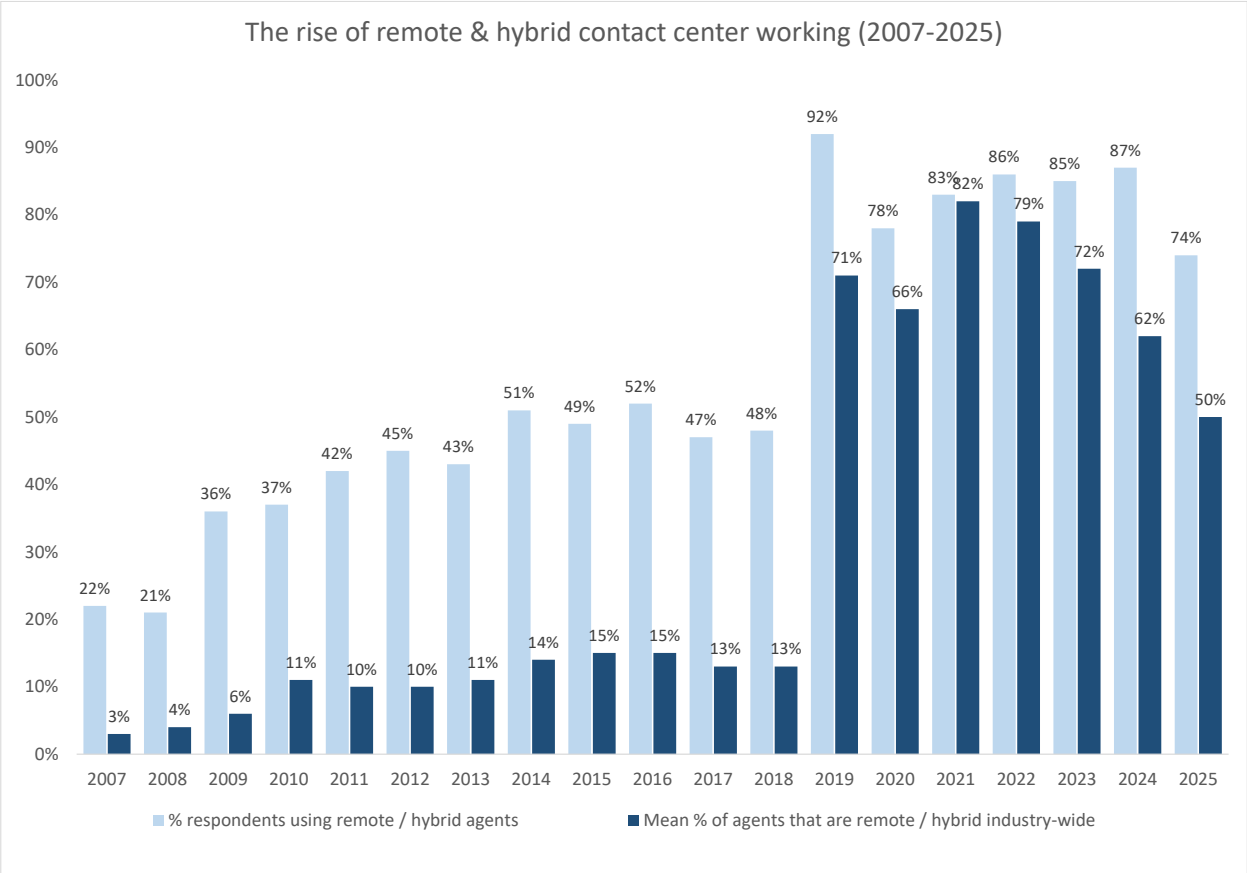
REMOTE & HYBRID WORKING

Up until very recently, the majority of US contact centers worked as a traditional, centralized model.

Faced with the challenges of continuing to run contact centers in an environment decimated by coronavirus, many businesses urgently implemented business continuity plans which usually involved remote working.

While we see can an actual and expected movement back to a centralized operation, there is little expectation that the entire industry will be recentralized.

Figure 12: The rise of remote & hybrid contact center working (2007-2025)



One of the factors that remote / hybrid contact centers have to manage is their agents' working environment, which will include maintaining a professional audio environment where both customers and agents can focus entirely on their conversations, rather than being distracted by everyday sounds found in most homes.

AUDIO IMPROVEMENTS IN THE MODERN CONTACT CENTER

Having shown that the phone channel is here to stay, that the growing majority of voice contact happens in a mobile environment, and that the remote / hybrid working model will remain popular, this chapter now looks at how audio quality and clarity on both sides of the conversation can be implemented in a modern contact center environment.

Noise-cancelling microphones go some way to filtering 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 centers 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, but even the most expensive and sophisticated headsets in themselves can only go so far in cleaning up background noise (and of course will still need to be replaced and repaired as time goes on).

There are examples of how improving audio and speech quality can positively impact upon call handling time and overall contact center performance.

A Spanish contact center 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.

Lack of audio clarity is not restricted to the contact center's side of the conversation, where high-quality noise-cancelling headsets can improve matters for the agent in terms of removing background noise at their workplace.

With more people than ever using mobile telephony to speak with organizations, both agents and customers have to concentrate very hard on the conversation, with the attendant stress and frustration that this can cause, particularly for the agent who may handle 80-100 calls each day.

Improving audio clarity in the contact center is not limited to buying increasingly more expensive headsets, however.

AI-enabled voice isolation can intelligently remove background noise from both sides of the conversation, both in real-time to assist the smooth and accurate flow of the conversation, and also in recordings to improve post-call analytics and voice-to-text transcription.

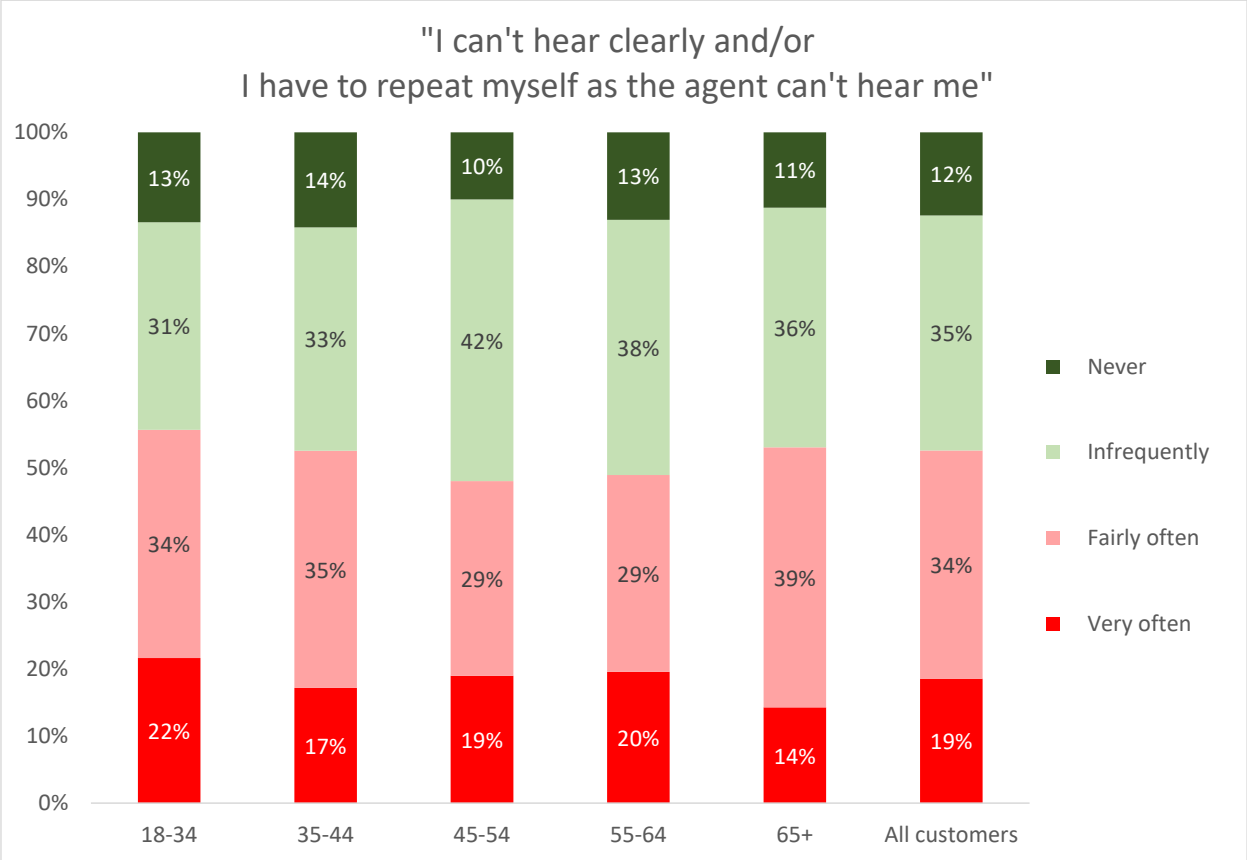
This also means that businesses have to spend significantly less on upgrading and replacing top-of-the-line headsets.

Previously, there has been little research carried out to quantify the effect that poor quality audio has on the effectiveness and efficiency of the contact center, and the impact it has on customer experience.

US consumers were asked whether they had any problems with making themselves understood, or if they had issues hearing and understanding the agent clearly to establish a baseline for the prevalence of incomprehension and repetition on phone calls: this could be caused by poor audio quality, difficulties understanding accent, or both. This question did not specify offshore or onshore agents, and should be viewed as a base-line for audio issues.

19% of customers reported that they “very often” had problems hearing the agent, or that the agent asked them to repeat something.

Figure 13: Customer Issue: "I can’t hear clearly and/or I have to repeat myself as they can’t hear me" (by age range)



Just over half of customers report that they can't hear clearly or have to repeat themselves either "very often" or "fairly often". The segmentation by age is of particular interest: it might have been expected that older customers reported greater problems with audio clarity[1], but in fact there is very little difference across age groups, suggesting that this is an issue affecting all ages, rather than being related to hearing loss.

It should also be reiterated that agents working at home find it more difficult to control their audio environment, and that the industry shows no sign of abandoning the remote working model, with the majority of US contact centers operating hybrid working.

While poor audio quality has a negative impact on the agents' and the customers' experience, business decisions need quantifiable data and we have estimated the potential cost to organizations below.

The amount of time wasted through mishearing caused by excessive background noise – whether in the contact center, or in the caller's environment – is rarely tracked and thus often overlooked.

As shown on the following page, reducing the number of times an agent or customer has to repeat themselves can make a huge difference to cost, with the attendant positive effect of reducing call times (and thus queue lengths) and improving customer experience.

[1] Approximately 15% of American adults (37.5 million) ages 18 and over report some trouble hearing, and about one in three people in the U.S. between the ages of 65 and 74 has hearing loss. Nearly half of those older than 75 have difficulty hearing. Source: https://www.nidcd.nih.gov/health/age-related-hearing-loss#:~:text=Approximately%2015%25%20of%20American%20adults,than%2075%20have%20difficulty%20hearing.

The unnecessary cost of mishearing

It is possible to estimate the industry-wide cost of mishearing and having to repeat.

- Inbound calls per year (handled by agents): 27.3bn[2]
- If 30% of calls require a sentence repetition[3]: 8.2bn calls
- Assume increased length of call due to repetition is 15 seconds
- Average call duration: 7m 5s (425 seconds), therefore 3.5% of the call is repetition
- Mean average cost per inbound call: $7.20
- Cost of time spent on repetition: 25.2c per call
- Therefore, theoretical industry-wide cost of repetition: $2.1bn per year

Using a typical 250-seat contact center with typical 30% repetition levels as a worked example:

- Average calls per agent position per year: 12,688
- If 30% of calls require a sentence repetition: 3,086 calls per agent position per year
- Assume increased length of call due to repetition is 15 seconds
- Average call duration: 7m 5s (425 seconds), therefore 3.5% of the call is repetition
- Mean average cost per inbound call: $7.20
- Cost of time spent on repetition: 25.2c per call
- Cost of repetition per year for typical 250-seat contact center: $194,418.

Some businesses will experience higher levels of audio interference due to their contact center environment, use of remote working and types of customer (e.g. older customers experience this the most, and those taking calls from customers on mobile phones are more likely to have higher rates of repetition).

It's also the case that this example assumes a single mishearing experience on each call, whereas the reality is that there may well be more than one per call. Using speech analytics, contact centers could analyze 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 accurately.

In is also important to note that decreasing the number of times agents or customers have to repeat themselves does not impact solely on cost through a reduction in call duration.

[2] ContactBabel, "US Contact Centers 2026-2030: The State of the Industry"
[3] Estimate based on assumptions: i.e. % of customers saying they experienced repetition "Very often" = experience this on 75% of calls; "Fairly often" = 35% of calls; "Infrequently" = 10% of calls; "Never" = 0% of calls. Calculates to 30% of all calls.

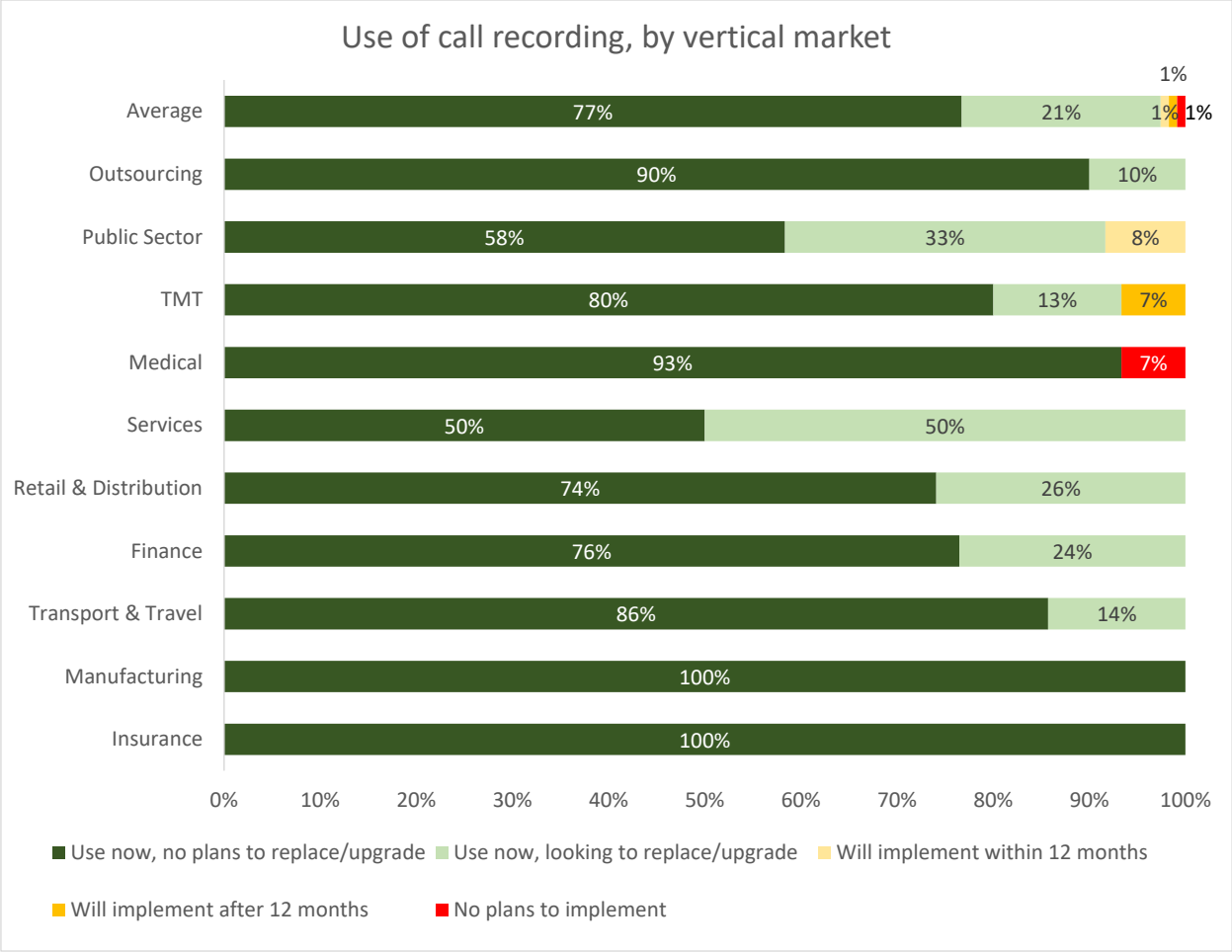
Other tangible benefits include:

- Increased first-contact resolution rates: better mutual understanding means accuracy and comprehension will be improved, meaning that fewer call-backs will be required for clarification or amendment, saving money and improving CX
- Improved agent morale: being frequently asked to repeat oneself or having to ask customers to do so is frustrating and stressful for agents
- Greater feelings of customer confidence: calls which are of a confidential, sensitive or highly emotional nature are more likely to be successful where the customer feels as though they are talking privately to a single agent, rather than to the whole room. Vulnerable customers are also likely to benefit from the feeling of privacy that enhanced audio performance can bring.

CURRENT & FUTURE USE OF CALL RECORDING

Consistently one of the most widely-used contact center technologies, call recording is used by 96% of this year's respondents, of whom 19% state that they wish to replace or upgrade their current system. Only 1% of respondents have no intention of using call recording.

Figure 14: Use of call recording, by vertical market



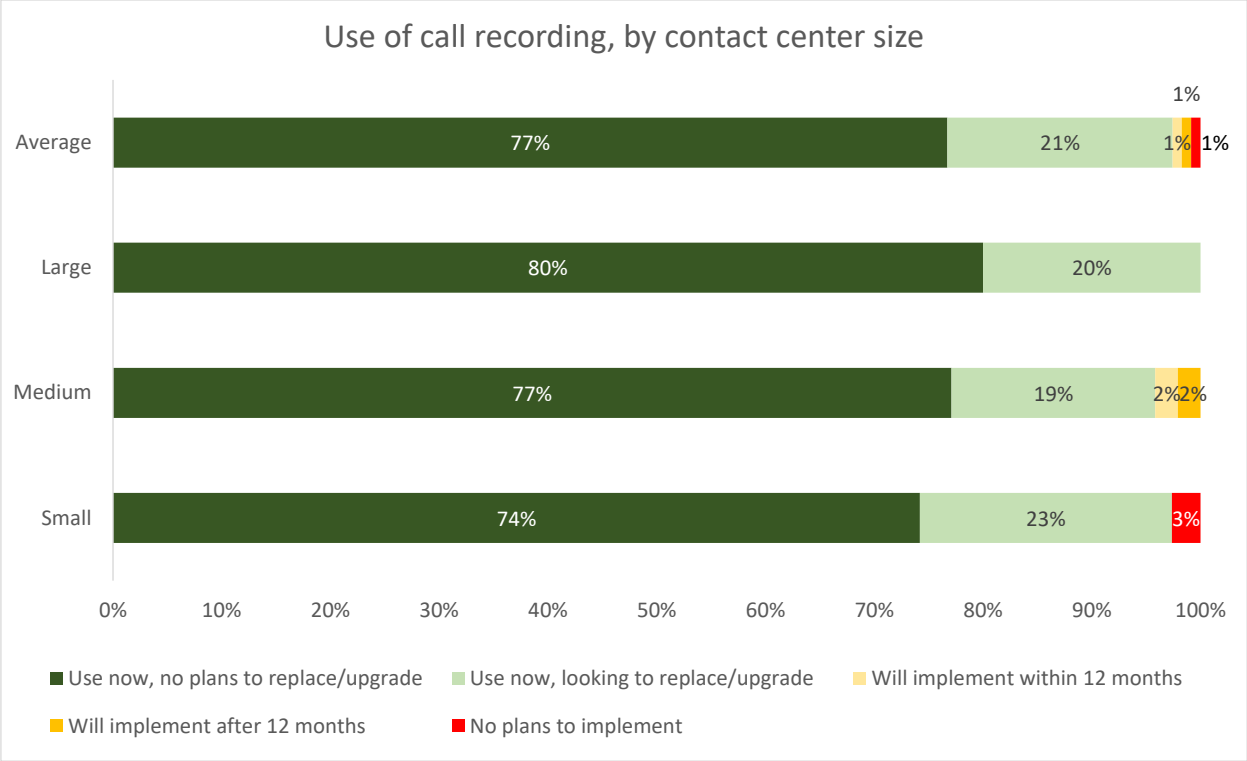
A considerable proportion of respondents in the services, public sector, retail and finance sectors report that they are looking to update their call recording solutions.

Taken in the context of data from elsewhere in this report, this is almost certainly connected with adding AI-enabled 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 current 97% penetration rate in respondents from small operations shows that vendors have been able to offer solutions successfully at various price points to smaller operations, through cloud-based deployments.

89% of call recording users report that they have cloud-based deployments, with the remainder planning to move to cloud within two years.

Figure 15: Use of call recording, by contact center 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 customized to support agent-initiated call recording through a desktop interface, or automated through call recording triggers sent from third-party software.

72% of respondents that use call recording do so for all calls, with 28% taking the option to record only a part of their overall voice interactions.

67% 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 38% will do so based on the inbound number called.

30% identify the inbound caller's number and decide whether to record or not based on that.

Figure 16: 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.)	67%
Based on DNIS (dialed number identification service), i.e. the number being called)	38%
Based on ANI (automated number identification), i.e. the number calling in)	30%

As with any form of recorded and potentially sensitive customer data, the secure storage of recorded calls must be taken into account.

80% 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?

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.

Interaction recording 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 improvement. The new generation of interaction recording solutions brings the whole contact center into play, supporting agent best practice and improvement, ensuring compliance with regulations and improving the organization's insight into the customer experience through supporting analytics.

Large and medium operations are likely to have coaches evaluating calls as well as a dedicated QA team, which will also feed into the process of understanding each individuals' need for specific improvement, as well as developing the wider training program.

A minority of operations have the contact center manager involved in evaluating calls as well, although especially in the case of larger contact centers, these may well have gone through an initial process of identifying calls relevant to the specific business or operational issue.

Most 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.

The traditional user of interaction recording solutions has been the contact center 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, so many operations now use interaction analytics which transcribes and analyses all call recordings consistently and objectively. Based on KPIs established by the company, supervisors and QA managers can search for calls that meet a certain criteria and listen to only those that have significant coaching value. This helps improve agent performance as well as reducing time and cost.

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.

Using more sophisticated interaction recording solutions means that 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, giving the supervisor the chance to improve the situation, rather than missing the problem altogether.

Agents can add to the value which interaction recording can provide. By using agent-initiated tagging of calls, the 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, although 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 analyzed, a complete performance management program may be put in place. Agent performance can be viewed by supervisors, team performances can be analyzed by the operational manager, and contact center performance can be evaluated by executives.

Analysis of interactions is also vital as part of a wider process optimization 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.

Of those contact centers 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. Compliance has also been a major reason to implement call recording, but moving forward, the real benefits of interaction recording will be through detailed analysis of every interaction to understand not only how the contact center is performing, but also how the wider business can be improved.

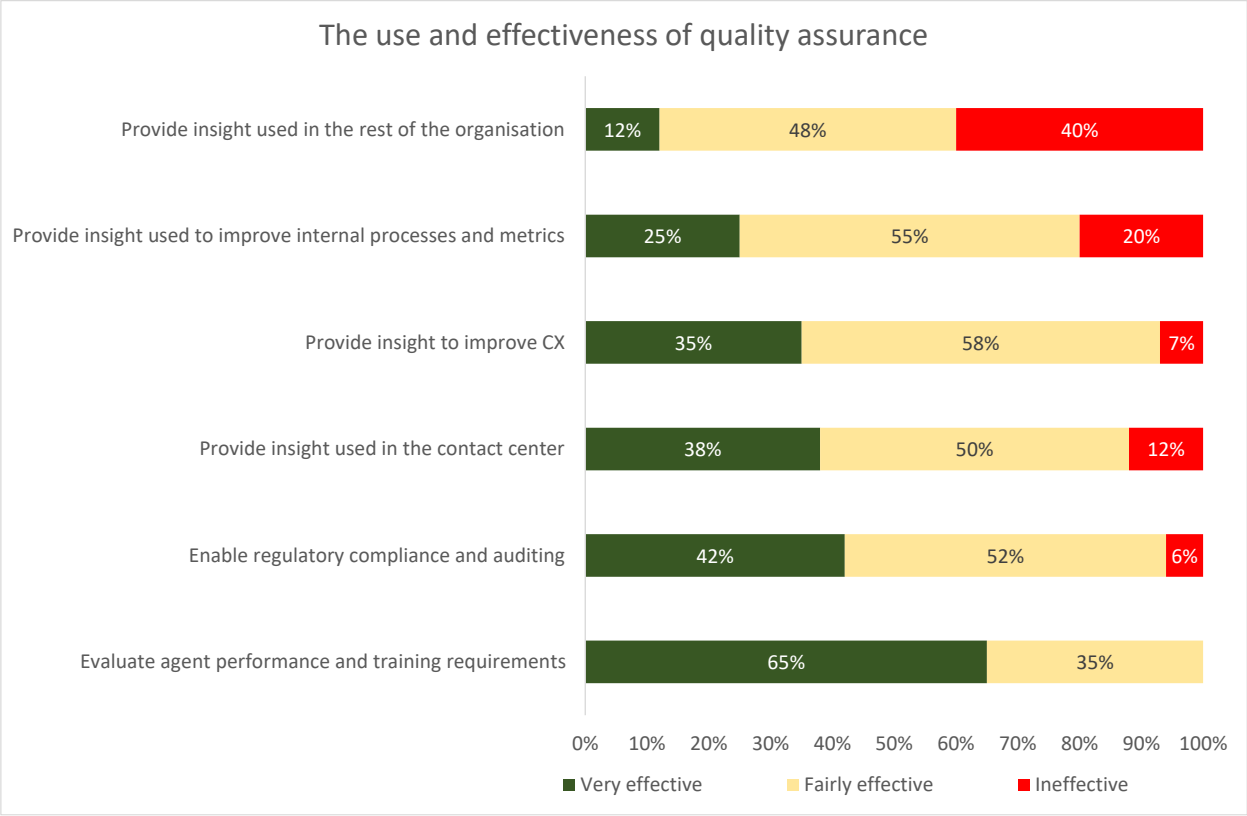
EFFECTIVENESS OF QA

When respondents were asked about how effective their QA processes are and what they are used for, it is noticeable that more of these respondents are lukewarm about the results of their QA processes than are actively enthusiastic: only "Evaluating agent performance and training requirements" had more respondents judging the QA process as 'very effective' rather than merely 'fairly effective' for this purpose, showing that there is still a need for improved functionality.

35% feel that QA drives customer experience improvements significantly, however, customer insight gained from the quality assurance process stands a very significant risk of not being used effectively within the wider organization, 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 agent productivity and skills, rather than as input into strategic business improvements, and it is fair to say it is not yet being used at its full potential.

Figure 17: Effectiveness of quality assurance



Survey respondents were asked their opinion on how effective they felt their quality evaluation was for specific contact center activities, including inbound and outbound activity, and multichannel work.

As might be expected, inbound telephony is judged to have the most effective quality evaluation, although only 40% of respondents stated that it was very effective. Evaluation of outbound calling was less positive, with 35% of respondents **that used** outbound calling feeling that it was ineffective and 30% very effective.

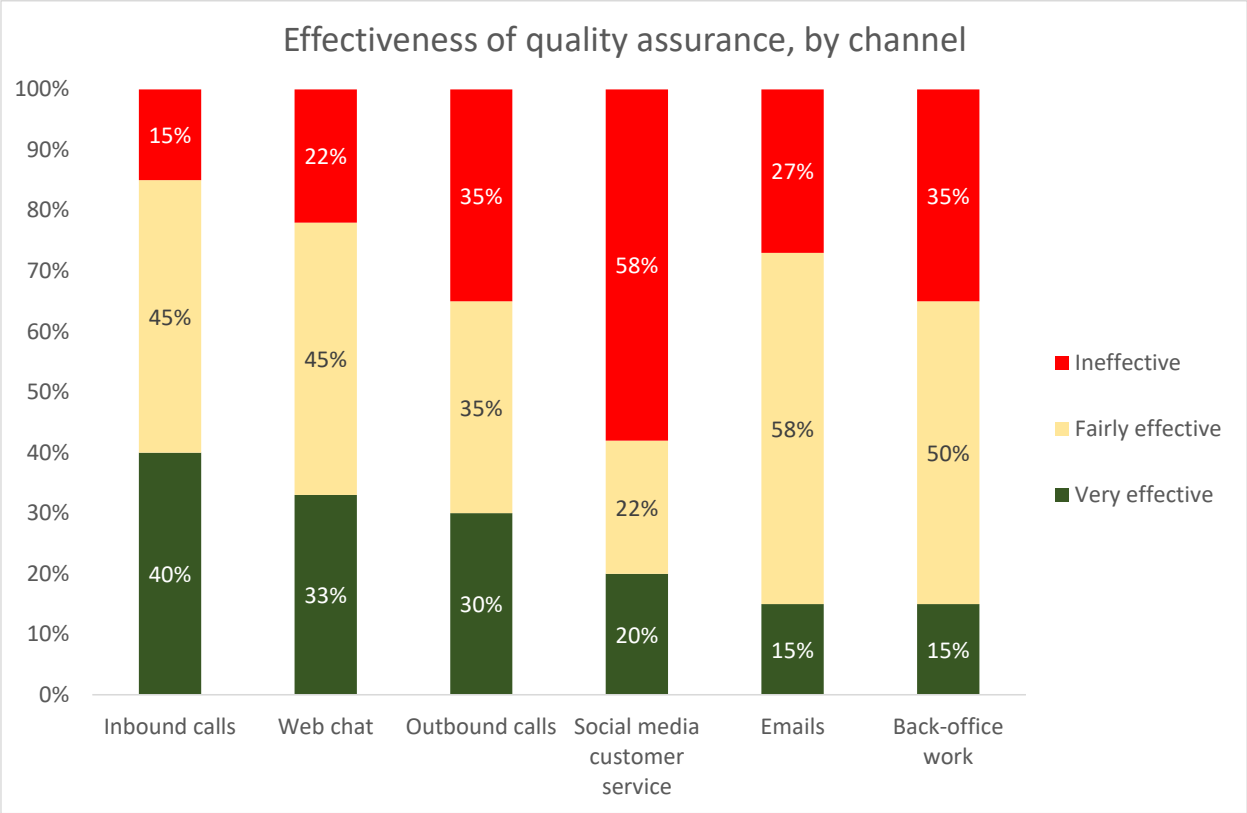
For back-office work evaluation, more than twice as many respondents believed their QA to be ineffective as did very effective. As workforce optimization solutions continue to evolve, and processes get tracked throughout the enterprise – not just in the contact center – the back office will have considerably more attention drawn to it.

Digital channel quality evaluation still has some way to go to reach the standard of telephony QA.

Only 15% of respondents using email stated that quality evaluation on emails was very effective, with 27% believing 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 even worse result, although web chat QA again showed a net positive outcome this year.

Figure 18: Effectiveness of quality assurance, by channel



CHALLENGES TO EFFECTIVE QA

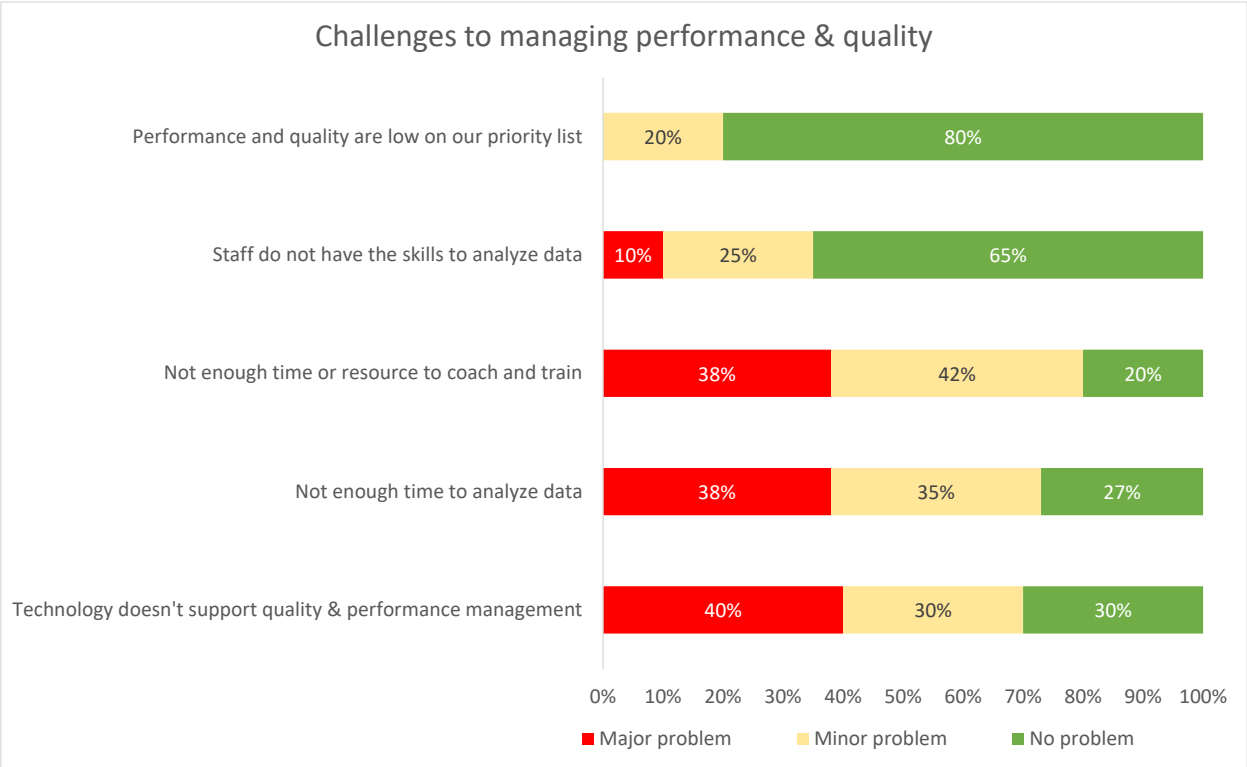
One of the greatest challenges to managing performance and quality is reported to be caused by not having sufficient time to analyze and use data, with 73% of respondents stating that this was a problem in some form, and 38% stating that it is a major problem for them.

However, very few of respondents believe that performance and quality is low on the priority list: just that their systems and personnel are having difficulty achieving their goals.

Not having enough time or resources to coach and train was seen as a similar-sized issue. Only 10% 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 40% of respondents strongly believe that that their current technology simply does not support what they would like to do.

Figure 19: 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.

KEY ISSUES IN QUALITY ASSURANCE & MANAGEMENT

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 center 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 organization in a quality-focused 'Voice of the Customer' program.

There are also some clear critical success factors:

- Organizations 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
- Organizations 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 center management to identify required agent behaviors and characteristics that are most closely aligned to the operational requirements of the contact center, which should themselves be driven by the strategic requirements of the entire organization.

Voice of the Customer (VoC) programs 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, yet many contact centers still measure and reward agents based upon metrics and behaviors 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 organization's aims, rather than seeing the contact center 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 center, there should be regular re-checks of calls already scored by other supervisors or QA staff.

As the focus of contact center'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 center 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 centers 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, and three elements stood out as the most popular:

1. provide better data management information systems and reporting
2. add and improve multichannel capabilities.
3. improve 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 point out that recording has moved out of the voice-only territory and needs to be able to handle multichannel with similarly rich functionality, but as shown earlier, QA effectiveness is different across channels.

The major change to quality management in contact centers will come from the continued growth in the use of AI-enabled analytics, which allows organizations to take 100% of calls and interactions into account within the quality process. This 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 often still requires the knowledge and experience of QM/QA experts.

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.

AI-ENABLED INTERACTION ANALYTICS

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 may be implemented to look at one particular pressing issue, such as automating the QA process, it often further develops over time into looking at business intelligence and process optimization.

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 optimization
- avoidance of litigation and fines
- customer satisfaction and experience improvements
- increases in revenue and profitability
- improvements in contact center operational performance, and cost reduction.

DRIVERS FOR AI-ENABLED INTERACTION ANALYTICS

Most contact center solutions have a specific, easily-communicated reason for purchase, usually around cost savings. Popular and widespread solutions, such as IVR, workforce management and outbound dialing, have all had a clear and quantifiable route to cost savings and improved efficiency.

Interaction analytics has a different appeal to contact centers, 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 center could possibly have.

While many businesses initially implement interaction analytics to solve a specific problem, successful usage of analytics solutions often encourage a more strategic approach to the technology later on.

One way to segment the use cases for analytics is to look at 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 20: 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 center performance metrics
Reducing the cost of QA	Optimizing multichannel/inter-department communication
Identifying and handling problem calls	Deepening the power and functionality of the workforce optimization 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	Maximizing profitability by managing customer incentives
One-off discovery/analysis via managed service	'Tell-me-why'/root cause analysis

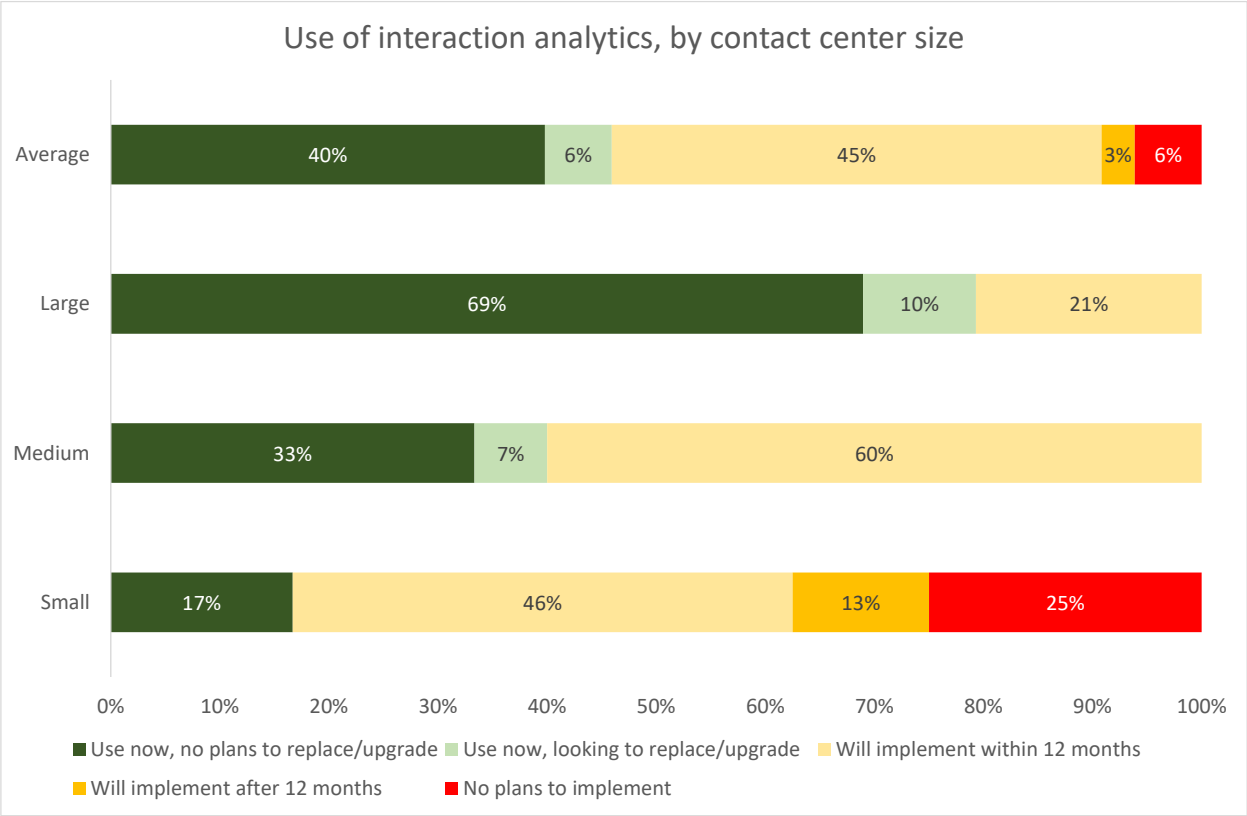
USE OF INTERACTION ANALYTICS

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 centers to learn more about the subject is very positive.

The positive correlation between size and penetration rate is very noticeable for interaction analytics. 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 some respondents from smaller operations are also using analytics, often for QA.

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 interest in implementing analytics in the small and especially the medium contact center sectors.

Figure 21: Use of interaction analytics, by contact center size



Against a virtual ubiquity of call recording, the penetration rates of interaction analytics are lower, although are generally increasing: 46% of this year's respondents use it now, with 48% stating that they have plans for implementation at some point.

The use of historical post-call speech analytics – the bulk analysis of call recordings – is the most widely used type of interaction analytics functionality.

51% of analytics users have also implemented functionality which can analyze the agent desktop activity which is linked to these calls.

Customer journey analytics is also quite popular amongst those who are using this solution, with 47% of survey respondents stating that they use it for this purpose.

Real-time (or near real-time, i.e. within the call) speech analytics is used by only 28% of interaction analytics users, although 53% state that they use multichannel analytics. The rise in non-voice interaction volumes has meant that there is an increased requirement to understand and analyze the customer journey.

49% of survey respondents that use analytics say that they carry out analysis of back office work as well.

Figure 22: 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	86%
Multichannel analytics (i.e. email, web chat, social media, etc.)	53%
Desktop analytics	51%
Back office analytics	49%
Customer journey analytics	47%
Real-time speech analytics	28%

POST-CALL ANALYTICS

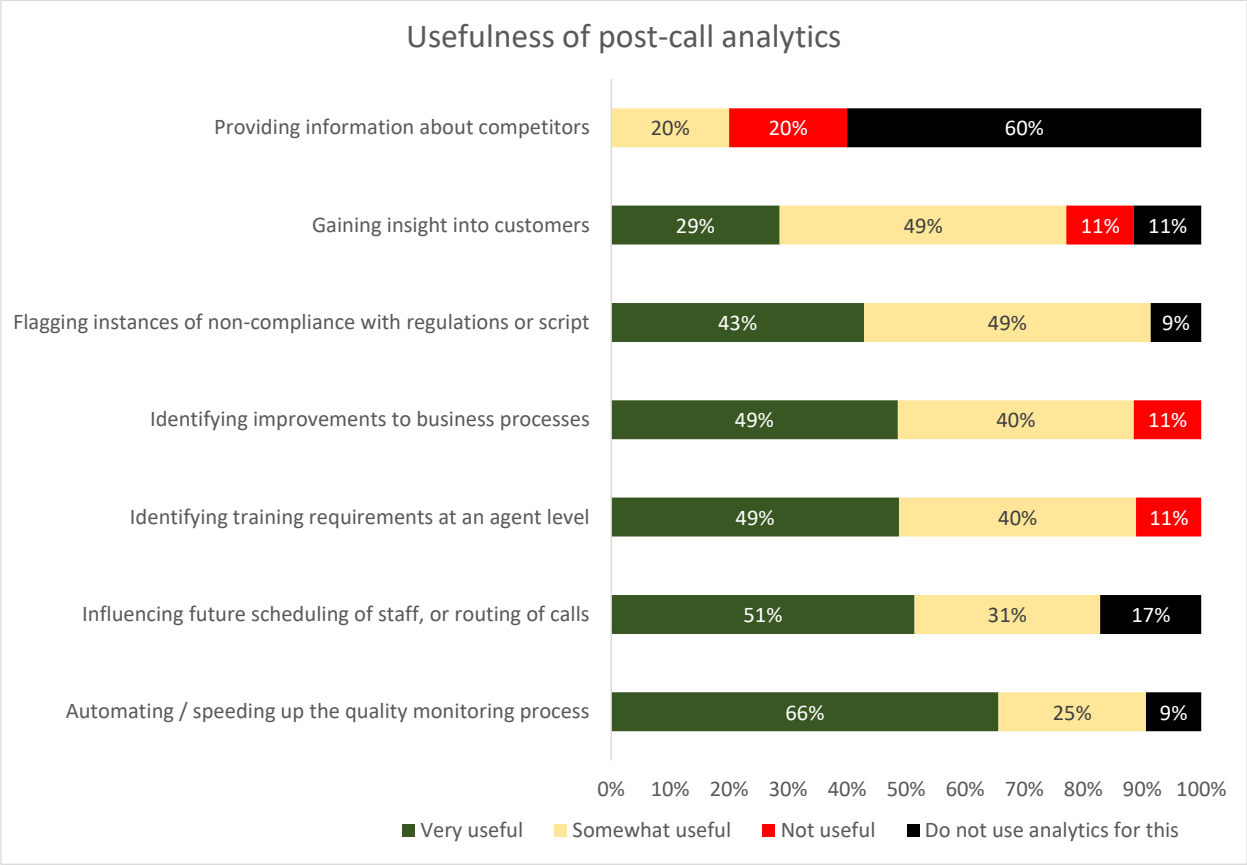
Initial implementations of speech analytics solutions were focused upon analyzing large numbers of recorded calls, often long after the actual event.

Many of the original users bought these solutions to assist them with compliance and as part of a larger quality assurance system, and these benefits are still present. Being able to analyze 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 centers have call recording in place, the raw material is already available and post-call speech analytics that analyzes 100% of recorded calls is proving hugely valuable.

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

Figure 23: Usefulness of post-call analytics



Using analytics to identify training requirements at an agent level and identifying improvements to business processes are popular uses of analytics, although survey respondents give somewhat mixed views on how useful analytics is for these purposes. Optimizing 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 real 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 expect to see growing significantly in future years.

Relatively few respondents believe that analytics is useful for providing insight into customers, which will certainly become one of the major areas for AI-enabled analytics in the near future.

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 now seeing significant benefit from this.

The previous chart 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.

REAL-TIME ANALYTICS

Real-time speech analytics looks for and recognizes predefined words, phrases and sometimes context within a handful of seconds, giving the business the opportunity to act.

Solutions supported by AI can be trained to understand intent and recognize 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, advising and acting in real-time.

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 behavior is falling outside of acceptable and previously successful norms (such as speaking too 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 analysis is an important and growing part of the armory that they have to improve their efficiency and effectiveness, benefiting from understanding what is happening on the call, and in being able to act while improvements are still possible.

Real-time analysis 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 (this is considered more fully in the next section of the report)
- 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.

Solutions now 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. Speaker separation and redacted audio output (e.g. stopping sensitive data being included in text transcriptions) further add to real-time analytics' capabilities.

Agent assistance tools are powered by speech and text analytics, eliminating time-consuming manual tasks with automatic notes and data entry, and monitoring and alerting agents with suggested corrective actions.

However, agents can only experience all these advantages when the tool is designed to extend agent knowledge rather than overload them with information. The intention is to give the only information that matters the most to the conversation, with an intelligent shortcut to provide agents with contextual recommendations and snippets of knowledge base articles.

The speed of real-time analysis 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.

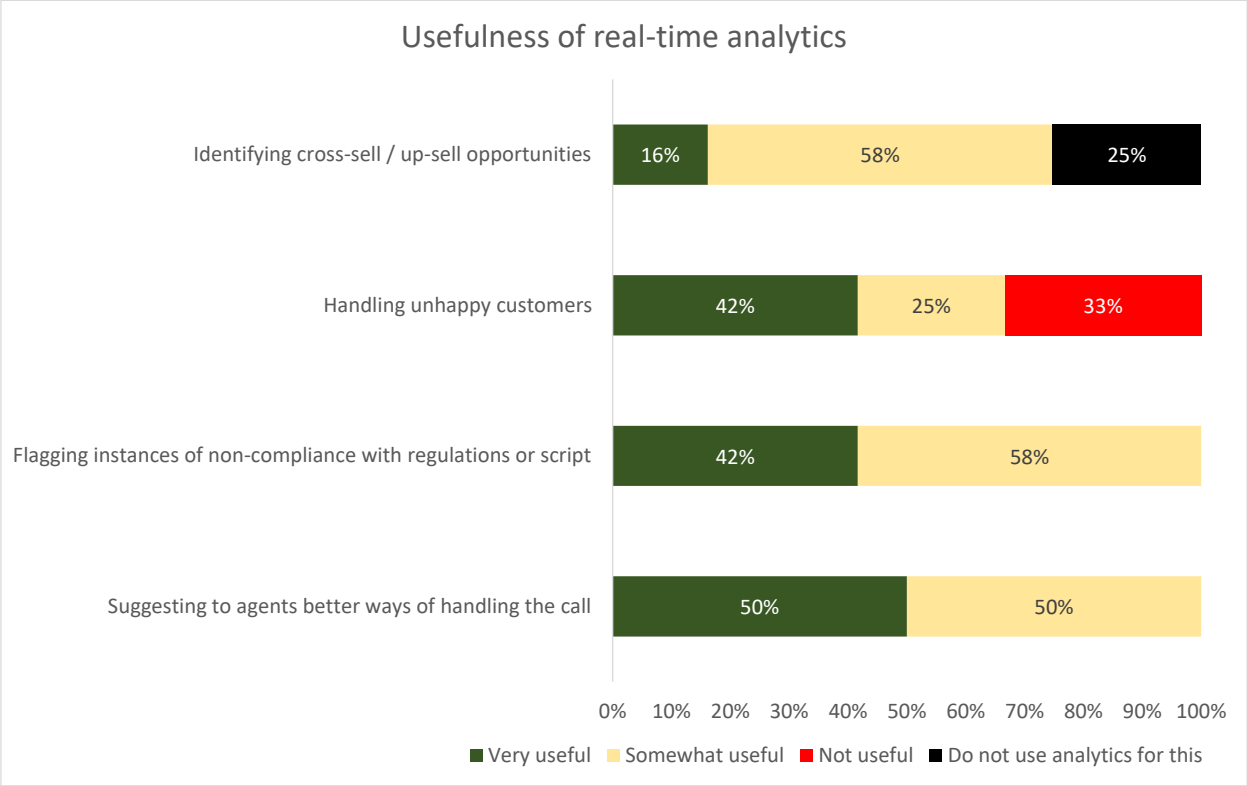
However, it is important not to get carried away with real-time analysis, as there is a danger that businesses can get too enthusiastic and set alert thresholds far too low. This can result in agents being constantly bombarded with cross-selling and upselling offers and/or warnings about customer sentiment or their own communication style, so that it becomes a distraction rather than a help.

The effectiveness of real-time analysis 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-contact 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.

Figure 24: Usefulness of real-time analytics



Compared to post-call analytics, users of real-time analytics have historically had more trouble in extracting value from the solution, but this has really been turned around with the results from using this solution being positive for most survey respondents.

The most popular uses of real-time analytics are for identifying non-compliance, with 42% finding it very useful, and suggesting to agents how better to handle the call, with half of respondents reporting this to be very useful.

42% also say that it is very useful for handling unhappy customers, although a third disagree.

The solution's ability to identify cross-selling and upselling opportunities has usually been less highly rated, although even this is now more popular than it used to be, albeit to a lesser extent.

TEXT ANALYTICS

As with speech analytics, text analytics can be applied historically or in real time 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. Much of the data analyzed by text analysis is unstructured (i.e. is not found in traditional structured databases), such as emails, web chats, message boards, RSS feeds, social media etc. The collection and processing of this data may involve evaluating the text for emotion and sentiment, and categorizes the key terms, concepts and patterns.

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.

Most large companies will have formal customer satisfaction and feedback programs, 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 categorize and act upon, especially where there are many thousands of comments.

Perhaps the most obvious potential contact center use of AI-enabled text analytics is in handling digital enquiries, where web chats can 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.

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 analyze 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 center; 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 analyzing 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.

AI-enabled analytics can be applied across the entire customer journey, including sales, marketing and service, helping organizations understand customer behavior, intent and anticipating their next action.

For example, an AI-enabled 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-enabled analytics can also help with customer onboarding through predicting which customers are likely to require specific assistance.

While CTI-like screen popping is useful for cutting time from the early part of a call, the insight that this functionality provides is often limited. AI enables an instantaneous gathering and assessment of data from multiple sources to occur even before the call has been routed, which allows accurate prioritization and delivery of the call.

For example, an AI-enabled analytics solution working in an airline contact center may judge a call to be urgent if the caller:

- Has booked a flight for this day
- Rarely calls the contact center, preferring to use self-service
- Is a frequent flier
- Is calling from a mobile phone rather than a landline
- Shares a similar profile with other customers who only tend to call for very urgent reasons.

In such a case, the solution may consider that there is a likelihood that the call is directly related to the flight that is happening today (e.g. there’s a danger of missing the flight and the customer may need to rebook), and is able to move the call to the front of the queue and route it to an agent experienced in changing flights, and whose communication style suits the situation and customer profile.

Taking this a step further, the AI-enabled analytics solution is able to augment the conversation with suggestions based upon what the agent is doing on the screen and also, through listening to the details of the conversation, is able to provide relevant information without the need for the agent to search for it, such as the next flight to the customer’s proposed destination or the refund / transfer options. At the end of the call, the solution can then email or text the agreed solution to the customer without the agent having to do this manually.

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 maximize future compliance with regulation and company procedure.

Average call duration is a metric that has been measured in contact centers 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.

BACK-OFFICE ANALYTICS

The back office is the part of the organization 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 center which trigger the relevant processes, which the back office then have to deliver upon. It 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 center itself.

WFO solution providers are developing applications that can be used in the back offices and branches of large organizations as well as their contact centers. Far more employees work in these spaces than in the contact center, 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 optimize any area of the organization that impact upon the customer experience, no longer being restricted to the physical environment of the contact center. The industry is likely to see back office and contact center workforce management systems being closely integrated, or even working as a single centralized function that can track and analyze the effect of different departments and processes on others throughout the customer journey.

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

- supporting different metrics and deadlines to those of the contact center
- 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 center
- forecasts built on contact center events and volumes
- different service levels and resource requirement calculations: many back office processes take considerably longer than a contact center 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 optimized in the same way as their front office colleagues.

CUSTOMER JOURNEY ANALYTICS

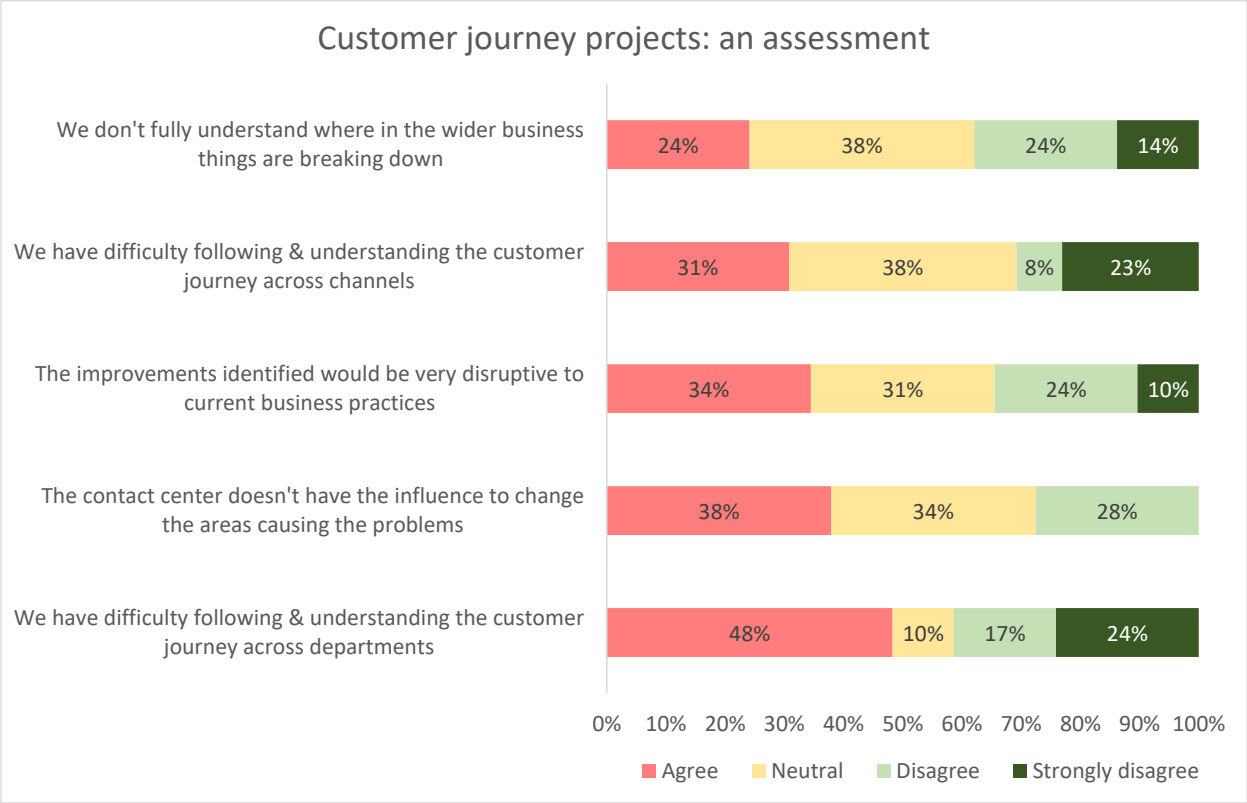
In the long-term, the use of customer contact analytics will improve the customer journey as many business process improvements will be enabled by the complete understanding of what is happening each step of the way, whether within the customer interaction cycle, or in one of the other processes occurring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

Businesses that understand the reasons that customers contact them can staff and train agents appropriately, provide feedback on 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 realize something out of the ordinary is happening.

Respondents using customer journey analysis reported generally positive outcomes.

Figure 25: Customer journey projects: an assessment



38% agreed that the contact center does not have the influence to change the area that is causing the problems. 34% agreed that the improvements identified would be too disruptive to implement.

Only 24% of respondents state that they do not fully understand where in the wider business things are breaking down.

48% find that they have difficulty in following and understanding the customer journey across departments, with 31% struggling to follow it across channels.

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 polarized lines: for everyday, mundane tasks, the customer will choose the website or mobile app for self-service, leaving the contact center to deal with those interactions which are complex or emotive for the customer (as well as there being demographics for whom the contact center 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.

VOICE OF THE CUSTOMER ANALYTICS

There has been a great increase in the number of organizations 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 programs 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 optimization.

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 center optimization and overall CX improvement.

Examples of more complete VoC program 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
- Behavior Playbooks: playbooks with scorecards help managers coach to specific behaviors by outlining how to best demonstrate each behavior, 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.

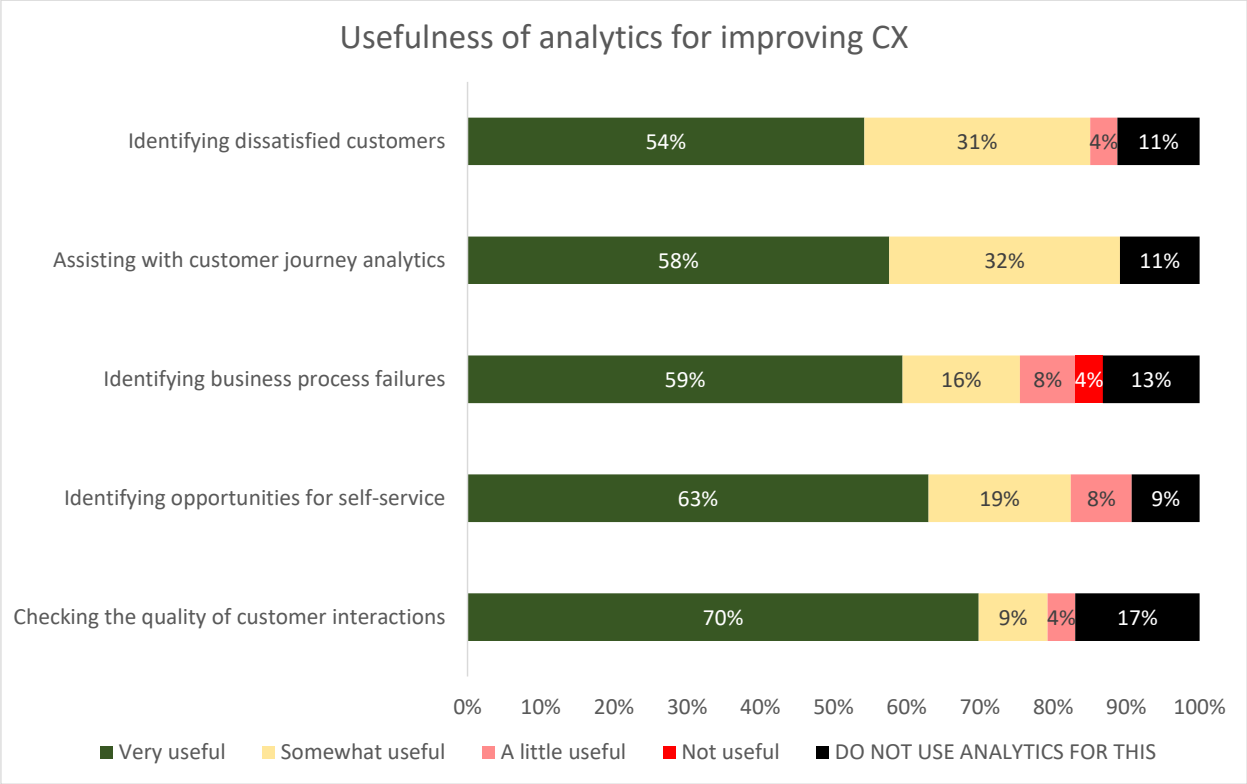
VoC programs are frequently ongoing engagements with result measured by internal CSAT scores, NPS benchmarks and efficiency improvements.

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 is a continuous process, and ongoing analysis allows the use of a closed-loop system, where identified issues can be actioned and continuously checked to make sure that the problem does not reoccur.

Organizations 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.

Figure 26: Usefulness of analytics for improving customer experience



The overall conclusions were surprisingly consistent: in all analytics use cases, over half of respondents that used analytics for the stated purpose said that it was 'very useful' with the majority of the rest saying that it was 'somewhat useful'.

These figures are somewhat more positive than has been the case in the past.

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

MAXIMISING EFFICIENCY AND OPTIMIZATION

Improving call throughput and decreasing costs has been a focus of most contact centers 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 center serve a dual purpose of decreasing customer effort as well,

This section looks at ways in which contact centers 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
- Customer Identity Verification
- PCI Compliance
- Remote & Hybrid Working
- Virtual Contact Centers and the Connected Enterprise.

VOICE AI & VOICE SELF-SERVICE

Despite the rapid growth in the use of web-based services, the importance of the voice channel has not diminished:

- 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. Telephony is still seen as the gold standard for customer service.

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 self-service solutions has become widespread and offers a rapid service option to customers while keeping contact center costs down.

Voice self-service is usually delivered by **touchtone (DTMF) IVR**, which allows customers with a touchtone phone to access and provide information in a numerical format.

Some businesses, often with large contact centers 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.

AI-enabled voicebots offer a major chance to increase the sophistication and functionality provided through voice self-service, and will drive the uptake of voice self-service.

TOUCHTONE IVR

IVR (interactive voice response) 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 the caller via caller-line identity (CLI) or through inputted information, such as account number. This information is then presented to the agent who then understands who the customer is and what they are likely to want
3. to segment and differentiate between customers, prioritizing against business rules in order to deliver a premium standard of service to them (e.g. minimizing time on-hold, 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 mainly 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 'Customer Personalization' elsewhere in the report.

Customer success with IVR 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.

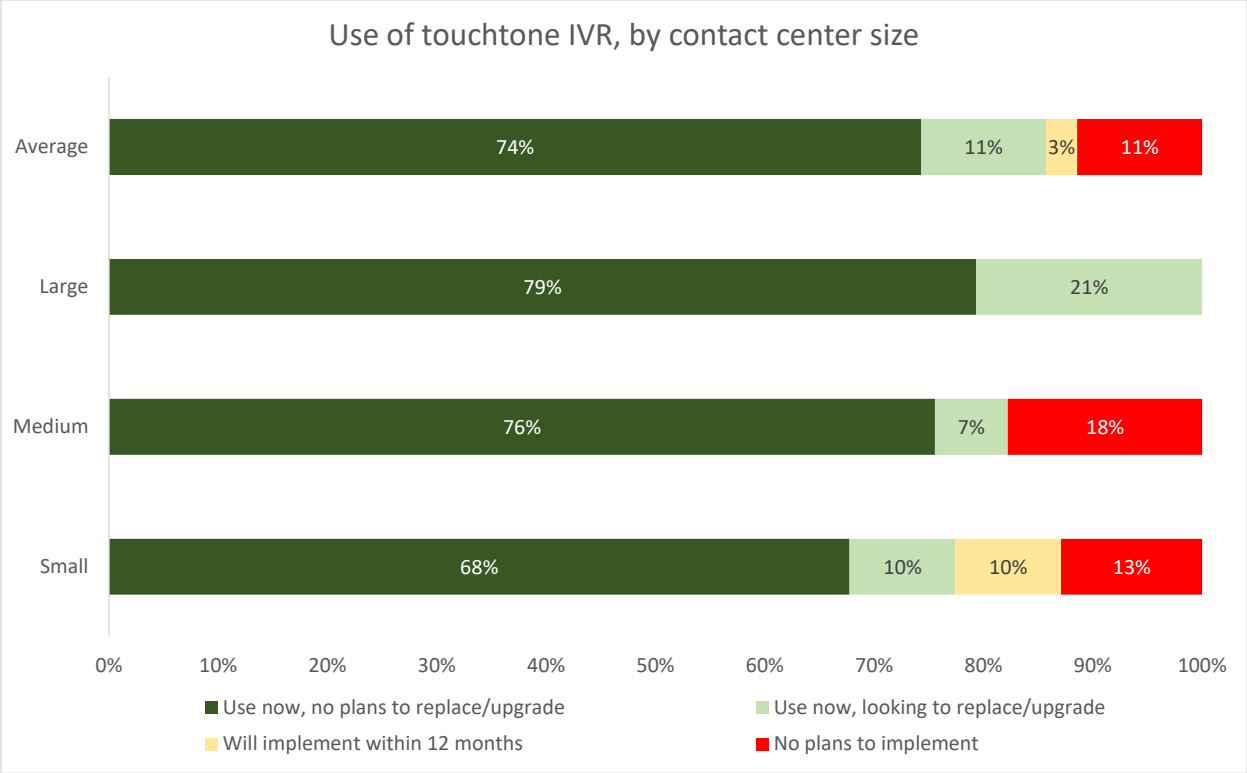
Figure 27: Advantages and disadvantages of telephony self-service

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 visualize 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

Touchtone (DTMF) IVR is used widely across size bands, and as with those using automated speech recognition, those in the largest operations are more likely to use it.

It is noticeable that while there are very few new touchtone IVR implementations planned, there are significant plans for upgrades amongst those in larger contact centers, probably to add speech recognition and artificial intelligence to the more basic touchtone functionality.

Figure 28: Use of touchtone IVR, by contact center size



AUTOMATED SPEECH RECOGNITION

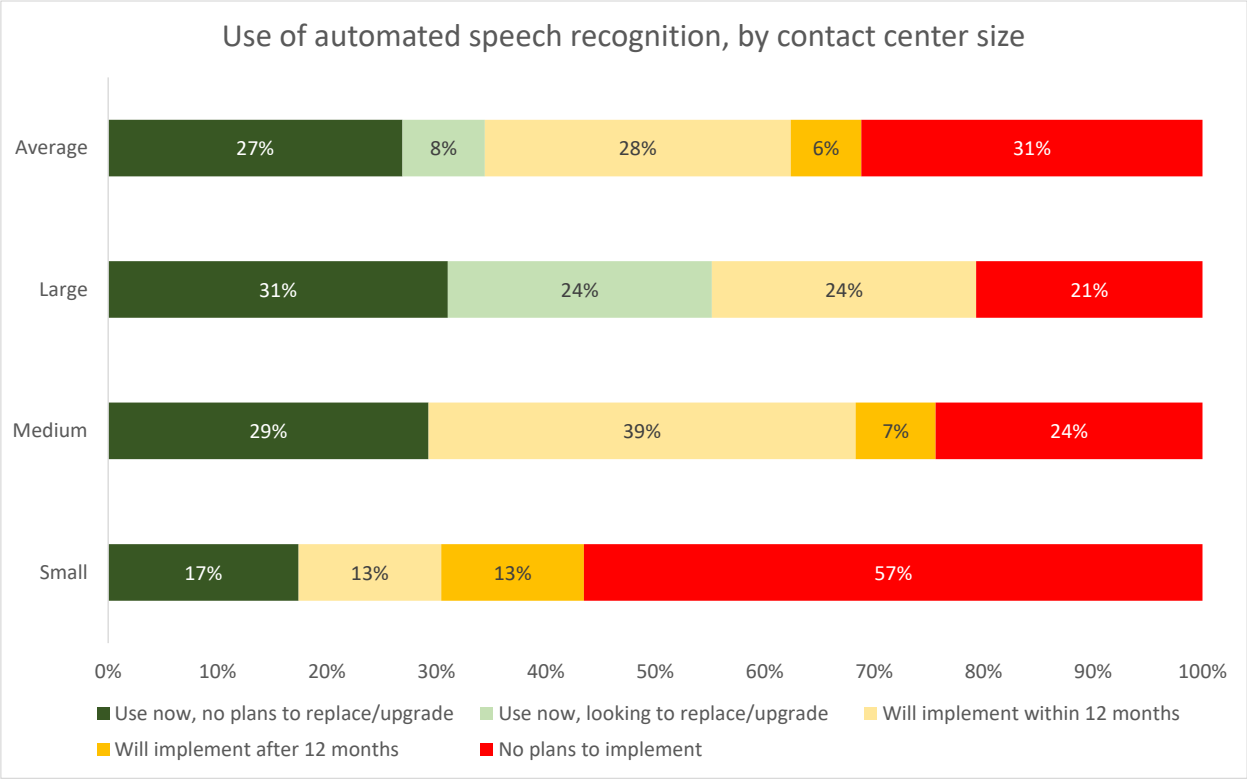
Despite the wider and more powerful functionality that speech recognition gives to an IVR system, significant inhibitors are present.

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.

There is a strong positive correlation between the contact center size and its use of automated speech recognition.

Figure 29: Use of automated speech recognition, by contact center size



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 speech-enabled 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.

Against a background of potential inhibitors, there is some positivity coming from the consumer base.

As 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 dialing – 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. Adding intelligence to speech-enabled self-service applications through the use of voicebots seems a clear next step.

VOICEBOTS

A voicebot is an application made up from AI and natural language understanding (NLU). Voicebots convert speech to text, analyze it and respond appropriately using text-to-speech.

It is integrated with CRM or a knowledge base in order to provide a greater accuracy and depth of response. It should be noted that a common use of speech recognition, such as keyword spotting in order to route a call, is not the same as a voicebot. Like any machine learning application, voicebots require training, as well as volumes of clean data from which to learn.

Voicebots are used to deliver full self-service experiences without requiring an agent, but are also increasingly used for customer identity verification and also call routing.

While a voicebot can deliver the same type of sophisticated AI-enabled functionality as chatbots, there are some extra elements to consider in implementation and usage:

Noise cancellation: the additional requirement of carrying out speech-to-text in order for the interaction to be analyzed is potentially more difficult because of background noise, but there are a number of software-based, AI-driven noise cancellation solutions available that can provide a clearer and more accurate delivery of the customer's voice.

This is particularly important when capturing names, addresses, payment card details and account numbers that could then be passed onto the agent if required.

Resilience: the dependency on multiple systems – sometimes external ones – means that integration may not be entirely straightforward, with components such as speech-to-text, natural language processing and noise cancellation all having to work together seamlessly and quickly, which risks system breakdown.

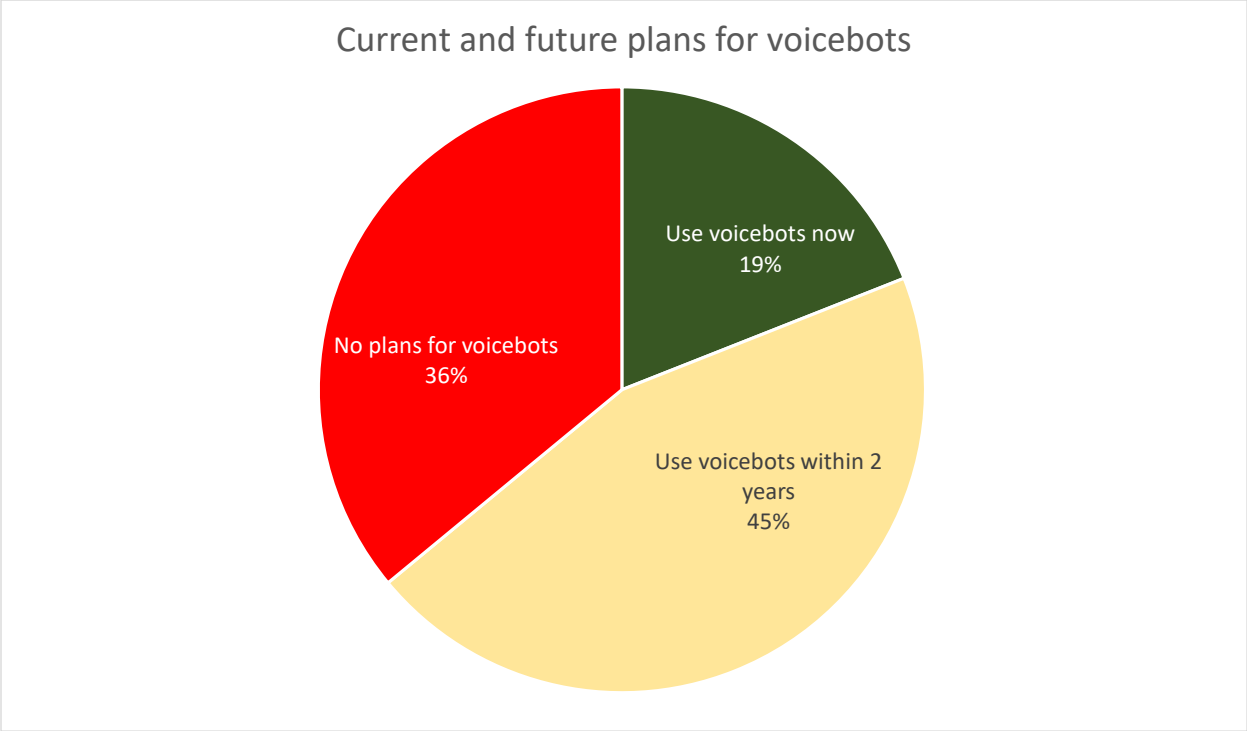
System latency: users of even basic automated speech recognition have been aware for years that it is not close to the experience of speaking with a live agent, with pauses of several seconds typical as the system processes the speech before replying. Voice AI providers claim that it is now possible to achieve latency of around half a second with an ideal voicebot set-up, but latency is something that businesses have to consider seriously when implementing AI-enabled voice assistants.

Other considerations around voicebot implementations include:

- Voice conversations don't follow linear paths: people speaking may repeat themselves, decide to change the phrasing halfway through a sentence to make it clearer, or interrupt. These are not issues that a text-based application such as a chatbot has to cope with.
- While accent recognition has improved greatly, it is still not infallible. There is also the issue with similar- or identical-sounding words (e.g. "1 / won"; "4 / for"; "2 / to") being misunderstood by the system.
- By its nature, a voicebot cannot show customers anything, unlike a chatbot which can send a clickable link or picture to the customer. As such, voicebot implementations will generally not be as wide-ranging or ambitious in their scope as chatbots.
- Whereas a pause in a conversation with a chatbot is expected – and allows the customer to consider their next statement carefully – this is not a part of spoken conversation. Customers can feel rushed to explain their issue, often sub-optimally, and can end up flustered, give the wrong information or want to start again.
- Intent detection can be more difficult with voice conversations, as people will tend to be more long-winded and include information that is not strictly relevant. There is also the necessity for systems to be able to break up multiple intents within a single utterance (e.g. "I want to book single train tickets from Newcastle to London for two people, travelling tomorrow and arriving before 11am.").
- Consider the voice brand you would like to use: many voice assistants sound robotic, overly produced or do not share the same national accent as the typical customer. You may decide that certain types of customer (younger / older; male / female) should be communicated with through different voice personas.
- Voicebots should be able to cope with interruptions, and keep the context of the conversation so as to be able to answer additional questions while keeping the required dialogue flow.

While voicebots are not widely used currently, there is considerable interest in doing so.

Figure 30: Current and future plans for voicebots



THE USE OF TELEPHONY SELF-SERVICE

Of those contact centers offering telephony self-service, a mean average of 33% were handled entirely by self-service without requiring an agent.

Figure 31: 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	60%
Median	15%
3rd quartile	8%
Mean	33%

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).

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 29% of calls (median 20%) 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 an improvement on previous years and suggests that voice self-service is improving.

There is a something of a positive correlation between the size of the contact center and the proportion of self-service sessions that are abandoned in favor of speaking to an agent: the larger the contact center, the more often customers 'zero out' (a mean average of around 34% in larger operations compared to 14% in small, sub-50 seat contact centers).

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 organizations 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.

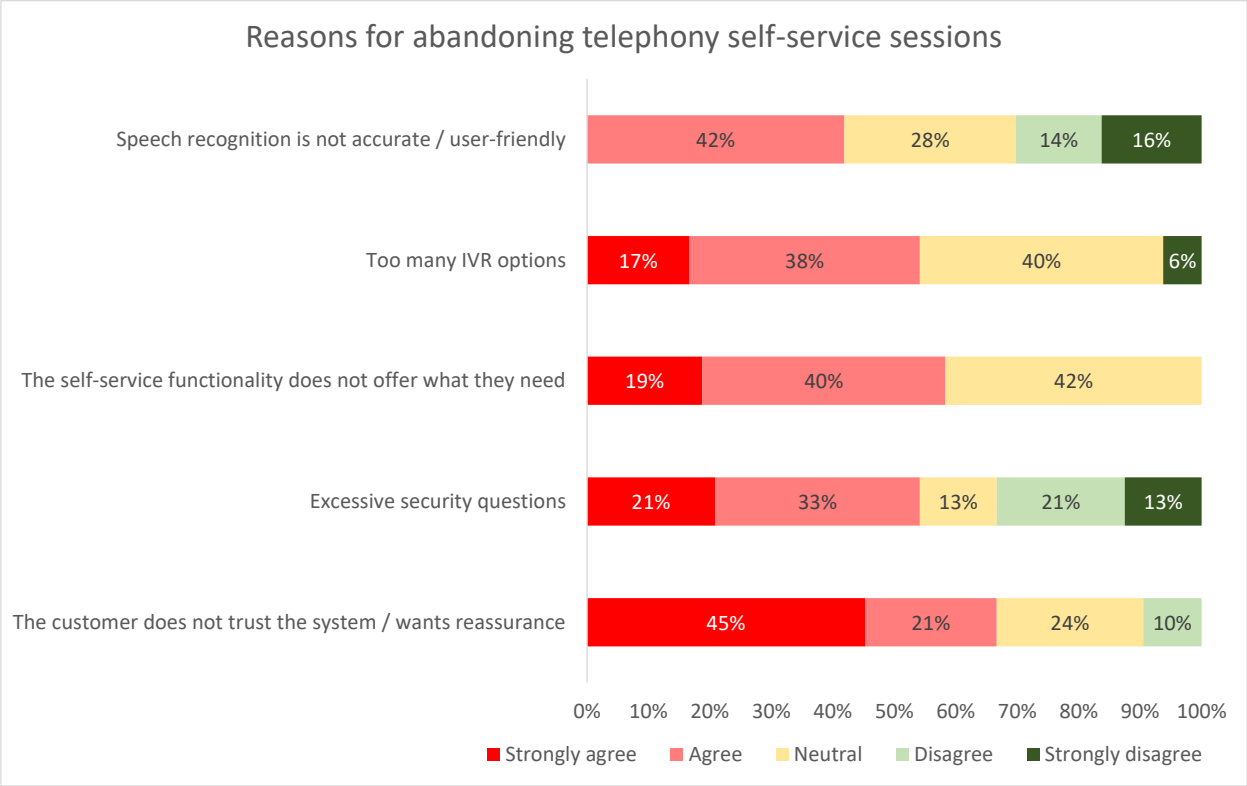
59% of respondents agreed that customers abandoned self-service sessions because the self-service function simply does not offer what the customers want.

While this at first glance may appear negative, it is the case that even in the most commoditized 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.

Figure 32: Reasons for abandoning telephony self-service sessions



It is particularly noticeable that 76% 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, 42% of respondents agree that speech recognition is unpopular with customers due to lack of accuracy and user-friendliness. Customers need to be continually 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).

55% of respondents agree that having too many options presented to customers is a major reason for them seeking human assistance.

MOVING TO VOICE AI

66% of US survey respondents state that there are circumstances in which they would **prefer** to use AI rather than speak with a live agent.

It's important to understand that finding fully: this isn't just customers saying that they're fine to use AI, or don't mind: they would actually **prefer** to use AI in some cases.

By far the most popular situation is where the customer wants a quick answer to a simple question. This is what most AI is currently used for – usually chatbots (regardless of whether they are truly AI-enabled or not) – and aligns closely with one of the main reasons that business themselves state they are implementing AI: to improve self-service uptake.

A desire for a speedy resolution is the second most popular response, as customers want to avoid waiting in a call queue. As short queue times – along with first-contact resolution – are the main drivers of positive customer experience, this again is to be expected, and the absence of a queue is a major advantage of voice self-service.

Customers report that they are willing to use AI-enabled self-service if it provides them with what they need: a quick, low-effort and successful outcome, but of course, there are circumstances when even the best self-service is not appropriate for the situation.

In cases where voice AI applications can't solve the customer's issue, it still has significant advantages over the digital channels where self-service hasn't delivered:

- it can identify and authenticate the customer before passing the call onto a live agent. This saves an average of around 45-50 seconds per authenticated call. The overall cost of customer authentication using live agents adds up to well over $10bn per year across the US contact center industry as a whole

- a summary of what the customer has been trying to do can be passed through to the agent, meaning the customer does not have to repeat themselves or start again entirely, improving CX and saving time and money on the call

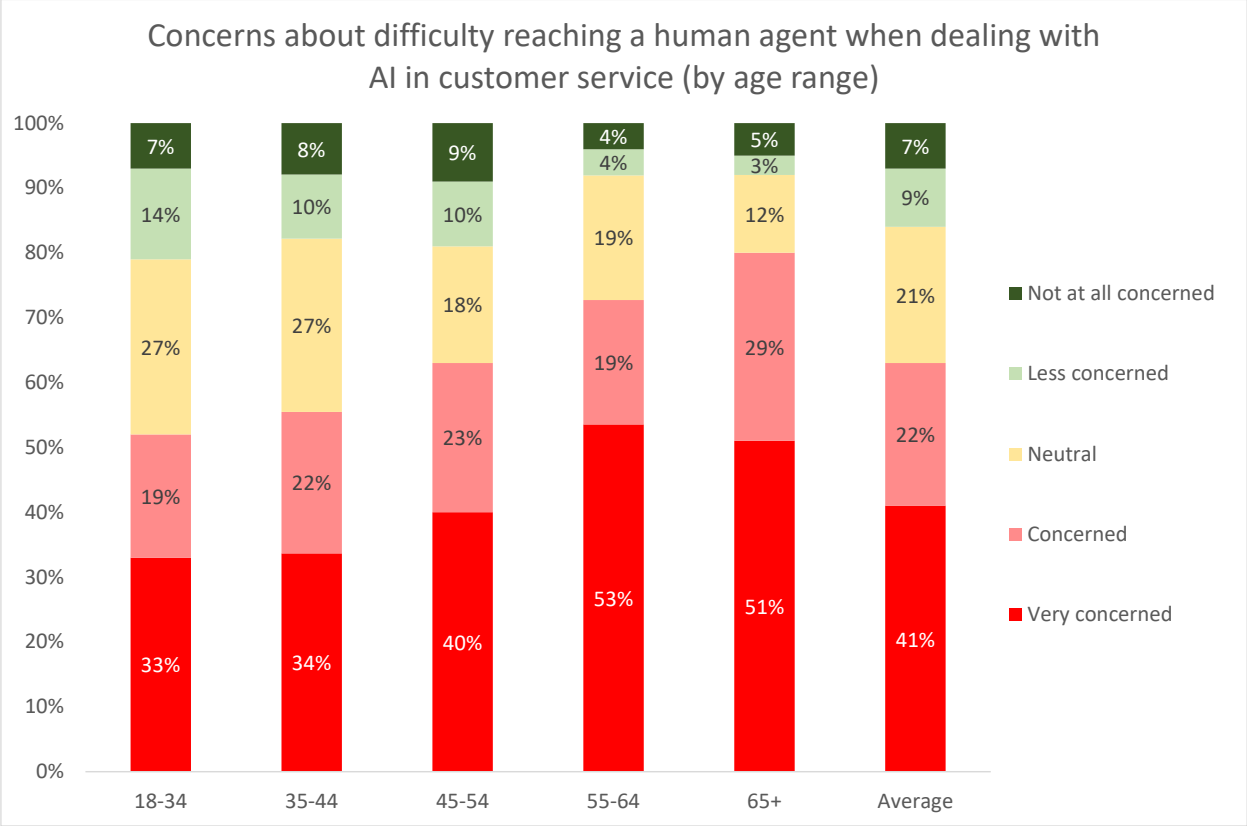
- this seamless move to an agent makes the customer feel like their call is being resolved first-time, despite live voice actually being the second channel they are using. First-contact resolution is consistently reported to be one of the top drivers of customer experience.

The importance of voice AI's smoothing of the path from self-service to live assistance should not be underestimated.

Customers report that one of their main concerns about the use of AI for customer service is that it will be used to block customers reaching a human agent when they need to: something that the following chart shows is of the utmost importance to older customers in particular, with 80% of these being concerned about this. This cohort of experienced customers have seen on multiple occasions that self-service tools – in particular touchtone IVR – seem to have been implemented in order to keep customers away from live agents.

Whether this outcome was what organizations actually **wanted** to happen is irrelevant: many customers see self-service as denying them the right to speak with someone.

Figure 33: Concerns about difficulty reaching a human agent when dealing with AI in customer service (by age range)



Any self-service implementation – AI-enabled or not – needs to have a clear and easy option to contact a live agent. Forcing someone to stay on a self-service channel is a self-defeating strategy: in the case of IVR, customers will zero-out or choose irrelevant IVR options just to speak with someone, or abandon the company altogether. In the case of web self-service, organizations that hide their phone number deep in the website are causing themselves problems as well as their customers.

Organizations should provide extra levels of reassurance to build customer confidence: people are usually willing to try something new, but need to know that they have options if it doesn't work out, or if they then decide they actually need to speak with a person.

Organizations must accept that self-service and live interactions do not work in a binary world of one or the other: a customer who is forced down an ineffective self-service path becomes frustrated, angry and more likely to use live channels in the future. They may abandon the organization altogether, so any potential self-service cost savings should be viewed in the light of long-term customer loyalty, advocacy and revenue.

Voice AI is ideally suited to support a channel which customers still trust more than any other, and we would expect a strong uptake in AI-enabled self-service in the near future.

CUSTOMER IDENTITY VERIFICATION & FRAUD REDUCTION

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, identity verification processes are now seen as critically important and most calls that are not initial enquiries will need to verify a caller's claimed identity by asking for additional information that only the real customer should know (knowledge-based authentication, or KBA).

However, fraudsters have often gained access to personal information such as mother's maiden name and date of birth, along with payment card details that have been stolen from websites, and research has shown that knowledge-based questions are answered correctly by fraudsters the large majority of the time.

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.

In many cases, 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 lengthy and complex questioning before being permitted to make their inquiry or place their order, not only reducing customer satisfaction, but also costing businesses time and money.

It takes an average of 42 seconds to verify a customer's identity, and this mounts up considerably: the US contact center industry spends billions of dollars each year just to verify the caller is who they claim to be and are permitted to do what they are asking.

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, the 3- or 4-digit security code on payment cards or a registered phone to which an SMS or other authentication code can be sent.

Combining these factors creates a more complex, and potentially more secure two-factor or three-factor authentication process (2FA / 3FA), although this is often inconvenient and time-consuming. Relying upon previously enrolled voice features 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 verification far easier.

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

73% of inbound calls received by this year's survey respondents require customer authentication to be carried out, and although in-call efficiency has improved, identity verification is slower than it has ever been.

44% of respondents state that all callers go through identity verification, with only 8% stating that they never do so.

84% of calls requiring customer authentication need agents, with 14% handled through touchtone IVR and a small minority using other methods.

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

The mean average time taken to authenticate is 42 seconds.

Figure 34: Caller identity authentication methods (only those contact centers which authenticate calls)

Identification method	Proportion of callers identified using this method
Agent	84%
DTMF IVR (touchtone)	14%
Speech recognition	4%
Voice biometrics	<1%
NB: total is greater than 100% as some calls may require multiple identification methods	

The unnecessary cost of caller authentication

Using our 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.

73% of all calls require a security and identification process to be completed first. This year, 84% of calls were reported to be authenticated by agents. On average, it takes 42 seconds to go through security. Using these statistics, it is possible to estimate how much US contact centers spend each year on screening customers by using agents.

Inbound calls per year (handled by agents): 27.3bn[4]

Proportion of inbound calls that require security and identification checks: 73%

Average length of agent-handled security and identification check: 42 seconds

Average call duration: 6m 51s (411 seconds), therefore 10.2% of the call is ID&V

Mean average call: $7.20

Cost of time spent on agent-handled security and identification check: 73.4c per call

Proportion of calls requiring ID&V: 73%, of which 84% require an agent

Overall cost of agent-handled security and identification checking: $12.3bn per year

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 center 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

[4] Source: ContactBabel – "US Contact Centers 2026-2030: The State of the Industry & Technology Penetration Rates"

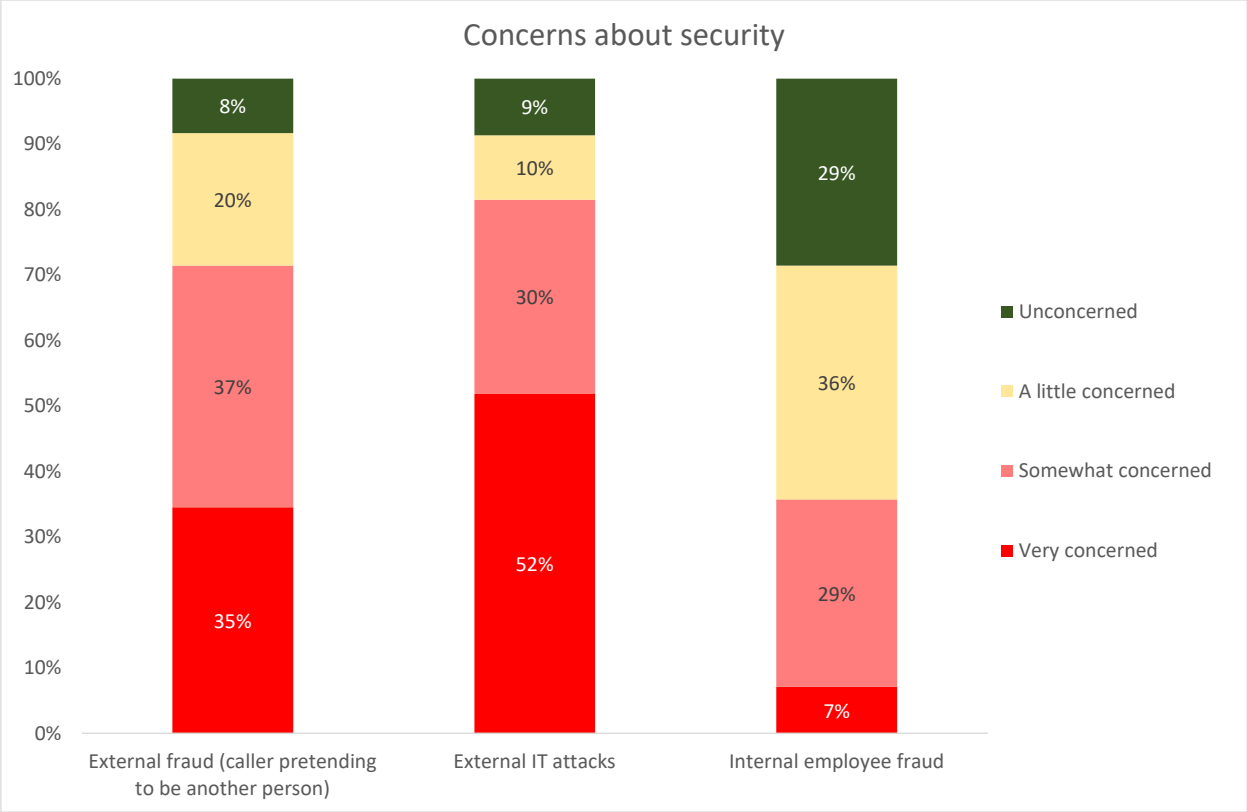
- existing methods of identity verification (e.g. PIN, password, device, etc.) are not secure and/or are user-unfriendly
- it is not just criminal fraud that identity verification aims to stop. The issue of privacy, especially in the healthcare vertical market, is a powerful driver for using right-party 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.

SECURITY CONCERNS

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

Concerns about external IT attacks are highest, with 82% of operations reporting significant concerns. 72% report concerns around external fraud attempts, although only 36% report that they are concerned about internal employee fraud.

Figure 35: Concerns about security



THE EMERGENCE OF BIOMETRIC TECHNOLOGIES

Biometric technology uses physiological or behavioral characteristics to verify a person's claimed identity. Physiological biometrics includes fingerprints, iris, or retina recognition, and voice verification. Behavioral 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 centers. It should be noted that many businesses now allow smartphones with thumbprint- or face-recognition 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 behavioral factors, including pronunciation, emphasis, accent, speech rate and other audio artifacts. 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 utilizing voice biometrics to authenticate customers within the course of the conversation.

Voice biometrics, while an excellent authentication tool, is not in itself enough to deter fraud attacks.

Researchers 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. As voice is a characteristic unique to each person, such attacks essentially give the attacker the keys to that person's privacy, and as AI tools develop rapidly, the sophistication of fraudulent voice attacks is sure in increase.

Obviously, voice biometric solutions are improving all of the time – AI can be used for defense as well as attack – but so are the weapons that fraudsters are using, and it would be risky to place all of the responsibility for fraud detection onto a single technology such as biometrics.

Security solution providers have added considerably to their portfolio, and while voice biometrics is still a key part of this, they may also offer ANI validation, device validation, one-time passwords, risk-based authentication and real-time fraud detection.

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 required.

Contact centers 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 ANI spoofing, voice distortion, and social engineering-based fraud attempts, which voice biometrics by itself 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.

It is interesting to note that some US states have privacy laws that require express consent and special handling capabilities to protect consumer privacy, which impact upon the cost and effectiveness of collecting, using and storing voiceprints, meaning that some businesses may not be able to use voice biometrics.

Potential cost savings are significant, especially for larger operations, and the customer also gains through a better experience, longer opening hours and greater identity protection.

While less than 1% of survey respondents currently use voice biometrics, 13% are trialing it or have a trial planned in the future. 68% say that they will keep a watching brief, and only 19% say that they will definitely not use voice biometrics.

INHIBITORS TO VOICE BIOMETRICS

One of the main inhibitors 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 center 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 may be applicable to 50% or less of customers and that a majority of customers will never be enrolled, leaving them vulnerable to fraud attacks.

It is still possible to give some protection to these non-calling customers' accounts, as criminals often try to mine the IVR in order to gather and using the stolen information to socially engineer agents and take over accounts across the enterprise.

Fraudsters identify and take over legitimate accounts by using automated bots in the IVR to test large numbers of stolen credentials and credit card numbers. Some solutions monitor inbound calls for IVR bot activity, suspicious phone numbers and accounts that have had multiple attempts to be accessed, flagging these accounts as requiring particular attention when a caller then tries to access that account on a call.

As every caller exhibits unique behavior patterns when engaging with a call center, by classifying the cadence of each keypress, a pattern can be established for every genuine caller.

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 centers in all size bands.

As might be expected, respondents in small contact centers 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.

CALL SIGNALING ANALYSIS

Solutions that focus on identifying potential fraudulent callers don't rely solely on matching the voiceprint, which is not an infallible method of authentication especially with the capabilities that AI now has, and businesses may wish to consider using biometrics in association with other security measures such as call signaling analysis, which is focused more on identifying and preventing fraud than on simply authenticating genuine customers.

Call signaling analysis is the process by which the metadata surrounding a call can be looked at, for the purpose of identifying potentially fraudulent and suspicious calls that can then be handled differently by the business.

The process 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), caller ID, 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.

For solution providers who have access to their country's PSTN, data such as network level caller ID may be collected from the call at carrier-level compared to the presentation caller ID: a mismatch may indicate that the call is suspicious.

Call metadata may include many dozens of individual pieces of data, which are put together to form a phone print:

- presentation caller ID
- network caller ID
- geographic ID
- the type of device being used
- codec artefacts
- packet loss
- clarity.

The solution checks to see if this pattern of metadata has been seen before, and if so which account it is linked to. If it is anything other than the account of the customer that the caller claims to be, it is flagged as a potentially fraudulent interaction. If the phone print is not recognized, it will be stored and used in future interactions.

The caller's voiceprint and phoneprint can be matched against a database of fraudsters: while this "bad voice" method of matching recorded voice against the database of known fraudsters can be effective, this is usually done as a retrospective batch process so does not work in real-time, although it can be useful to check that requests for new credit cards are authentic before the card itself is sent out.

Some fraudsters call in multiple times to find an agent that they can socially engineer. Identifying and logging multiple calls from the same caller/device can identify this and allow agents to be aware and/or block calls.

Call signaling analysis can work in conjunction with voice biometrics to alleviate some of the weaknesses of the latter. By identifying suspicious phone prints, the caller can be identified as being suspicious and handled accordingly:

- IVR spear-phishing: fraudsters use the IVR to validate customer information such as recent transactions, which is then used to conduct fraud through other channels

- Fraudulent voice biometric registration: if the customer has not already registered their voiceprint, a fraudster can do so if they have sufficient static identification information about the customer (e.g. password, date of birth, address, etc.)

- 'Catch and release' fraud: fraudsters contact the bank to clear blocked fraudulent payments that they themselves have made, if they are able to successfully authenticate themselves as the customer

- SIM swap and fraudulent ports: fraudsters gain control of genuine customers' phone numbers in order to bypass two factor authentication (e.g. caller ID and another factor)

- Call signaling analysis can also reduce unnecessary customer callbacks caused by a lack of confidence about the caller ID: in cases where voice biometrics has been uncertain, metadata around the call can be used to provide a more definite answer either way.

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. Such information can also feed into fraud detection platforms which gather data from many sources often do not include flags from the telephony channel causing a limited detection of cross-channel attacks.

Some solution providers offer a fraud investigation service for SMEs who may not have the resources to implement the full biometrics or call signaling analysis solution, taking audio recordings to identify fraudulent activity on an as-needed basis.

Sophisticated fraud detection solutions use AI and machine learning to identify fraudulent transactions and also to analyze cases where legitimate users fail the authentication attempt (e.g. due to noise variations, the ageing process, a change in devices, etc.) to amend and optimize the voiceprint so that they are more likely to be identified correctly in future.

To summarize, the strongest security will be present where there is multi-factor authentication around voice biometrics, device authentication, shared information about known fraudsters and customer behavior such as keypress analysis and call patterns.

PCI COMPLIANCE & CARD SECURITY

Around half of US contact centers take card payments over the phone.

One of the key ways that contact centers 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 over half of US contact centers 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 centers 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 (3DS) which is an additional two-factor authentication security layer used in online 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 center.

PCI DSS BACKGROUND

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).

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 (December 2024), the current standard is PCI DSS 4.0.1, which will come into force on 31st March 2025.

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 organization that they represent meets the requirements of the standard. Third Party Service Providers (included hosted contact center 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 organizations, 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.

PCI DSS 4.0 has moved towards being more flexible and outcome-based: rather than specifying exactly what and how a business needs to implement a technology or security measure, it states what must be achieved, leaving businesses to work out how best to do so while taking into account their own unique environment.

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 – as especially noted in PCI DSS 4.0 – PCI compliance is not a once-a-year box-ticking exercise, but should be entwined in the security DNA of an organization: QSAs are now told to select samples from throughout the year to prove compliance, rather than just using a snapshot at the time of assessment.

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

QSAS AND SELF-ASSESSMENT QUESTIONNAIRES (SAQS)

The PCI DSS guidelines state: "As a starting point, consider whether the organization should aim at excluding telephone-based card payment data entirely...for organizations committed to taking payments over the telephone, consideration should be given to techniques that minimize exposure of PAN (primary account number) and SAD (sensitive authentication data) 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".

SAQ A is relevant to card-not-present merchants (including contact centers) 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 centers to consider, with many QSAs recommending this.

For Level 1, 2 and some 3 merchants, SAQs have become channel-related (e.g. a organization 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 center 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 organization 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 payment 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 program, 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 minimize?

PCI DSS REQUIREMENTS

There are 12 requirements to fulfil in order to achieve PCI DSS compliance (full details are available here[5]), 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

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

- 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 centers 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 center 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.

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 such as card verification codes is prohibited even if encrypted, and must be permanently deleted immediately after authorization.

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.

PCI DSS 4.0 emphasizes the limited storage of cardholder data even prior to transaction authorization, stating that it must be encrypted if held electronically, and applies to any stage in the process where agents or systems may hold this data, regardless of where in the interaction it is. Furthermore, an annual risk analysis of all system components – call recording, reporting, CRM and customer databases for example – should be carried out. All software, including any which is customized, should be patched immediately once any vulnerabilities are noted.

For contact centers, the most obvious place where data is stored as in the recorded environment, and the use of RAM scrapers should be considered, being a form of malware that takes data from volatile memory as it as being processed and before it is encrypted.

Organizations 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 states clearly 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, up-to-date 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. Security certificates used to safeguard card data sent over public networks must be valid and unexpired, including when transmitting this to the payment service provider. Companies should consider segmenting networks so as to limit the systems and environments in PCI scope by separating those networks which store, process of transmit card data from those that do not.

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.

PCI DSS 4.0 emphasizes the need to use strong authentication, such as multifactor authentication and longer and more complex passwords containing at least 12 characters and a mixture of numbers and letters. Multifactor authentication should be applied to all accounts that have access to cardholder data, not just administrators.

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 centers and limit physical access to servers storing payment card information. Consider how the physical and logical environment of remote workers will need to be managed.

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

This requirement has a significant impact on the contact center industry as providers move to the cloud, as it is mainly about managing the security of payment card data, having an incident response plan that deals with card data at risk, and also deals with third-party service providers through requirement 12.8: "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 centers, 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 minimization 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, 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 an alternative allowing the business to achieve the outcome of the control. Guidelines for valid compensating controls indicate that they must meet the intent of the original requirement, and provide a similar level of defense, 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.

Each merchant has a level assigned to it, based on the number of card payments taken annually across all payment channels and for a single payment card scheme (typically Visa, which has c. 70% market share).

Level 1 merchants have over 6m transactions per year (and/or has had a data breach that resulted in account data compromise, and/or is identified as Level 1 by Security Standards Council); Level 2: 1-6m; Level 3: 20k– 1m online transactions, Level 4: under 1m transactions, and less than 20k online transactions.

- Level 1 merchants have to be externally audited annually and have an annual Record of Compliance. Assessments must be performed by a PCI SSC-approved Qualified Security Assessor (QSA) or a PCI SSC-certified Internal Security Assessor (ISA). They also require a quarterly network scan by approved scanning vendors, as well as an attestation of compliance form
- Level 2 – must submit a report of compliance, performed by internal evaluation if preferred, guided by the relevant self-assessment questionnaire (SAQ). They also require a quarterly network scan by approved scanning vendors, as well as an attestation of compliance form
- Levels 3 – no report of compliance needed, self certifies with SAQs. They also require a quarterly network scan by approved scanning vendors, as well as an attestation of compliance form
- Level 4 – meet the PCI requirements of their bank, which may include carrying out annual SAQ and quarterly network scans.

TPSPs (third-party service providers) have to externally certify by QSA and produce a RoC (Report on Compliance) if they process more that 300K Visa transactions per annum (Level 1 Service Provider).

In version 3 of the standard, self-assessment questionnaires (SAQs) additional to those already existing were introduced to assist merchants and service providers to report the results of their PCI DSS self-assessment.

An **Internal Security Assessor** (ISA) is an individual who has earned a certificate from the PCI Security Standards Company for their sponsoring organization, giving them the competence to perform PCI self-assessments for their organization. ISA certification empowers inward appraisal of their organization 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 organization 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 several thousand dollars 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 organization 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 centers do not require a full audit, and self-assessment questionnaires (SAQs) are the norm for many organizations, 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, recognizing 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:

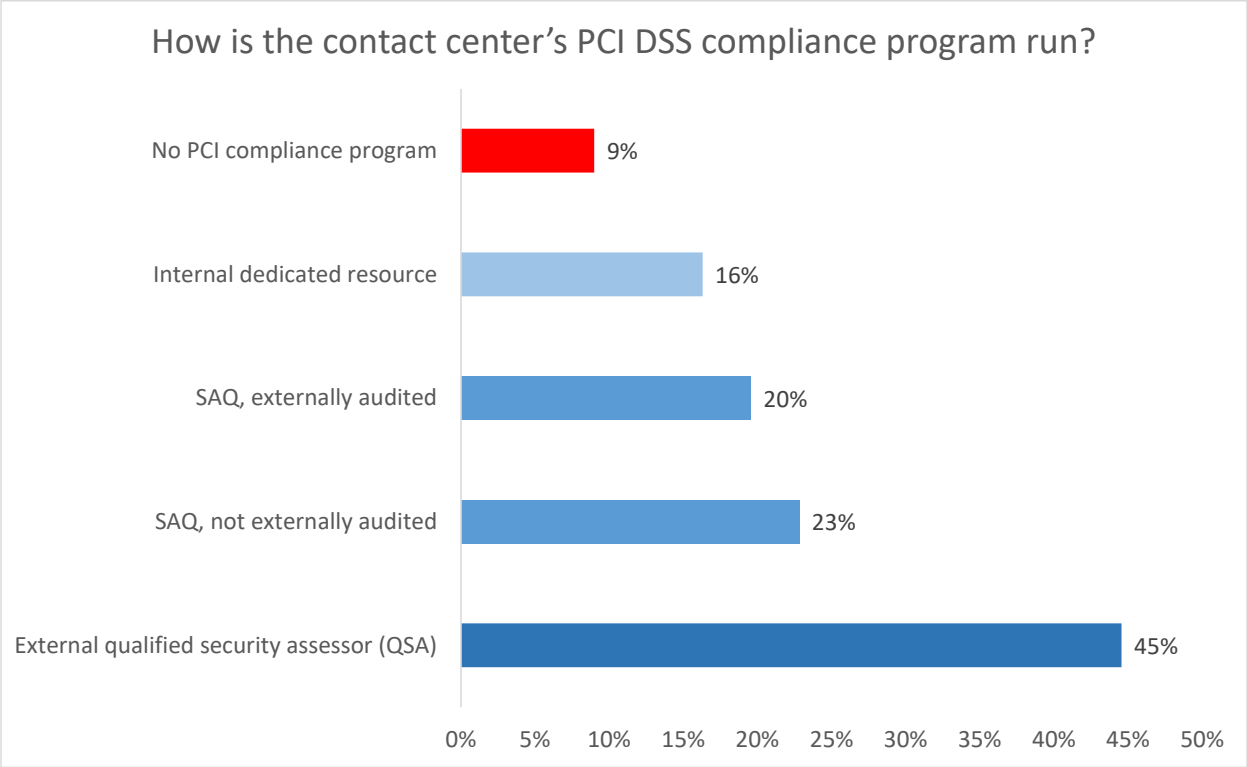
- Annual Self-Assessment Questionnaire (SAQ) D
- Quarterly network scan by an ASV
- Penetration Test
- Quarterly local network vulnerability scans
- AOC Form.

While small operations in the past were more likely to use internal self-assessment questionnaires, they have moved towards getting external help.

Roughly the same proportions across size bands use an external Qualified Security Assessor (QSA).

Larger operations are more likely to use a number of compliance methods, especially dedicated internal resource.

Figure 36: How is the contact center's PCI DSS compliance program run?



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** who were able to answer this question were included (9% of respondents did not know how their PCI compliance was run).

THE VIEW FROM THE CONTACT CENTER

Potential danger points within the contact center fall into three main areas: storage, agents and infrastructure. Storage includes 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 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.[6]"

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 center).

The supplement also explains the processes whereby an organization 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 organization, so any third-party used must themselves be confirmed to be PCI compliant.

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

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

Figure 37: 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 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 – as especially noted in PCI DSS 4.0 – PCI compliance is not a once-a-year box-ticking exercise, but should be entwined in the security DNA of an organization: QSAs are now told to select samples from throughout the year to prove compliance, rather than just using a snapshot at the time of assessment.

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 organization has not also considered their PCI compliance status but also the compliance status of Third Party Service Providers supporting their card payments process.

Policies and activities that are helpful include:

- ensure that contact center employees do not share passwords or user IDs, 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, analyzing 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 centers and limit physical access to servers storing card data
- 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.

THE USE OF CARD FRAUD REDUCTION METHODS

The PCI DSS guidelines state: "As a starting point, consider whether the organization should aim at excluding telephone-based card payment data entirely...for organizations committed to taking payments over the telephone, consideration should be given to techniques that minimize 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 list of solutions, approaches and business processes that aim to reduce the risk of card fraud within the contact center, and indicated 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 center at any point (even encrypted) will take the operation out of the scope of PCI. Respondents use an average of 3.6 card fraud reduction methods.

Pause and Resume (67% - up from 59% in 2024)

'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.

Pause and resume is consistently one of the most widely used fraud reduction solutions, despite not taking the agent out of the scope of PCI.

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 analyze 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 centers 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 41% of respondents (2024 - 41%) stated that their application does not record card details from the agent's screen.

21% of respondents (2024 – 26%) **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 (50% - down from 68% in 2024)

One of the most widely used fraud reduction methods is that of improving manual processes and agent training: the biggest risk in any organization 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 (29% - down from 35% in 2024) and Dedicated Payment Teams (21% - down from 24% in 2024)

Some organizations 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 underutilized, 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 $2,500 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 (38% - up from 31% in 2024)

The increasing requirements and costs associated with more stringent payment technology, processes and training mean that many contact centers are choosing to use a third-party to handle card payments, rather than remove the payment option entirely.

38% 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 center environment, whether infrastructure, agents or storage. As such, this de-scopes the entire contact center 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 minimize changes to the contact center 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 (7% - up from 2% in 2024) and mid-call (24% - up from 15% in 2024)

A minority of respondents, especially those with large contact centers, 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 and has grown in usage over the past few years: 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 organization'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 (26% - up from 24% in 2024)

26% of this year's respondents use DTMF suppression in order to assist with card fraud reduction, which is an upward trend.

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 unauthorized 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 neutralized (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 can be one of the more expensive card fraud reduction methods to implement.

Tokenization (31% - down from 32% in 2024)

The practice of **tokenization** is used in 31% of this year's respondents' operations.

Tokenization 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 tokenization 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 center 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 center environment. This allows the contact center 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. Tokenization 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 tokenization is to collect the actual cardholder data via DTMF tones. 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 tokenized. Card numbers and sensitive authentication data such as card validation codes are replaced, and the new tokenized DTMF tones are played down the line to the contact center. The actual cardholder data is held temporarily within the hosted environment.

Within the contact center environment, the tokenized DTMF goes to the same places that the existing payment process defines, being recorded as usual and going to the agent desktop 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 tokenized 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 tokenized payment card details, the transaction is sent back to the hosted environment, where the tokenized 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.

Customers should check that any hosted tokenization 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 tokenization product security guidelines[7].

Send Secure Payment Link by SMS or Email (24% - up from 12% in 2024)

This self-service card fraud reduction method involves sending an SMS, email or WhatsApp link to a customer which then opens a secure form in which card details can be entered.

Card data is kept outside the organization, keeping it outside of scope and can also be linked with tokenization 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.

Further details about all of these methods, as well as other approaches to take, are investigated in depth in ContactBabel's free report, **"The Inner Circle Guide to Fraud Reduction and PCI Compliance"**, which is available from www.contactbabel.com.

[7] https://listings.pcisecuritystandards.org/documents/Tokenization_Product_Security_Guidelines.pdf

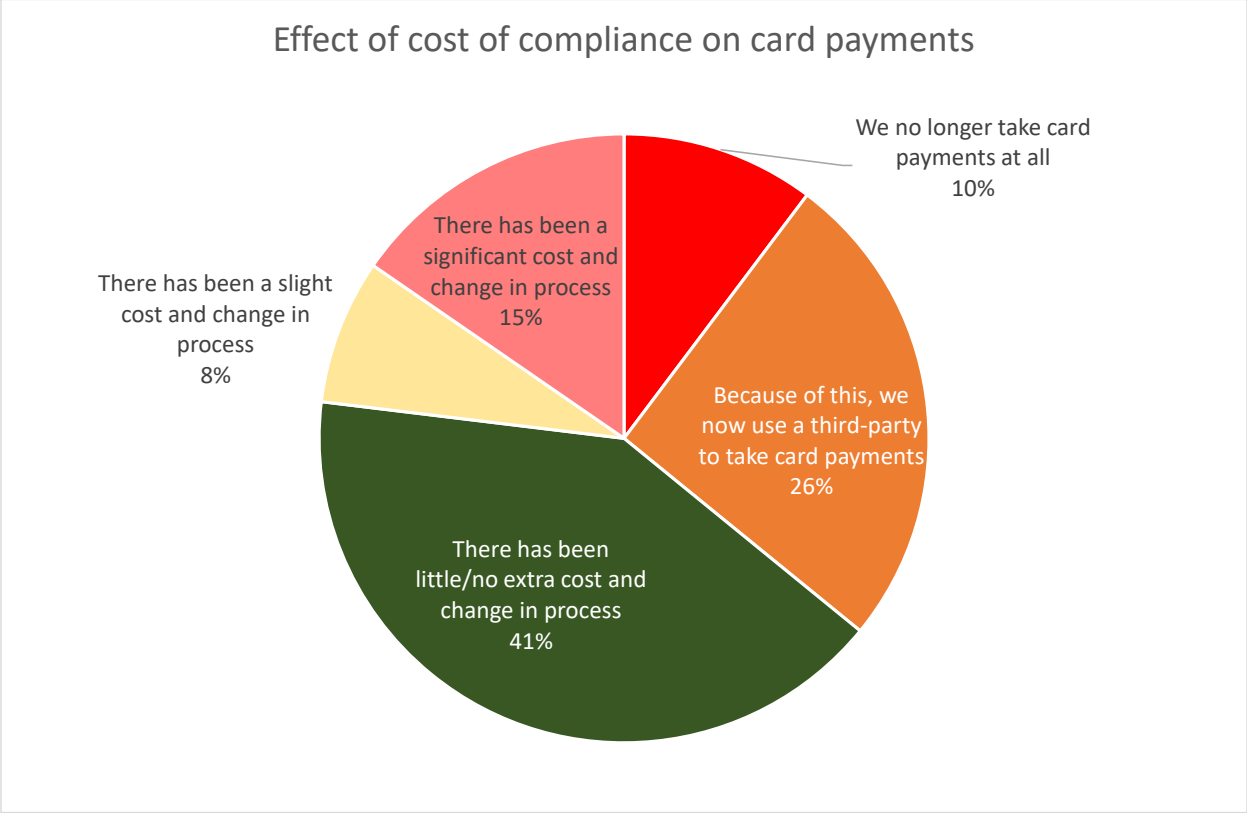
THE COST OF PCI DSS COMPLIANCE

The following chart shows that a significant proportion of contact centers have found that the cost of PCI DSS compliance is very considerable, with 15% of respondents stating that they have seen a significant cost associated with compliance, as well as a change in their processes. A further 8% report a slight increase in cost.

41% of survey respondents state that they have not had to increase their costs or change the way in which they operate in order to be compliant.

26% of respondents state that the cost and effort of compliance was so high that they decided to use a third-party to take card payments, in order to take the contact center out of scope, and 10% stated that they now no longer take card payments at all.

Figure 38: Effect of cost of compliance on card payments



49% of survey respondents state that software and/or payment technology is the single largest cost associated with PCI DSS compliance.

The cost of training staff in card fraud prevention techniques and processes is said to be the largest cost in 36% of cases, with 15% stating that having dedicated compliance staff was the largest cost.

VIRTUAL CONTACT CENTERS AND THE CONNECTED ENTERPRISE

Although many contact centers still operate as a single, centralized site, there have been increasing commercial pressures and technical opportunities allowing businesses to look at alternative ways of working, such as using virtual contact centers, encouraging homeworking or bringing in knowledge workers from elsewhere in the enterprise.

The pandemic meant that remote working became vital to the business continuity plans of many contact center operations, and many decided that simply reverting to the centralized contact center model is no longer optimal and that hybrid or fully remote working brings greater flexibility and performance.

Apart from the pandemic-driven requirement for business continuity, the drivers for decentralization include:

- the presence of multiple contact centers – 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 centers 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 center 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. Some organizations prefer to offer US-based service at all times rather than offshore service outside core US hours
- remote working 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 a short time, rather than having them come in for a full shift
- the desire to increase the size of the contact center, which may not be possible in that location due to market saturation and a shrinking labor pool.

This section looks at alternatives to the 9-to-5, full-time, centralized ways of working, and investigates the number and type of contact centers that are using these alternatives.

VIRTUAL CONTACT CENTERS

The application of technological abilities to commercial issues created the virtual contact center which, although located in multiple sites, can still be run as a single logical entity.

The virtual contact center 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 center model has been driven by several factors. These include:

- For businesses involved in acquisitions or mergers, the number of contact centers they run have increased, particularly in the finance, insurance, telecoms and utilities sectors
- Rapid contact center 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 center. This is increasingly the case in 2nd- and 3rd line technical support, where skilled agents can be scarce and expensive to replace
- Some companies want to base operations in the area or country which they serve, or in which the company already has a non-contact center 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 center is now much more easy to realize at an affordable cost with reduced upfront investment required
- Companies have increasing needs to serve global customers, necessitating either contact centers 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 centers
- Smaller contact centers 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 centers as a virtual contact center allows economies of scale, 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 39: Virtual contact center commercial and operational benefits

Effect of virtual contact center	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 centers, but only 1 person in each contact center speaks a specific language, then it only becomes feasible to offer this as a routable skill once the contact centers are linked together to create a virtual language team)
More balanced work across contact center locations	In a stand-alone multiple contact center environment, there is a very real risk that agents in one contact center 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 centers, which can improve both customer and agent experience
Skills may be widely deployed and managed	Virtual contact centers can look at agent skills and competencies with a view to scheduling staff and routing calls accordingly. This allows specialized virtual teams to emerge
Forecast and schedule only once	Where many contact centers are treated as a single entity, work can be shared across sites as the contact centers 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 centers spanning distant time-zones, the opportunity exists to create a follow-the-sun contact center, 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	Virtualization 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 center operation open. Virtual contact center technology also allows businesses to reach out to new labor 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

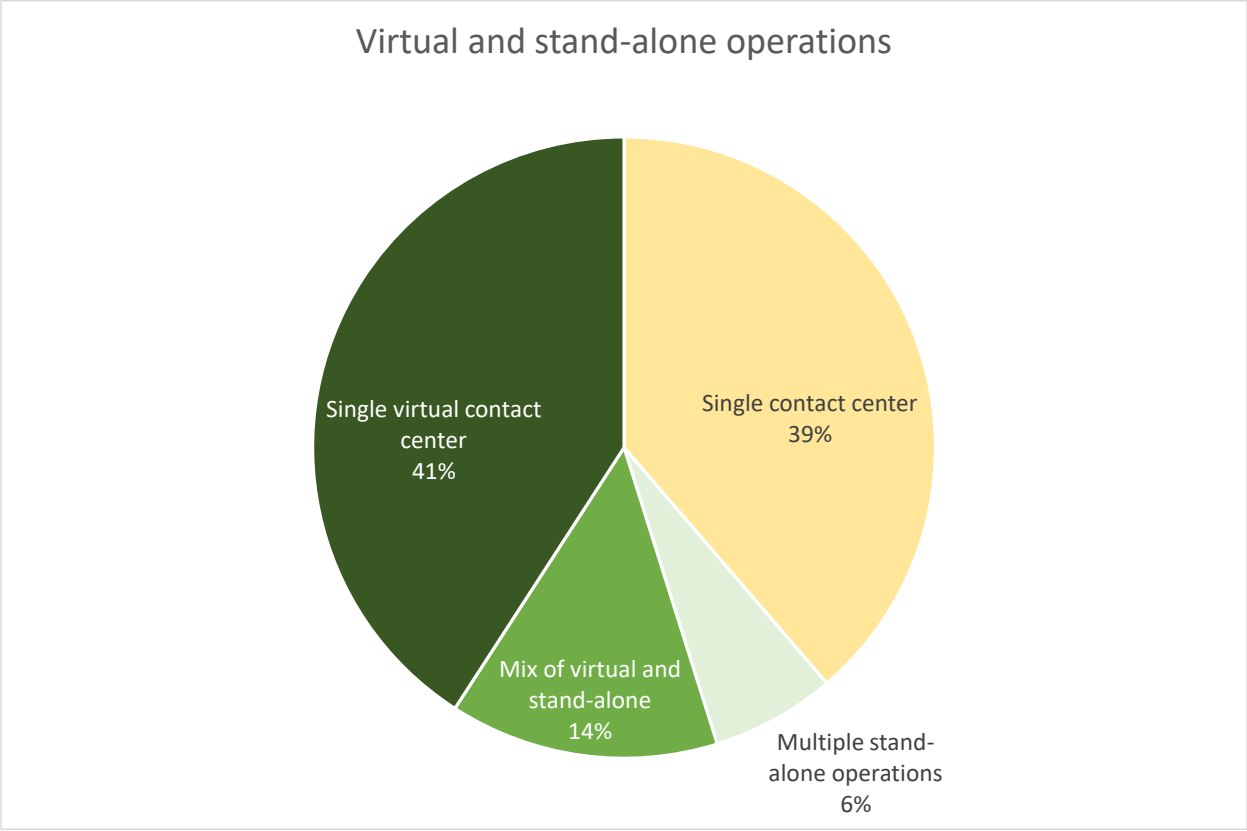
Linking contact centers together has often been a complex task, especially in circumstances where the business had multiple types of switch and other infrastructure, perhaps as a result of merger and acquisition history.

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.

Figure 40: Virtual and stand-alone operations



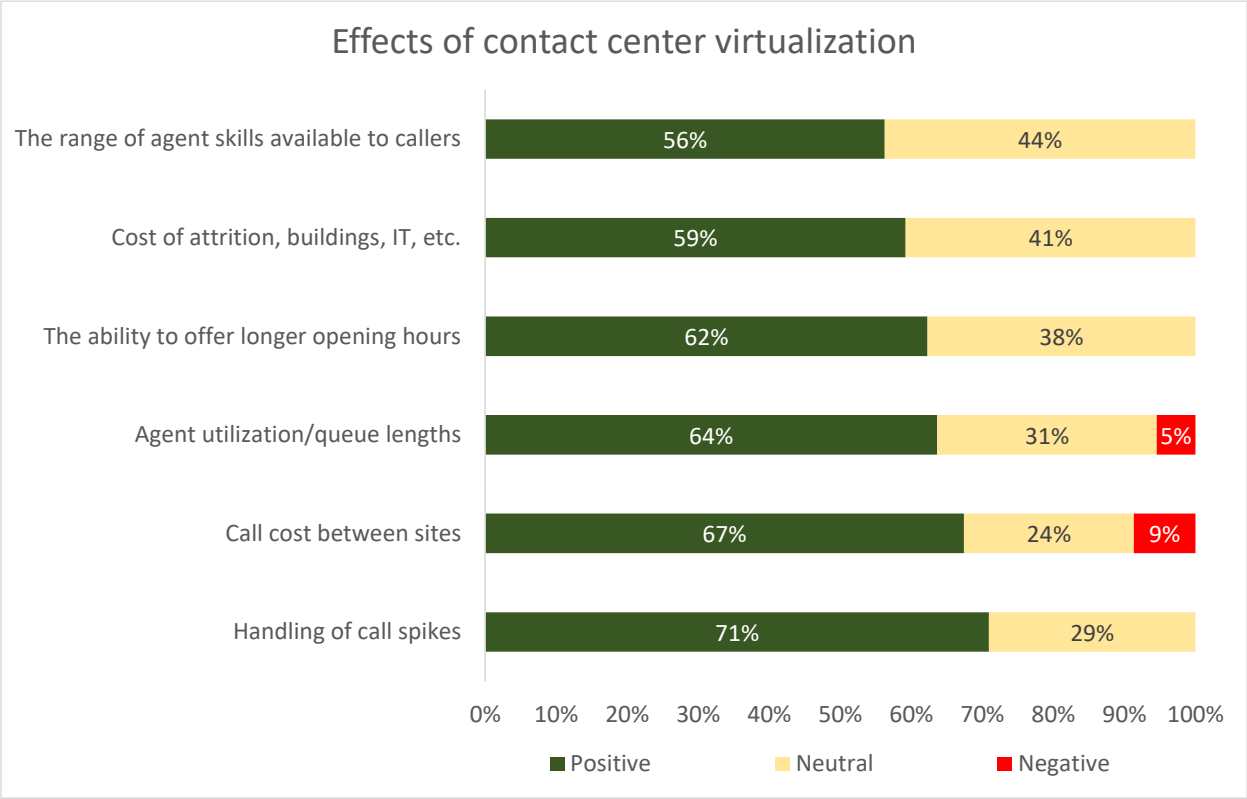
61% of this year's respondents' centers are part of a multiple-site operation, and as such are potentially part of a larger virtual contact center structure.

67% of multi-site contact centers act as part of a full virtual contact center operation, with a further 23% acting as a part of a partial virtual operation (e.g. in cases where only a few of the overall number of US operations are linked together).

Respondents with virtual contact centers 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 centers, and the reduced wait times were particularly mentioned, although all of the potential virtual contact center benefits mentioned were rated positively, showing a maturity and bedding-down of the technologies.

Figure 41: Effects of contact center virtualization



The issue of coping with call spikes has grown year-on-year, and virtual contact centers 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 utilization, as the situation of a set of agents sitting idle while others are under great pressure is less likely to happen.

THE ENTERPRISE AS THE CONTACT CENTER

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.

Cloud-based unified communication solutions can break down the boundaries between the contact center and the wider business, allowing every employee to act in the capacity of a contact center agent if in the best interests of the business.

From a contact center perspective, there are significant advantages to having non-contact center 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.

While 32% of contact centers have access to non-contact center staff, there is no apparent correlation across size bands.

Figure 42: Non-contact center staff handling substantial numbers of calls, by contact center size

Contact center size	% of contact centers using non-contact center staff
Small	33%
Medium	38%
Large	25%
Average	**32%**

Knowledge workers can be incorporated into the contact center on a part-time basis, without actually becoming a customer service agent.

Figure 43: Integration of non-contact center staff with systems and processes (only respondents using non-contact center staff)

Level of integration with contact center systems and processes	Non-contact center staff capability
Same access to customer information as a contact center agent	80%
Can be viewed in real-time as being available or unavailable	90%
Rota / schedule for on-call experts	43%

Used by 90% of the respondents who use non-contact center staff to handle calls, 'presence management' links workers from diverse back office departments into the contact center 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 center.

Presence can be seen as an extension of multi-channel contact routing by being integrated into software-based contact routing solutions.

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 center, thus ensuring the privacy of the others in that virtual team, although this is used by only 43% of these respondents.

80% of staff outside the contact center who answer customer queries have access to the same level of customer information as an agent within the contact center.

REMOTE & HYBRID WORKING

Up until very recently, the majority of US contact centers worked as a traditional, centralized model, with a small minority of agents working remotely at home on a permanent basis.

Faced with the challenges of continuing to run contact centers 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 centers 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 centers 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 center 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 labor pool without widespread pay increases should not be ignored.

The ContactBabel report, "The Inner Circle Guide to Remote & Hybrid Working Contact Center Solutions" looks in depth at the technology and working practices required to operate a successful remote working operation.

USE OF HOMEWORKING

The following table looks at the historical use of homeworking / remote working, and shows a very slight but steady increase up until 2020, after which the pandemic changed the face of contact center remote working, probably for good.

2024's survey shows only 13% of survey respondents stated that none of their agents are currently still working at home, even part-time.

Figure 44: Changes in use of homeworkers, 2007-2025

Year	% respondents using remote / hybrid agents	Mean % of agents that are remote / hybrid industry-wide
2007	22%	3%
2008	21%	4%
2009	36%	6%
2010	37%	11%
2011	42%	10%
Q1 2013	45%	10%
Q1 2014	43%	11%
Q2 2015	51%	14%
Q2 2016	49%	15%
Q2 2017	52%	15%
Q2 2018	47%	13%
Q3 2019	48%	13%
Q2 2020	92%	71%
2020	78%	66%
2021	83%	82%
2022	86%	79%
2023	85%	72%
2024	87%	62%
2025	88%	73%

27% of agents are now based entirely at the contact center, with 40% of agents have a hybrid working pattern, with 33% based remotely full-time.

Survey respondents were asked what their expectations of remote working are for 2026.

The proportion of agents working at home full-time is expected to be 38%, while 31% are expected to be hybrid workers and 31% permanently at a centralized contact center. 19% of survey respondents expect all of their staff to be homeworking full-time, and 24% expect all of their agents to be working in the contact center.

DRIVERS & INHIBITORS FOR HOMEWORKING

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 virtualization of multiple contact center 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 has been proven.

Figure 45: Most important benefits of homeworking, (respondents using homeworking now)

Benefit	Score from 10	% scoring 9 or 10
Staffing flexibility	8.0	70%
Disaster recovery / business continuity	7.9	65%
Reduce staff attrition	7.1	56%
Overflow / call spikes	6.6	42%
Incentives for staff	6.5	45%
Reduced equipment and building costs	5.6	25%
Seasonal demand	5.0	15%
Organizational environment goals	4.6	12%
Scarce skills	4.4	6%

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 organization. In such cases, the employee is happy to work the hours that suit them, and the organization 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 center opening hours to be longer.

It is also noticeable that some advertised salaries for fully remote workers are lower than are typically being paid in a similar centralized operation, as this allows employment from anywhere, including lower cost areas.

When considering the inhibitors to homeworking, concerns over security and fraud were stated by almost 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 center, 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 center 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 center 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 centralized 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.

MANAGING REMOTE WORKERS

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 centers have centralized 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 centralized contact center 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 managers 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 centralized contact center 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 centralized contact center 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 rumors: 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 centers 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 socializing.

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 behavioral models for other contact center 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 centralized environment.

REMOTE WORKING SECURITY

Remote working may create some new issues for security, and it is desirable to be able to replicate the existing centralized 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 center, 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 center 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 center 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 center'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 authorized user (this may be an additional requirement to those normally needed within the contact center, where other employees will be immediately aware of the presence of an unauthorized user)

- Regular on-site visits to the home environment are necessary to identify any other potential risks, where possible.

DIGITAL, CLOUD AND THE CUSTOMER OF THE FUTURE

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 Center Solutions.

THE CUSTOMER INTERACTION CUBE: UNDERSTANDING CUSTOMER REQUIREMENTS

There are two main factors that influence contact centers within any vertical market: the commercial activity within that sector, and customers' requirements and preferences for contacting organizations.

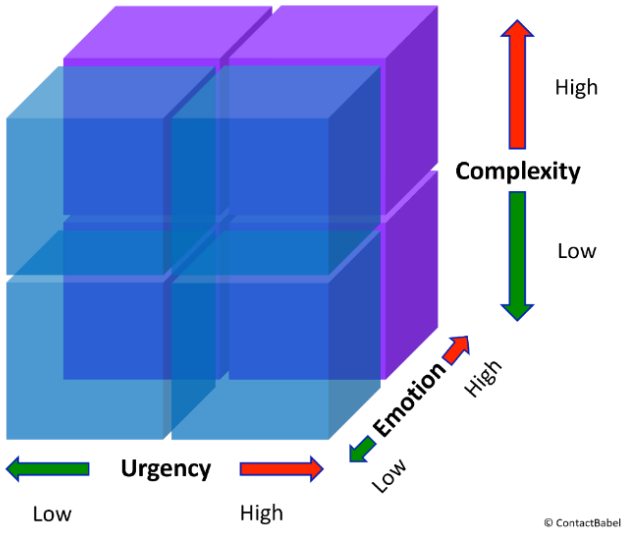
It is not only the nature of the specific vertical market that needs to be considered. The urgency, complexity and emotional importance of the interaction is at least as important: for a customer calling a bank, a simple balance request and an urgent call about the progress of a mortgage application are very different types of call, and should be treated as such.

The Customer Interaction Cube (below) is a structure developed to categorize 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 analyze 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 only suggestions, and will differ between customer types, businesses and vertical markets, but may offer a starting framework for readers to build their own scenarios.

Figure 46: 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	Phone / email
Low	High	Low	Top up mobile credit; check payment has been made	Self-service	Web chat / phone
Low	High	High	How to make an insurance claim; understand mobile roaming charges before imminent trip abroad	Web chat	Phone / web self-service
High	Low	Low	Book train tickets for important engagement	Self-service	Phone
High	Low	High	Complaint about incorrect billing	Phone	Email / web chat
High	High	Low	Simple question about imminent purchase (e.g. delivery, personalization, return policy)	Web chat	Phone
High	High	High	Household emergency advice; 911	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 US Customer Experience 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 http://www.contactbabel.com.

McKinsey talks about the 'moment of truth' in customer interactions[8], 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. Recognizing 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.

AI-enabled 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 recognizing 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.

[8] 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 center.

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 center 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 recognize 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 center 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 center), 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.

As importantly, the customer would feel that the airline is looking out for them, creating the conditions for long-term loyalty from the negative experience of missing a plane.

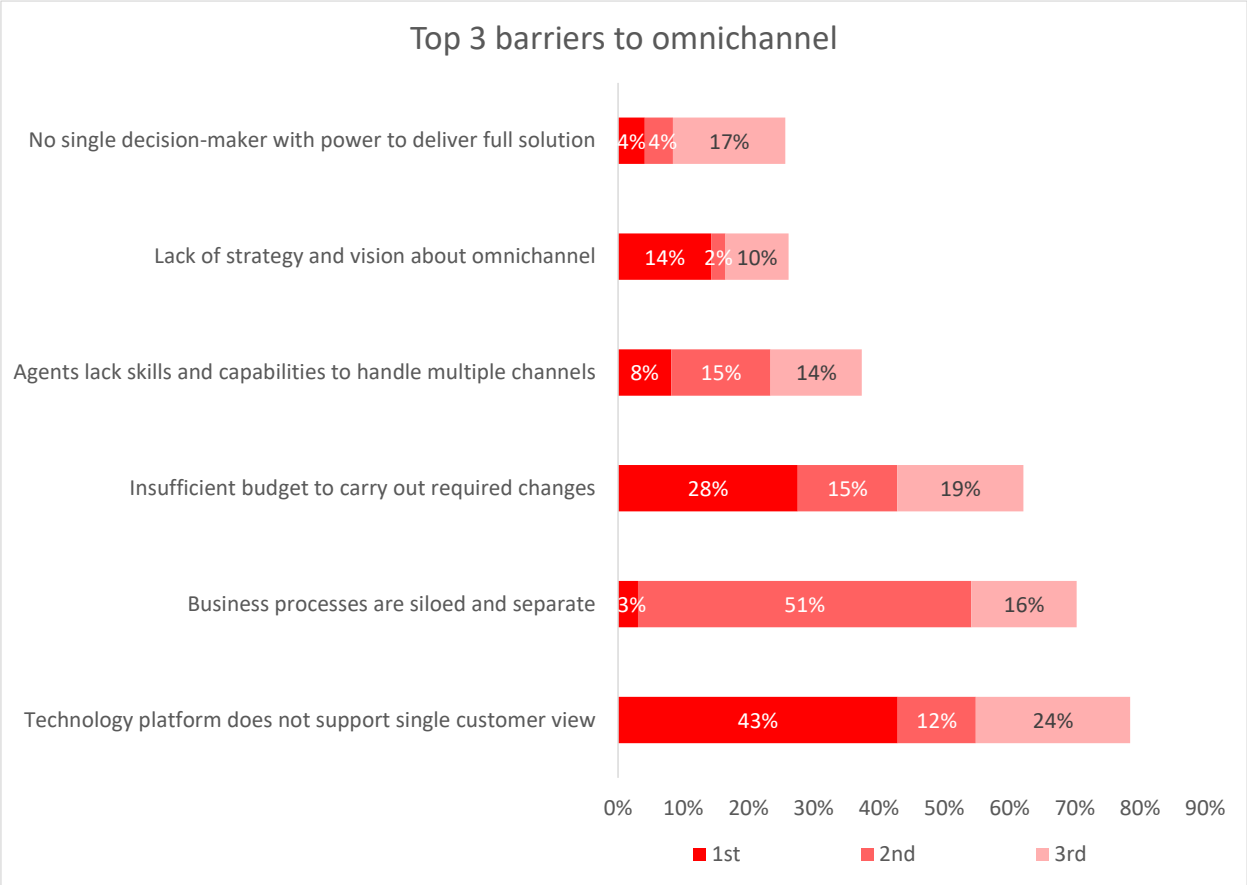
BARRIERS TO OMNICHANNEL

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.

Apart from perennial issue around budgets, survey respondents believe that there are two main barriers to moving from a siloed multichannel environment to true omnichannel:

- the technology platform does not support a single view of the customer
- business processes are siloed and separate.

Figure 47: Top 3 barriers to omnichannel



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.

APPROACHING THE OMNICHANNEL CHALLENGE

- 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, behaviors 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 organization, 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 organization. Create a cross-functional organizational 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 center 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 center 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

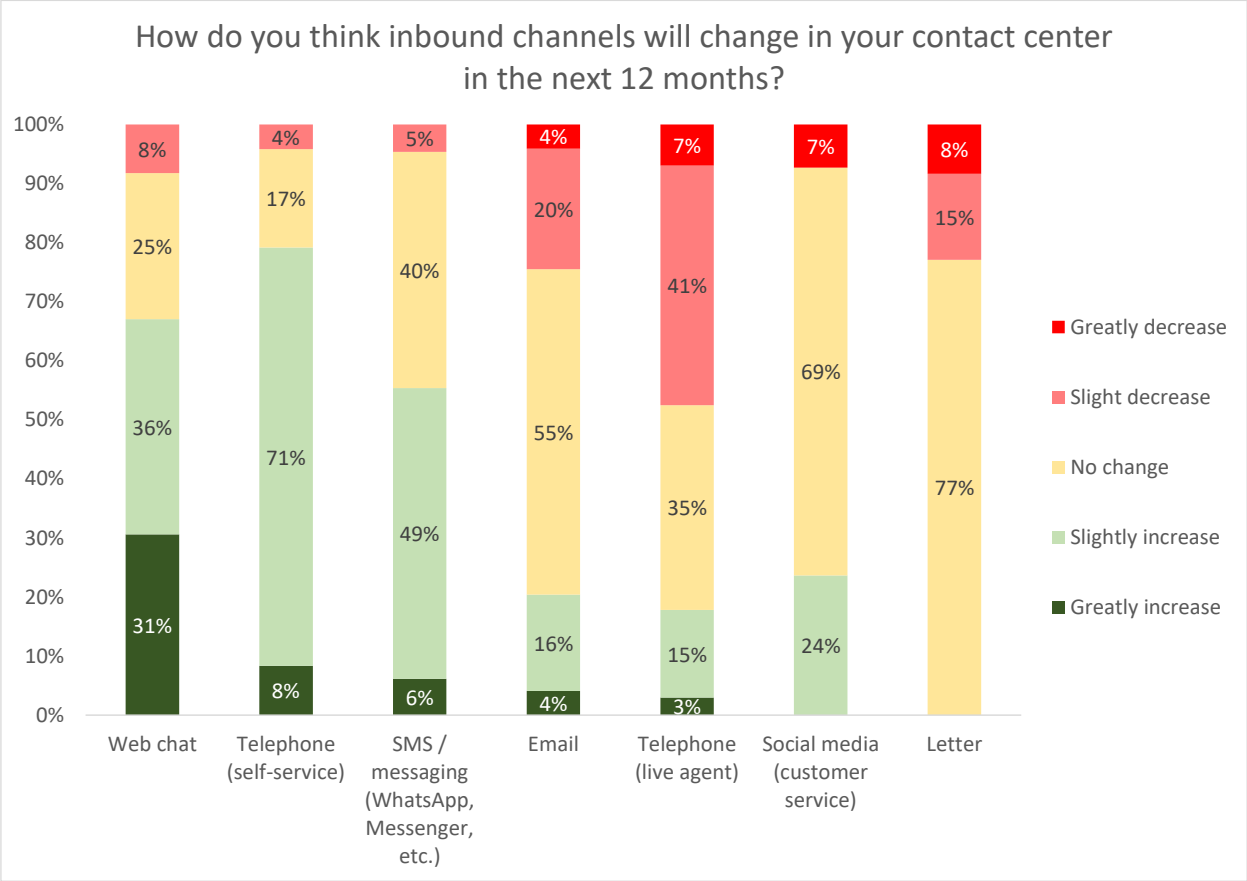
- Accept that omnichannel customer contact is an ongoing process, to be revisited and continually improved as the nature of business, customer preferences and new channels further evolve.

CHANGING CHANNELS

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.

Respondents were asked how each inbound channel will change, so as to judge if any alteration in the use of channels is due to real changes at a contact center-level, or is more of a statistical blip caused by a different set of respondents providing data each year.

Figure 48: How do you think inbound channels will change in your contact center in the next 12 months?



For the first year, a much greater proportion of respondents believed the live telephony channel volumes would drop (48%) than rise (18%), unlike many previous years where growth was expected.

Strong growth is once again expected in web chat interactions, with SMS / messaging and social media also predicted growth. However, after many years of expected growth, respondents expect email volumes to stay fairly flat.

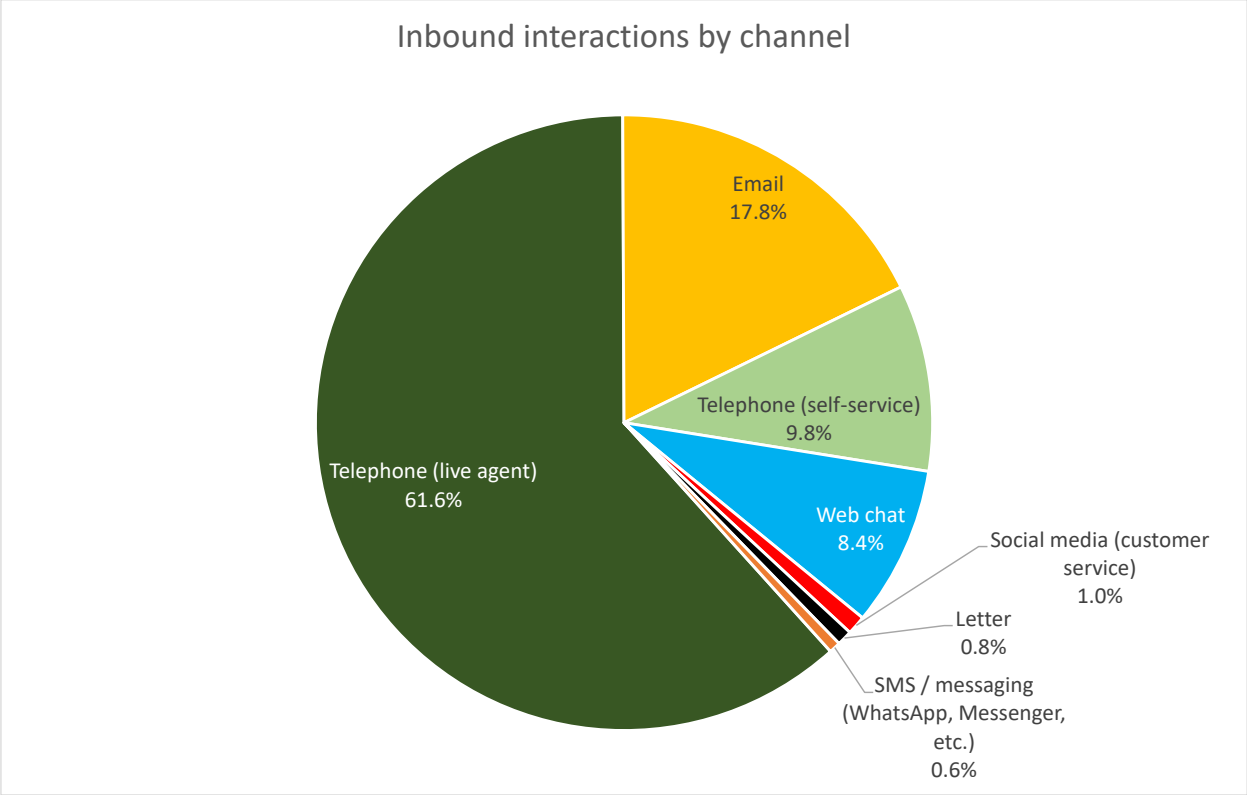
Telephony self-service is expected to grow once again this year, with its twin benefits of customer convenience and low cost still very much relevant. New approaches, such as AI-enabled interactive voice assistants, could encourage further use of self-service.

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 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.

Looking at the reality of omnichannel activity, the US contact center industry has now strongly embraced the various forms of non-voice customer communication.

Figure 49: Inbound interactions by channel



The proportion of live inbound interactions by telephone has once again declined very slightly to 61.6%: the long-term gentle downward trend appears to have stabilized to some extent in recent years.

The proportion of telephony self-service interactions rose again (7.4% in 2023), and we would expect voice self-service via voicebots to become an increasingly important part of the customer communication mix.

The email channel maintains its place as the second most important channel once again, being steady at around 18% of inbound interactions.

Web chat continues to grow without threatening email as the most important digital channel, and sees another small increase from 7.9% in 2024 to 8.4% now. Growth is expected by businesses and the impact of AI-enabled chatbots will begin to be felt. Social media's figure has returned to being around 1% after a brief period being somewhat higher.

SMS / messaging and letters remain very minor channels for most organizations studied.

ARE DIGITAL CHANNELS ACTUALLY CHEAPER?

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.

Figure 50: Cost per inbound interaction (phone, social media, email & web chat)

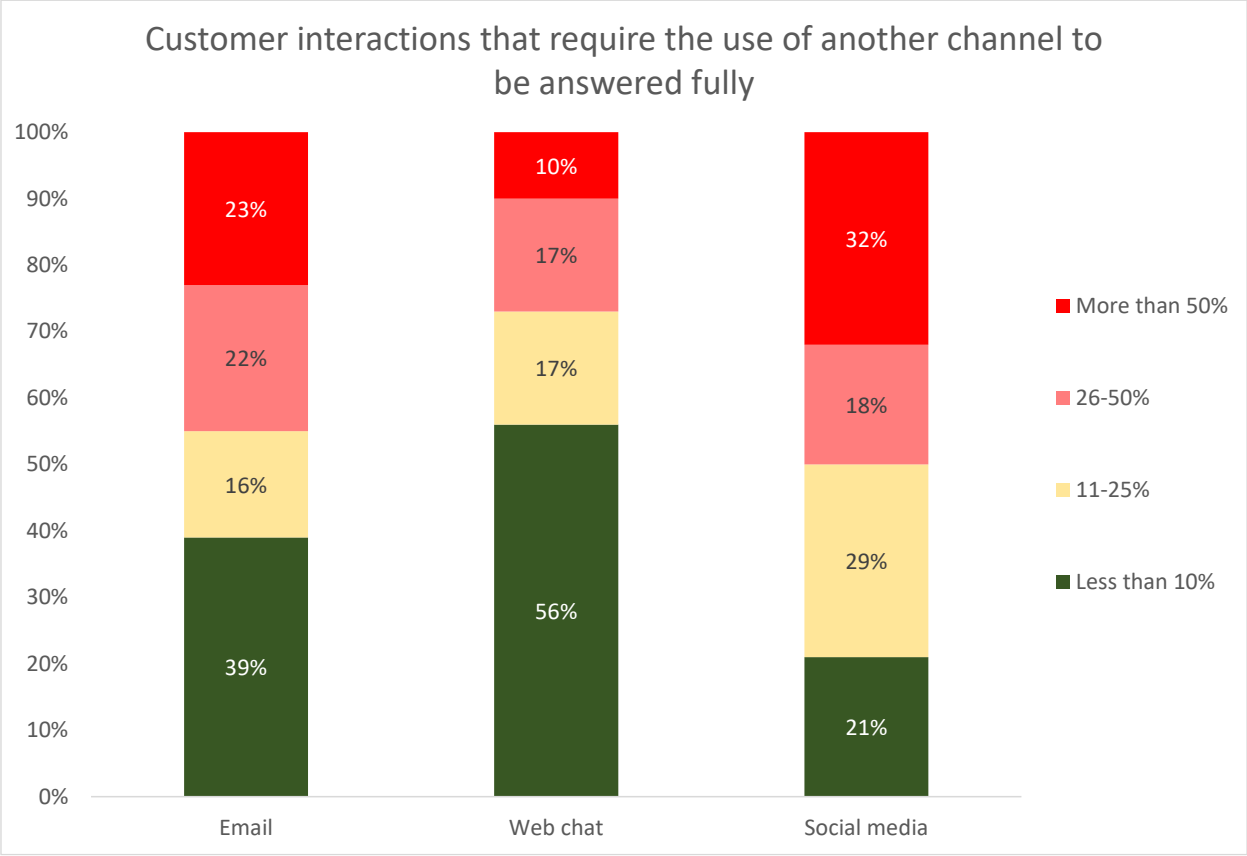
Channel	Mean	1st quartile	Median	3rd quartile
Phone	$7.20	$8.00	$7.35	$4.00
Email	$4.91	$7.50	$5.00	$2.00
Web chat	$5.84	$7.75	$5.00	$3.20
Social media	$5.50	$8.00	$5.00	$3.00

Looking at figures from hundreds of US contact centers, it seems that digital channels are a little cheaper than live voice, but that the differential is not yet what might be expected. One of the main reasons for this is that the levels of automation being used in many businesses still relatively low.

Having an integrated omnichannel solution is becoming more important: 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 has grown for many years.

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 quite a likely requirement for many customers and interactions.

Figure 51: Customer interactions that require the use of another channel to be answered fully



56% of respondents state that more than 90% of web chats can be handled over that specific channel, with a figure of 39% for email, but only 21% for social media.

In fact, 32% of survey respondents state that more than half of the social media requests they receive require 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.

CHANNEL FOCUS: EMAIL

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 organizations 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 center, 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 realize 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 and attachments.

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 as an asynchronous channel, there is no queue time at all – the customer writes the email and presses 'Send' immediately – a 'fire and forget' interaction.

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.

Taking longer than one day to answer an email runs the risk of the customer losing patience, and going elsewhere or phoning the contact center, placing a greater cost burden on the business than if they had just called in the first place.

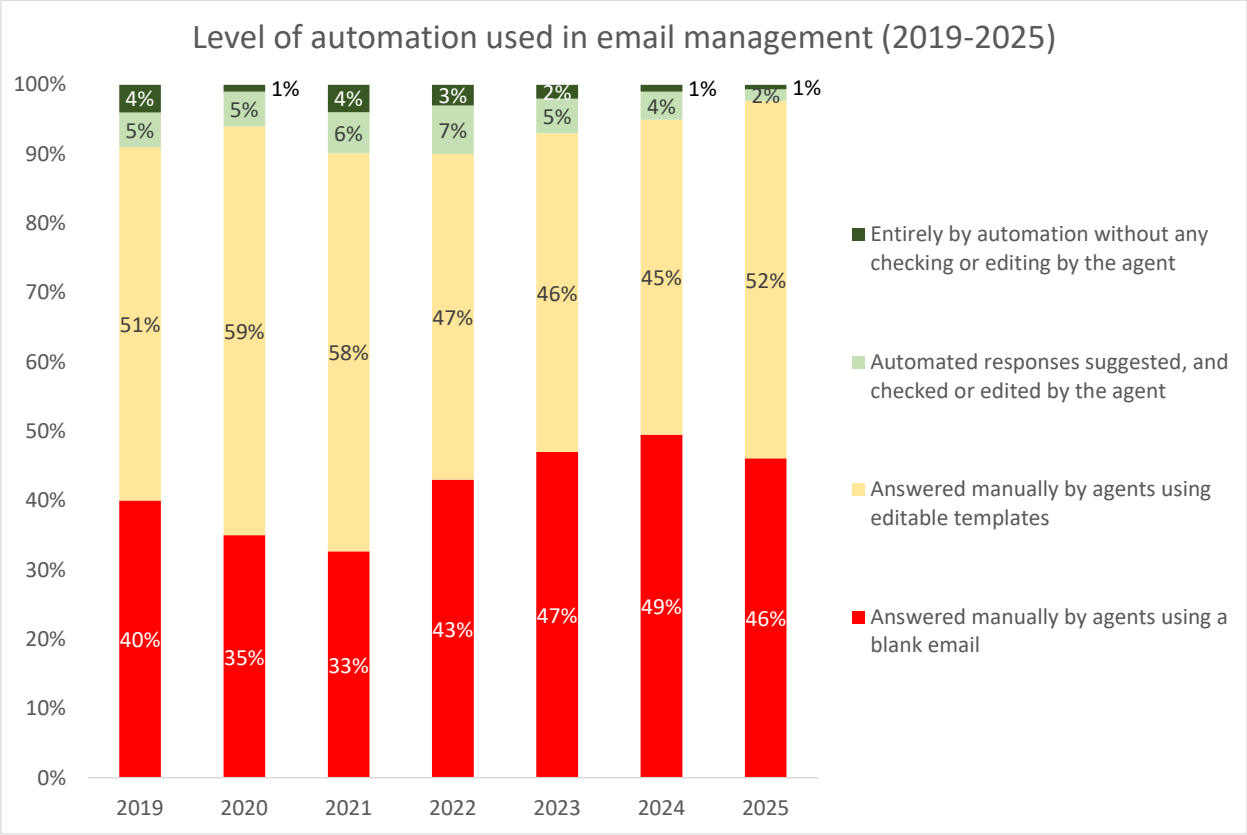
24% of emails are reported to be answered in less than 1 hour, with 60% taking between 1 hour and 1 day. 12% take between 1 and 5 days, with 4% requiring more than 5 days.

Before 2023, the most popular method of answering inbound email was to use agents who start with templated, 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. However, 2023 and 2024 found that the most popular method of answering emails was to start with a blank email, and let agents complete it themselves. This 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. 2025 has reverted to the template mode.

Only 3% of emails have automated responses, (these statistics do not include simple automated acknowledgements), and of those, the majority have to be checked by agents before sending.

As email is the largest digital channel, the opportunity to automate through using AI is considerable, and also largely ignored at the moment, but we would expect this to change.

Figure 52: Level of automation used in email management (2019-2025)



CHANNEL FOCUS: SOCIAL MEDIA FOR CUSTOMER SERVICE

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/X account to communicate with it, even if the company originally had a social media presence only to disseminate information.

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.

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.

Response times for handling a social media customer service request are somewhere between a phone call / web chat on the one hand (e.g. a maximum of a few minutes), and an email on the other (e.g. next working day).

29% of respondents answer within the hour, with 43% saying they answer the same day, and 28% taking longer than a day.

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/X 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 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/X feed or Facebook page up-to-date, an organization 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 Messenger), please see the “Mobile & Video Customer Contact” chapter.

WEB CHAT, CHATBOTS & 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.

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 organizations to keep up or even exceed the current benchmark performance.

For many types of interaction, customers will visit a website first. If they cannot find what they're looking for or if any self-service experience offered 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.

Websites can offer various service options to customers, ranging from the most basic search and static FAQ functionality, to AI-enabled chatbot agents and dynamic FAQs.

THE USE OF WEB CHAT

Web chat offers 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-to-business interactions.

One of the original key features of web chat was to offer an organization 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 stated that an agent can deal with 4 or more web chat sessions at the same time, but whether this was ever 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 templatized answers and can escalate queries if required, but the cost of handling a web chat manually is not vastly different from that of a phone call.

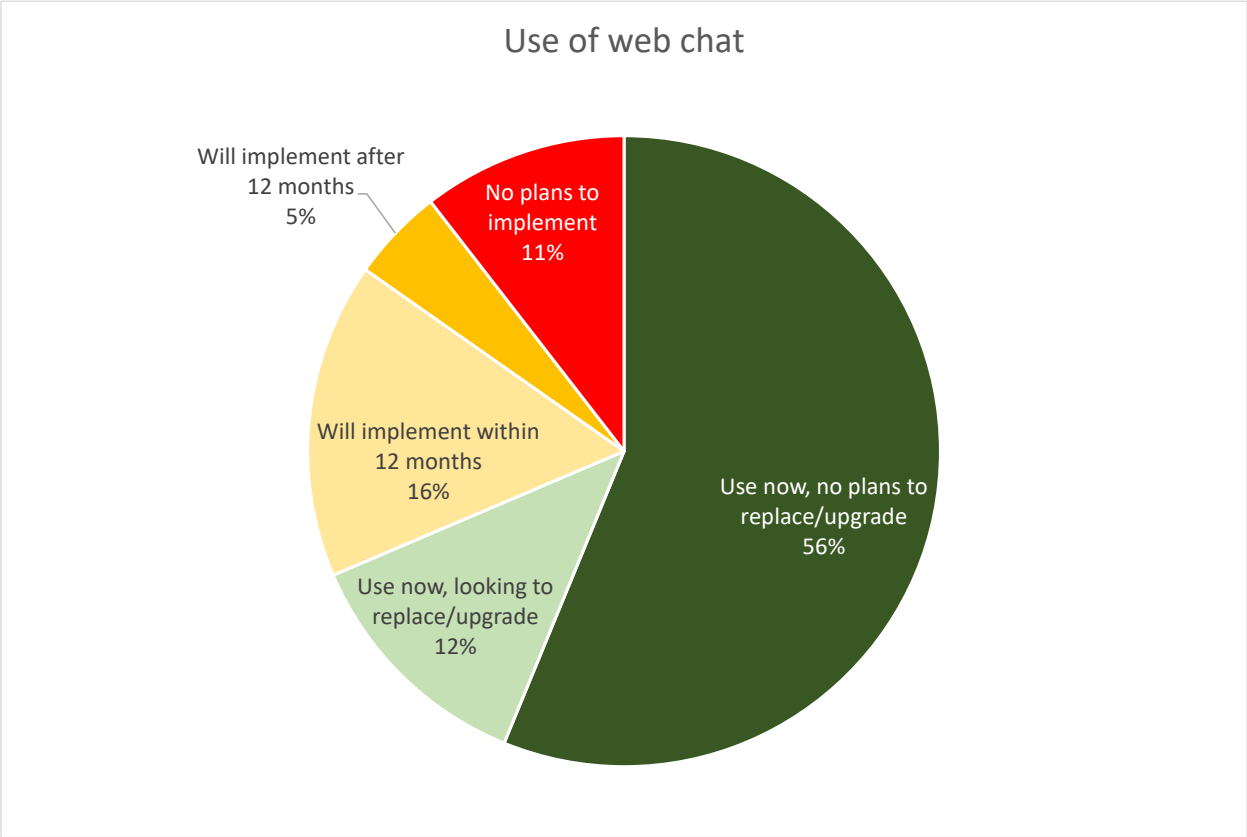
Web chat can be used as a 'point of crisis' channel, for example, to convert an online shopping basket into a sale by providing timely service, or if a browser is paused on a webpage too long, perhaps as they can't find what they are looking for.

In such cases, there are two main benefits to the business in providing web chat: revenue maximization, 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 as they do not have to change channel.

Recent years have seen great strides being made in the use of 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.

Figure 53: Use of web chat



While web chat is growing in popularity, the proportion of interactions coming through this channel (8.4%) is much lower than telephony (71.4% for live and self-service) and even email (17.8%).

HOW IS CHAT HANDLED?

Web chat has experienced significant growth and although volumes on average are still less than 10% of all customer/business interactions, in vertical markets such as retail they are considerably higher.

User uptake of web chat will continue: it provides a quick response, and with multiple concurrent chat sessions per agent, can be a lower cost channel than voice for the business to support. This cost differential is getting particularly noticeable as there has been a significant movement towards the use of chatbots.

The mean average cost of a web chat is stated once again this year to be less than a phone call ($7.20).

While the cost of web chat is dropping – at least in relative terms compared to other channels – there is still considerable room for increasing efficiencies and lowering costs.

Figure 54: Estimated cost per web chat

	Web chat cost
Mean	$5.84
1st quartile	$7.75
Median	$5.00
3rd quartile	$3.20

AI in the customer contact world is perhaps currently best known for chatbots. AI tools such as natural language processing (NLP), machine learning and analytics run automated tasks and simulate conversation with the customers.

Chatbots – as the name suggests – are found in the web chat channel, but the functionality can be used in any other digital channel, such as social media, email and especially voice self-service in the form of voicebots.

However, chatbots do not always use conversational or generative AI, and rule-based basic chat applications can be used in circumstances where there are a significant proportion of interactions about similar issues, where the chatbot can be tasked to answer these and pass more complex issues to a human agent.

Even without AI, rule-based chatbots can have a positive impact on customer care without requiring large investments or long implementation timescales. Chatbots using conversational AI use natural language understanding (NLU) and can ask questions to understand customer intent and improve the accuracy of the output, and may also use machine learning and analytics to predict and improve future outcomes.

Chatbots encourage the visitor to engage using natural language rather than keywords, parsing, analyzing and searching for the answer which is deemed to be most suitable, returning this to the customer instantly.

Many 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 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.

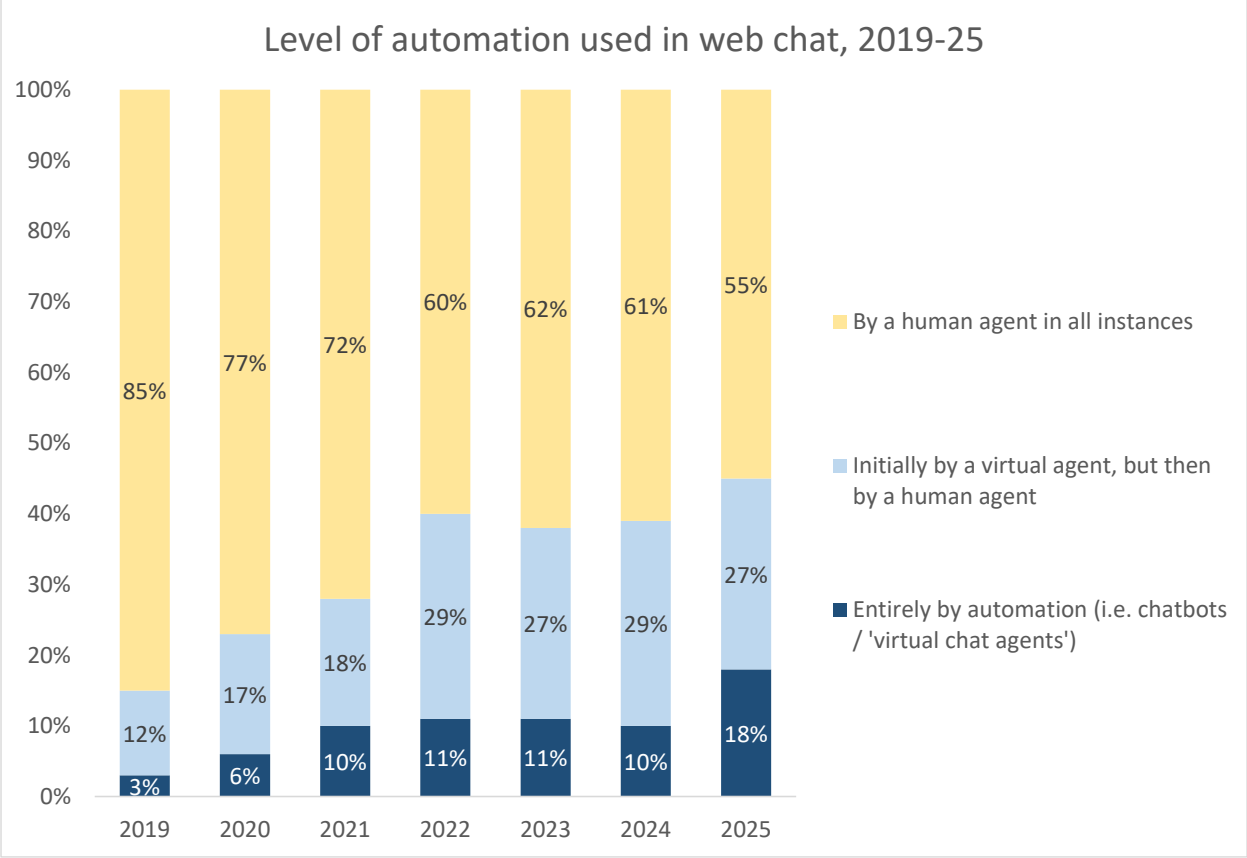
Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Whereas only 15% of web chats had any automation involved in 2019, this has grown to 45% in 2025.

Initially, this was mainly as a result of initial handling by automated chatbots which may then hand off to live agents where appropriate, although fully-automated AI-enabled web chat has increased significantly as well, especially in the past 12 months.

While 2022-24 saw little increase in the level of automation – it may well be that most of the chatbots being used then were static rules-based applications – the 2025 data suggests that US contact centers are moving onto the next level as more sophisticated AI-enabled applications are being used.

Figure 55: Level of automation used in web chat, 2019-25



Comparing the experience of web chats with telephone calls, the survey finds that 70% of web chats take longer than 5 minutes to complete fully, compared to 68% of phone calls.

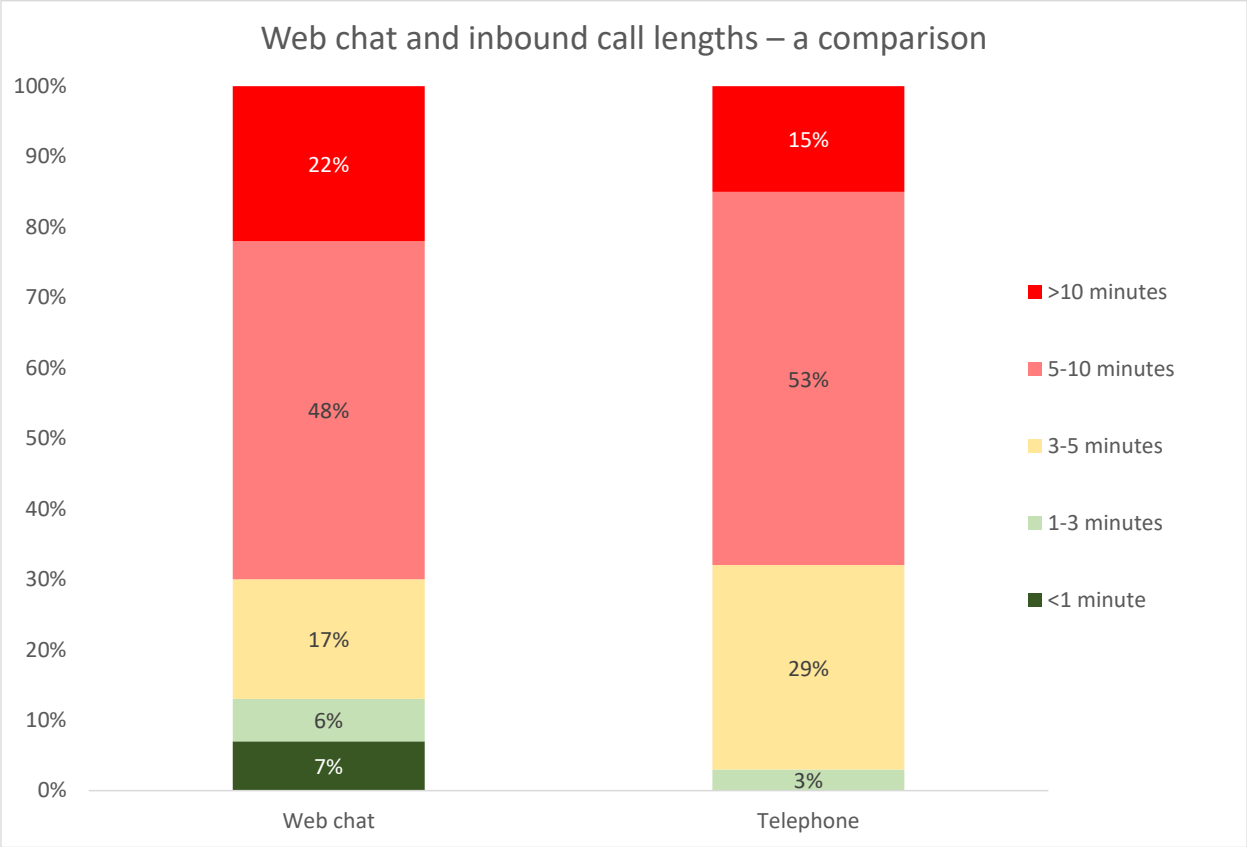
While agent multi-tasking and the time taken to type differs from the experience of handling a phone call, web chat has often been a shorter experience for many customers.

This may well be because the subjects of web chats have often been simpler than telephony, which is increasingly being used for more complex and multiple queries, as well as the increasing use of chat automation.

Despite the increase in automation seen this year, only 13% of web chats take less than 3 minutes (compared to 25% last year), and it is becoming noticeable that web chat does by no means guarantee a quick interaction.

While it may be that web chats are becoming more complex, it is also the case that most companies ask their agents to run multiple concurrent web chats: agents may be becoming too stretched to handle even simple web chats in a reasonable timescale, meaning that customer experience is suffering.

Figure 56: Web chat and inbound call lengths – a comparison

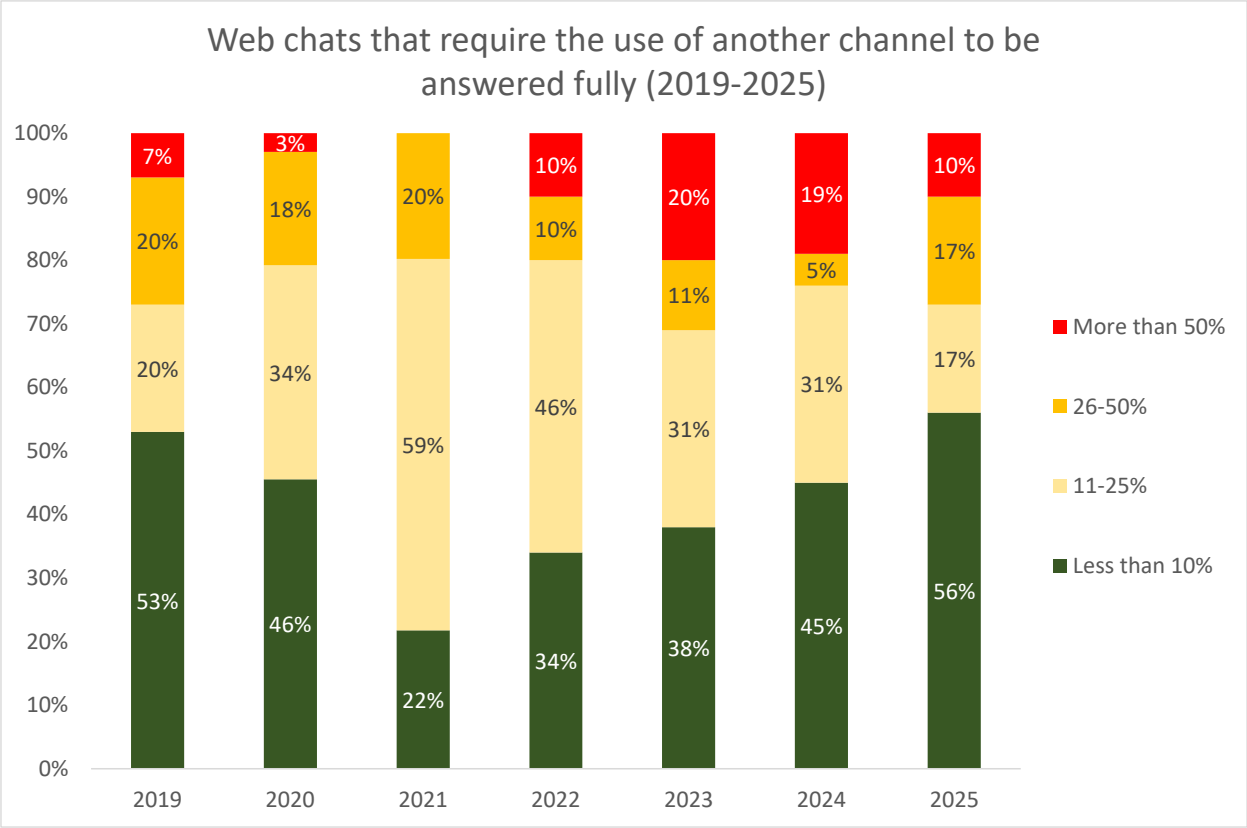


56% of respondents report that fewer than 10% of web chats require another channel to answer the query fully, with only 10% stating that more than half of web chats require movement to another channel.

On average, around 19% of web chats require another channel – usually telephony – to resolve satisfactorily.

This reverses a pattern seen in past years where it appeared that web chats were being used for simpler interaction types, but this may no longer be the case, as perhaps evidenced by the web chat length also increasing.

Figure 57: Web chats that require the use of another channel to be answered fully (2019-2025)



More information about the use of chatbots can be found in "The Inner Circle Guide to Chatbots, Voicebots and Conversational AI."

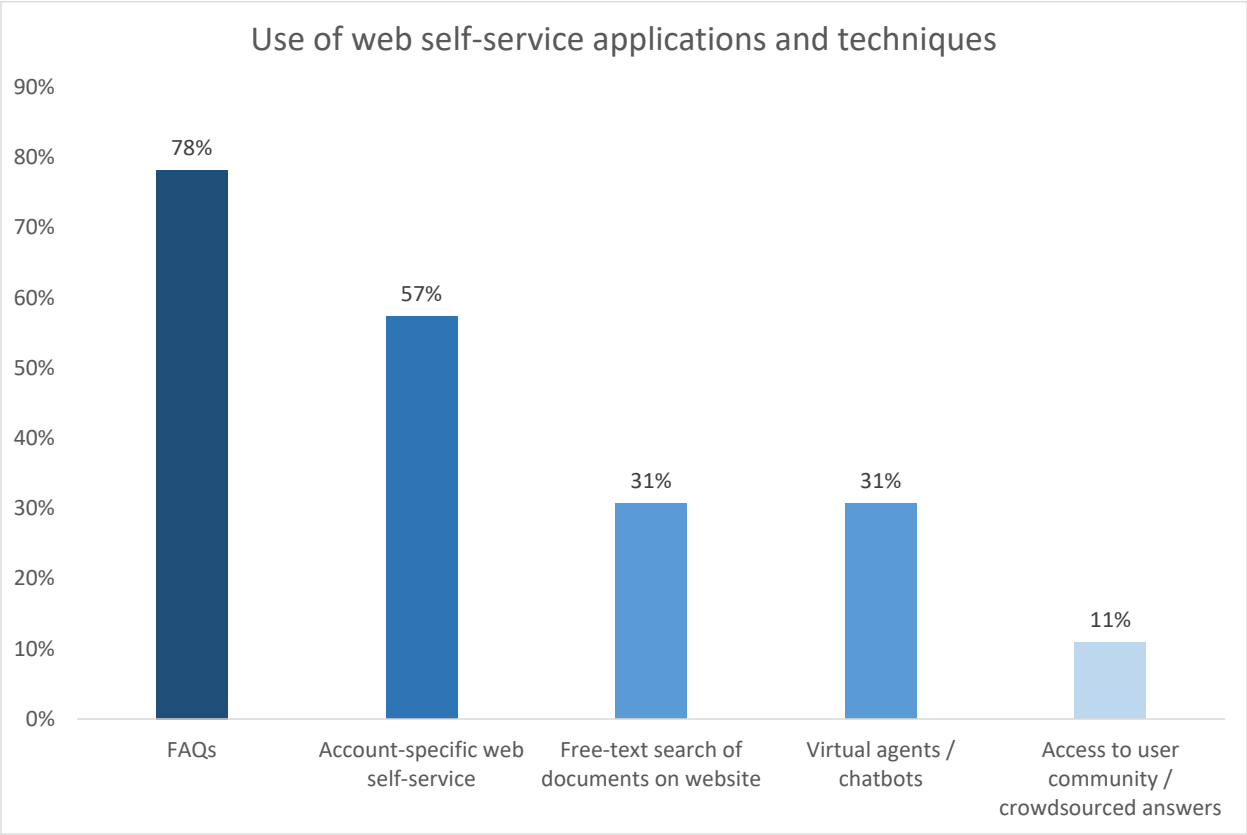
While chatbots are an increasingly important element to web self-service, they are not the only application helping customers to help themselves.

WEB SELF-SERVICE

Many customers 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.

If the customer is tied into an existing business, this will result in a higher cost of service and decreased customer satisfaction. If the web visitor is only a potential customer, a failure in the web self-service process 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.

Figure 58: Use of web self-service applications and techniques



By far the most prevalent form of web self-service is that of the FAQ (frequently-asked question), which is used by 78% of respondents.

Free text search of the document library is much less well supported, at 31%. Access to crowdsourced information is only 11%.

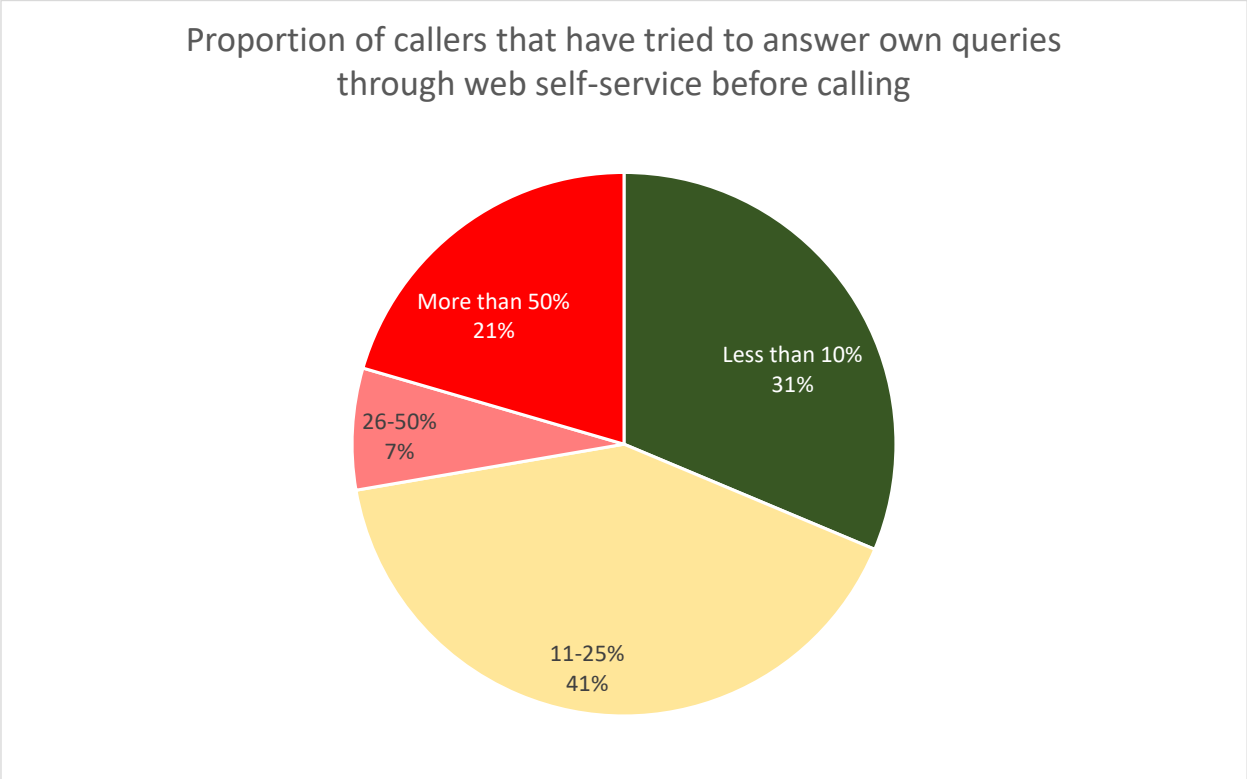
Virtual agents / chatbots are used by 31% of respondents and 57% of respondents provide customers with account-specific self-service, allowing them to access order information, change personal details, etc. to deflect unnecessary calls.

ESCALATING FROM WEB SELF-SERVICE TO LIVE TELEPHONY

31% of survey respondents state that fewer than 10% of their customers have tried to resolve issues online before calling the contact center, and a slightly lower proportion 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.

We would estimate around 25% of callers have tried to answer their own questions through web self-service before calling the contact center.

Figure 59: 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.

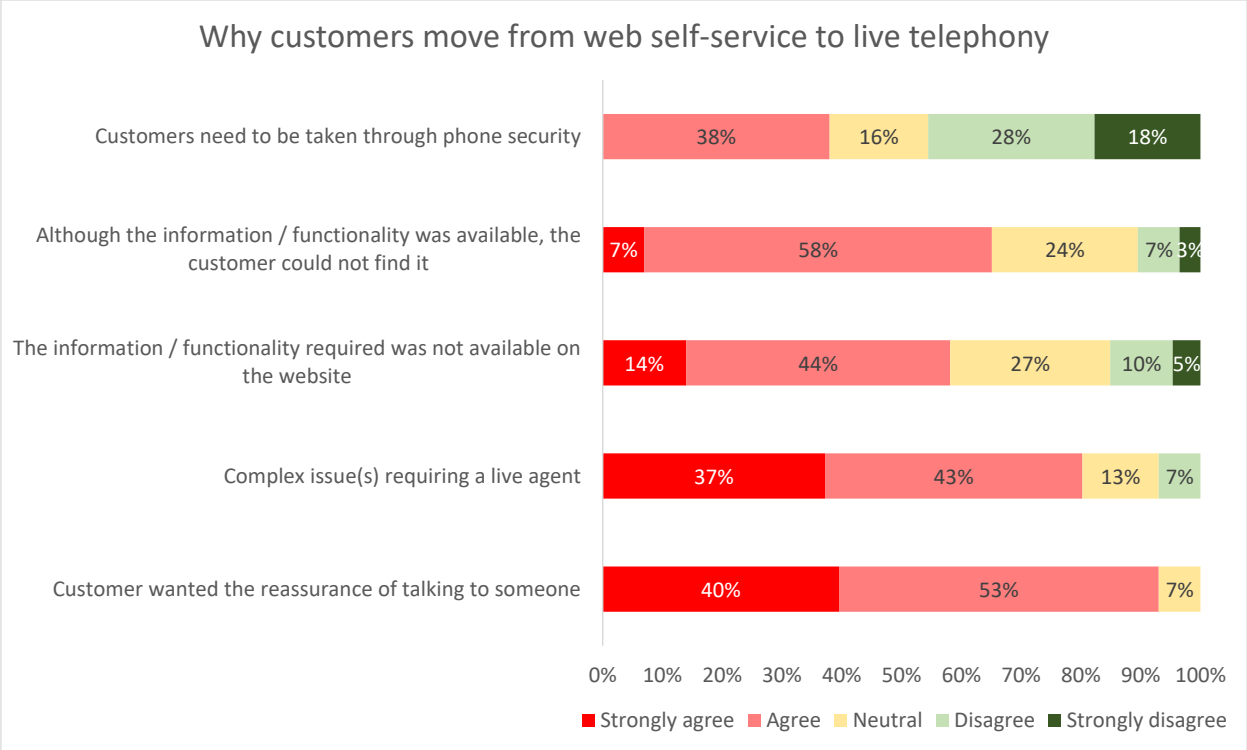
For some of these interactions, web chat would be suitable although it should be noted that customer authentication on the telephone is more rigorous than through web chat. Having said that, relatively few respondents believed that website security authentication was a major issue causing unnecessary inbound calls.

93% of survey respondents also felt that customers wanted the reassurance that a live agent brings to a conversation.

56% stated that the functionality that the customer calling in required was not available online, but interestingly, 65% 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.

Figure 60: Why customers move from web self-service to live telephony



THE MOBILE CUSTOMER

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 organization, 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. The switch-off of PSTN has hastened the movement from landlines to mobile telephony.

On average, 75% of customers use their mobile phone to call the contact center.

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 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-optimized 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 minimizing 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 5G and cheaper data become 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.

SMARTPHONE APPS

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 center 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 flavors 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 a cost of many tens of thousands of dollars (per platform) is very feasible. The cost of developing a mobile website is less, and only needs to be done once.

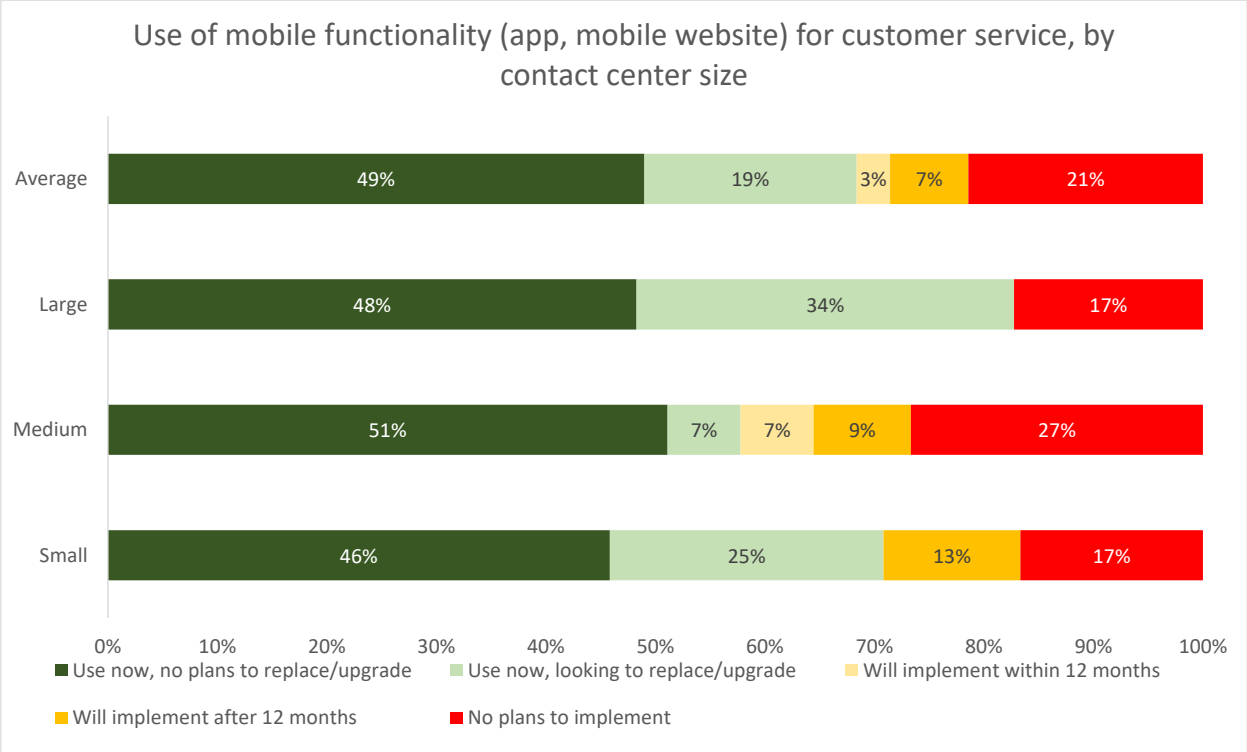
Whether an app is suitable for a company depends on their budget, and their customer base. It may be that the superior branding associated with apps is seen as being well worth the expense, even before factors like increased sales conversion rates and reduced live contact costs are taken into account.

USE OF MOBILE SERVICE FUNCTIONALITY

68% of this year's survey respondents stated that they offer mobile functionality for customer service, with a further 10% having plans to do so.

Respondents from large operations are a little more likely than small and medium contact centers to be using mobile customer contact functionality already.

Figure 61: Use of mobile functionality (app, mobile website) for customer service, by contact center size



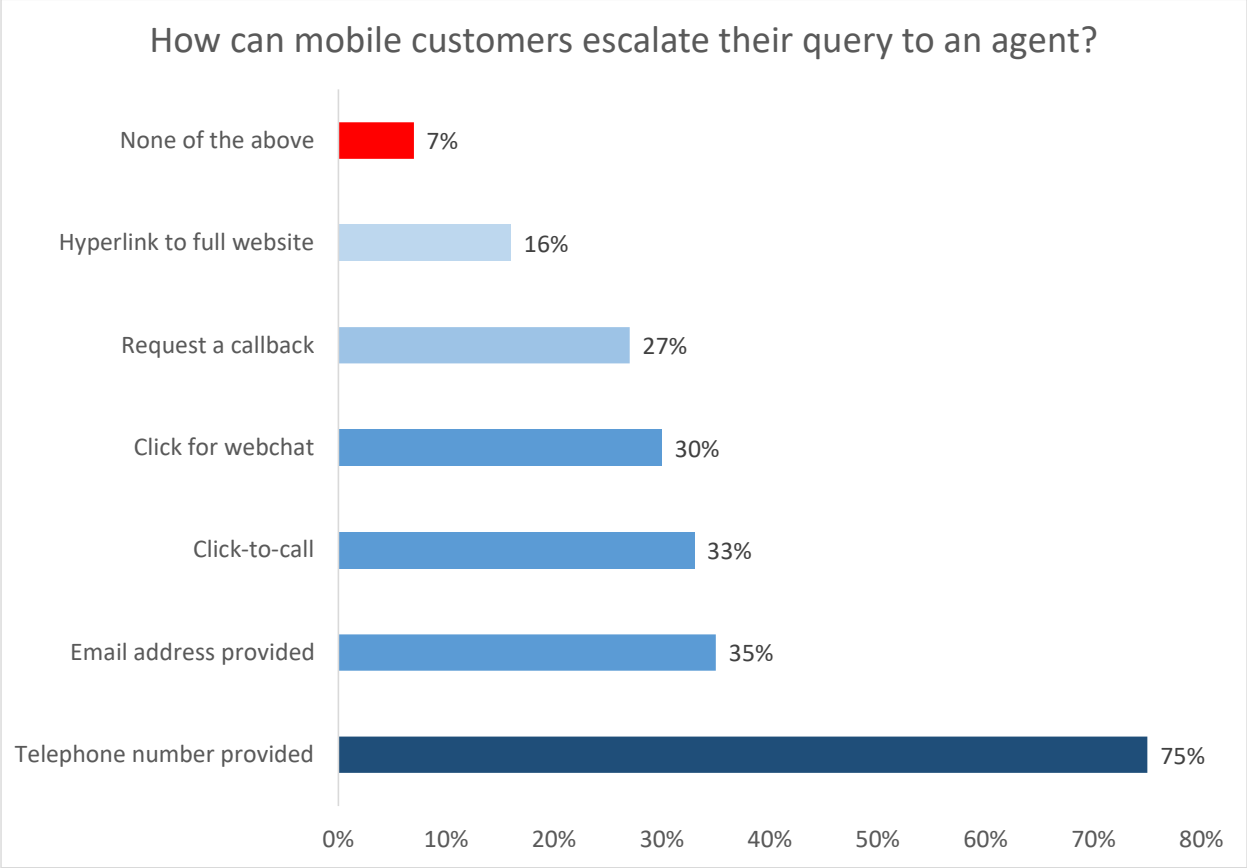
CROSS-CHANNEL ESCALATION

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 often 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 live 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 62: How can mobile customers escalate their query to an agent?



The easiest way to support cross-channel contact is to offer a telephone number on the mobile website or inside the app, and 75% of respondents do so, with 33% 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.

27% 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.

30% 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.

CONTEXTUAL DATA: THE GREAT MOBILE OPPORTUNITY

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 center.
- 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 center 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 center 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 personalized 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 organization 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.

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).

VIDEO

Video agents can be seen as a step towards more personalized, high-quality customer contact. 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

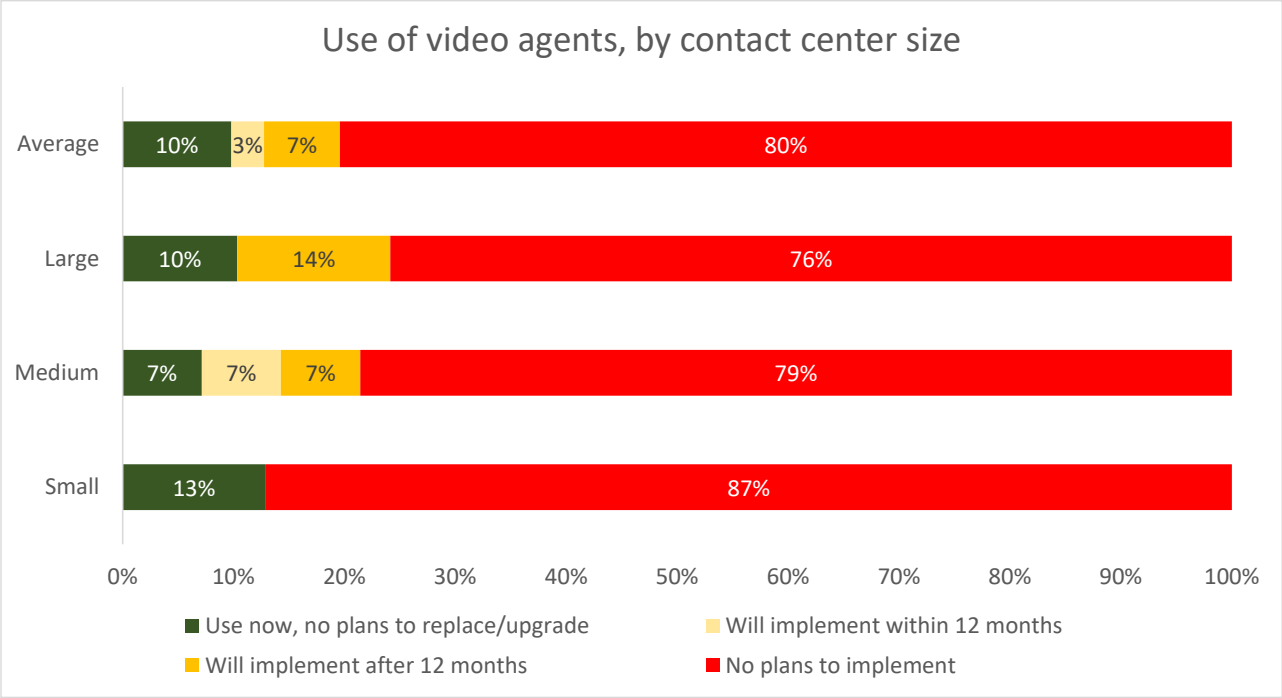
- Eye contact is critical for establishing trust and 60% of the communication process is actually visual. For sensitive purchases such as financial services, being able to see the financial advisor can help to establish trust and put the customer at ease. The entire contact may be captured and distributed for further reference
- Verbal abuse, a major problem for some agents, may decrease in a virtual face-to-face setting, however, agents may feel privacy is decreased if they are on camera, especially one-way, and the incidence of disturbing crank calls may increase
- The contact center environment will need to be altered to impress the customer, and voice agents will need to be trained in visual communication.

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.

The use of video agents is still very much a niche application regardless of contact center size.

Figure 63: Use of video agents, by contact center size



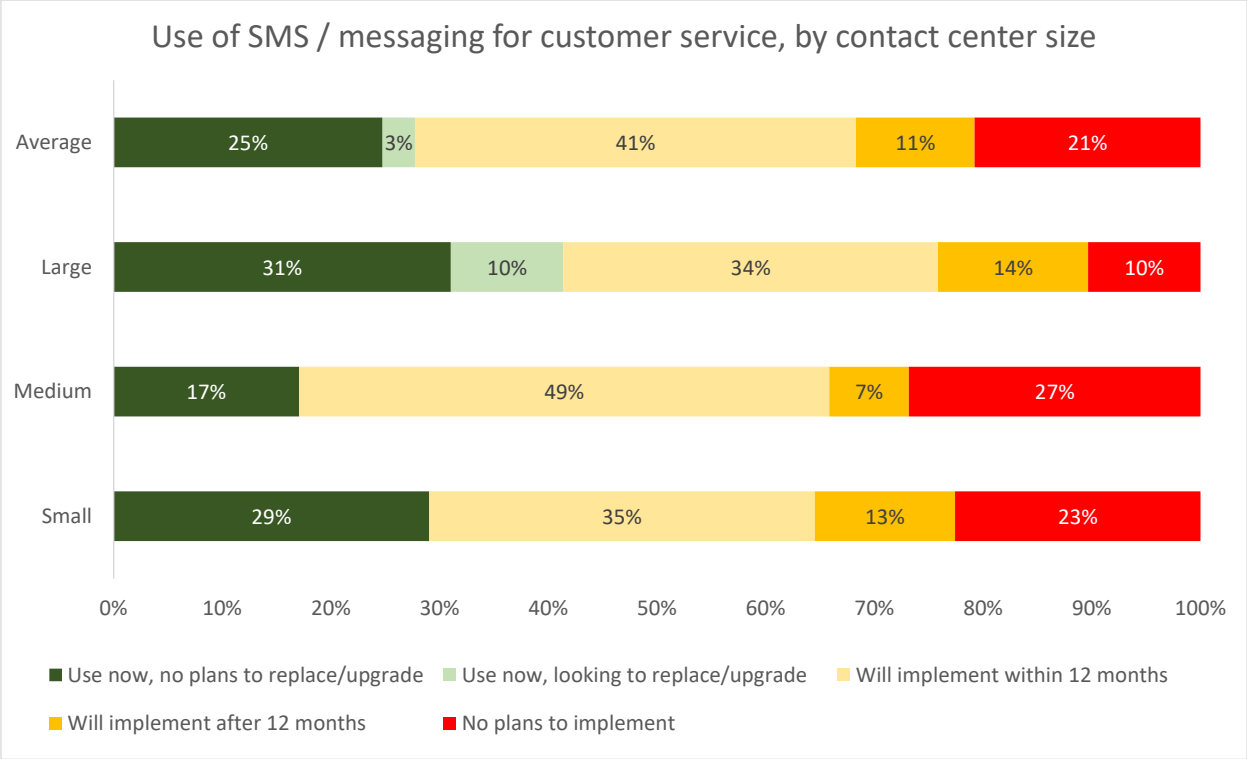
SMS / MESSAGING FOR CUSTOMER SERVICE

SMS and messaging are growing in importance as a customer service tool, particularly for reminders, notifications and for customer surveys.

Smaller operations are almost as likely as large operations to be using SMS & messaging to communicate with customers, with 29% of respondents from the smallest size band doing so.

There is interest in implementing SMS/messaging in the short term in all sizes of operation.

Figure 64: Use of SMS / messaging for customer service, by contact center size



With well over 1bn active users of Facebook Messenger and 2.7bn for WhatsApp, organizations should at least be considering these tools where customer contact is concerned.

Only around 5% of survey respondents use WhatsApp, with Facebook Messenger (25%), X (22%), and Instagram (22%) being more popular. 32% of survey respondents have a dedicated mobile app.

Messaging has 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, as well as them being trusted communication channels.

The applications allow historic records of interactions to be kept (which is not the case with all users of web chat), and messages in most of these applications are private, which not only allows customer identity verification, but also will reduce the damage to a business through public negative messages. Unlike some web chat applications, these allow the sharing of images.

The familiarity of these applications will work in favor 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. Organizations 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 'Omnichannel' section of this report.

AI-ENABLED AGENT ASSISTANCE

With the rapid rise of AI, the question is often asked whether eventually there will even be a need for people to work in contact centers, answering calls. At the least, surely call numbers and employment will drop drastically, meaning investment focus should be elsewhere?

The answer is resoundingly negative. There is evidence elsewhere in this report that shows customers' preference for the phone channel is stronger than ever, and that businesses accept this.

For the foreseeable future, live agent contact will be vital to the customer experience and the success or otherwise of organizations.

Despite a very significant drop in the proportion of inbound interactions coming into the live phone channel over the past 20 years, this has steadied at just over 60%, and both businesses and customers expect this to continue.

There are numerous use cases for AI and machine learning in the contact center, and they are listed in greater detail in ContactBabel's reports, "The Inner Circle Guide to AI-Enabled Agent Assistance" and "The Inner Circle Guide to Chatbots, Voicebots & Conversational AI".

Use cases for AI which look to assist agents themselves include:

Assisted Service

AI works 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.

Real-time Analytics and Support

AI can be trained to understand intent and recognize 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.

Transcription, translation, summarization and note-taking

Transcription converts speech to text in real-time, allowing for better documentation, analysis, and understanding of customer interactions. It distils customer communications and feedback – regardless of the language used – into concise summaries, helping agents to understand and address customer needs more rapidly, and can create accurate call summaries, saving time for the agent.

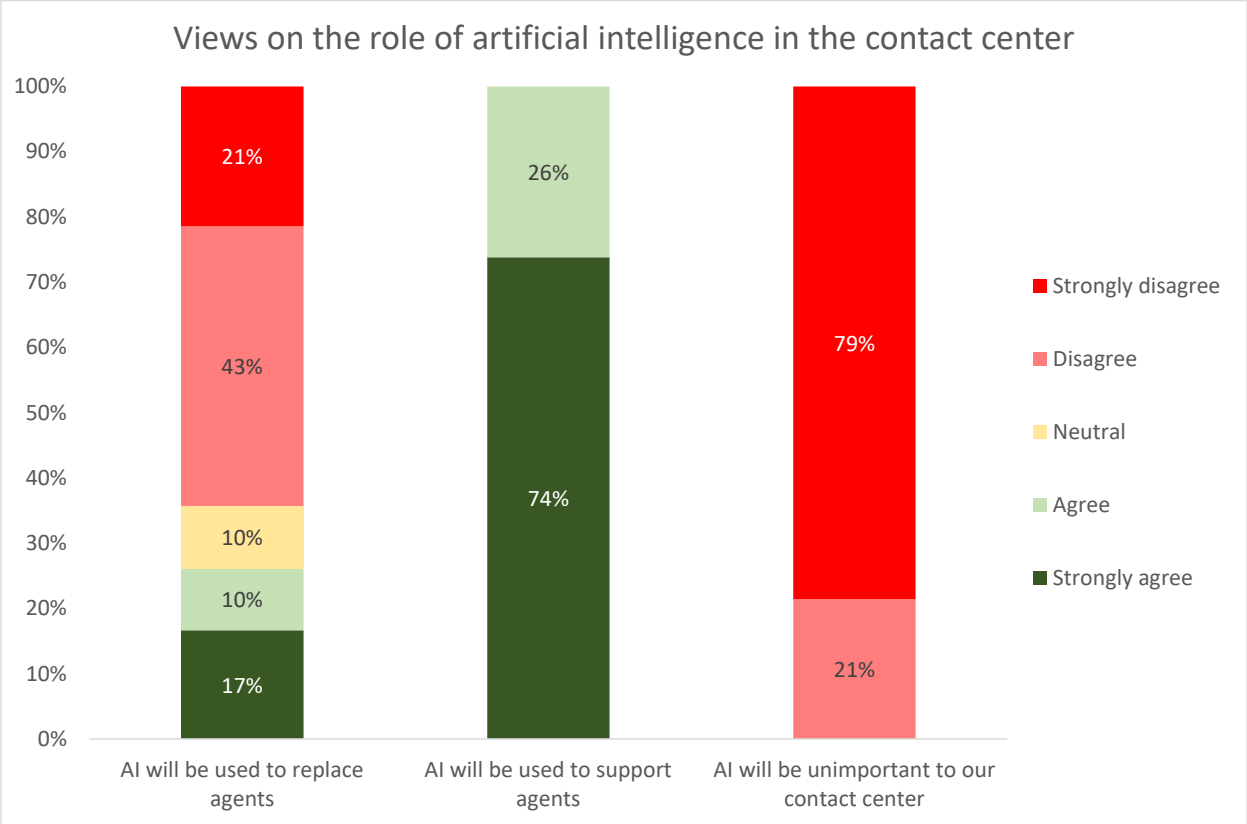
VIEWS ON THE EFFECT OF AI ON THE CONTACT CENTER

Survey respondents generally do not believe that AI would replace agents: only 27% agreed to some extent that this would be the case, with 64% disagreeing. It is worth noting that after a growing feeling some years ago that AI will replace agents, recent years' 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.

79% strongly disagreed that AI would be irrelevant to their contact center, with unanimous agreement that AI will affect contact centers of all sizes. This figure has grown year on year as AI becomes more widespread and the benefits better understood.

Figure 65: Views on the role of artificial intelligence in the contact center



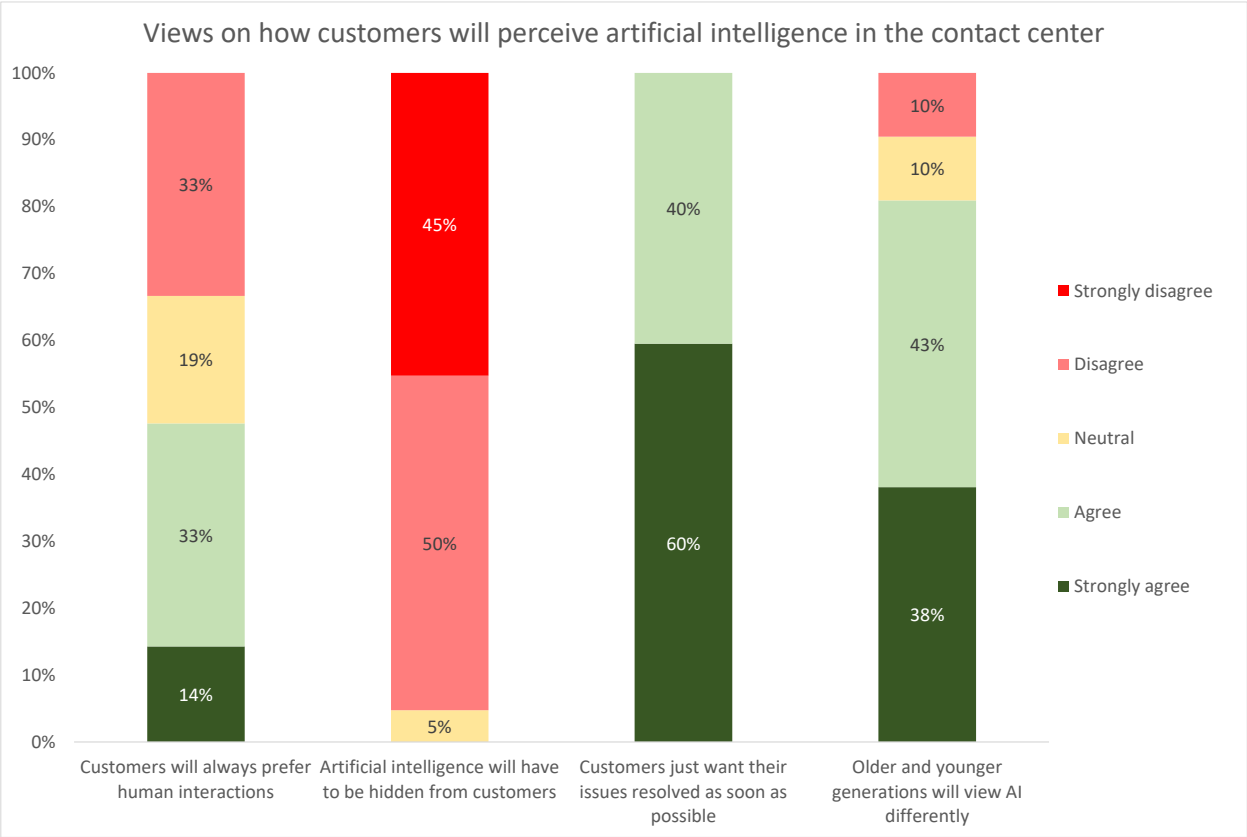
The survey then looked at how organizations believe their customers will view AI.

There was unanimous belief that customers would appreciate AI if it helped them to resolve their issue as quickly and easily as possible. The uptake in web self-service and automated digital service suggests that customers will accept non-human assistance if it is most convenient for them, which means requiring a low effort and getting a positive outcome.

There was also widespread 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 the use of LLMs, smartphones or other virtual assistants in the home). There was also a definite feeling that AI should not be hidden from customers.

Respondents disagree whether customers will always prefer human interactions: 33% do not believe that this is the case, but 47% think that customers will always prefer human interactions. "The US Customer Experience Decision-Makers' Guide" looks in-depth at what customers actually think about this.

Figure 66: Views on how customers will perceive artificial intelligence in the contact center



The unanimous expectations of the people who make business investment decisions is that AI will be used not only to provide better self-service options, but also to augment their contact center agents. The question this chapter looks at is: how will this be done?

INCREASING AGENT PRODUCTIVITY

The live telephony channel – despite the rise of digital channels – still accounts for over 60% of inbound customer interactions to US contact centers.

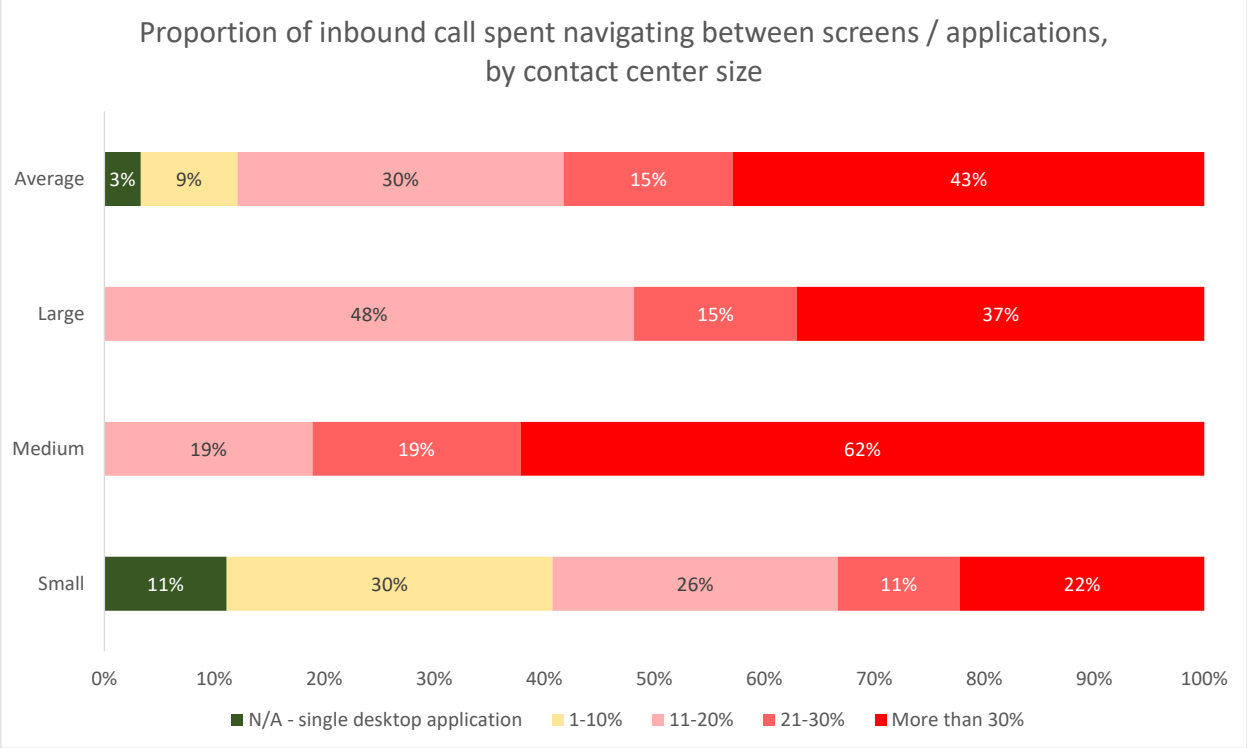
Average call durations have almost doubled in the past 20 years, as simpler work has moved to self-service. Call duration as a metric for contact center success has become far less popular – the prevailing wisdom is that calls should take as long as they need to – but this does have a negative effect on queue lengths, which along with first-contact resolution, are the main driver of customer experience in the contact center.

As such, opportunities to reduce call duration without damaging customer experience will benefit both customer and business, and one of the ways in which AI agent assistance can help is through trimming the unnecessary call time that agents spend navigating between applications and screens.

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

88% of respondents reported that their agents spent over 10% of the call's time in moving between screens and applications.

Figure 67: Proportion of inbound call spent navigating between screens / applications, by contact center size



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 in fact mid-sized operations are most likely to report having issues.

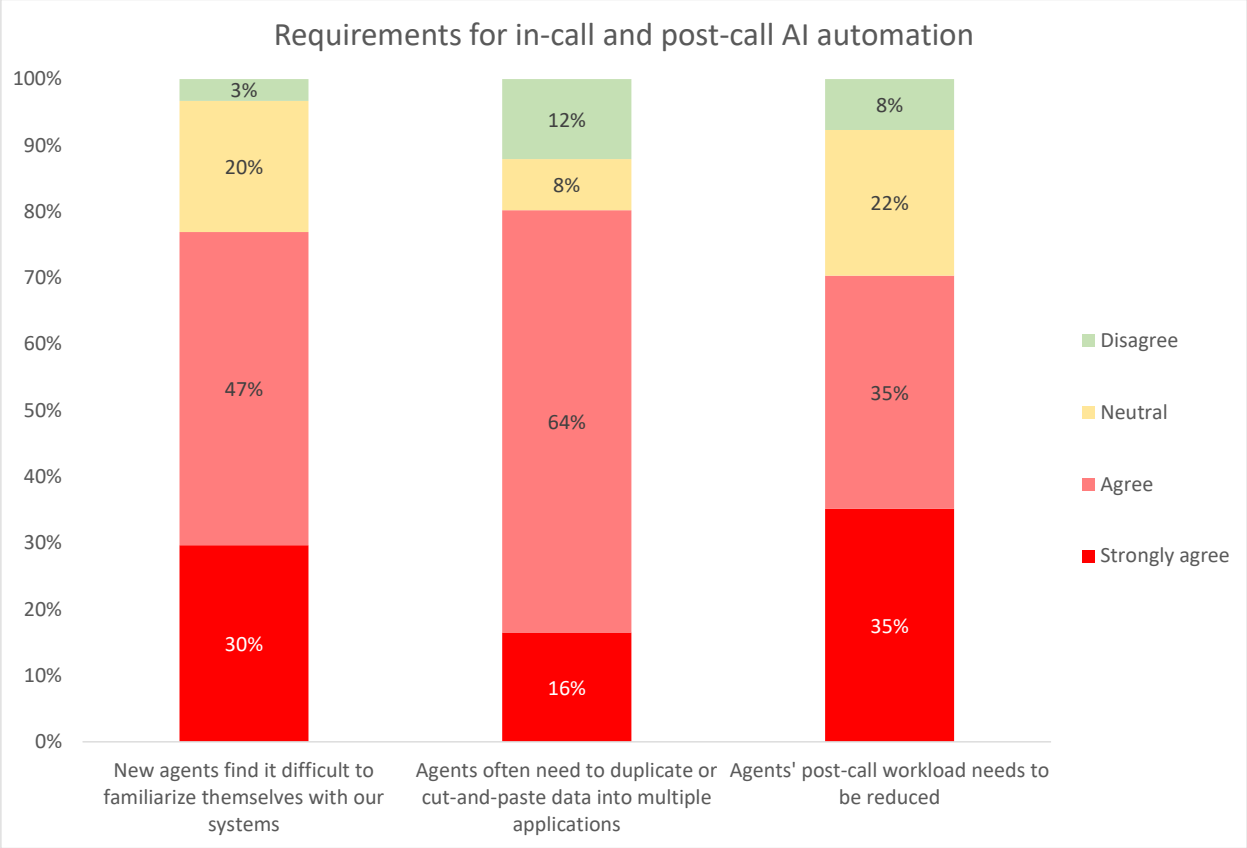
37% of large operations, 62% of medium-sized contact centers and 22% of small operations report agents spending over 30% of call time on navigation.

We estimate that these figures suggest that agents in small contact centers spend an average of 16% on in-call navigation, those in medium-size operations spend 30% and those in large contact centers 24%. The overall figure industry-wide is 24%.

This shows the scale of one of the many potential savings that AI agent assistance can bring.

Furthermore, 80% 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 68: Requirements for in-call and post-call AI automation



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.

70% of survey respondents report problems with post-call work, and 77% state that new agents have problems familiarizing themselves with the system.

The data identifies that new agents have problems finding what they're looking for, and that agents spend too long navigating between applications and screens, cutting and pasting data into multiple applications and carrying out post-call work.

How then can AI be used to assist agents and speed up the process without damaging customer experience?

IN-CALL AGENT ASSISTANCE

AI offers great opportunities for a reduction in talk time, without negatively impacting customer experience or outcomes.

Within calls, time can be wasted by:

- searching for the right information
- accessing multiple applications and screens
- repetition due to mishearing
- pauses for agents to type
- reading long terms and conditions to customers.

AI offers an opportunity to provide timely and effective support to every agent as necessary, actually within the call.

Finding the right information: AI can provide the agent with suggestions about next best action, pull up relevant information from the knowledge base, make suggestions based on customer history and sentiment about optimal cross-selling and upselling opportunities, and even the style of conversation that this customer may prefer.

This has a positive impact on first-contact resolution as well as customer experience, and is of particular use to less experienced agents and for unfamiliar subject areas.

AI monitors the real-time desktop and voice data, triggering processes such as information provision and back-office processes.

It can also provide coaching or alerts if there's a lengthy pause in the conversation or anything has been done wrong. Agents can also use specific phrases, such as "I'll just look that up for you", triggering the AI assistant to take action and putting the information on a single agent desktop application.

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.

Accessing a single screen: Many of today's contact centers 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.

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

Many contact centers still rely on information held in legacy systems, and agents use an average of 3.5 applications within a call, and 2.3 post-call, which leads to considerable amounts of time being spent – especially by inexperienced agents – trying to find the right information or input data on the correct screen.

There are significant issues around not asking or forgetting to key in information, 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.

AI-enabled 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, AI-enabled agent assistance can help 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 and industry regulations can be assured by making the agent complete all of the required steps in the transaction (for example, adding call notes, reading disclaimers, etc.).

Reducing repetition due to mishearing: In our survey of 1,000 US customers, 53% reported that they "very or fairly often" had problems hearing the agent, or that the agent asked them to repeat something.

This is not just an issue for older customers, as 56% of the youngest 18-34 year-old cohort reported experiencing this either "very often" or "fairly often".

Lack of audio clarity is not restricted to the contact center's side of the conversation, where high-quality noise-cancelling headsets can improve matters for the agent in terms of removing background noise at their workplace.

With more people than ever using mobile telephony to speak with organizations, both agents and customers have to concentrate very hard on the conversation, with the attendant stress and frustration that this can cause, particularly for the agent who may handle 80-100 calls each day.

AI-enabled voice isolation can intelligently remove background noise from both sides of the conversation, both in real-time to assist the smooth and accurate flow of the conversation, and also in recordings to improve post-call analytics and voice-to-text transcription. This also means that businesses have to spend significantly less on upgrading and replacing top-of-the-line headsets.

Reducing the number of times an agent or customer has to repeat themselves can make a huge difference to cost, with the attendant positive effect of reducing call times (and thus queue lengths) and improving customer experience.

Reducing time taken for agents to type: AI can be integrated with CRM systems to populate forms with relevant customer information retrieved from databases or previous interactions, reducing the need for manual entry by the agent.

AI can also listen to the conversation between the agent and the customer using natural language processing to identify key information and automatically enter this data into the correct fields.

Furthermore, if a customer calls about a common issue, AI can predict and pre-fill the form, offering contextual assistance such as automatically populating the relevant fields in the form for reporting a lost payment card.

AI can also draw from a customer's history and preferences to personalize the form completion process. It can pre-populate fields with known preferences or previous selections, making the process quicker and more personalized.

AI can also detect errors in real-time as the form is being filled out, such as incorrect formatting or mismatched data (e.g., an invalid address), suggesting corrections or automatically adjusting the information.

Using AI to read terms and conditions: Many organizations have long terms and conditions that they have to read to customers within the call in order to remain compliant with regulatory requirements.

If the customer is made aware and agrees that an AI is reading out these statements, and that they have the right to speak to a human at any time, businesses may wish to consider using AI to do this. The agent can then carry out an extra work connected to the call while the terms are being read out, which could save time overall.

POST-CALL AGENT ASSISTANCE

On average, 20% of a call's overall length is spent on post-call work, including coding call dispositions, writing notes, updating databases and initiating business processes.

The post-call wrap-up stage can waste 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 manual 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 AI-enabling the agent desktop is not simply a matter of writing consistently to the correct databases, although this is a key element. The contact center also initiates a number of processes elsewhere in the enterprise: it is the prime mover for sending out documents and items, arranging deliveries, taking payment and many other key elements to a successful customer-business transaction.

AI improves post-call efficiency through helping with call summaries and dispositions. Many agents spend a significant amount of time making notes within calls, and then writing them up afterwards, meaning not only that the agent is not available to take other calls, but also that they are perhaps not giving the customer their full attention during the call.

Using natural language processing and generative AI, call summaries can be created in real-time which can be amended by the agent, speeding up the process. Individual agents will have varying writing and summarizing capabilities, so consistency of quality is assured. The next agent to speak with that customer benefits from having an accurate note of what has been discussed previously, meaning that it is not only the original call which is shortened.

If appropriate, the call summary can also be emailed to the customer, which shows them that the business has understood their query and is acting upon it. Having an accurate call record at hand could also remind the customer of key points and action items, preventing some unnecessary repeat calls.

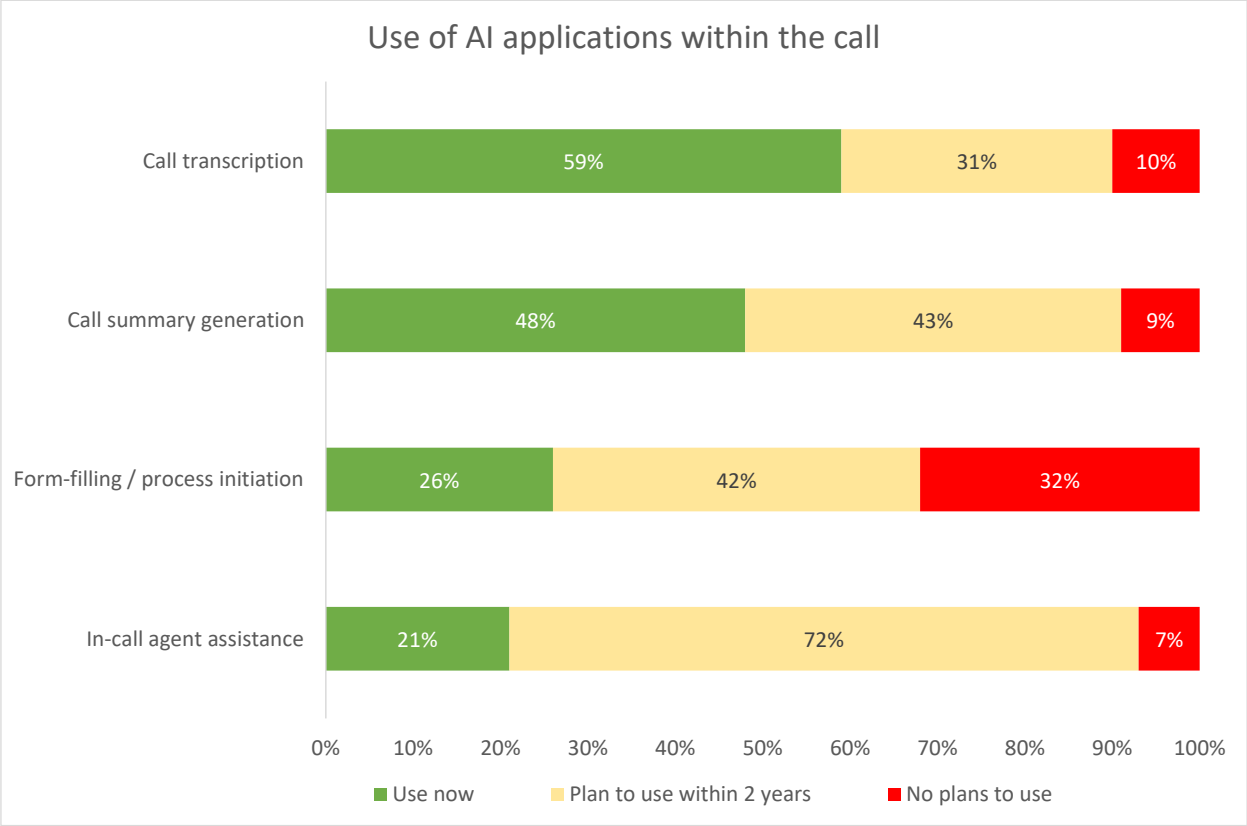
This use case should be seriously considered for implementation, as it has the benefit of being internally focused (thus reducing risk) and can also be applied to almost every call received. Post-call notes do not have a particularly high profile outside the contact center as they are a hidden part of the interaction, but this use case has huge potential for spectacular ROI, especially in contact centers where post-call work is significant.

AI-ENABLED AGENT ASSISTANCE: CURRENT AND FUTURE USE

Survey respondents were asked which AI applications they are currently using with their contact centers, and what their plans were for future implementations.

The following chart shows some of the AI application which can be used to assist agents within the call and also in the post-call work.

Figure 69: Use of AI applications within the call

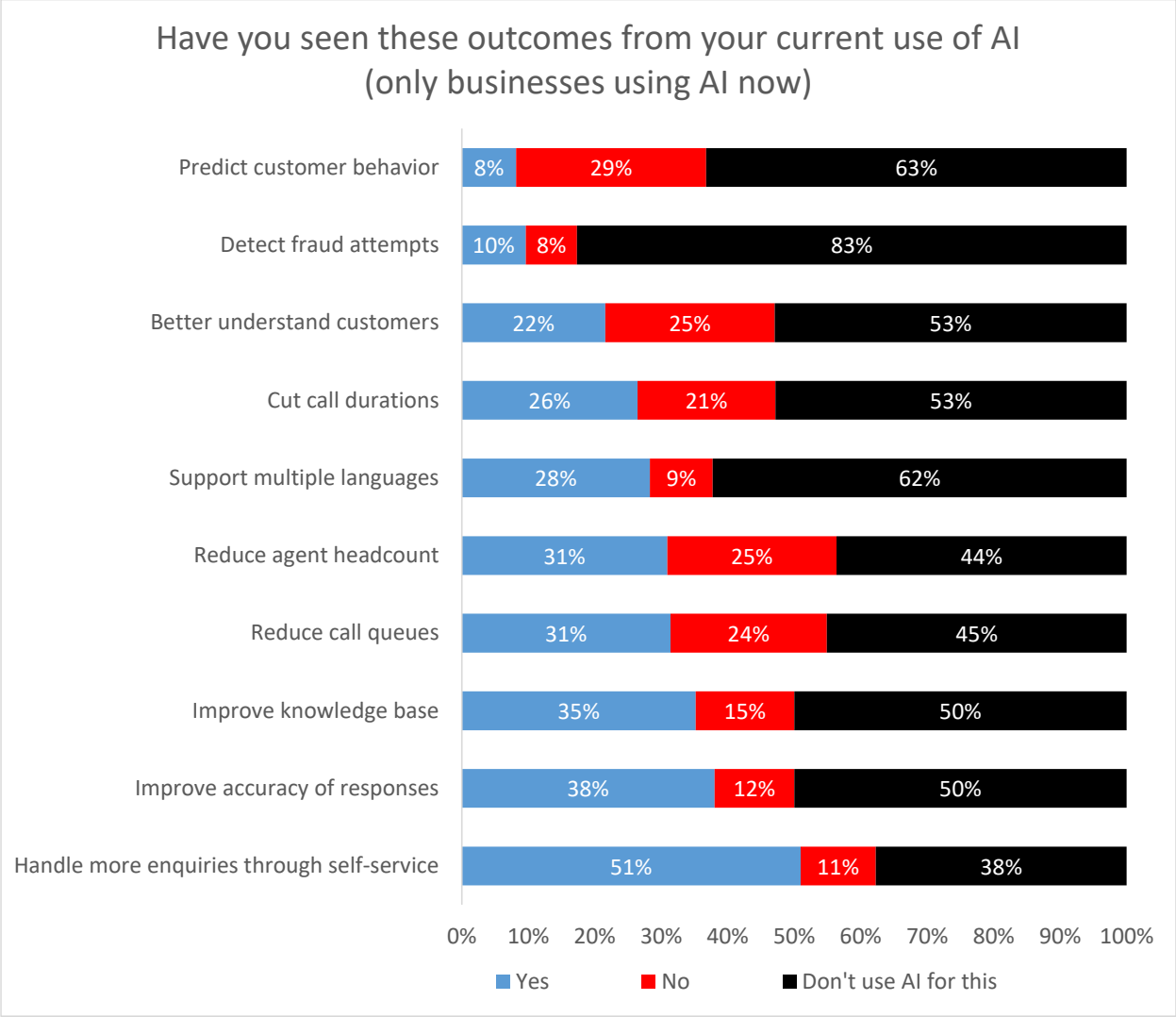


Currently, AI is used far more often to support agents to summarize conversations and transcribe calls, with 26% of survey respondents using it to initiate processes and complete forms.

While real-time in-call agent assistance is less often used currently, there is a very strong expectation that it will be widely used within the short-to-medium term.

Survey respondents who were currently using AI applications were asked about the outcomes and results that they had seen as a result. As the use of AI in the contact center is in its relative infancy, readers should be aware that the small sample size needs to be treated with caution.

Figure 70: Have you seen these outcomes from your current use of AI (only businesses using AI now)



There was a widespread positive response from those using AI to improve self-service, which is mainly from chatbots, and an improvement in knowledge base quality and response accuracy was also noted.

There was much less use of AI to detect fraud attempts, to predict customer behavior or to cut call durations, and these applications were by no means unanimously agreed to be successful at the moment.

Improving operational metrics such as call duration and queue length also had mixed results.

CLOUD-BASED CONTACT CENTER SOLUTIONS

The modern contact center 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, 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 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 organization, whether managed internally or by a third-party and hosted internally or externally. They require management by the organization 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 organizations 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 utilizing "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.

DRIVERS FOR CLOUD-BASED SOLUTIONS

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 center? Cloud offers contact centers 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 center?

- Trial new applications quickly using a low-risk pilot: using a pay-per-use model allows businesses to start a contact center 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 center: 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 minimization. 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, or which have to react quickly to handle event-driven call spikes (e.g. power outages affecting utilities companies)
- The exceptional event of the pandemic meant that most of the contact center 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? Organizations 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 center 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 center 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 center solution that businesses are most comfortable with outsourcing.

Integration & Customization: while out-of-the-box functionality can be quick and cheap enough to get things moving, what if businesses need more a personalized 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 customization.

Performance & Reliability: how does cloud affect the contact center'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 centers 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.

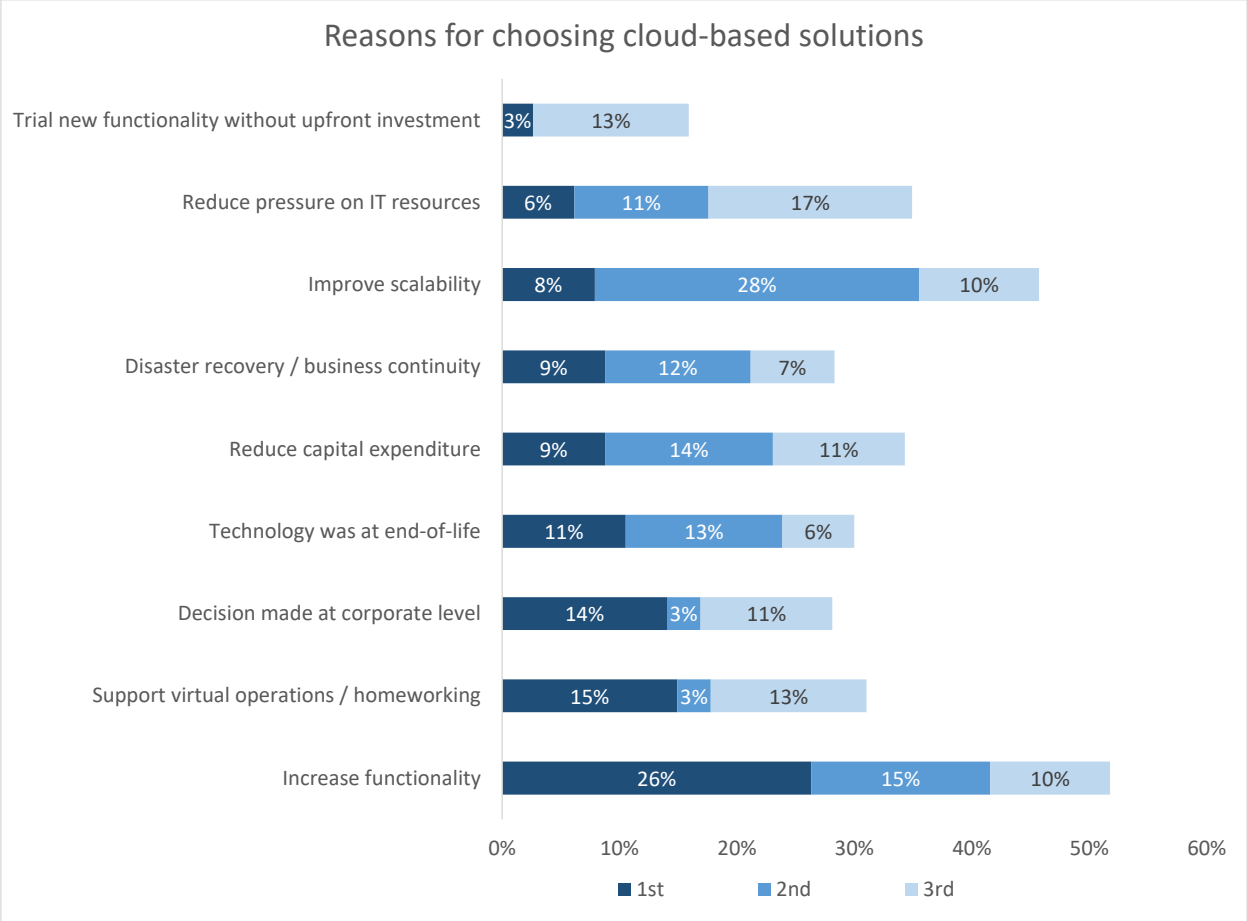
The following figure, which looks at the top three reasons to move to cloud, shows that there is no single dominant reason as much depends on the nature of the business and contact center environment.

It is worth noting that supporting remote working is placed as no.1 by 15% of survey respondents, supporting the view that remote and hybrid working practices are here to stay.

The ability to reduce capital expenditure was historically seen by respondents as the most important primary reason to move to the cloud but this has declined in importance over the years.

Increasing functionality is placed as a top 3 reason by over half of respondents, with reducing IT pressures and improved scalability also being viewed as more important factors than CapEx reduction.

Figure 71: 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 organizations to do so.

It is worth looking in more depth at attitudes to legacy-based contact center solutions, as this can sometimes being a sticking point for those looking to implement a cloud-based contact center.

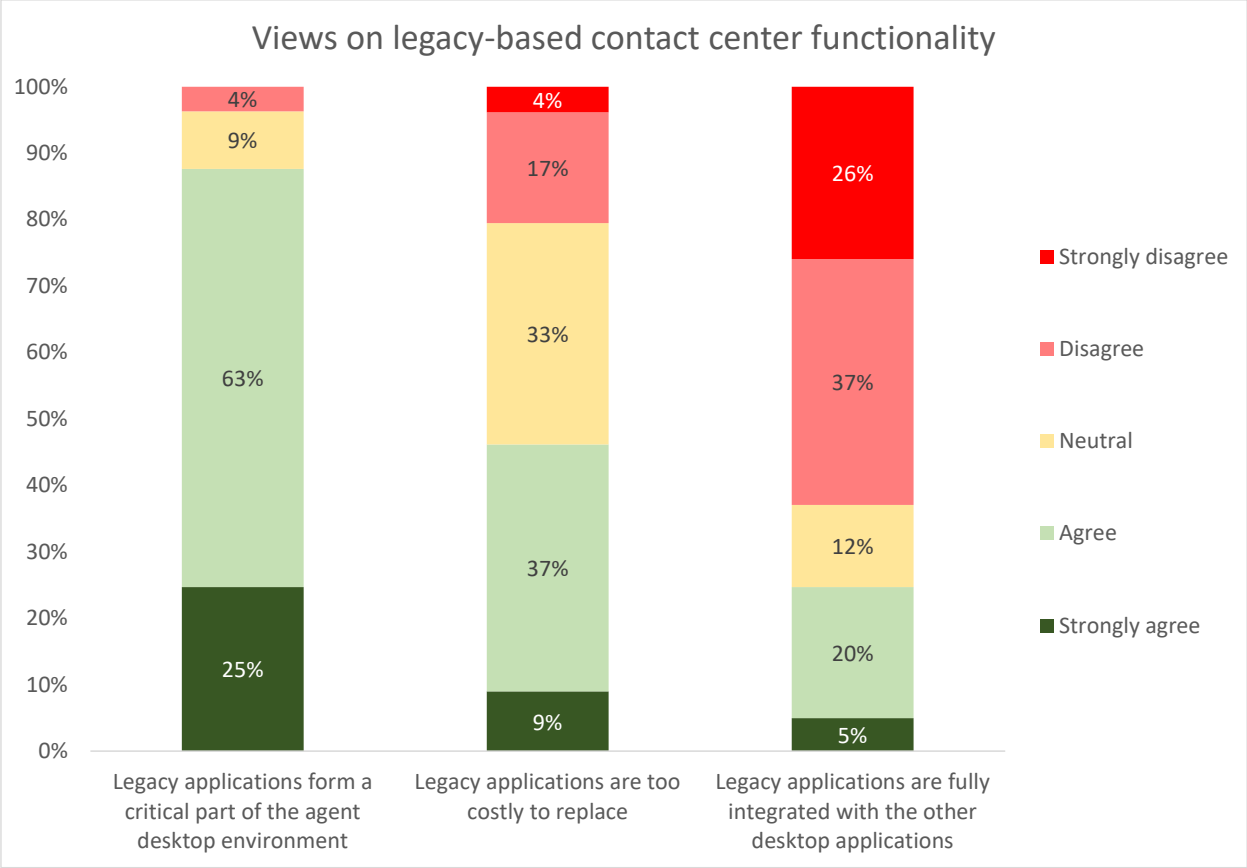
Only 5% of survey respondents state that they do not use legacy applications, and this is certainly a factor that plays a part in the cloud decision.

88% of respondents using legacy applications state that they form a critical part of the agent desktop environment.

For all of legacy applications' importance, 63% disagree that they are fully integrated with other desktop applications, and this will be holding many contact centers back from their full potential.

46% cite the cost of replacement as being a major factor in their decision-making process around how to proceed with their technology.

Figure 72: Views on legacy-based contact center functionality

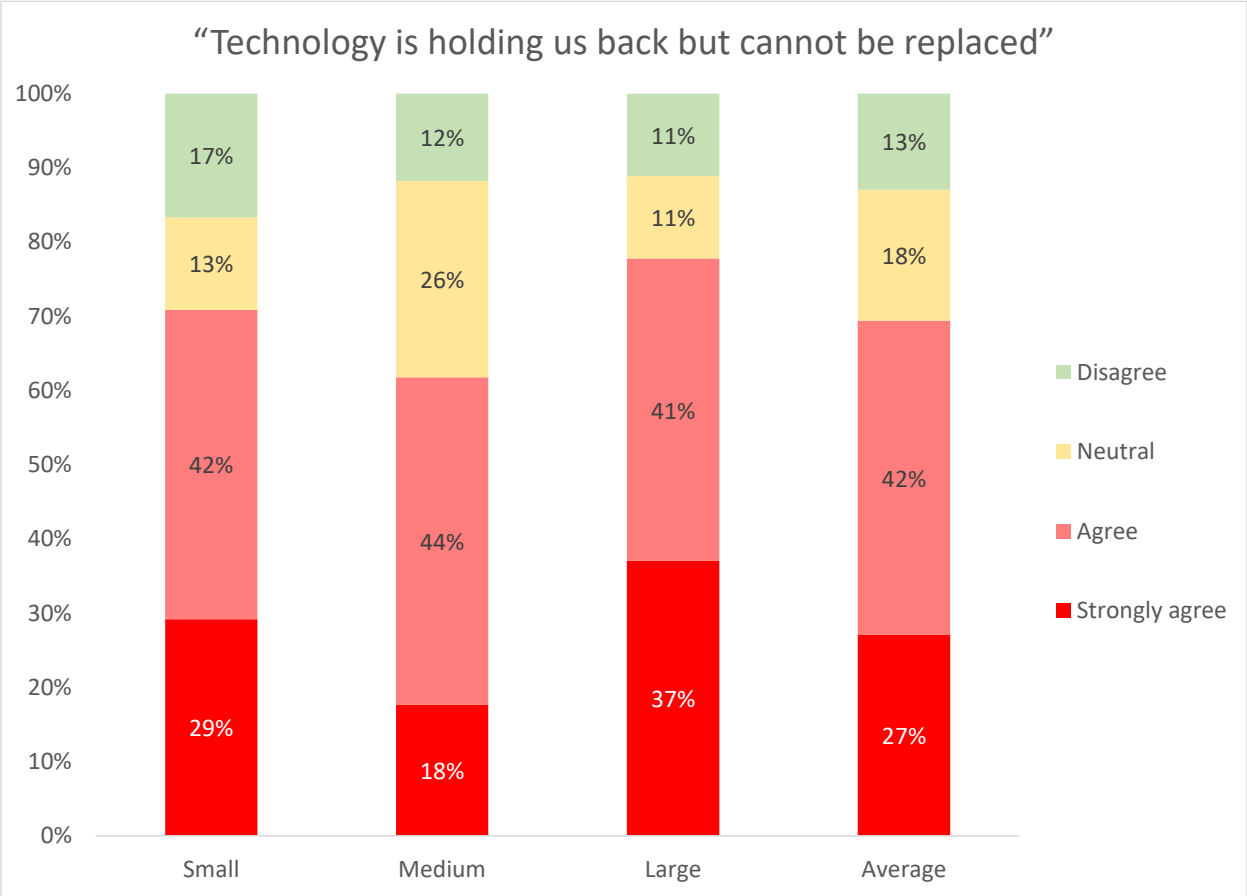


The impact of legacy-based systems on contact center performance can be seen in the following chart, where 69% of survey respondents – across all contact center size bands – state that they are being held back by technology which cannot yet be replaced.

Concerning, both the proportion of survey respondents agreeing with this statement, and the strength of their feelings appears to be growing.

In some cases, this will be through lack of budget, but the previous chart showed that many contact centers are still reliant on their legacy systems which nonetheless are often holding the business back from achieving its aims.

Figure 73: Agreement with statement: "Technology is holding us back but cannot be replaced"



Most cloud contact center 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 datacenter (whether physical or virtual security), some focused 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 organization which promotes the use of security assurance best practices 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.

Solution providers are confident that the dedicated security procedures and architecture in place within their solutions were likely to exceed those found in their clients' previous contact center operations, having full-time dedicated security resources and a vested interest in keeping client data safe.

A security breach for in-house contact center is damaging and embarrassing; for a cloud provider to suffer a similar failure would impact severely on their credibility and the company's future, but security should not be left 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.

Integration and customization

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 center solutions can be seen to be following in the footsteps of cloud-based CRM.

Some customization 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 customization 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 should carry 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.

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 a key 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 datacenters provide 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 reassuring, it will do little to assuage the loss of revenue or customer goodwill if the cloud-based contact center 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 datacenters if the problem occurs outside the software providers' purview.

Quality of service testing is vital to ensure that contact center network traffic and 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 customization and integration should also be investigated.

USE OF CLOUD SOLUTIONS

The most vertical markets report the use of at least one cloud-based contact center application. The TMT and manufacturing respondents were least likely to be doing so.

92% of survey respondents state that they are using at least one cloud-based contact center application, the highest-ever proportion.

Figure 74: Use of cloud-based contact center applications, by vertical market

Vertical market	Proportion of respondents using a cloud-based contact center application
Medical	100%
Outsourcing	100%
Public Sector	100%
Services	100%
Finance	100%
Insurance	100%
Transport & Travel	90%
Retail & Distribution	85%
Technology, Media & Telecoms	78%
Manufacturing	67%
Average	**92%**

Recently, there has often been a slight positive correlation in the use of cloud-based contact center solutions when looking at contact center size, but this is less the case this year.

Figure 75: Use of cloud-based contact center applications, by contact center size

Contact center size	Proportion of respondents using a cloud-based contact center application
Small	93%
Medium	85%
Large	98%
Average	**92%**

Respondents were asked about the contact center functionality that they had within the cloud, and what their plans were for the next two years.

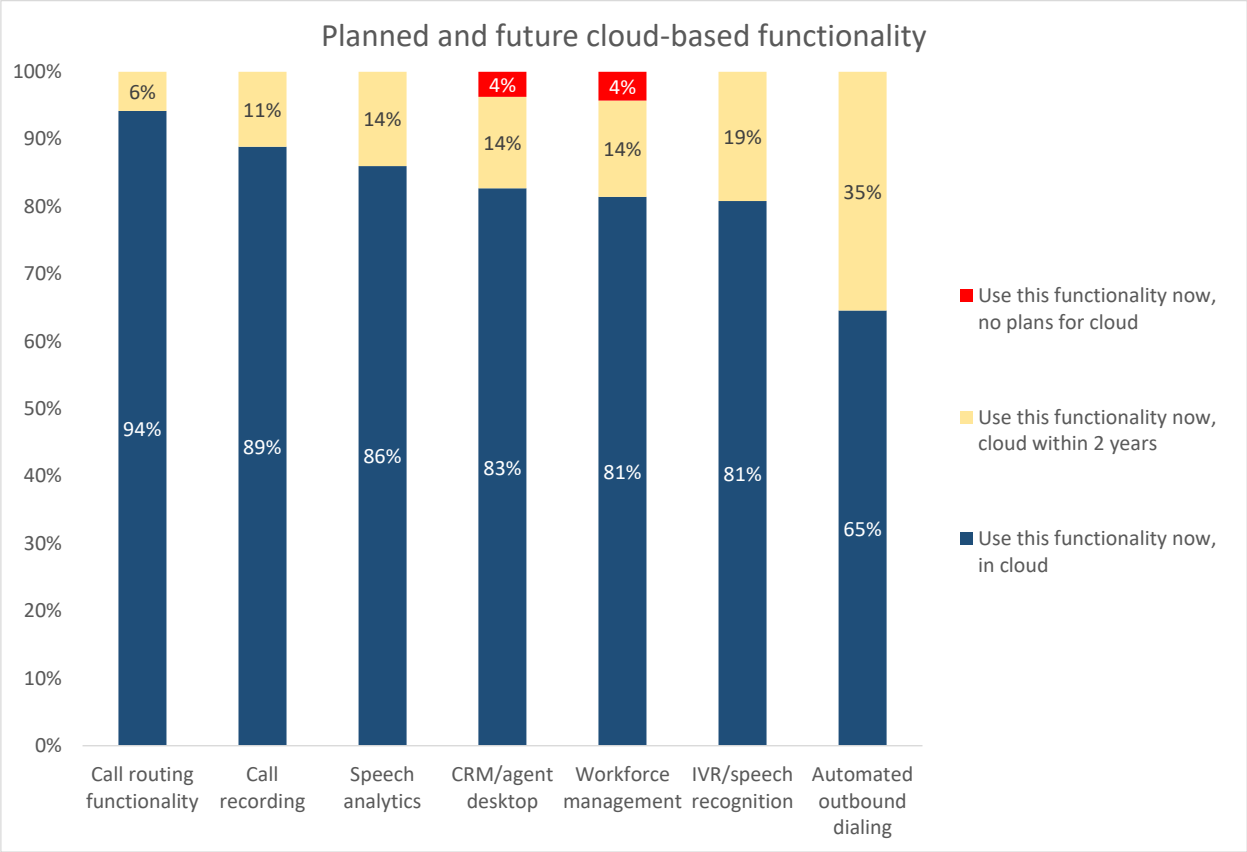
The chart below shows **only** those respondents that actually use this technology, regardless of which deployment option they use.

Call routing and call recording functionality is the most likely solution to be deployed through cloud-based solutions, with speech analytics and CRM also used extensively in the cloud. The clear majority of all 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 2027. Respondents indicate that their cloud-based deployment of outbound dialing, speech analytics, IVR/speech recognition and CRM will increase greatly within two years.

There is a very small proportion of survey respondents that have no plans to move to the cloud, but this is decreasing each year.

Figure 76: Planned and future cloud-based functionality



RESULTS OF USING CLOUD SOLUTIONS

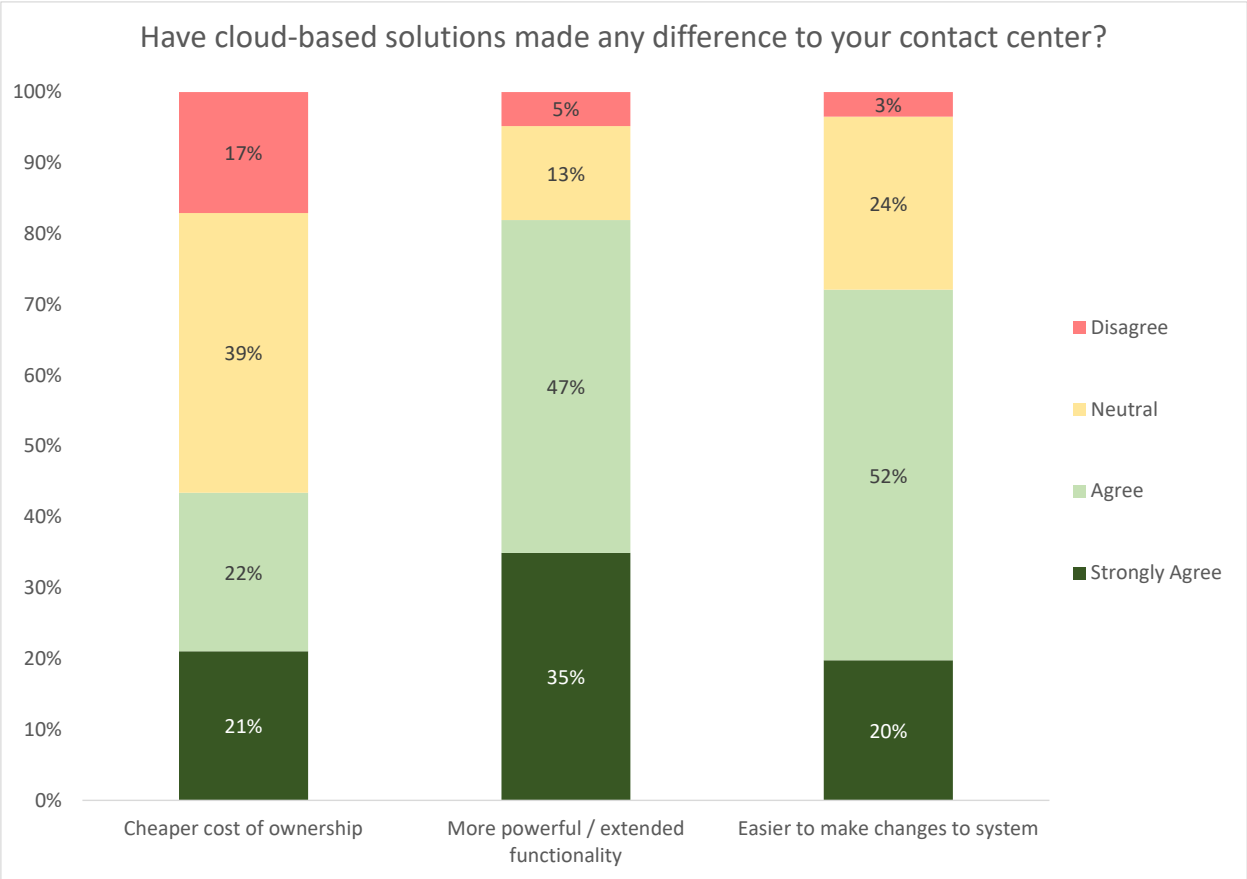
Those contact center respondents who have actually implemented a cloud-based solution have generally found that it has delivered significant advantages.

43% of respondents stated that cloud-based solutions had given a cheaper overall cost of ownership of their contact center technology, although 17% disagreed to some extent.

82% experienced more powerful extended functionality in a cloud-based environment, with only 5% disagreeing that this was the case.

72% of respondents stated that cloud made it easier to make changes to the system, with 3% disagreeing.

Figure 77: Have cloud-based solutions made any difference to your contact center?



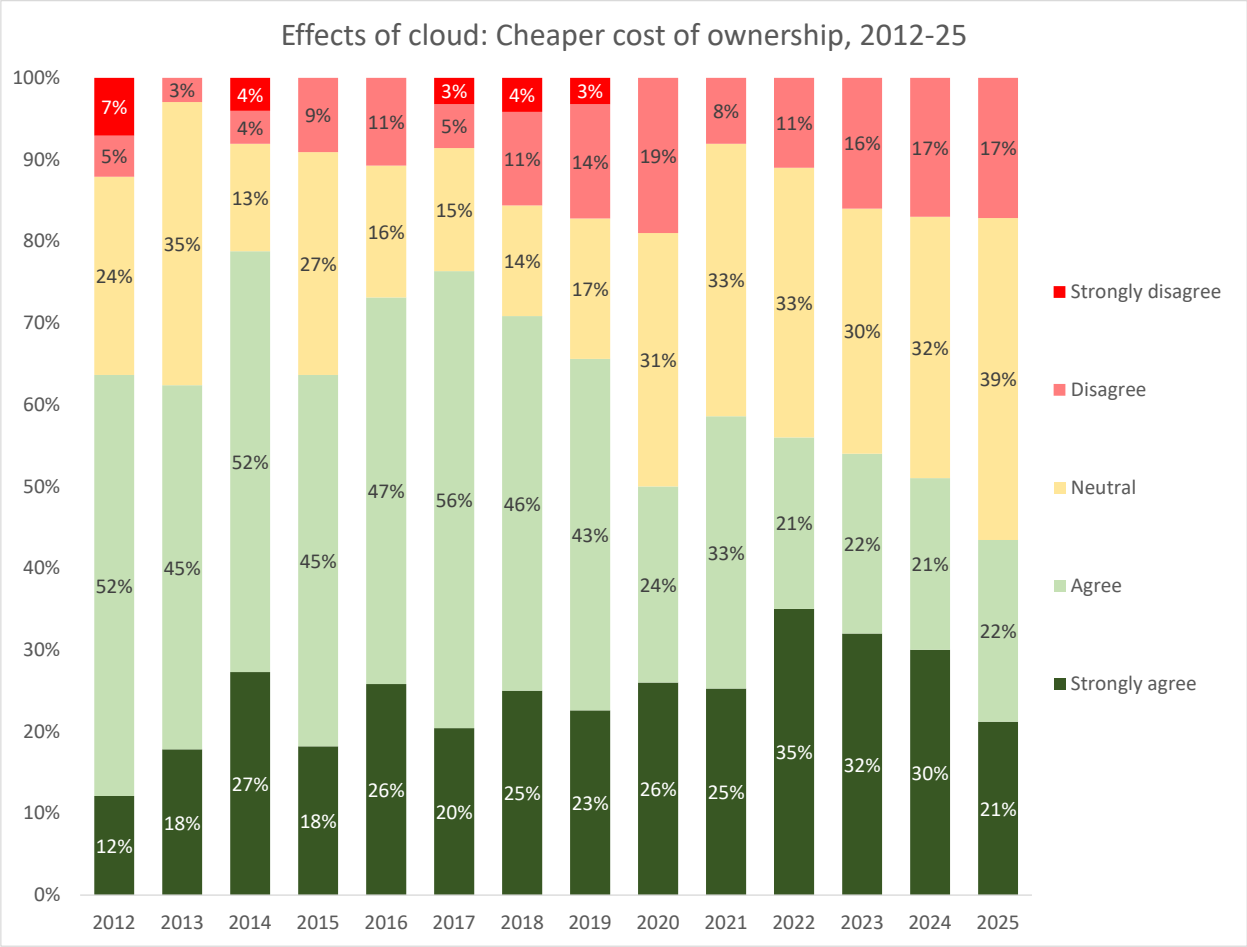
Despite different organizations taking part in this research each year, these findings have been consistent for many years and readers can treat these with some confidence.

To show this, the following three charts show how each of these effects has been viewed by respondents over the past 14 years' surveys.

While there is a general feeling that cloud offers a cheaper overall cost of ownership, this is much less strong than it has been: 43% feel this now, compared to a high of 79% in 2014, and there has been a definite decline in the proportion of survey respondents seeing cloud as a cheaper alternative to on-premise solutions.

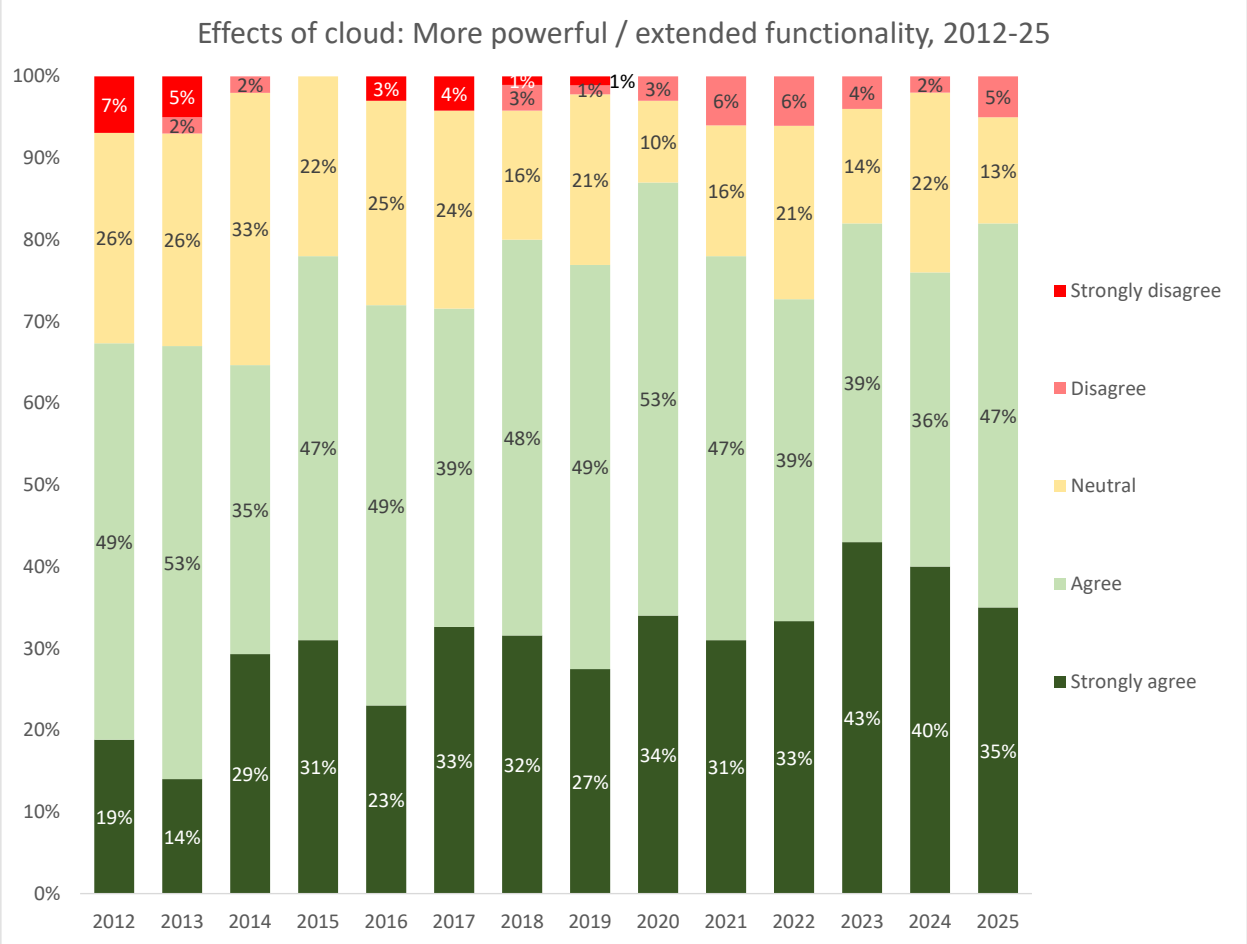
This is almost certainly due to the increased functionality and sophistication now being delivered by cloud-based contact center solutions being reflected in relatively higher prices.

Figure 78: Effects of cloud: Cheaper cost of ownership, 2012-25



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 since 2017 as many solution providers continue to move their focus to the cloud.

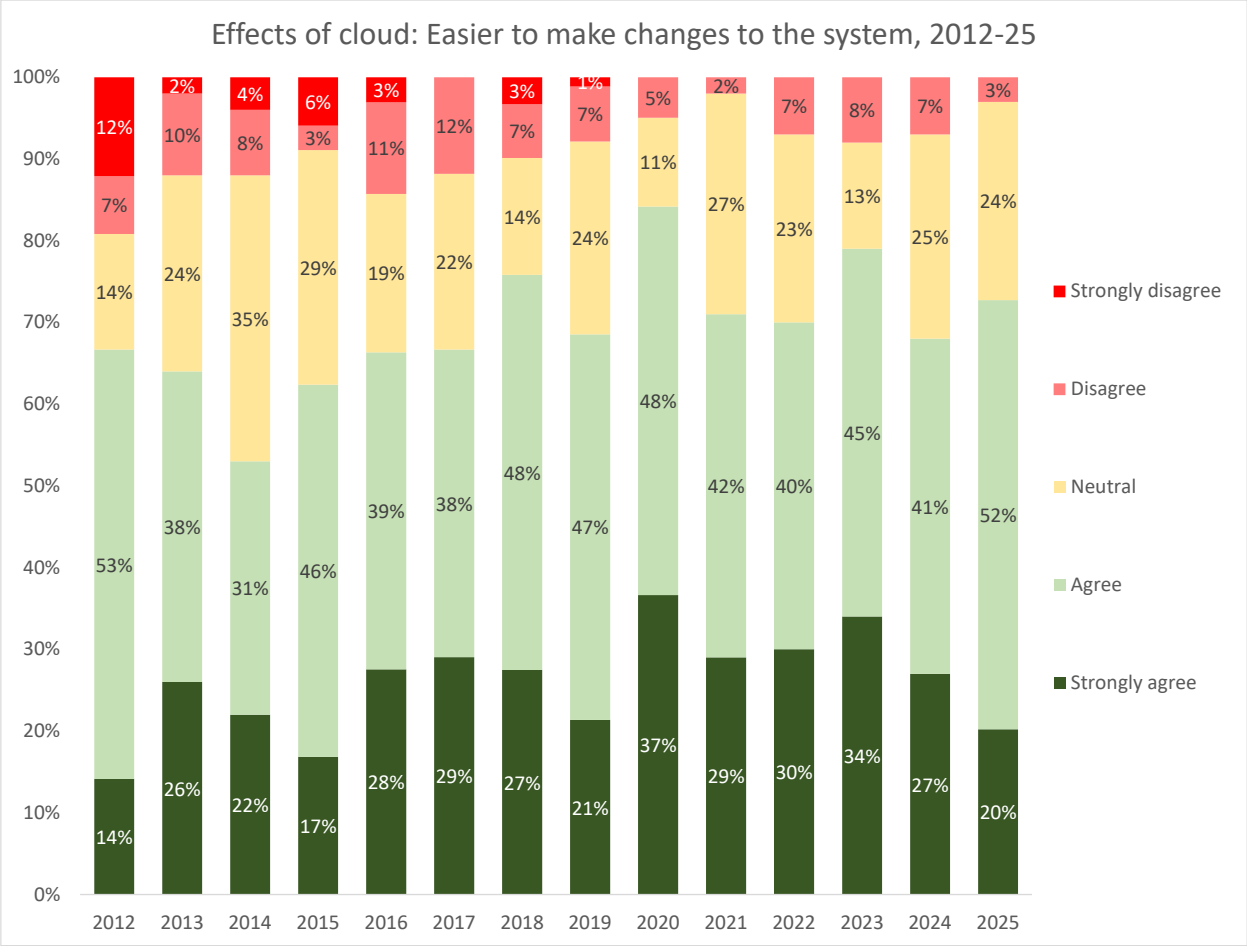
Figure 79: Effects of cloud: More powerful / extended functionality, 2012-25



Over the years there has been a steady feeling that cloud makes system changes somewhat easier, and this opinion rose every year between 2014 and 2019, and has remained fairly steady since then.

This may be the result of cloud solution providers now offering a quicker and easier method for contact centers to make changes to their solutions, as well as the case that contact center users have become more familiar and comfortable with making changes in a cloud-based solution.

Figure 80: Effects of cloud: Easier to make changes to the system, 2012-25



For more information on cloud-based solutions, please download ContactBabel's in-depth, updated report, "The Inner Circle Guide to Cloud-based Contact Center Solutions."

THE CUSTOMER EXPERIENCE

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
- Customer Effort, Engagement & First-Contact Resolution
- Customer Personalization.

CUSTOMER EXPERIENCE MEASUREMENT & IMPROVEMENT

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 centers?

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.

The business also 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 center does not stand alone: it orchestrates the rest of the business and sometimes cleans up its mess.

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 that predicts positive business outcomes , and that organizations should focus upon reducing the amount of effort that a customer has to expend to carry out the interaction successfully.

A contact center 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 centers 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.

FACTORS IN ACHIEVING CUSTOMER SATISFACTION

THE VIEW FROM THE BUSINESS

Organizations were asked to rank eight factors that impact upon customer experience.

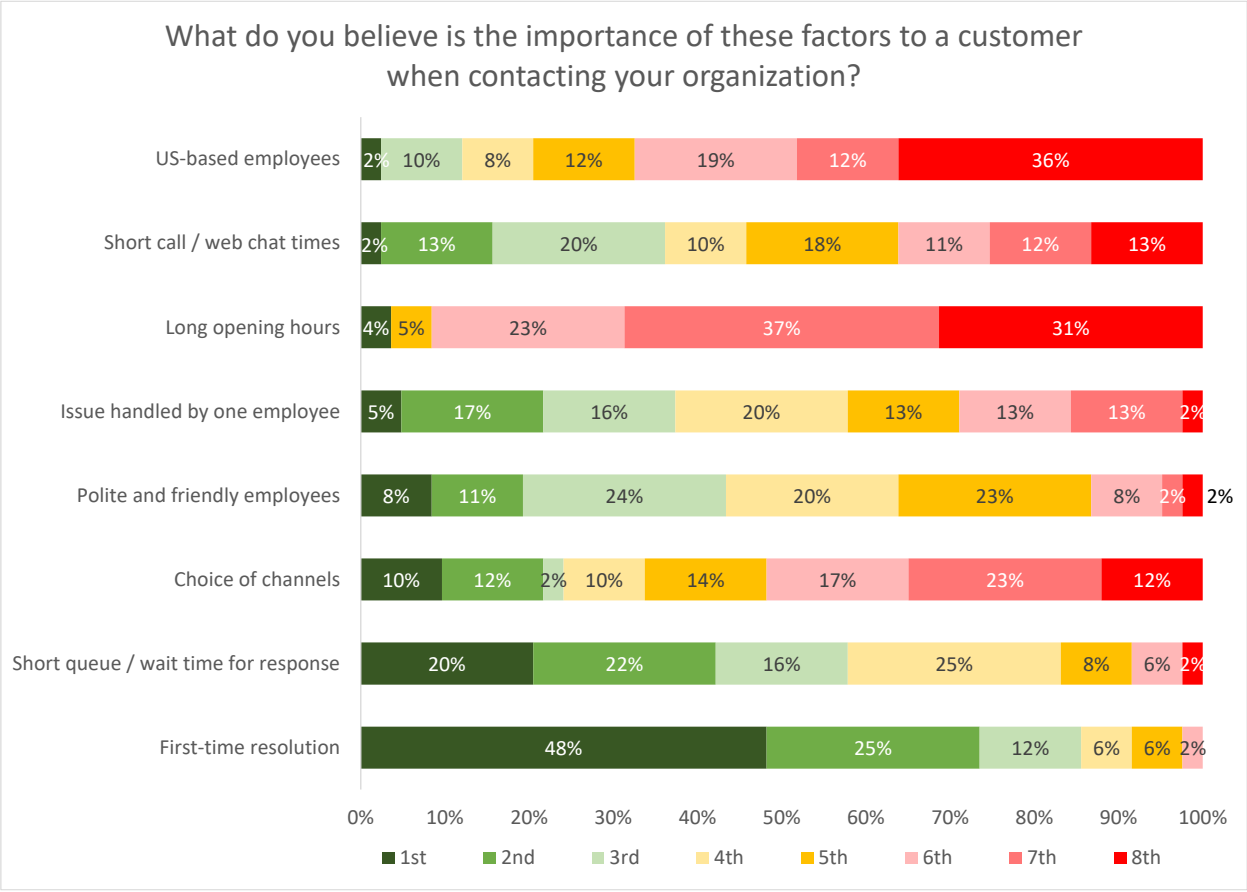
As with many past ContactBabel surveys, first-time resolution was clearly seen as being the most important factor impacting upon customer experience, with 48% of business respondents ranking it in first place, and a further 37% placing it within the top three.

A short queue time or wait time for a response was also seen as being important, being ranked in the top 3 by 58% of respondents, with polite and friendly employees being ranked in the top 3 by 43% of organizations surveyed.

Having the issue handled by a single employee was placed in the top 3 by 38% of respondents, with a choice of channels making the top 3 for only 24% of respondents.

Long opening hours (4%) and US-based agents (12%) were seen by very few organizations as impacting significantly on customer experience.

Figure 81: What do you believe is the importance of these factors to a customer when contacting your organization?



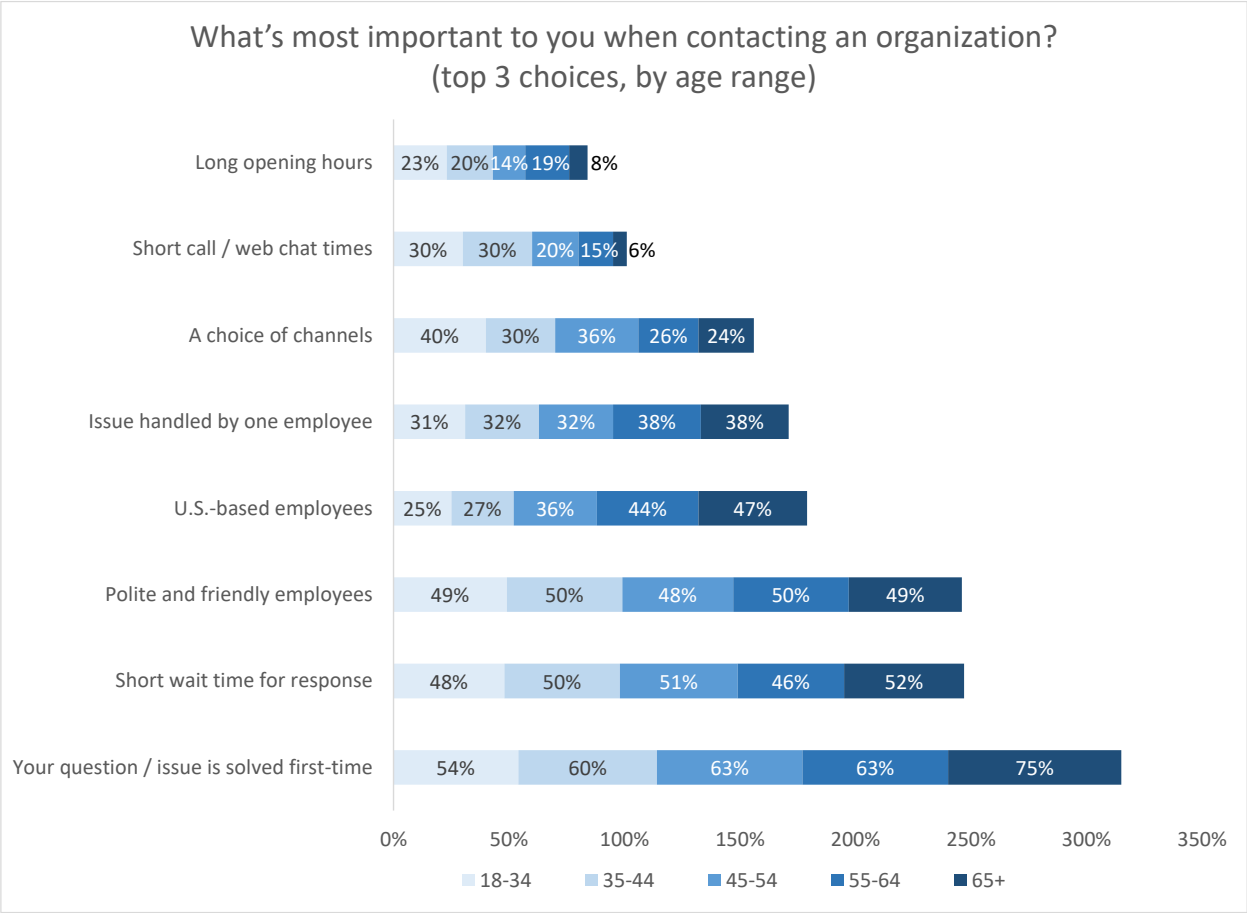
THE VIEW FROM THE CUSTOMER

In order to compare businesses' opinions of the most important customer experience factors with those of actual customers, ContactBabel commissioned the research firm Big Village to carry out a survey of 1,000 US consumers.

As such, consumers were asked to state which were the top three most important factors to them when contacting an organization, with the same factors presented to them that had been offered to organizations within the business survey.

Figures below are expressed as the percentage of each age group that expressed an opinion.

Figure 82: What are the top 3 most important factors to you when contacting an organization by phone or digital channel? (by 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, 54% of the youngest age group (18 to 34 years old) stated that having a question answered first time was one of their top three most important factors, whereas 75% of the oldest age group (over 65 years old) placed this in their top three.

When considering these findings from the perspective of the various age ranges, younger respondents place a greater emphasis on their time than older people, being more likely to rate short call / chat times and long opening hours as being more valuable.

Younger people also value having polite and friendly agents just as much as any other age group, being as important to them as a short queue time or first-contact resolution. This may be because the youngest age group have the least experience of dealing with businesses and contact centers, perhaps lacking some of the confidence that comes with years of speaking with businesses, and to have a friendly and approachable agent is valued very highly.

Younger age groups are also much more likely to value a choice of channels and long opening hours, the latter of which can be achieved through effective self-service options which younger customers are generally willing to try out.

One of the most noticeable differences between ages groups is the requirement for US-based employees, which is very important for older customers, but much less so for younger people.

Older customers are also very focused on first-contact resolution – they do not wish to have to call back – and also want their issue handled by a single employee.

Again, it must be emphasized that unless a business deals almost entirely with older or younger customers, that **all** of these factors are valued highly by a substantial part of their customer base, and need to be addressed.

CUSTOMER SATISFACTION MEASUREMENT TECHNIQUES

Customer surveys are an integral part of most businesses. Many organizations now have "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:

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. Additionally, 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 center is open.

Outbound automated surveys are becoming more prevalent. After the call has been concluded, the caller's number may be put into an outbound dialer'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 email is sent to the customer soon after an interaction takes place, often requesting detailed feedback through open-ended questions.

Typically, more customers who have had a poor experience will bother to complete the questionnaire, skewing the figures, and although some good and detailed learning points can emerge, it's 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.

However, email does allow 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 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 provides far higher take-up rates and more accurate, informed feedback.

Outbound: the contact details of a proportion of incoming callers can 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 formalized 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 center to use this information for agent performance as well as satisfaction with the business.

However, SMS does not support particularly detailed questioning, 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 center 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 and level of insight will be received from each approach.

Regardless of whether or not surveys identify specific agents, a key to customer feedback 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 and missed insight
- 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 analyzed 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 quickly 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 risks not supporting the right behaviors needed to produce superior customer experience. 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.

USING CUSTOMER FEEDBACK

The chart below takes into account the respondents' opinions of the effectiveness of each method of gathering customer insight, sorted by 'very useful', where the method is used.

Respondents rate speech analytics of recorded calls the highest, with 56% of **those using this method** of customer feedback finding it very effective and 18% ineffective.

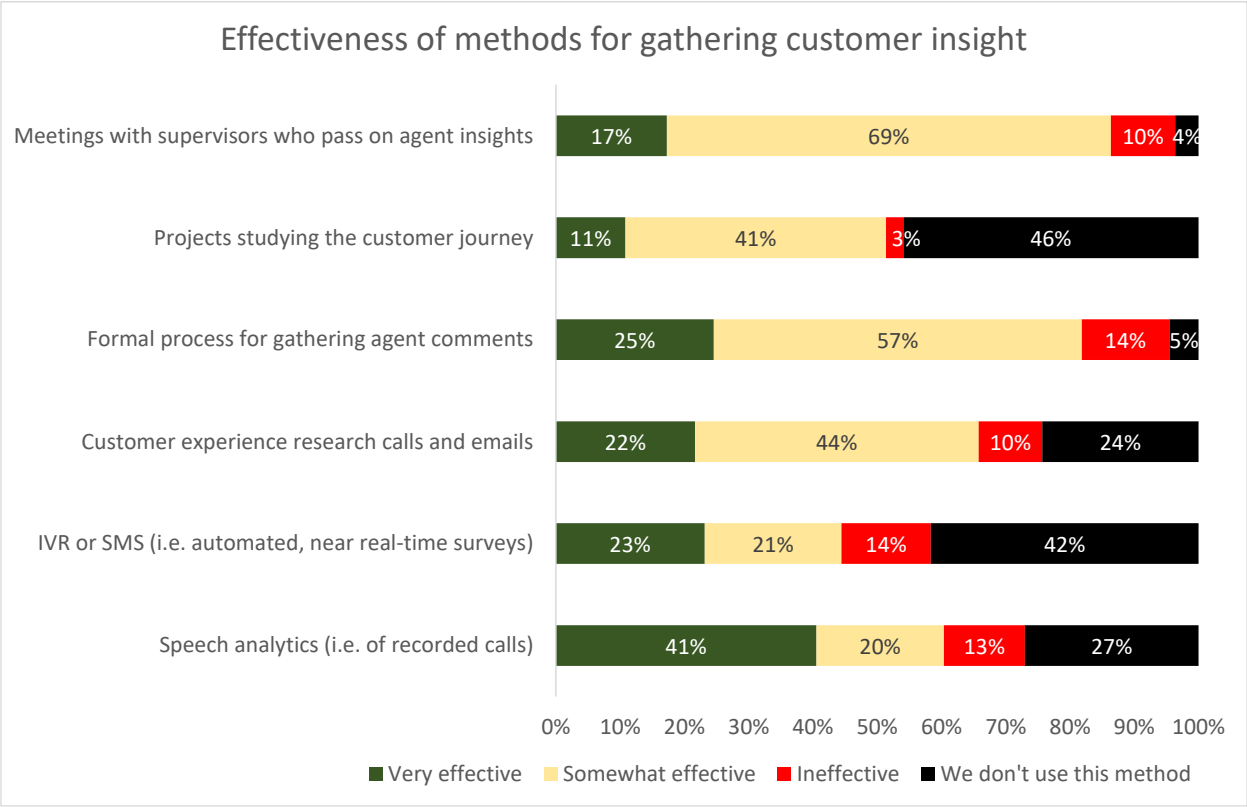
IVR/SMS surveys are also seen as fairly useful, with 41% of those using them stating that they are very effective, although 25% report them ineffective.

Despite the higher incidence of their use, the informal gathering of insight from agents via supervisors is not judged as being especially useful, with only 18% of those using this insight method stating that they are very effective compared to 10% ineffective. A formal process for gathering agent insights is seen more positively.

However, none of the methods of gathering customer insight seem to be hugely popular, and except for speech analytics, are actually declining in usefulness in respondents' eyes.

In the long-term, we would expect automated AI-enabled analytics to be used to extract the meaning and context of customer insights, and present it in a useable way to businesses.

Figure 83: Effectiveness of methods for gathering customer insight



CX BENCHMARKING

Businesses were asked which of six quantifiable benchmarks that they use in order to measure customer experience and satisfaction.

- Net Promoter Score®, 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 than or equal to 6, 'Passives' score 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 to focus upon increasing the number of people that actively advocate for the company, as well considering those who are 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[9]
- Quality scores are based on interaction scorecards on which employees are scored over a number of calls or interactions, 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
- Customer retention rates are generally based on the percentage of customers renewing contracts, and are typically used by businesses within contract-based industries, such as insurance and telecoms
- First-contact resolution rates can be complex to measure, and as no widely accepted external standard is present, this is of most use as an internal benchmarking metric. It is a major driver for both CX and contact center costs
- CSAT (customer satisfaction) scores do not have a fixed and widely-accepted scoring system, but are more 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.

[9] 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 84% of respondents. First-contact resolution rate is used by 65%, NPS 71%, customer retention rate 60% and agent quality scores 68%. Customer effort score is much less widely used and is in place with only 34% of survey respondents.

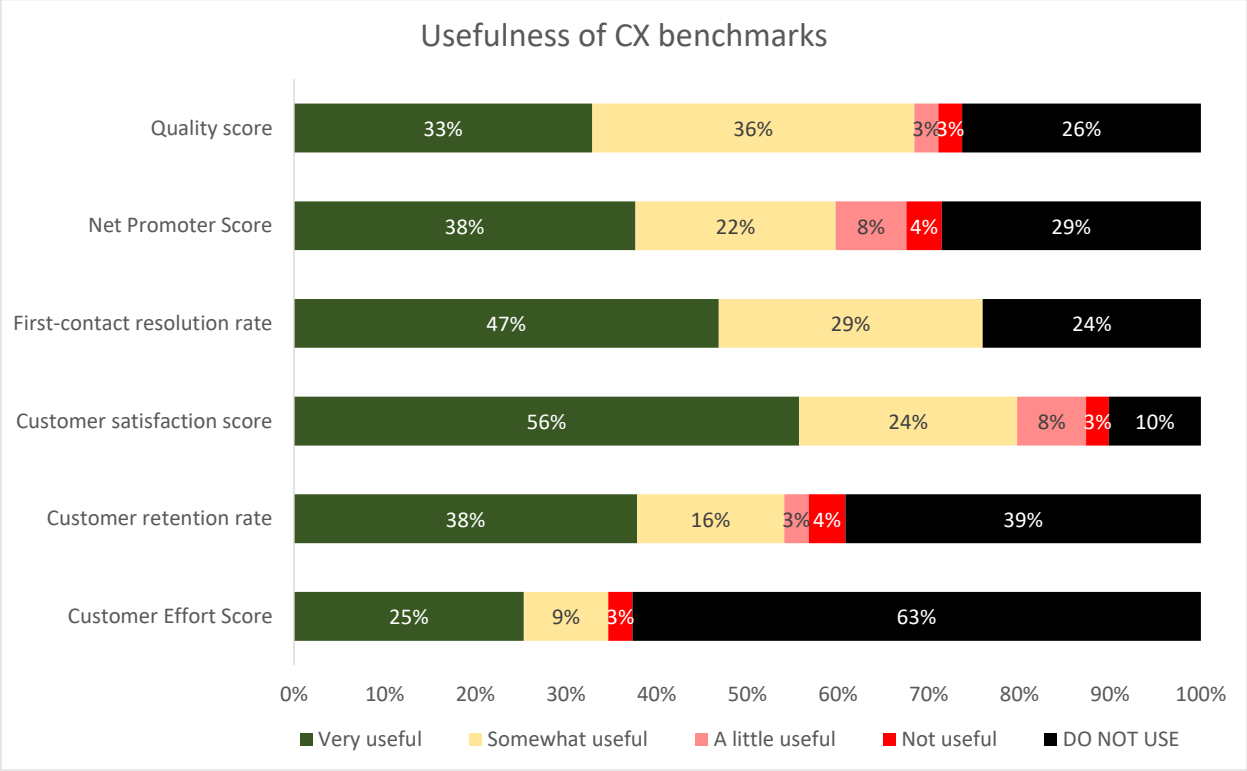
Respondents that used these customer experience benchmarks were asked to rate how useful they were.

The chart below is ordered by the proportion of responses which are stated to be "very useful" by those who use it. Customer effort is rated highest, and quality score the lowest.

68% of the respondents **that used it** stated that they believed that customer effort score was a very useful indicator of customer experience, being the highest-rated metric, although the least used.

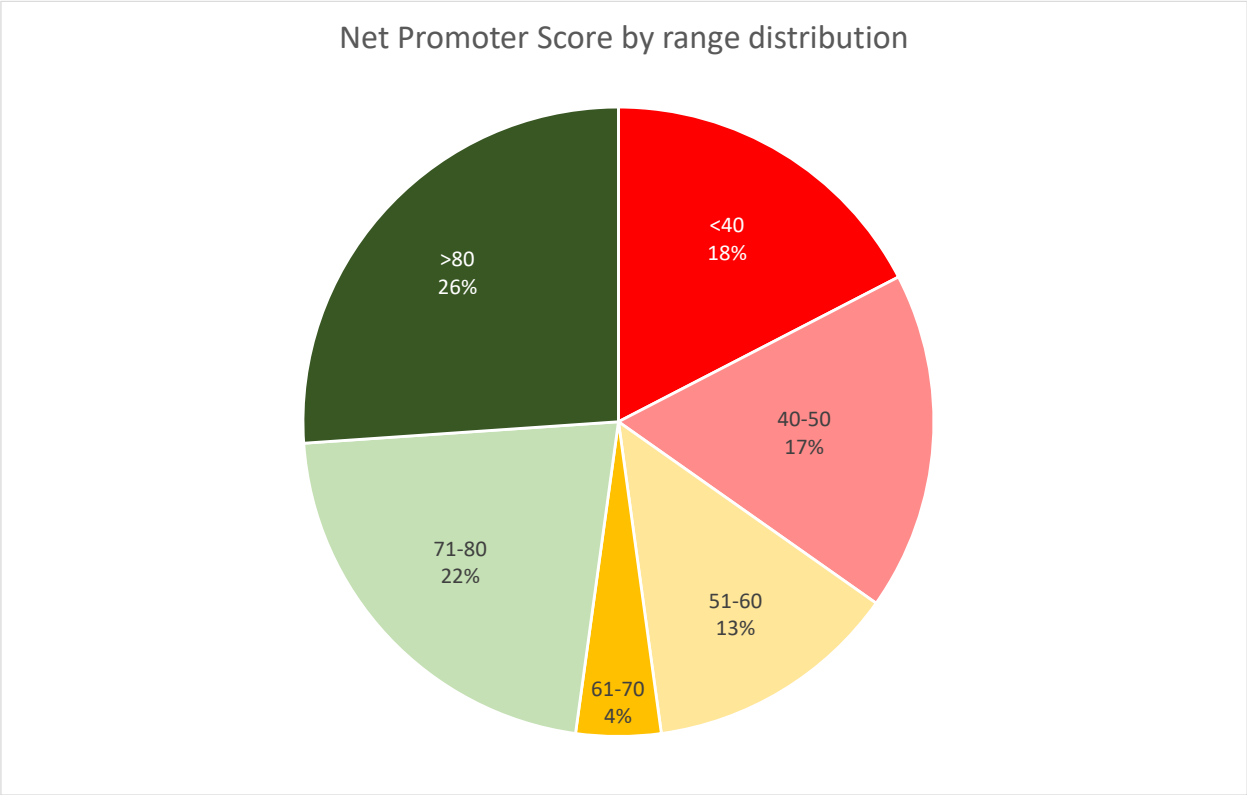
Most of the other customer experience benchmarks received very similar scores, with 50-60% respondents stating that they were 'very useful'.

Figure 84: 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 organizations – 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.

Figure 85: Net Promoter Score by range distribution



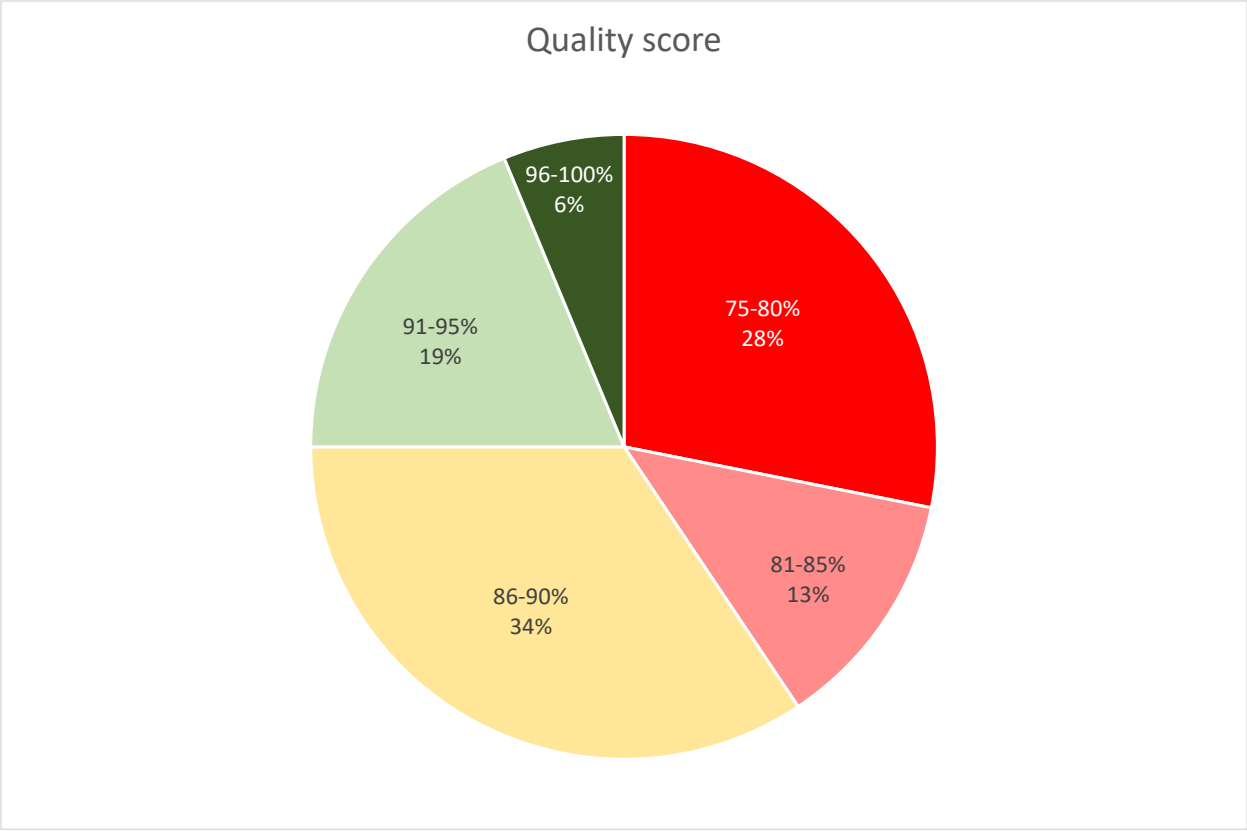
The chart above shows the distribution of NPS across ranges, with 18% of respondents under +40, and 26% at over +80.

Mean average: +63 (2024: +62), against a target NPS of +62. Median NPS is +70.

Looking at quality scores, the fact that there is no single industry-wide quality measurement score made head-to-head comparisons impossible. As such, we have normalized the data to act as a percentage of the maximum (100%).

25% of respondents report a quality score of over 90%, with 28% only achieving 80% or lower.

Figure 86: Quality score



37% of survey respondents are currently missing their quality target, and 44% report beating their target quality score, a decline on last year's figures.

However, the mean average quality score was 99% of target.

In the same way as with quality scores, customer satisfaction scores are not necessarily directly comparable between organizations. However, where possible, the data was normalized as a percentage.

The majority of survey respondents achieve CSAT scores higher than 85%, although 10% report getting CSAT scores of under 75%.

Figure 87: Customer satisfaction score

13% of respondents were more than 10% below their target, with 51% above it to some extent, which is a considerable improvement on previous years.

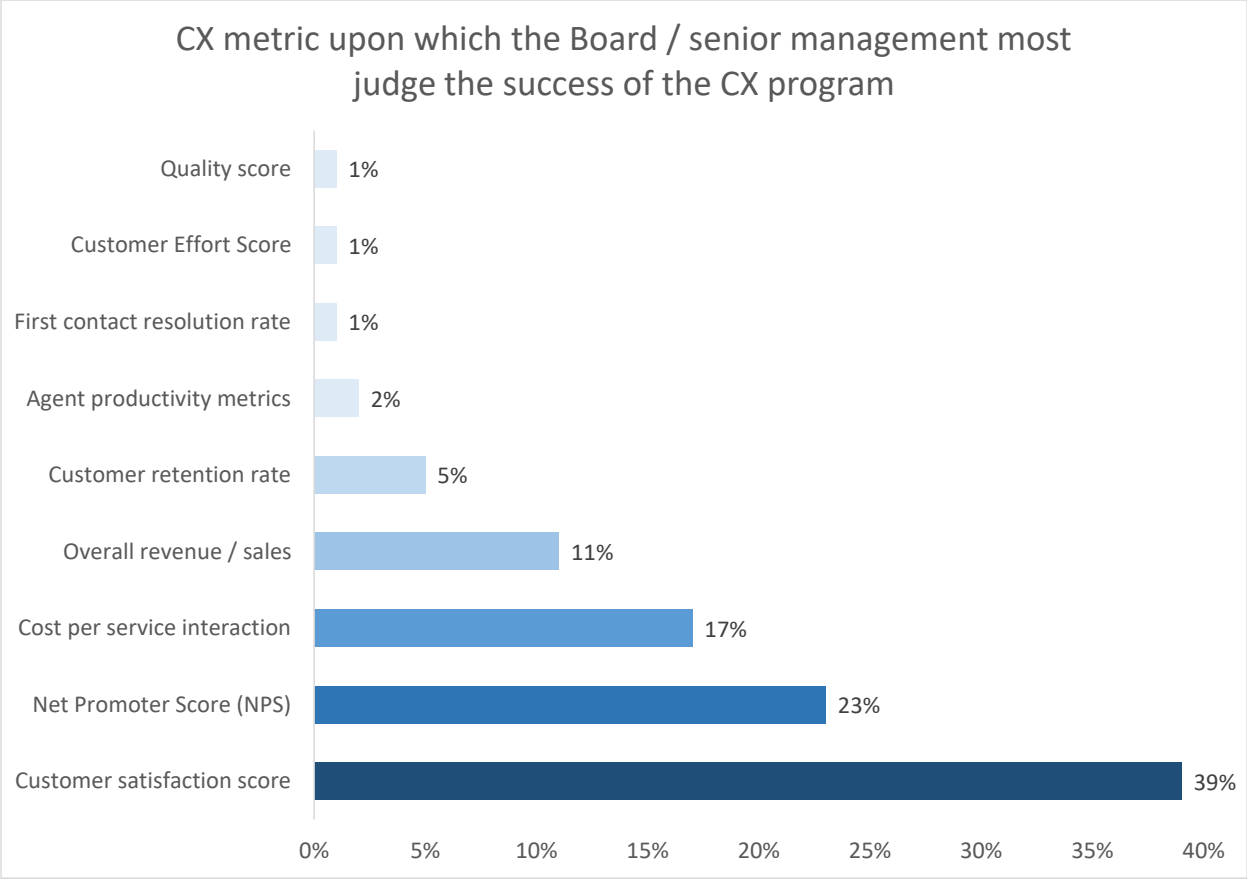
On average, survey respondents report being at 97% of their CSAT target.

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 program.

There was a wide mix of responses, with NPS and customer satisfaction score accounting for 62% of responses.

Of note is the fact that first-contact resolution rate was identified as being the key CX metric for senior management by only 1% 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 88: CX metric upon which the Board / senior management most judge the success of the CX program



COMPLAINTS

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 organization's control, and it is a major form of sub-optimization."[10]

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.

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.

The majority of complaints received are not about the contact center itself (or its staff), but rather 'failure demand', caused by a breakdown of process elsewhere in the organization.

On average, 12% of survey respondents' calls were complaints, and of those calls, 78% were not about the contact center itself (or its staff), but rather 'failure demand', caused by a breakdown of process elsewhere in the organization.

However, the contact center 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 center again and again, becoming more irate each time, despite the real problem lying outside the contact center.

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.

[10] *Freedom from Command and Control: A better way to make the work, work*, by John Seddon

CUSTOMER EFFORT, ENGAGEMENT & FIRST-CONTACT RESOLUTION

For most businesses, there is no fixed agreement on what a successful contact center looks like: even in similar industries, around half of businesses state that a contact center is a strategic asset, with the other half seeing it as an operational cost center.

It can be stated with some confidence that first-contact resolution is widely seen one of the keys to a successful contact center: while ContactBabel research consistently 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, and alongside speed to answer is the main driver for positive customer experience.

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.

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.

FIRST-CONTACT RESOLUTION AS A CUSTOMER EXPERIENCE DRIVER

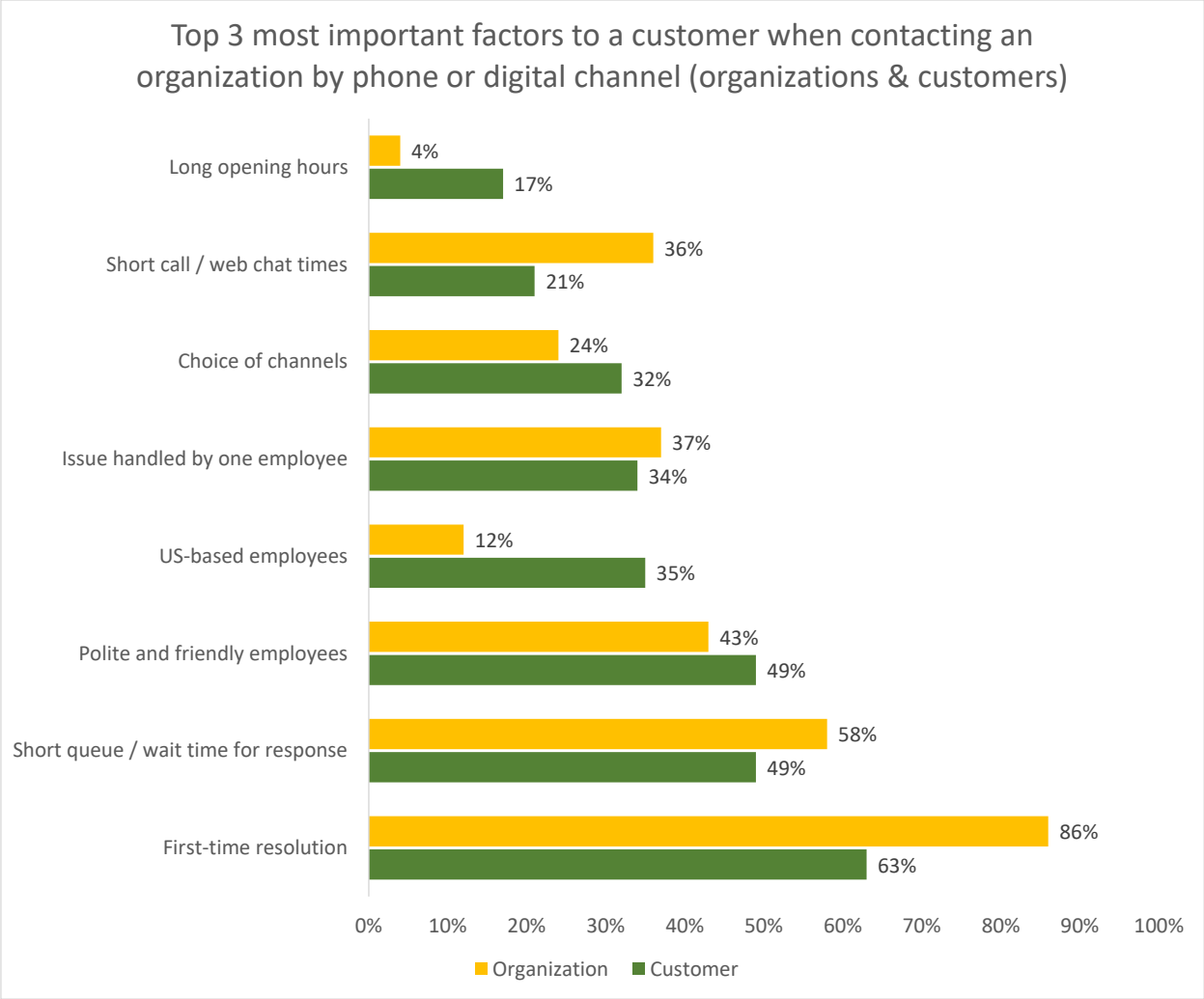
ContactBabel commissioned the research firm Big Village to carry out a survey of 1,000 US consumers.

One of the purposes was to identify any differences in opinion between organizations and customers about what were the most important customer experience factors when contacting an organization.

As such, consumers were asked to state which were the top three most important factors to them when contacting an organization, with the same factors presented to them that had been offered to organizations within the business survey.

Figures below are expressed as the percentage of each age group that expressed an opinion.

Figure 89: Top 3 most important factors to a customer when contacting an organization by phone or digital channel (organizations & customers)



This consumer research has some interesting findings when comparing consumer attitudes to businesses' beliefs:

- both businesses and consumers agree that first-contact resolution, short wait times and polite & friendly agents are the most important factors impacting upon customer experience when contacting a business
- long opening hours are judged more important by customers than businesses, especially for younger customers
- having US-based employees is seen as far more important to customers than businesses believe, particularly for the older generation.

THE IMPACT OF CHANNEL CHOICE ON CUSTOMER EFFORT

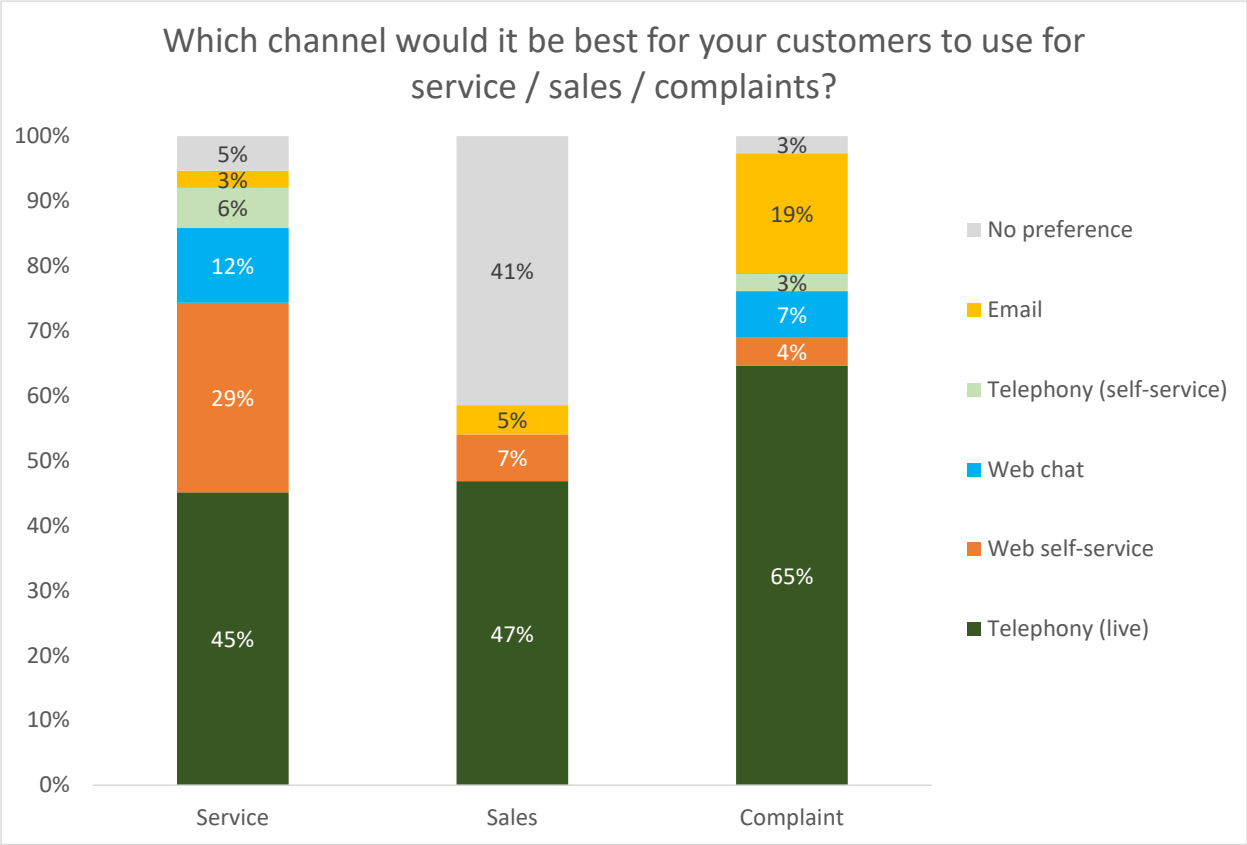
Survey respondents were asked to assess which channel they would recommend customers to use if they had a complaint, a sales query or a service query.

Telephony is the most frequently recommended specific 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.

No survey respondents recommended social media to be the best way to get anything resolved, although web chat looks to have its place for service queries in a small proportion of operations.

Figure 90: Which channel would it be best for your customers to use for service / sales / complaints?

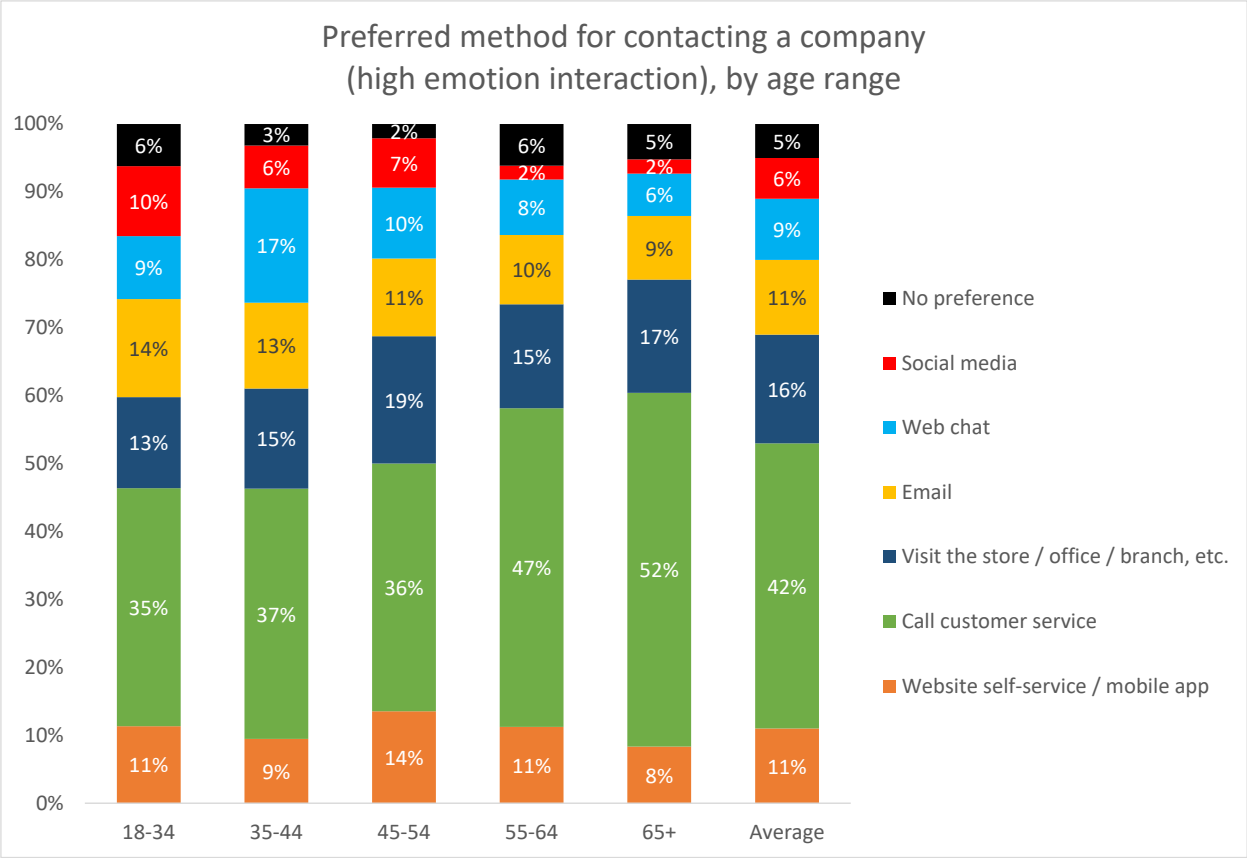


Summarizing, the telephony channel is recommended to customers as the primary channel for many queries (and is in fact growing each year). The following chart shows what customers believe is best for them.

The survey of 1,000 US consumers carried out for "The US CX Decision-Makers' Guide" [11] 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 show here the preferred channels for the 'high emotion' scenario, that of receiving a 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.

Figure 91: Preferred method for contacting a company (high emotion interaction), by age range



The most popular option is to phone the organization, with 42% of respondents choosing this method. A physical visit to the store was the next most popular, with email and web self-service each being chosen by 11% of survey respondents.

There was a strong pattern based on the age of the survey respondent and their preferred channel: the older demographics were the most likely to pick up the phone.

[11] Available free at http://www.contactbabel.com

Web chat was a popular option with the 35-44 age group, and email is most popular with the younger cohorts.

10% of the sub-34 year-old age group would choose social media, which is a significant finding for businesses serving these customers.

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. It is also the case that some channels – such as telephony – are relatively unused by some demographics: for most younger people, a phone is something to use to send messages or post content, rather than for speaking to someone.

Customers do not just choose to use the channel of least effort: they choose the channel which is the least effort to them **personally** (both in terms of time and stress) , 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.

Many younger customers actually get stressed about the idea of calling a contact center, and will try to avoid this wherever possible (note the great importance that the youngest demographic places on having 'polite and friendly agents').

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.

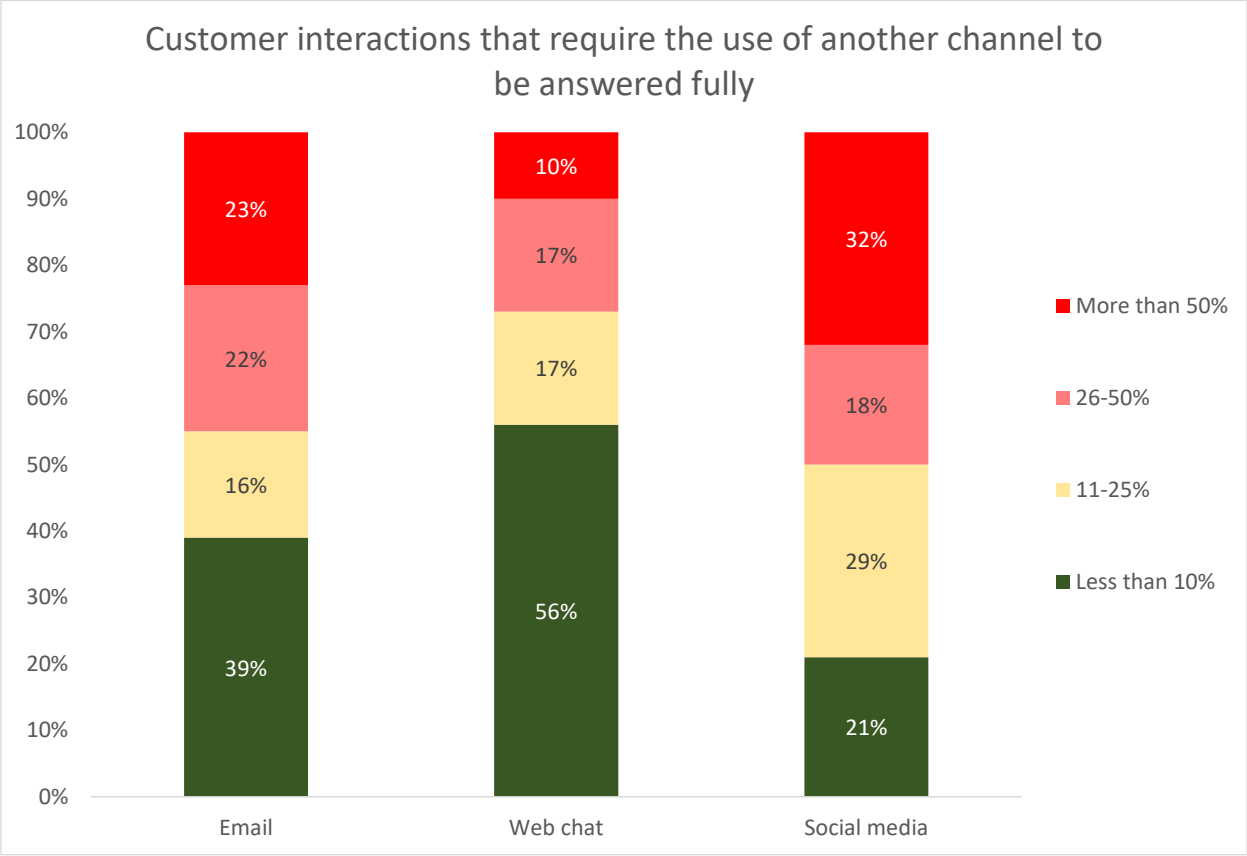
All channels will sometimes fail to deliver, and how that failure is then handled impacts upon overall success.

CHANNEL 'FAILURE' AND CUSTOMER EFFORT

Businesses estimated 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 92: Customer interactions that require the use of another channel to be answered fully



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.

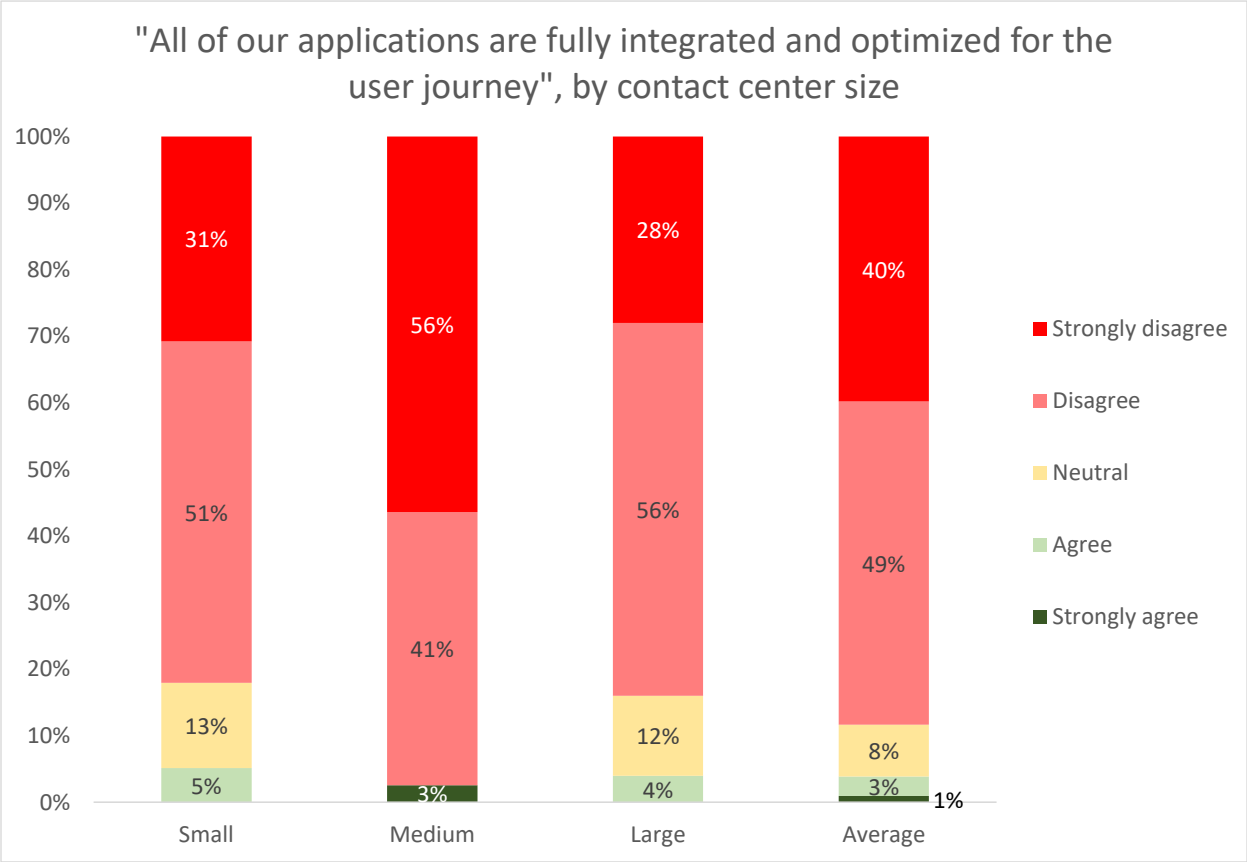
Therefore, a seamless, contextual omnichannel experience is necessary to reduce customer effort, and make sure they don't have to start from the beginning in the next channel.

In reality, this seamless movement between channels, systems and processes seems rare.

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

89% disagreed that this was the case, with mid-sized contact centers most likely to state that there was still a general need for much deeper integration of applications.

Figure 93: Agreement with statement: "All of our applications are fully integrated and optimized for the user journey", by contact center size



FINDING THE REASONS FOR UNNECESSARY CUSTOMER EFFORT

Not all customer interactions are strictly necessary. Some come from failure demand: issues arising elsewhere in the organization that then drive customers to contact the business, which the contact center then has to deal with.

Others come as a result of customer issues not having been handled correctly first-time, either as a result of the contact center's actions or – more usually – failure of action elsewhere. This is what the first-contact resolution metric looks to measure.

Businesses should consider the reasons for these unnecessary calls, rather than just focusing upon a single metric, as high first-contact resolution (FCR) rates may actually be masking underlying problems:

- The contact center 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 center to emerge, which can then be addressed more fully.

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.

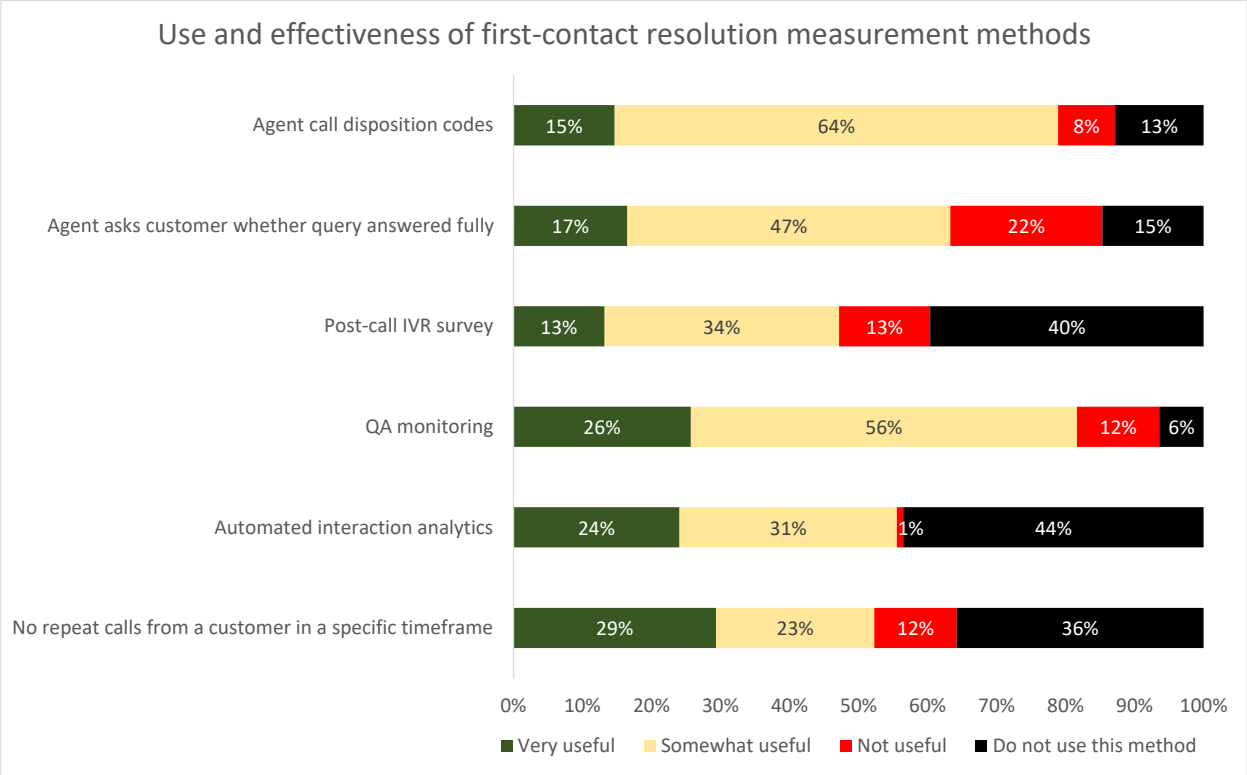
The first-contact resolution rate is an important metric to study, being concerned both with the customers' experience as well as avoiding unnecessary calls. However, it is very difficult to measure effectively, with no single best practice method of getting definitive statistics that are directly comparable to the rest of the industry. As such, it should primarily be used as an internal metric to gauge performance over time.

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 87% of respondents)
- Tracking of issues shows if they are re-opened (64%)
- Supervisors monitor calls and score based on their opinion (94%)
- Customers can be asked their views by the agent (85%) or through an IVR survey (60%)
- Analytics of interaction recordings can be used to see whether the call was actually resolved or more interactions were needed (56%).

The accurate tracking and actionable insight of FCR is one of the biggest challenges to the contact center industry: it is key to customer satisfaction and cost management.

Figure 94: Use and effectiveness of first-contact resolution measurement methods



The chart above is ordered by the highest proportion of respondents **who use the method** reporting it as 'very useful'.

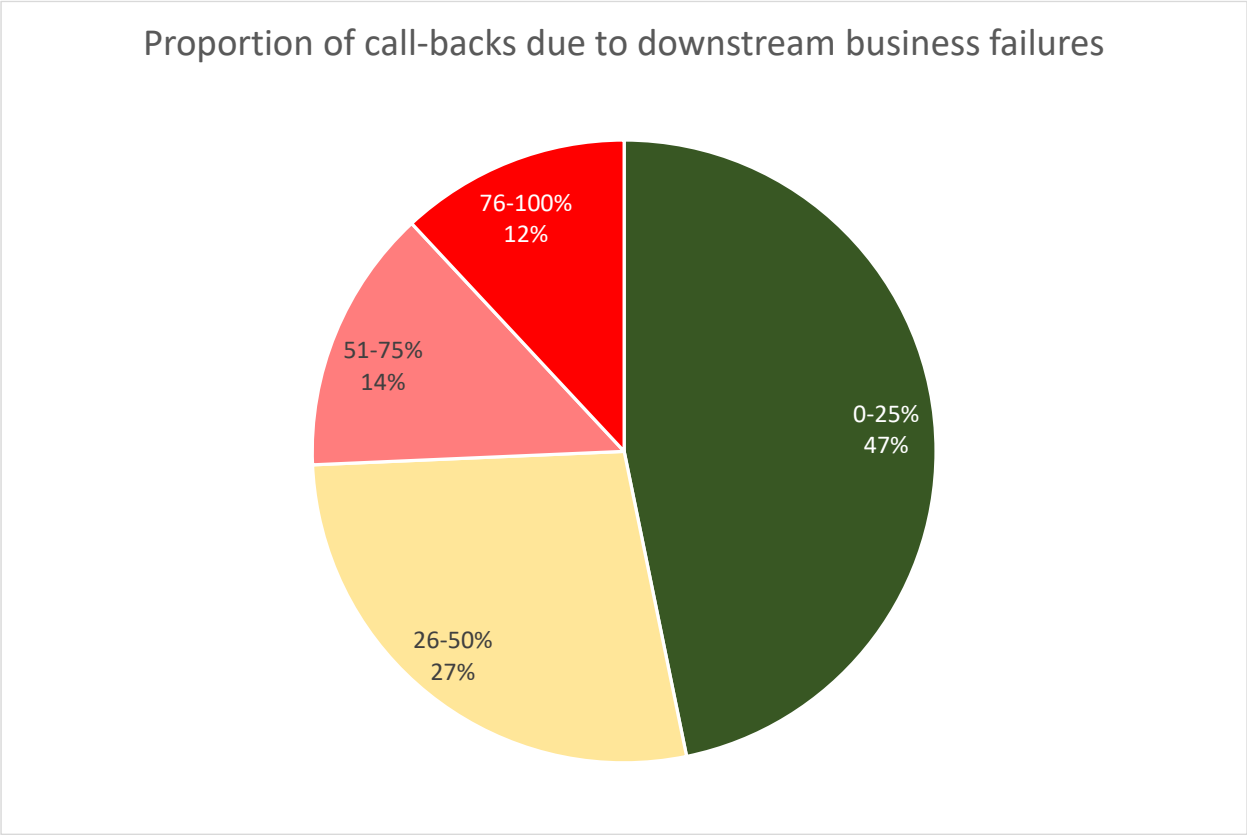
For example, having no repeat calls in a specific timeframe is used by 64% of respondents, 45% of whom rated it very useful. Agent call disposition codes were seen as very useful by only 17% of those using them.

QA monitoring, the most widely-used form of gathering first-call resolution information, is seen as very effective by 28% of users, but automated analysis of call recordings is considered better, with 43% of users finding it very useful. Other methods have their supporters and detractors.

It is worth noting that the majority of contact centers 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. 80% or more of complaints received by a contact center are about the failings of the wider business, so focusing only upon the contact center's work is missing the point of measuring FCR.

The following chart shows that 26% of respondents report that the majority of their call-backs are due to failures in downstream processes and actions (or lack of them), demonstrating a need for joined-up processes between the front and back-office as well as between channels. These figures indicate that around 35% of call-backs are due to downstream business failures.

Figure 95: Proportion of call-backs due to downstream business failures



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 greater insight, contact center managers may not be addressing the real issues 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 AI-enabled interaction analytics being directed at understanding why customers contact a business multiple times.

CUSTOMER EFFORT WITHIN THE CALL

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.

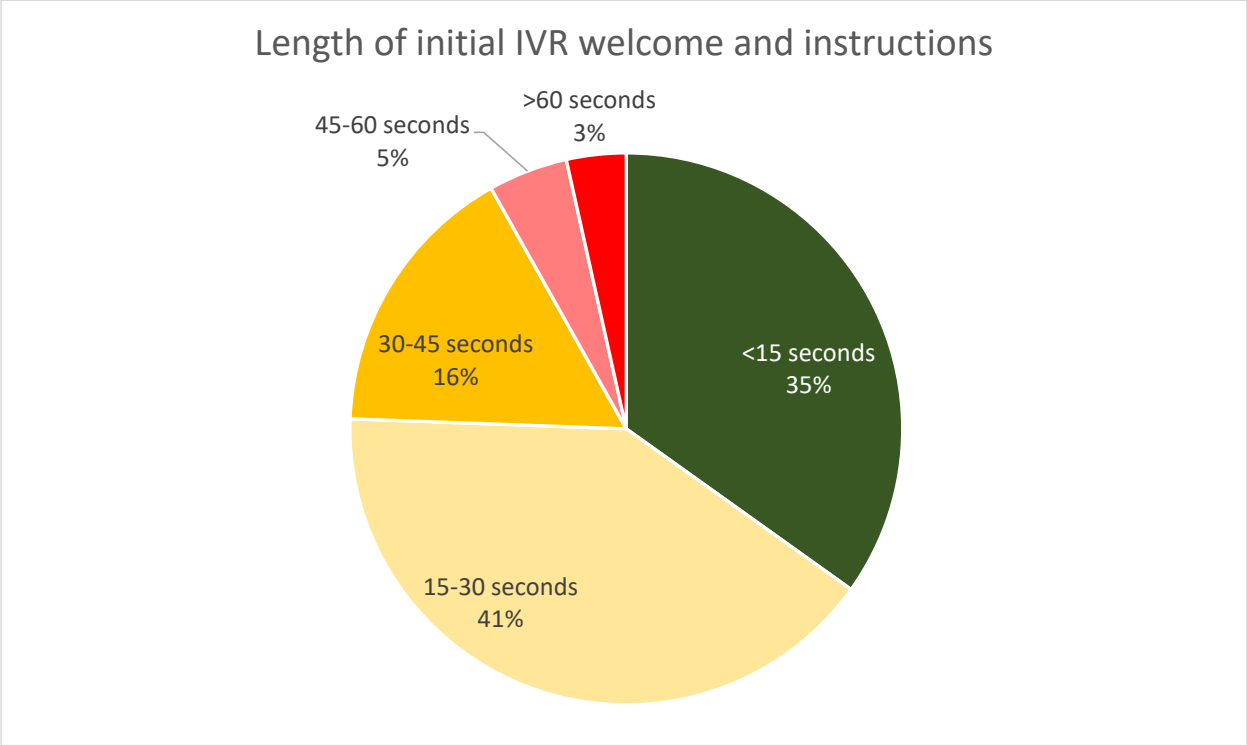
Many customer interactions begin with an IVR session. For many customers, IVR is seen as a way for the business to put up a barrier between them, involving a long and tortuous path before actually getting to speak with someone.

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).

24% of initial IVR announcements take more than 30 seconds, which seems like a lot for customers to have to listen to, when all they want to do is talk to someone.

Figure 96: 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 11% of respondents keep it simple with a single-level of options, e.g. "Press 1 for Sales; 2 for Service; 3 for Accounts".

31% 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, and even 25% of small contact center respondents report doing the same.

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 centers 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 medium and large contact centers, with more than half of respondents from large operations reporting that they offer seven or more routing options to their customers.

Intelligent virtual agents (IVAs) or voicebots will become increasingly used in the voice channel to handle self-service and routing requests, removing the need for touchtone IVR and for customers to navigate long-winded menus.

CUSTOMER IDENTITY VERIFICATION

Live agent authentication accounts for 84% of the calls that require customer identity to be proven. 14% of calls are authenticated with DTMF touchtone IVR and 4% use speech recognition to identify the caller, which takes an average of 42 seconds. Less than 1% are handled through voice biometrics.

Respondents from large contact centers with far higher volumes of calls have historically been more likely to use some form of automation – usually DTMF IVR – to authenticate customers.

However, some 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 center's costs. This 'double checking' is the reason for the figures in the chart below adding up to more than 100%.

Figure 97: Caller identity authentication methods (only those contact centers which authenticate some or all calls)

Identification method	Proportion of callers identified using this method
Agent	84%
DTMF IVR (touchtone)	14%
Speech recognition	4%
Voice biometrics	<1%
NB: total is greater than 100% as some calls may require multiple identification methods	

MEASURING CUSTOMER EFFORT

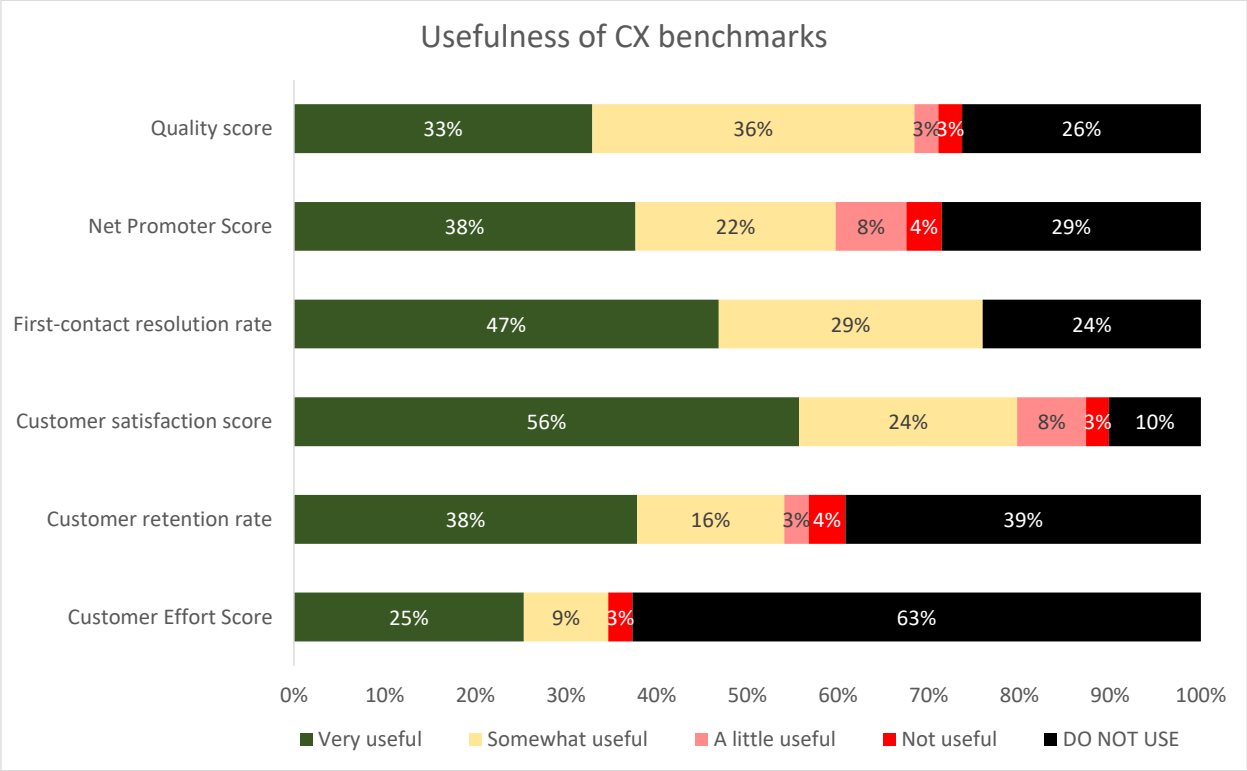
Customer effort scores look to understand the ease or otherwise with which the customer has interacted with the company on a particular occasion. Often, there will be a five-point scale running from "very easy" to "very difficult", which can be converted into a quantitative metric. Various methods of calculating customer effort scores and pitfalls to avoid can be found within this referenced article[12]

Respondents that used these customer experience benchmarks were asked to rate how useful they were.

68% of the respondents **that used it** stated that they believed that customer retention rate was a very useful indicator of customer experience, being the highest-rated metric, although the least used.

Most of the other customer experience benchmarks received very similar scores, with 50-60% respondents stating that they were 'very useful'.

Figure 98: Usefulness of CX benchmarks



While 68% of the survey respondents **that used** customer effort score said it was a key metric for them, this does not yet seem to have struck a chord at the highest levels of most businesses.

[12] https://www.callcentrehelper.com/how-to-calculate-customer-effort-94671.htm

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 program.

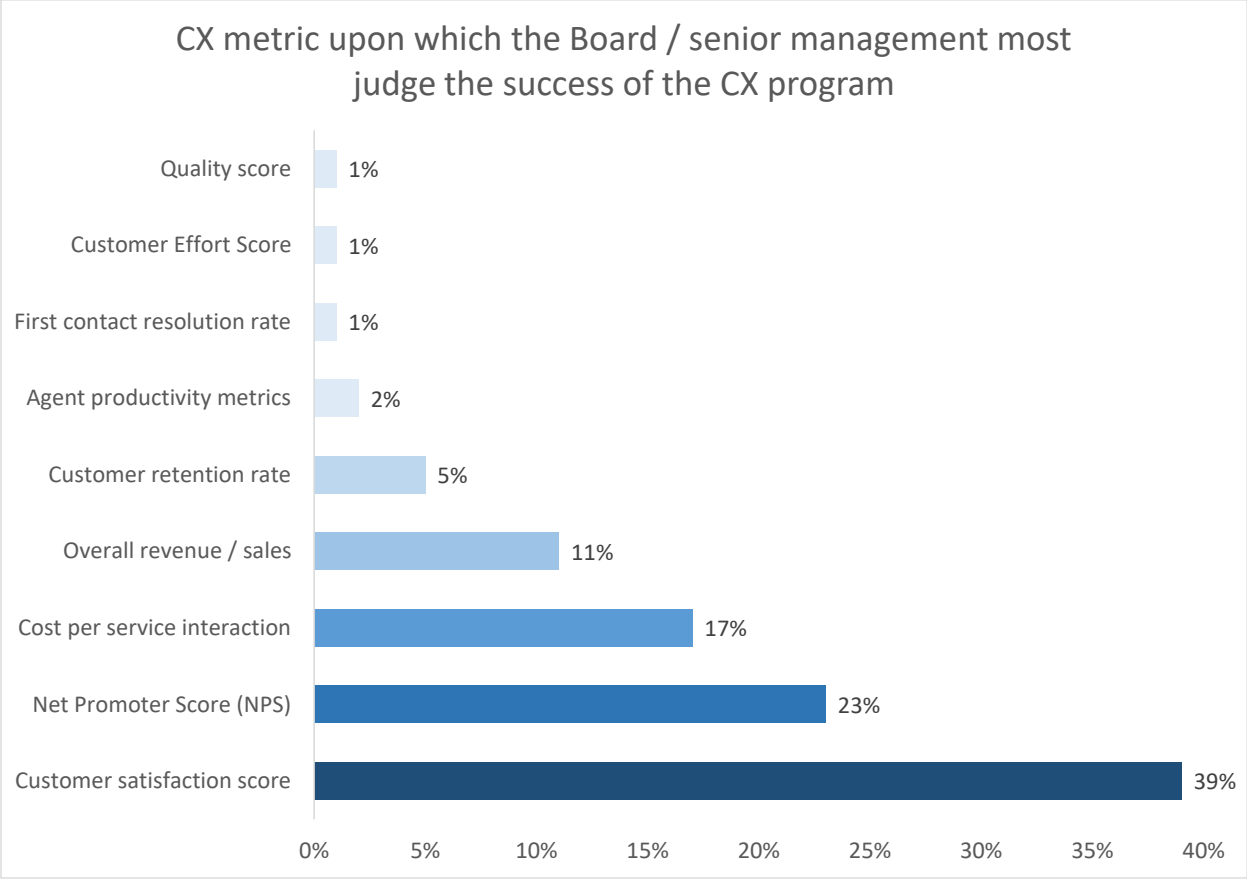
There was a wide mix of responses, with NPS and customer satisfaction score accounting for 62% of responses.

Interestingly, despite customer effort score being stated as a very useful CX benchmarking metric, only 1% of respondents stated that it was the CX metric considered most important by the senior management team.

Also of note is the fact that first-contact resolution rate was identified as being the key CX metric for senior management by only 1% 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 center and its customers.

Figure 99: CX metric upon which the Board / senior management most judge the success of the CX program



CUSTOMER PERSONALIZATION

Moving beyond the mass-production model employed historically in many contact centers, customer personalization has become of great interest to businesses looking to improve their customer experience within the contact center and other service channels.

By doing so, businesses aim to extend the positive reach of the brand beyond the original marketing touch points, keeping customers positively engaged and turning them into loyal, long-term advocates for the organization.

To do this effectively at scale, there are numerous requirements, solutions and techniques including:

- a clean and preferably large pool of customer data that is accessible in a timely fashion by any person or system that needs it
- the segmentation of customer types and personas which provide a starting point for understanding the requirements of a particular customer and make successful outcomes more likely
- understanding what each customer – or certainly, customer type – most values in an interaction
- various customer identification techniques – preferably requiring a low effort from the customer themselves – which can then allow other systems to decide how best this particular customer can be served
- the automated analysis of large pools of customer data will allow businesses to recognize likely customer intent and predict the next best action, whether through a live agent or automated system
- the ability to understand all elements of the customer's history, including all interactions regardless of channel
- support for agents to employ empathy and active listening skills and act upon what they hear: customer engagement isn't all about technology solutions
- the capability to offer consistent levels of service across any channel that the customer chooses to use
- agent assistance and augmentation solutions which can provide an agent with relevant information and suggest successful actions and resolutions in real-time
- the ability not only to ask and measure what customers feel about their experience, but then to act upon this immediately: for many instances of negative feedback, a successful customer rescue can in fact lead to greater long-term advocacy and brand loyalty.

In order to offer personalized service at scale and have the chance to engage every customer across every channel with something beyond the charm and competence of your best agents, a supporting structure should be put in place, including customer segmentation and an omnichannel environment.

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 personalization to the contact center's strategy
- Context- and location-specific service
- Understanding the channel of choice
- Optimizing and personalizing the IVR experience
- Call routing decisions
- Supporting the agent to help the customer through dynamic scripting, real-time analytics and emotion detection.

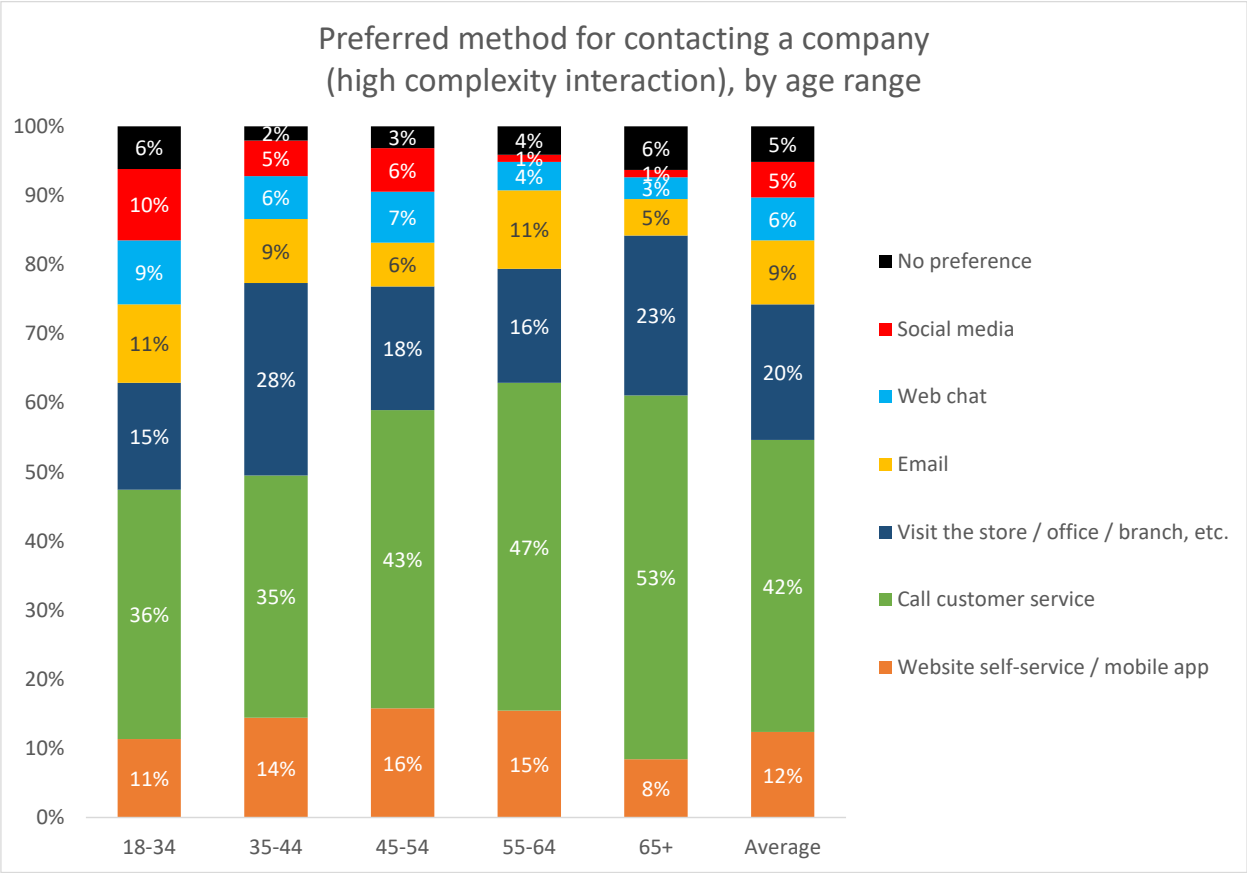
More ideas on how to improve customer personalization can be found in "The Inner Circle Guide to Customer Engagement & Personalization."

THE CHANNEL OF CHOICE

The single largest finding from a ContactBabel survey of 1,000 US 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 social media and web chat 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 100: 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 personalized 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 favor 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 US Customer Experience Decision-Makers' Guide".

Businesses can reach a better understanding of their customers' requirements by analyzing 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 customized to the needs of that specific customer, starting from the time that they connect with the IVR menu.

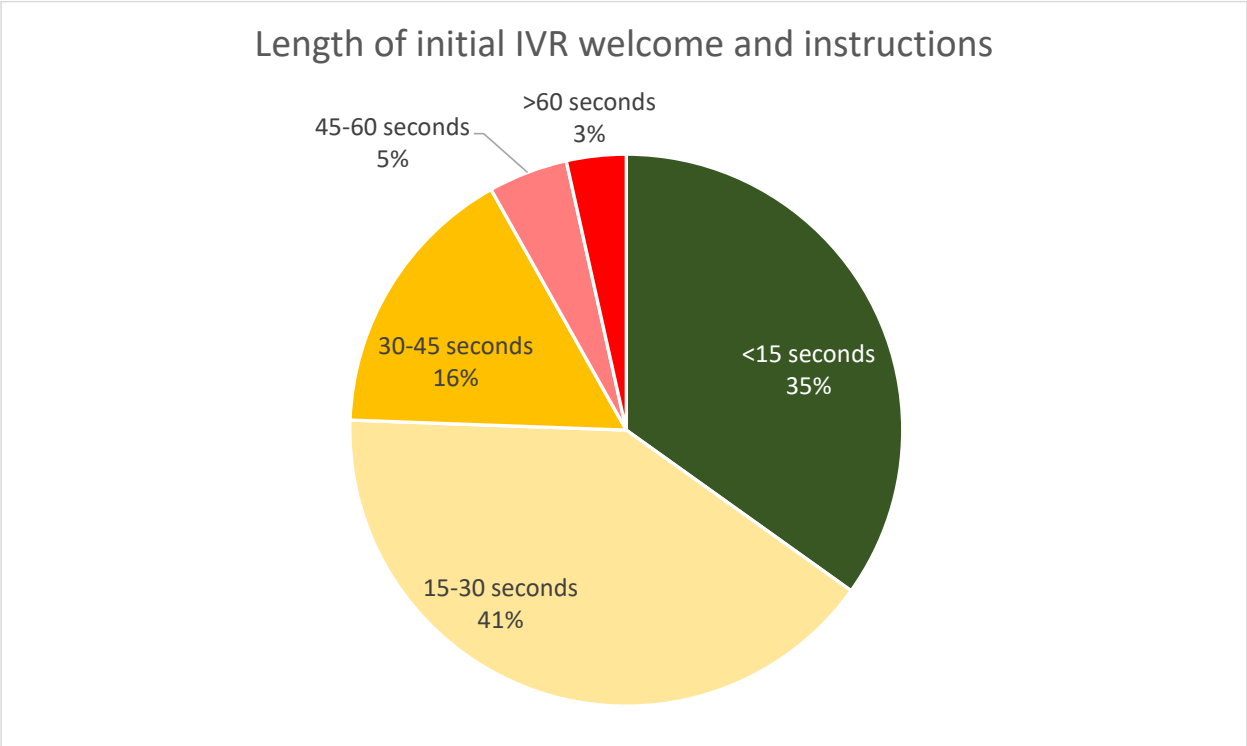
THE IVR EXPERIENCE

The majority of customer phone 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).

Figure 101: 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 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.

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 use voicebots and IVAs (intelligent virtual agents), which use natural language understanding to gather information about what the customer wants to do, and then either provide self-service or route them to the correct department. More information about this can be found in the "Voice AI & Voice Self-Service" chapter.

By identifying a customer within a self-service process, and by personalizing and contextualizing offers that they may be interested in based upon their profile, history and what they are searching for now, businesses can improve their cross-selling and up-selling rates.

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.

Putting such systems and processes in place will allow the seamless escalation of service requests within channels, and also give 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 center 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 personalized 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.

Analyzing 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. Categorizing types of calls, and then analyzing 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 analyzed 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 center, rather than the customer purchasing on the website.

The automatic categorization 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.

References to competitors and their products can be captured, analyzed and passed to the marketing or pricing teams to provide them with real-life, rapid and accurate information upon which to base decisions.

This categorization 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.

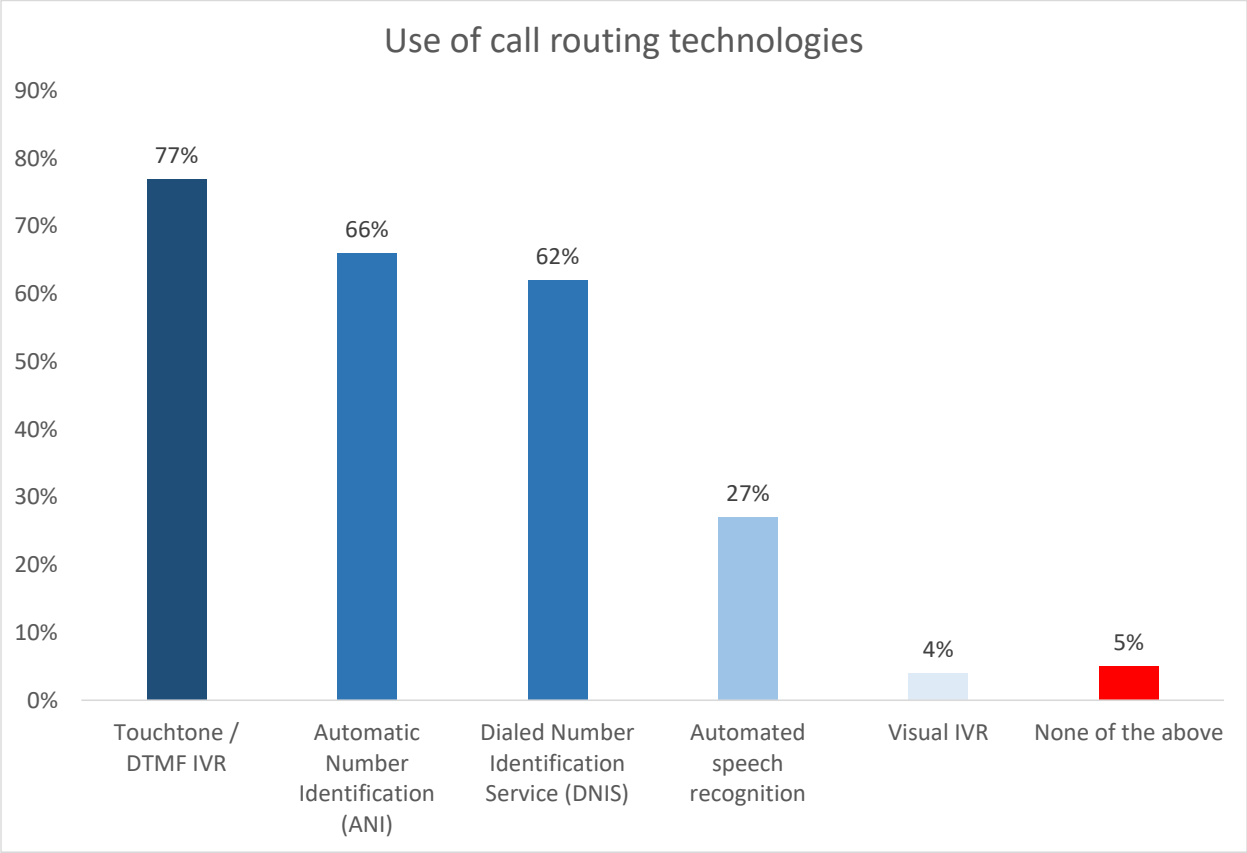
This information can be matched against customer profiles, or those which have recently carried out specific actions, in order to predict why they are calling, and either offer the correct self-service option, or proactively communicate the required solution.

ROUTING AND CUSTOMER PERSONALIZATION

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 102: 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 automatic number identification (ANI) 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 ANI to identify a region or country and route appropriately without looking up who the customer is, but these are not included in this figure.

Figure 103: Pre-call personalization actions

Method	% of respondents using this method
Identify the customer	62%
Access the customer's records and history in the CRM system	60%
Identify the skills and capabilities that the agent answering the call is likely to need	47%
The subject that the customer wants to discuss	38%
Identify whether the agent that last talked with this customer is available to take the call	18%
None of the above	*23%*

47% 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.

38% 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 62% actually identify the customer, with 60% accessing these records within the CRM system in order to deliver this to the agent desktop.

Only 18% identify whether the agent who last spoke to this customer is available, an option which could be used to personalize the call and develop the relationship and understanding between the customer and business.

23% of contact centers 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 centers 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 behavioral analytics and routing.

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 analyze 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 center; 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 analyzing 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 behavioral 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 behavioral 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 analyzing 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 dialing 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.

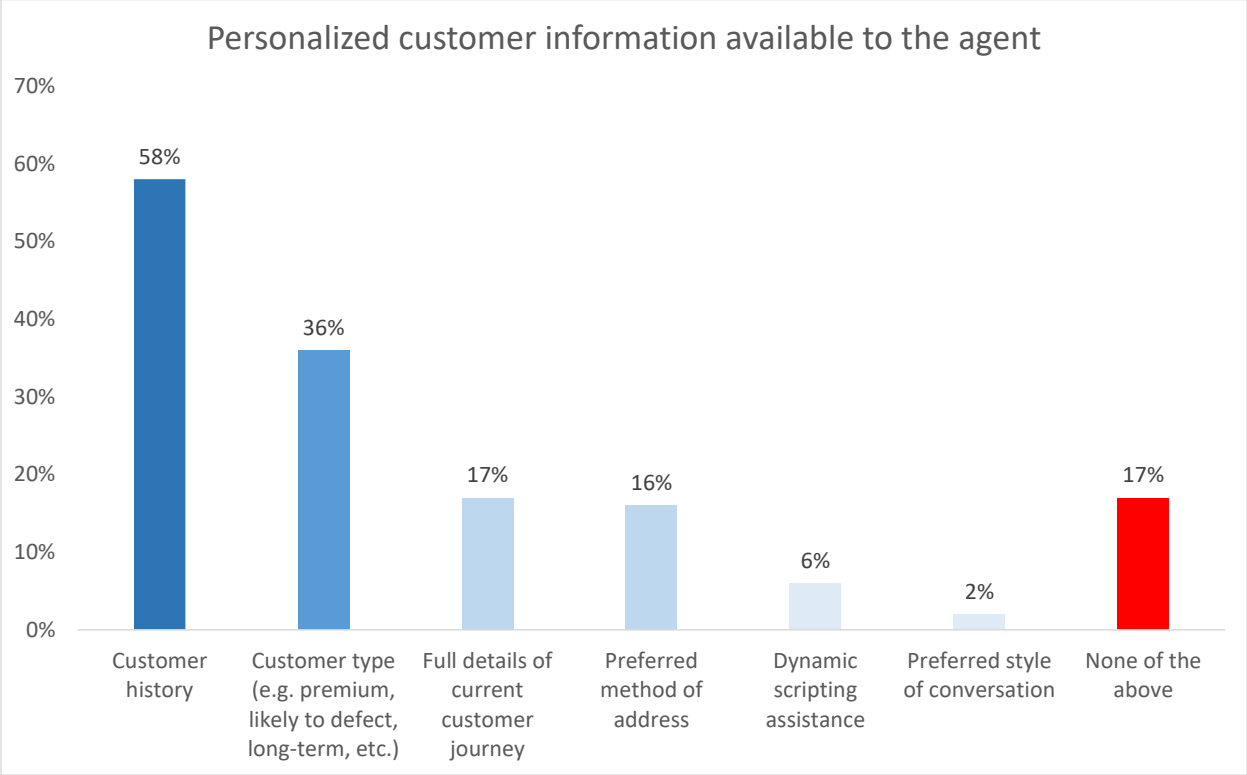
This increase in empathy and the matching of communication styles has seen these matched agent-customer pairings get significantly higher sales closure rates and better customer satisfaction scores.

HELPING THE AGENT TO HELP THE CUSTOMER

Once the customer has been identified and the call has been routed to the agent, greater personalization 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 104: Personalized customer information available to the agent



58% of contact centers report that the agent has a full view of the customer history, including any non-voice interactions. 36% provide the agent with an understanding of the type of customer they are speaking with.

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 6% 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 is part of AI-enabled agent assistance, an important and growing part of the armory that contact centers 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.

AI agent assistance 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.

Many solution providers have worked hard to bring new or improved AI-enabled solutions to market that 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 agent support is crucial: long delays can mean missed, inappropriate or sub-optimal sales opportunities being presented; cancellation alerts can show up too late; script compliance violations may occur as the call has already ended.

However, it is important not to get carried away with real-time agent support, 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.

Some vendors argue 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.

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 well be the case 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.

Away from live phone calls, using AI) for analytics will allow the business to provide customers with personalized 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 realized it, on a personalized basis.

HR MANAGEMENT

With staffing accounting for up to 75% of a contact center's operational cost, issues such as attrition, recruitment and training are always towards the front of any contact center manager's mind.

This section looks at how time and money are spent on the human element to contact centers, how contact center decision-makers view their agents' performance and morale, and what they are doing to support their agents' performance.

This section contains top-level information around contact center HR benchmarks such as attrition and absence.

"The US Contact Center HR and Operational Benchmarking Report" gives detailed analysis of salaries, attrition and absence, segmented by vertical market, contact center size and contact center activity type where relevant.

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.

ATTRITION, ABSENCE AND SALARIES

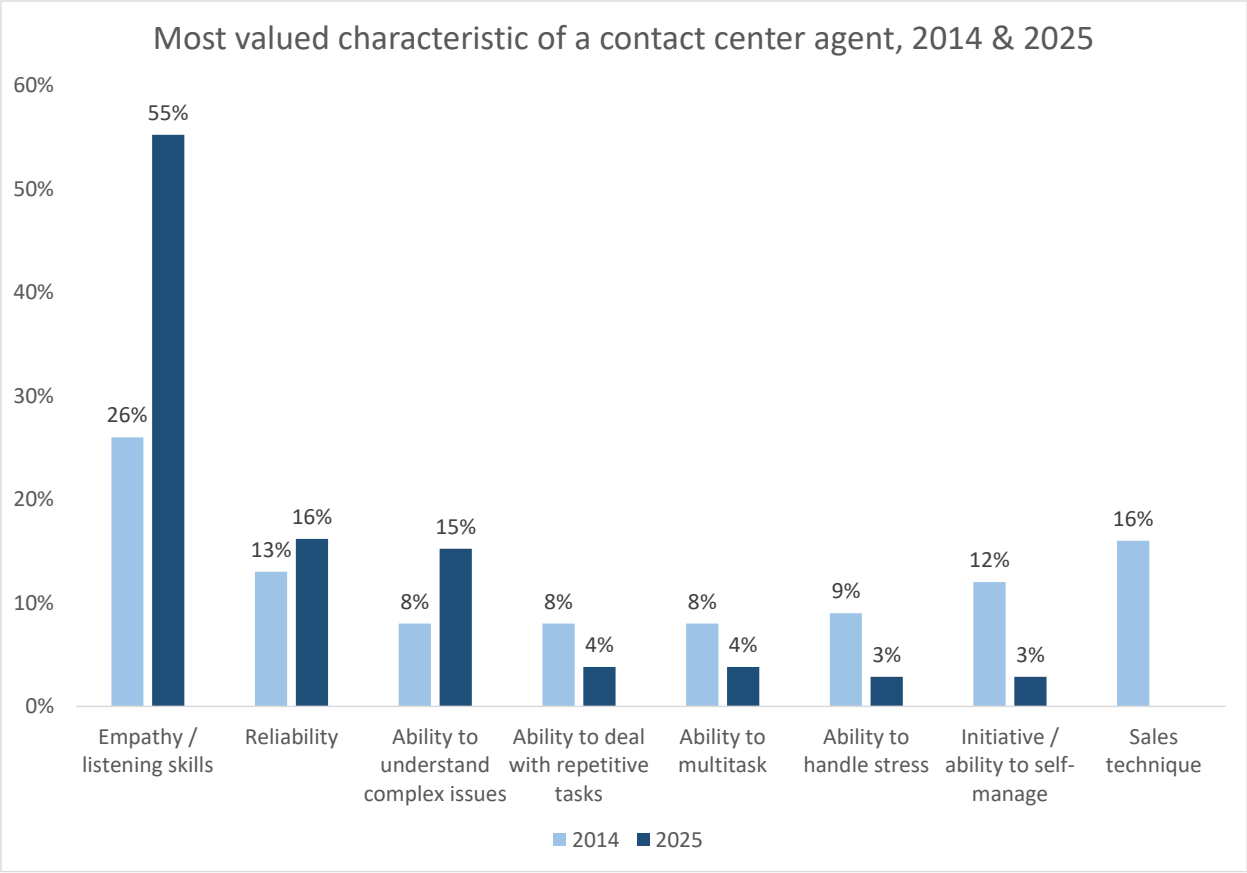
55% of respondents this year's survey state that the most valued characteristic of a contact center agent is their ability to listen and empathize with the caller. This ability is seen as being far more important than initiative, being able to handle stress, multitask, sell effectively or understand complex or technical issues.

While some people naturally have this skill, experience and directed training can maximize 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 or of a type where the customer needs reassurance and empathy.

This is proven by the very significant increases in average call duration with the typical inbound service call rising in length by around 80% since 2003.

Figure 105: Most valued characteristic of a contact center agent, 2014 & 2025



This focus on empathy has risen from 26% in 2014, and the need for agents to understand complex issues has also risen, showing that the role continues to change.

Outbound sales activity has dropped considerably in the past decade, so it is no surprise to see that sales technique is much less important.

That the ability to deal with repetitive tasks and to multitask have also decreased may be a positive sign that the work is becoming more interesting for agents and also that their supporting systems are doing more of the heavy lifting for them.

Interestingly – and somewhat worryingly – the ability to self-manage and show initiative has decreased significantly, which is somewhat counter to the idea that agents should be empowered to handle customer issues and own the situation.

ATTRITION

Today's contact center requires different people than has traditionally been the case, with skills and behaviors aligned to the modern customer and the business's desire to improve the customer experience. With contact center attrition on the way up again, finding and keeping people of the right caliber is more difficult than ever.

Staff attrition has consistently been quoted as one of the major worries of contact center management. Along with staff absences, high levels of unexpected attrition can cripple a contact center's ability to provide acceptable 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.

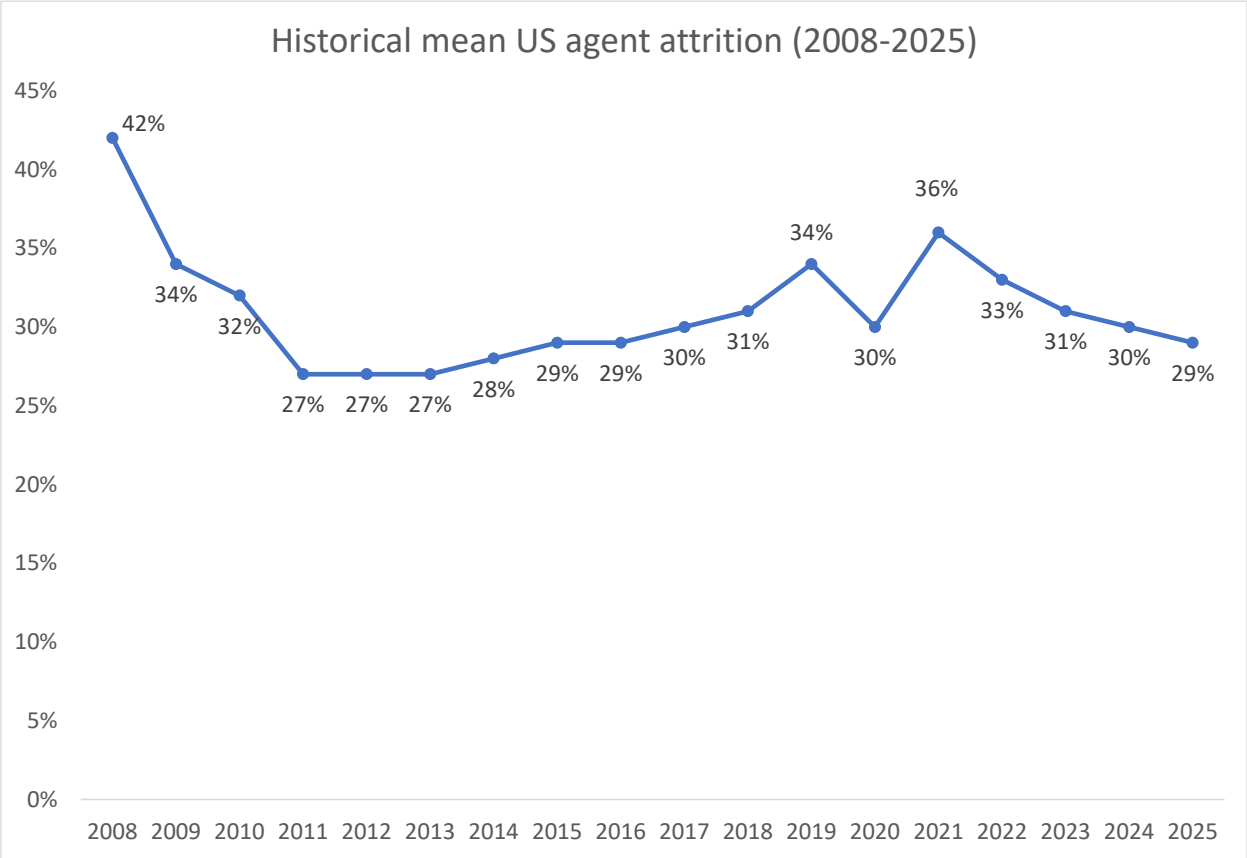
Staff attrition in small doses can be good for a contact center, bringing in fresh blood and enthusiasm. However, high levels of staff attrition have some serious side-effects:

- 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 effect on contact center 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 center in a 12-month period, divided by the average number of occupants during the same 12-month period, expressed as a percentage.

Staff attrition rates dropped from over 40% in 2008, steadying in the high 20% mark for many years. The pandemic years saw attrition above 30% again, and it has slowly eased in the past few years to be close to the historical average.

Figure 106: Historical mean US agent attrition (2008-2025)

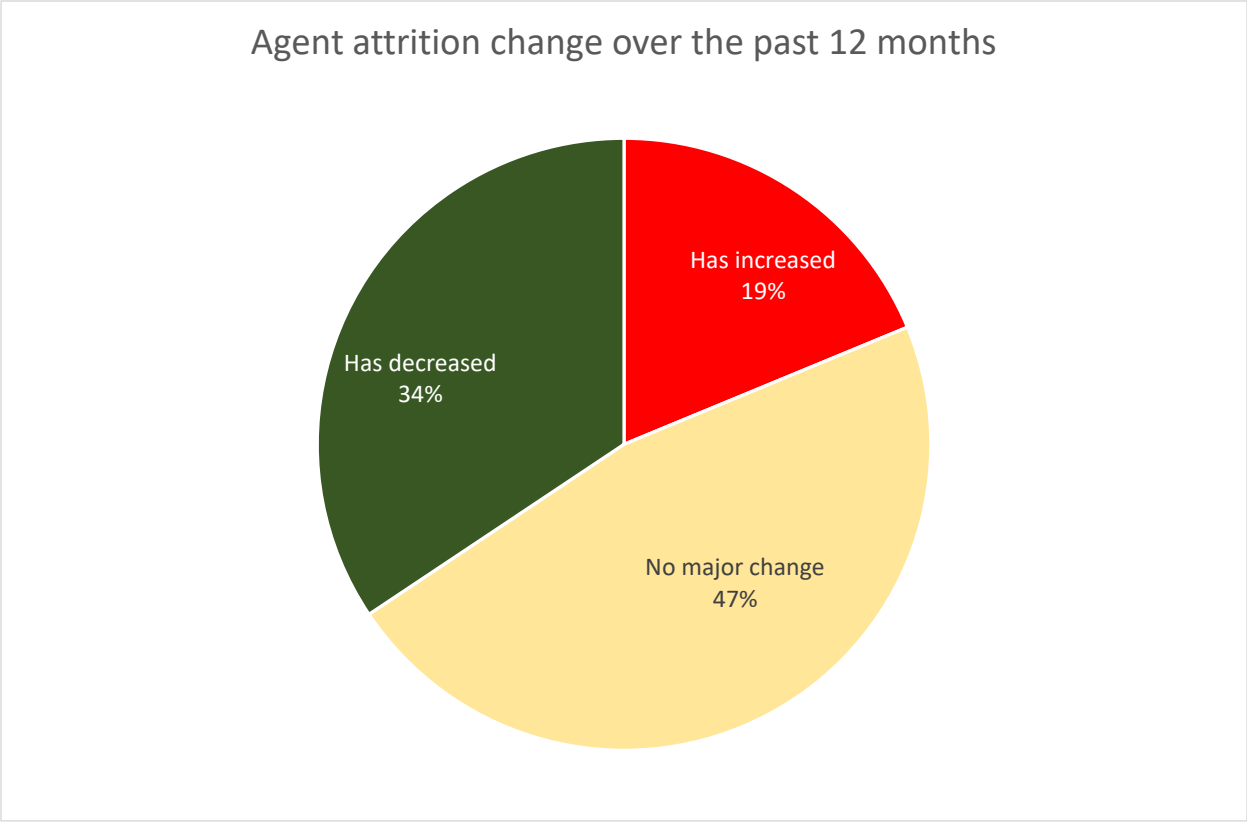


One of the difficulties with tracking metrics such as attrition over time is that the companies responding to the research program may be different year-on-year, meaning comparing like-for-like is difficult. As such, the question was asked, "How does your current attrition rate compare with 12 months ago?", giving a consistent view of changes at a company level.

While 47% of respondents say that there has been little real change, only 19% say that attrition has increased, with 34% saying it has decreased.

This suggests that any change in attrition across the industry as a whole – not just with this set of survey respondents – is likely to be slightly downward.

Figure 107: 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 behavior and characteristics of people likely to do well in each role – preferably analyzing the people who are successful in the roles already – and pre-screen applicants against those criteria.

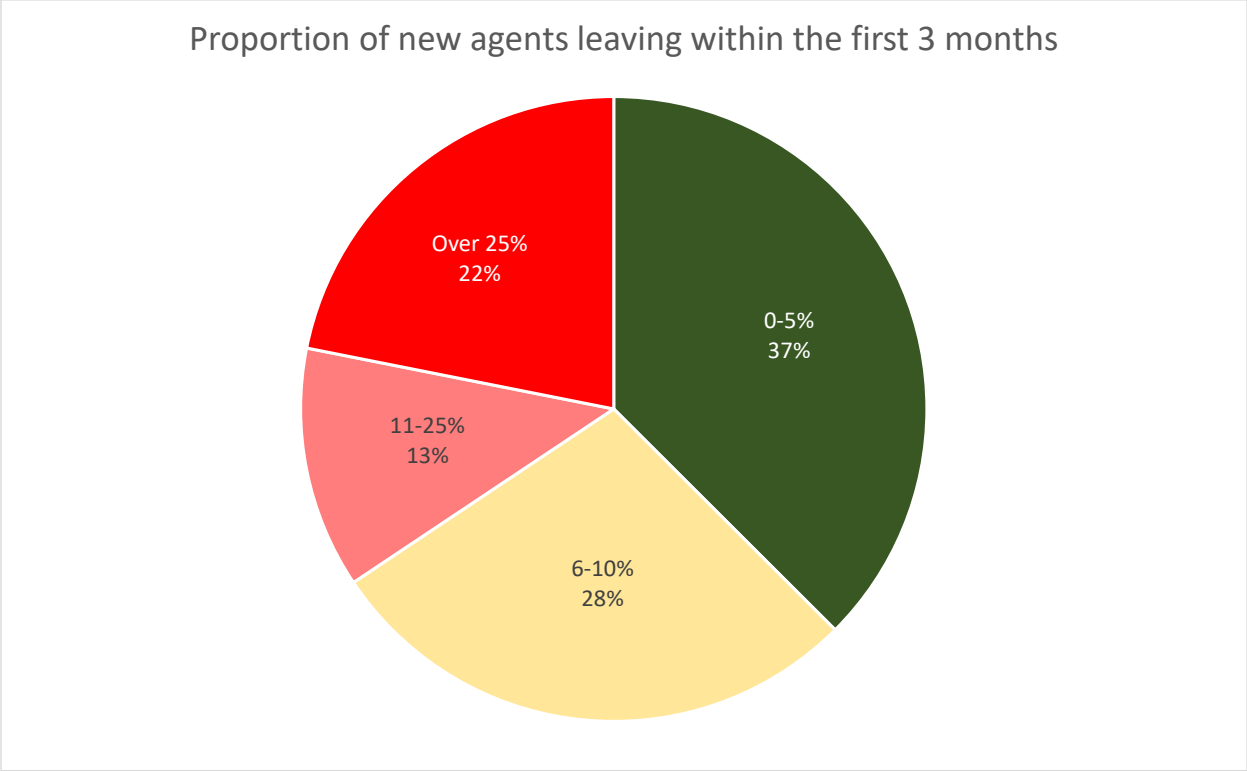
Getting a high proportion of the right sort of people through the doors and onto the induction course can greatly reduce early attrition: attrition is something that should be focused upon at the recruitment stage, rather than leaving it until the candidates are already in the business before noticing the problems.

37% of respondents report no problems with early attrition, although 22% have more than one-quarter of their new agents leave within the first three months.

There has been little change in these figures over the past year, which suggests that any rise in attrition seen 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 center through remote working, that this induction has been as successful as the traditional method.

Figure 108: Proportion of new agents leaving within the first 3 months



Looking at the causes for attrition, the stress of the work and the repetitive nature of some contact center 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 centers 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 behavior 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 109: 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	Low pay
3rd	Lack of promotion or development opportunity
4th	Excessive pressure or stress
5th	Repetitive work
6th	Competition from other contact centers
7th	High numbers of temporary / seasonal staff
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 third-greatest cause of staff attrition, just below low pay (until recent years' reported significant increases in salary, contact center agents had earned less in real terms than those in similar roles 10 years ago).

As for other causes, much of the repetitive work has 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

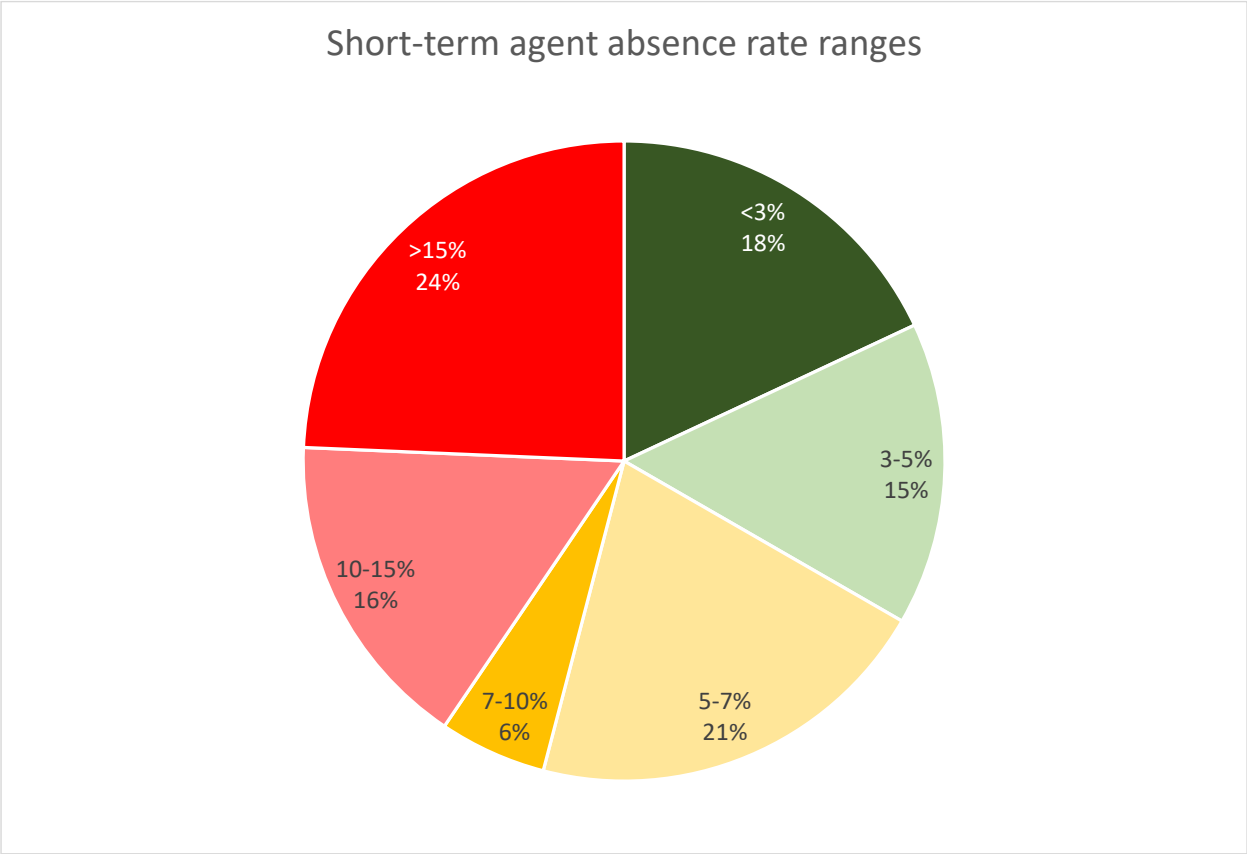
In tightly-run contact center operations where cost and performance is closely managed, significant levels of staff absence can cause major problems. Even a slight increase in absence rates can mean a major difference to how well the contact center performs on that day. Staff end up overworked and stressed, 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 unauthorized absence as a percentage of contracted days annually. Top-level information is included in this report and detailed information by vertical market and contact center size is available in US Contact Center 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. Although not included here, it is found in the US Contact Center HR & Operational Benchmarking Report.

The mean average for short-term staff absence is 9.4% (end-2024: 9.6%), with a median of 6.0% (end-2024: 6.0%), which remains considerably higher than the historical norm.

Figure 110: 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.

SALARIES

New agent salaries are reported to have decreased by 4.1%, with a larger decrease reported in the salaries of experienced agents. This is likely to be the case of a statistical blip caused by fewer very high-paying survey respondents taking part this year.

At a team leader level, average salaries have dropped by 3.0%, and respondents' average contact center manager salaries showed a 1.9% drop in 2025.

These are likely to be a result of a statistical reset as 2024's figures saw some very large salaries being paid by a relatively small number of respondents, which created salary growth in excess of 7% last year. Median salaries have a much smaller difference than last year.

Figure 111: Mean contact center salaries and changes

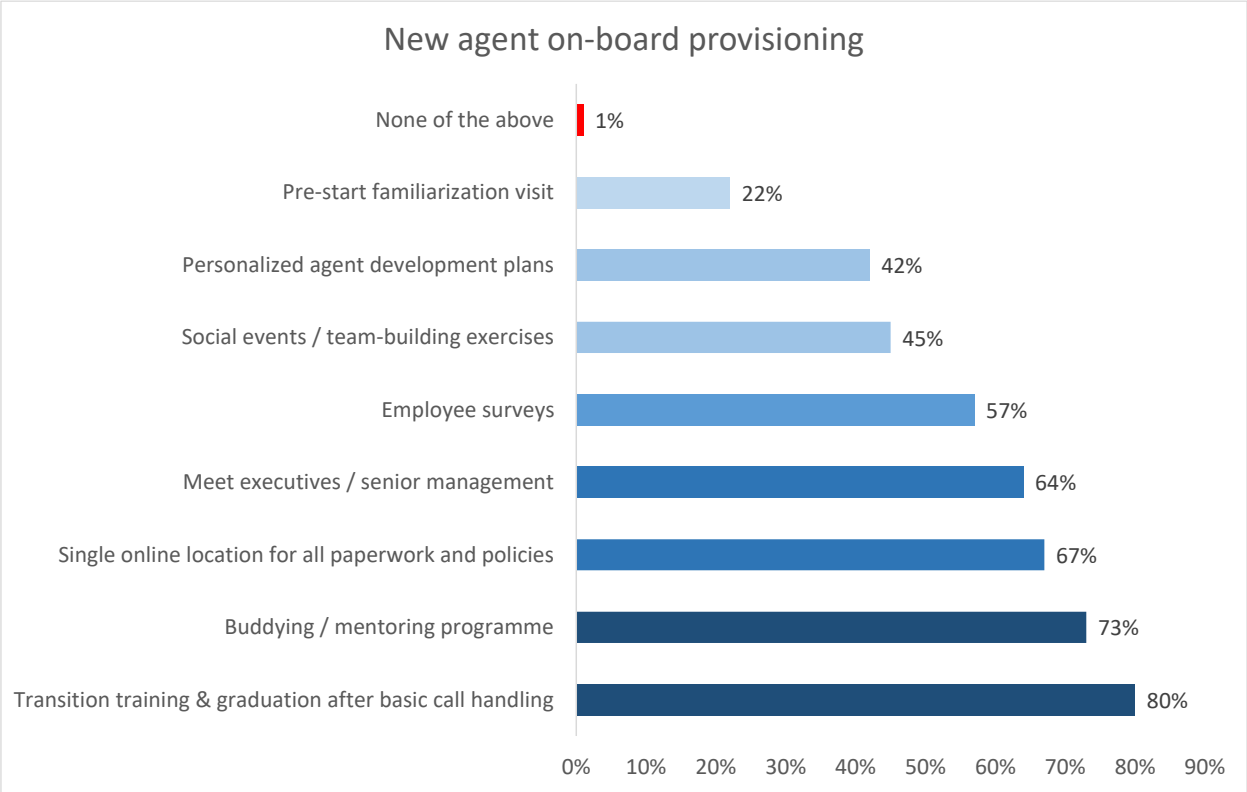
Role	2025 mean average salary	Change 2024-2025
New agent	$39,253	-4.1%
Experienced agent	$45,362	-5.9%
Team leader / supervisor	$59,241	-3.0%
Contact center manager	$89,311	-1.9%

Detailed analysis of salaries, including historical patterns and segmentation by vertical market, contact center size, region and activity type is included in "The US Contact Center HR and Operational Benchmarking Report".

ENGAGING THE NEW AGENT

An agent joining a new organization 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 center environment. Businesses have numerous ways of onboarding new agents, shown in the following chart.

Figure 112: New agent on-board provisioning



73% use a buddying / mentoring program, and 80% have a form of official 'graduation', easing new agents into the real work. While senior management introductions feature highly again after the pandemic, pre-start familiarization and social events are less common.

42% provide individual agent training plans and 57% of respondents seek 360 degree feedback from new agents (which provides vital information about the reality of the agent onboarding process that could be used for improvement).

67% offer a single online portal containing all of the paperwork and internal administrative tasks that a new employee requires.

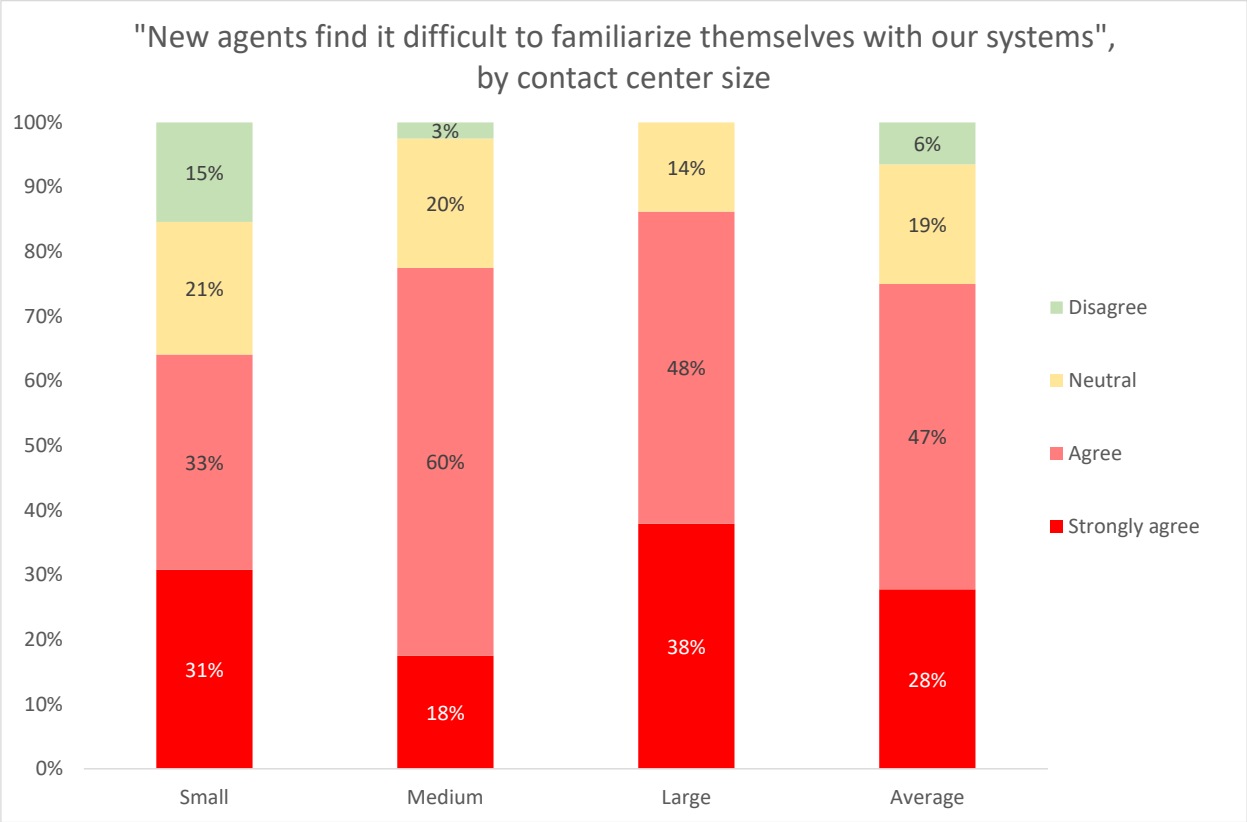
One of the main issues that new agents can face is having to wrestle with unfamiliar and complex systems, causing them stress and low morale as well as sub-optimal performance at a time in their tenure when they will be especially susceptible to negativity.

75% of survey respondents agree or strongly agree that new agents find it difficult to familiarize themselves with systems when they first start in the contact center, which leads to sub-optimal performance, errors in processes and low morale.

This is a higher figure than usual and is perhaps linked to the increasing number of people working remotely.

Clearly, this will impact negatively on new agent morale and performance, and is something which contact center management should take into account when considering changes to agent desktop technology.

Figure 113: Agreement with statement: "New agents find it difficult to familiarize themselves with our systems", by contact center size



ENGAGING THE EXPERIENCED AGENT

Motivating and keeping good agents in a working environment that can be stressful, sometimes repetitive and usually not well-paid is a challenge the contact centers have had to face since their inception.

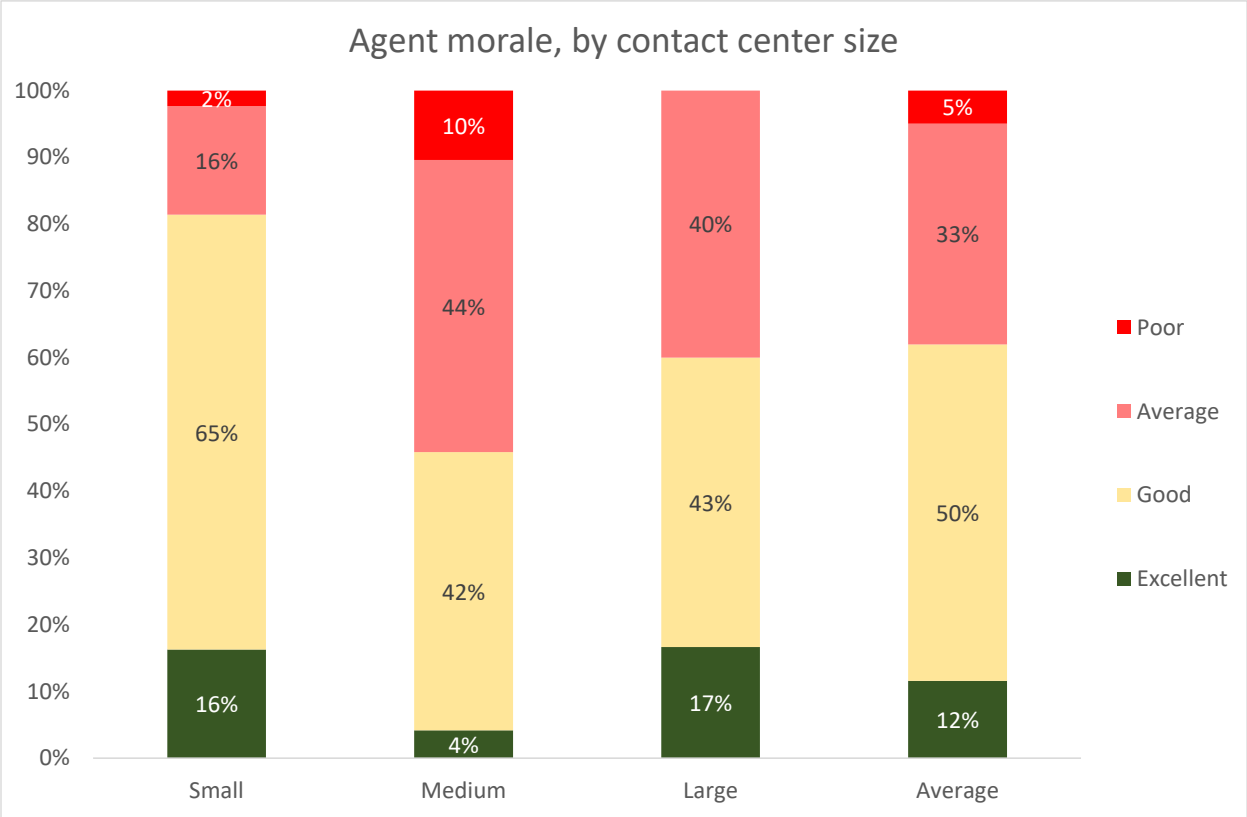
As contact center work becomes increasingly complex, and customers' expectations of what constitutes good quality service becomes ever higher, the agent's job is now about reading something off the screen: they have to be empathetic, use their initiative to solve the issue and remain focused on answering the next call just as effectively.

AGENT MORALE

Agents with low morale engage with customers less, provide lower quality work, take more unauthorized absences and end up leaving the company. Improving morale is good for business, and also good for other agents: no-one wants to go to work in a miserable place.

It seems that contact center morale is generally seen to be reasonable, with 62% of respondents stating that their contact center enjoys "Good" or "Excellent" morale.

Figure 114: Agent morale, by contact center size



AGENT PERFORMANCE

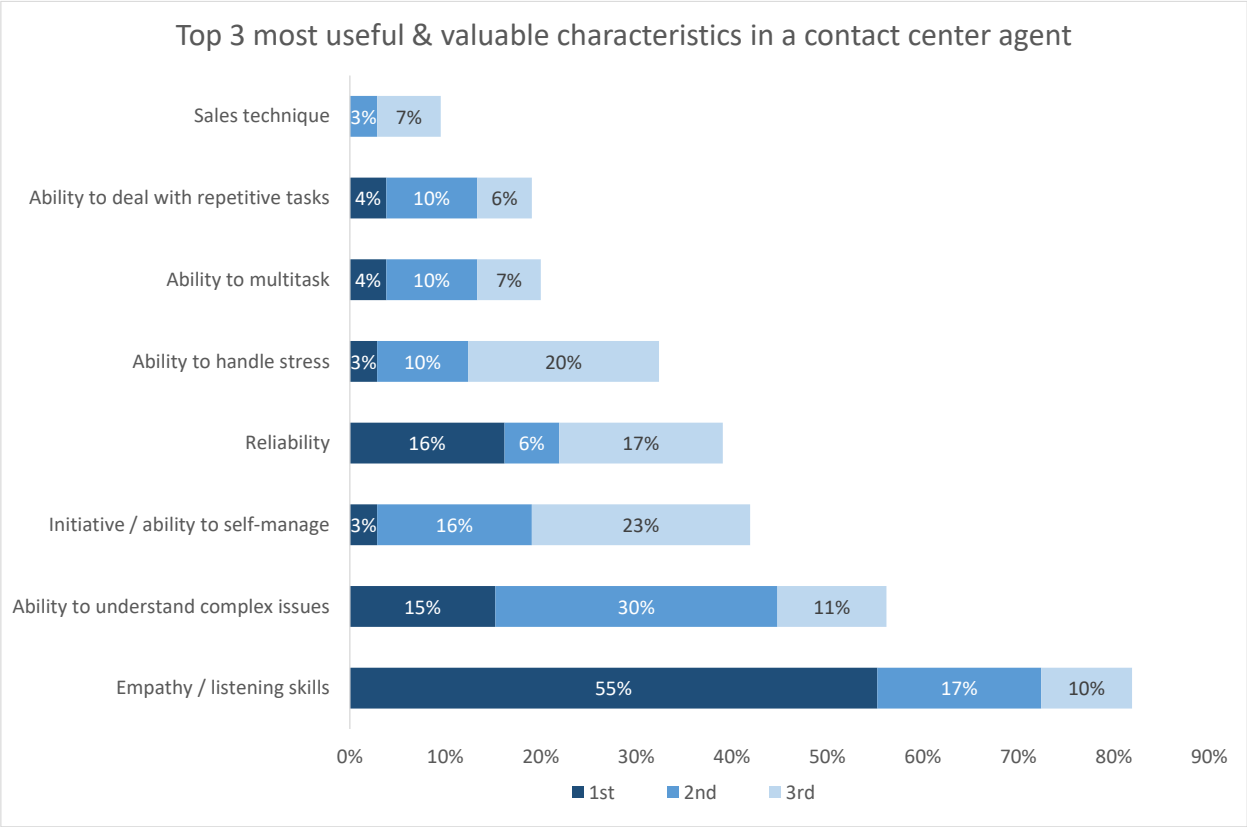
Survey respondents were asked to rate the attributes that they believed were most useful and valuable in contact center agents.

By far the most important factor was empathy – the ability to listen, understand and help customers – which was placed in no.1 position by 55% 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 important, 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. Reliability is also valued very highly as always.

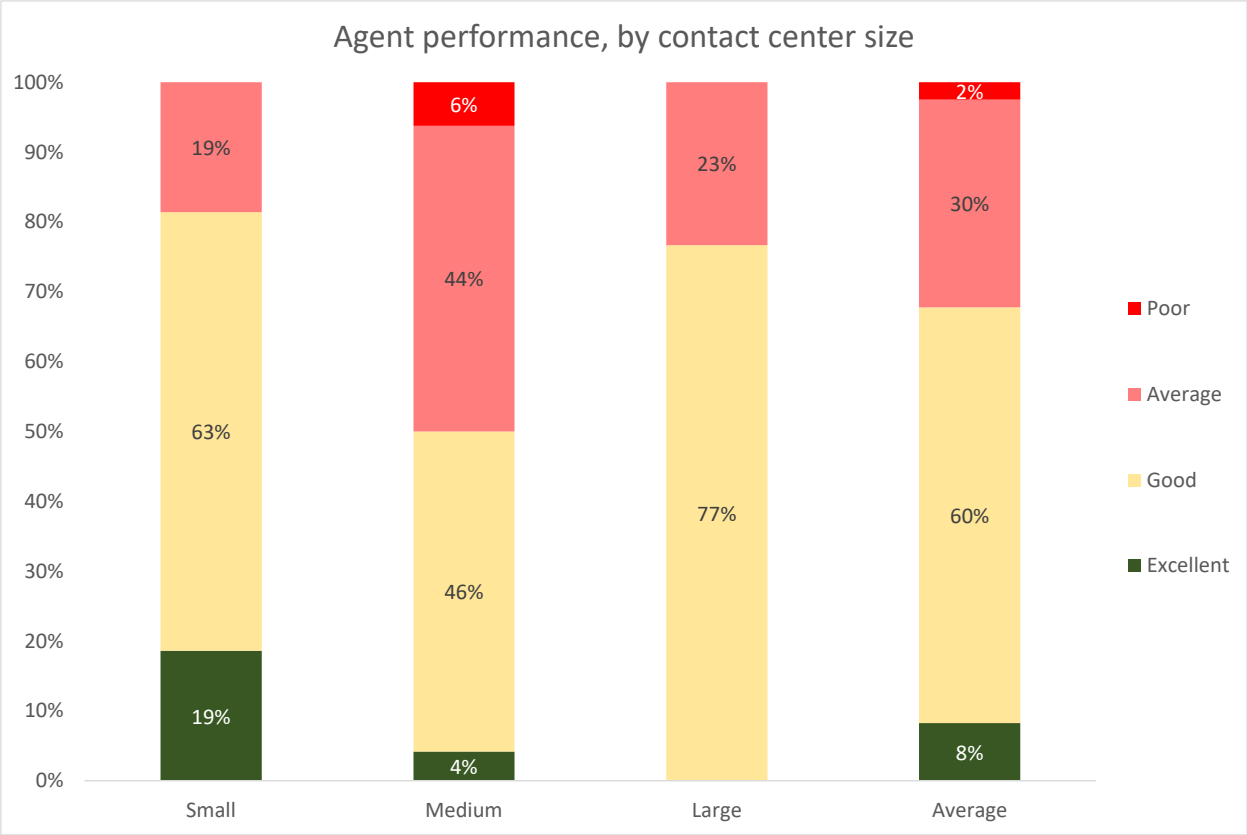
Figure 115: Top 3 most useful and valuable characteristics in a contact center agent



Looking at agent performance, only 8% of those surveyed felt that their agent performance was “Excellent”.

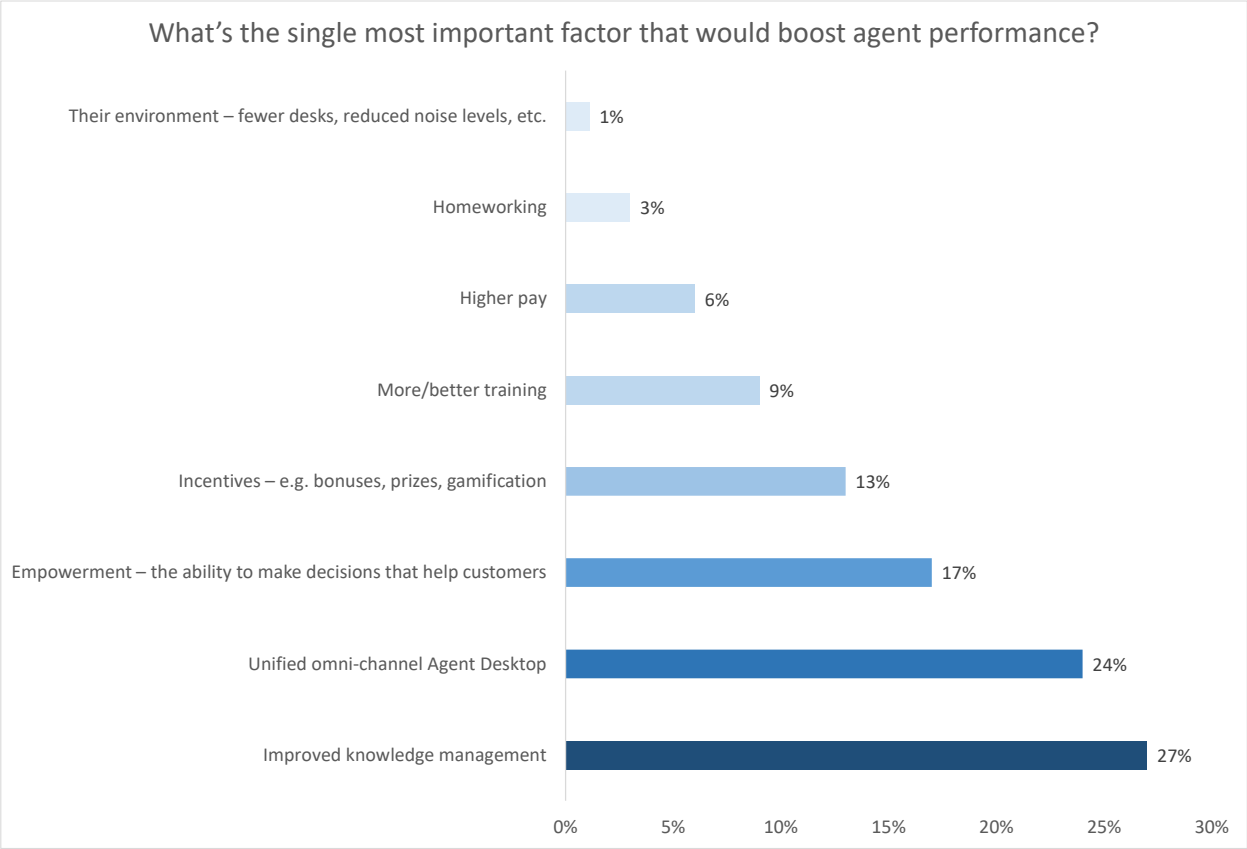
30% stated that theirs was only “Average”, and 6% of mid-sized operations reported their performance as “Poor”.

Figure 116: Agent performance, by contact center size



Respondents were presented with a list of factors that could improve agent performance and were asked to rate the most important.

Figure 117: What's the single most important factor that would boost agent performance?



Empowering agents to make decisions that help customers – which increases first-contact resolution rates – is an important factor in increasing agent performance.

Contact centers should focus upon the tools, processes and culture that support agent empowerment. Improved knowledge management applications – the most popular top 3 factor – help with this, as they 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 the information required on a single screen, also empowers agents and help solve the customer's issue first-time.

Higher pay, despite being a boost to morale, is 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 high attrition environments such as many of the largest contact centers and those running outsourcing operations.

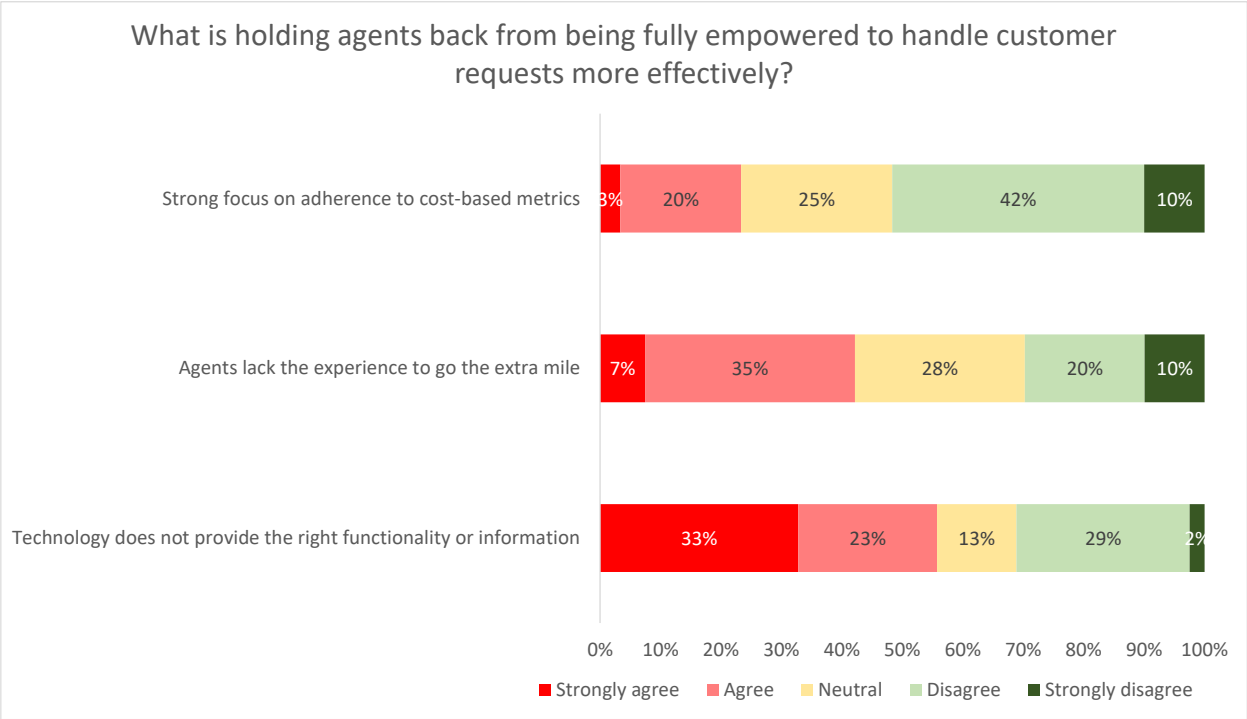
AGENT EMPOWERMENT

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 one of the keys to customer satisfaction.

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.

56% of respondents agreed that this was the case in their contact center, many of them very strongly.

Figure 118: What is holding agents back from being fully empowered to handle customer requests more effectively?



Only 23% of survey respondents blamed the contact center'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.

42% of respondents 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 and systems of the contact center.

So how can agents become empowered? Options include:

- 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
- AI-enabled intelligent support systems 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

Relatively few survey respondents are actively recruiting more experienced and educated agents to handle changing customer requirements, which implies that the typical contact center 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 centers 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 center strategy.

Contact center leaders 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.

Most technology solutions now being implemented aim to help the agent deliver a higher level of customer experience as well as managing cost of course. Technology in itself can't do this: it must be aligned with a culture of agent empowerment and learning in order to raise the overall quality of customer interactions.

Contact center 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 often under 10% for many 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 aligned with the contact center's and wider business's strategy.

The difficulty in keeping agents engaged, understanding and focusing upon the desired behaviors, actions and characteristics – and the limited budget which most contact centers have for incentive programs – create a situation whereby an alternative approach may need to be considered.

Gamification is an approach taken to improving agent engagement, aligning behaviors and characteristics with those of the contact center and wider enterprise: at the most basic level, it involves making work tasks into games. The contact center 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.

CURRENT AND FUTURE USE OF GAMIFICATION

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 behaviors, 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 behaviors 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 centers 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 incentivized 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
- reducing the time required for new agents to become competent, providing real-time feedback in order to encourage positive behaviors
- 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 behaviors that are most closely aligned with the contact center's and enterprise's own requirements.

This final point – encouraging agents to do what benefits the business – should be a key goal of gamification. Many organizations reward agents for behaviors which are not aligned with where the business needs to go, while ignoring the 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:

- clarifying the enterprise's objectives
- identifying contact center metrics that directly impact upon these objectives
- identifying the agent characteristics, behavior 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.

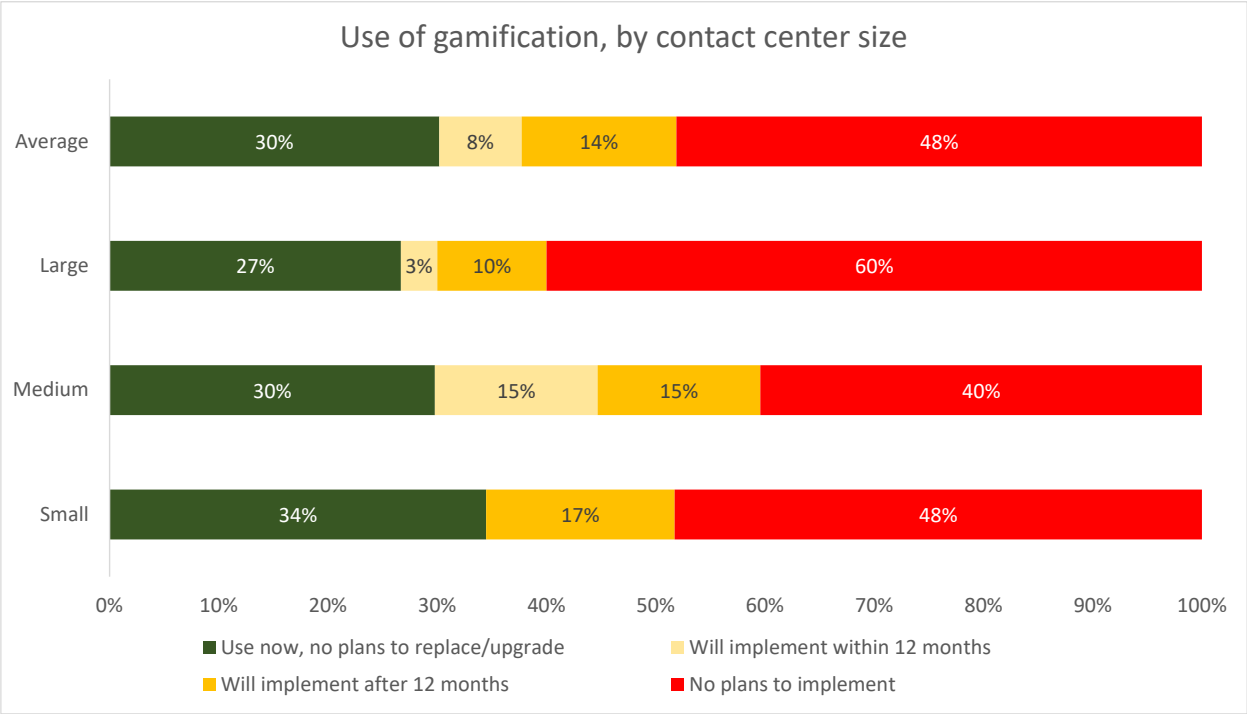
For businesses which want to achieve specific results, gamification can assist through:

- 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 recognizing and rewarding positive behaviors and characteristics.

30% of respondents currently use gamification within their contact center operations, and a further 8% would like to implement this within 12 months.

The use of gamification does not seem to be correlated by the size of contact centers.

Figure 119: Use of gamification, by contact center size



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.

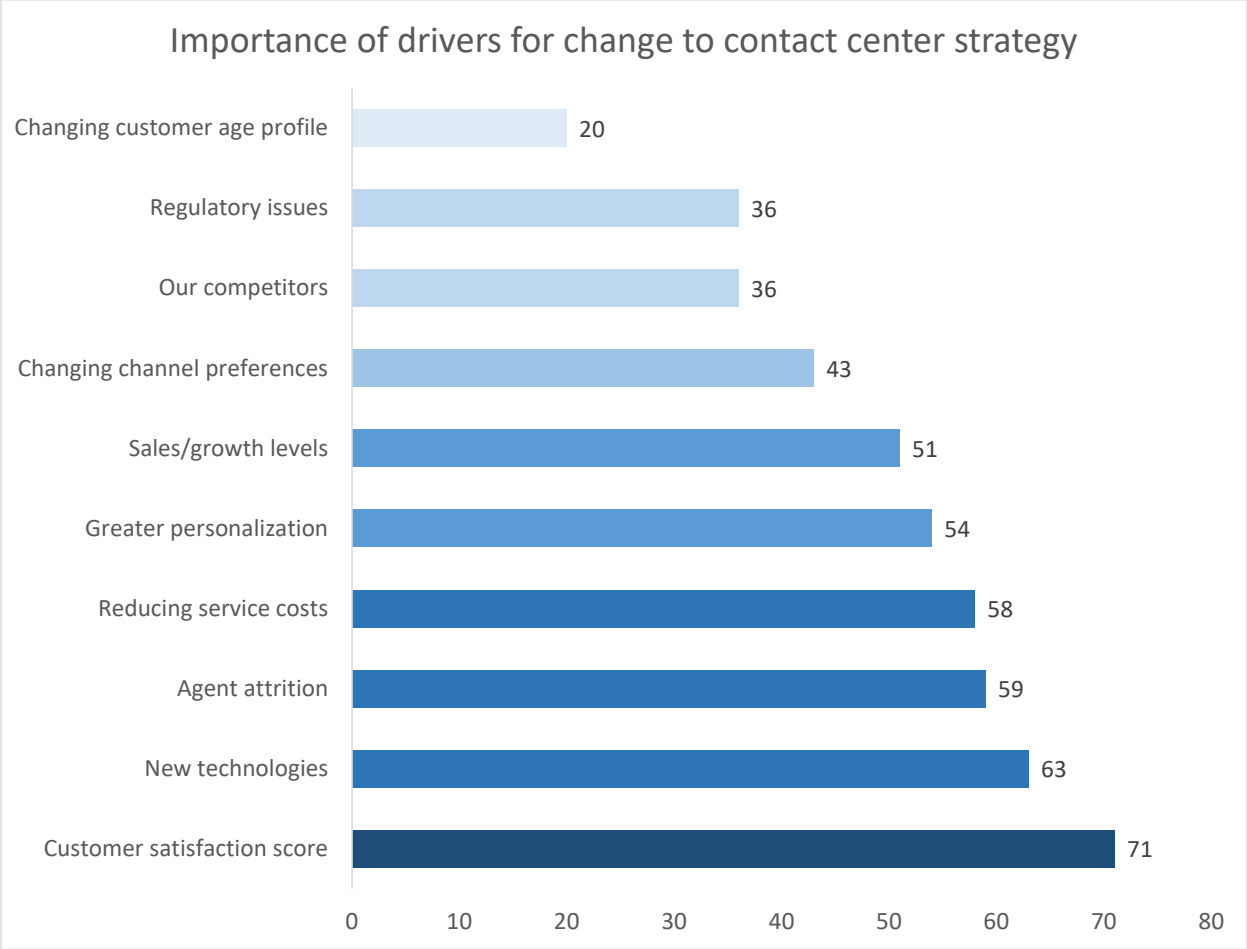
CONTACT CENTER STRATEGY DRIVERS

The chart below shows the average score that was given by respondents to the question: "How important are these drivers for strategic contact center change, where 0 is very unimportant, and 100 is vitally important?".

Unsurprisingly, customer satisfaction score ranks the highest, with sales and agent attrition also being seen as very important.

Continued pressure on costs will force contact centers to do more with less, and the replacement of agents with technology – whether enforced or through natural attrition – will be supported in large part by new technology.

Figure 120: Importance of drivers for change to contact center strategy



TECHNOLOGY USAGE AND PLANS

Historically, HR issues such as attrition have been what make contact center 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 centers are also aware that they have to modernize their processes as well as the technology, but 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 centers 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 centers realize 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 optimization – 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 centers with multiple, complex processes and legacy systems, and this is leading to a greater focus on optimizing 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 offering great promise, the opportunity to increase functionality and insight has never been higher.

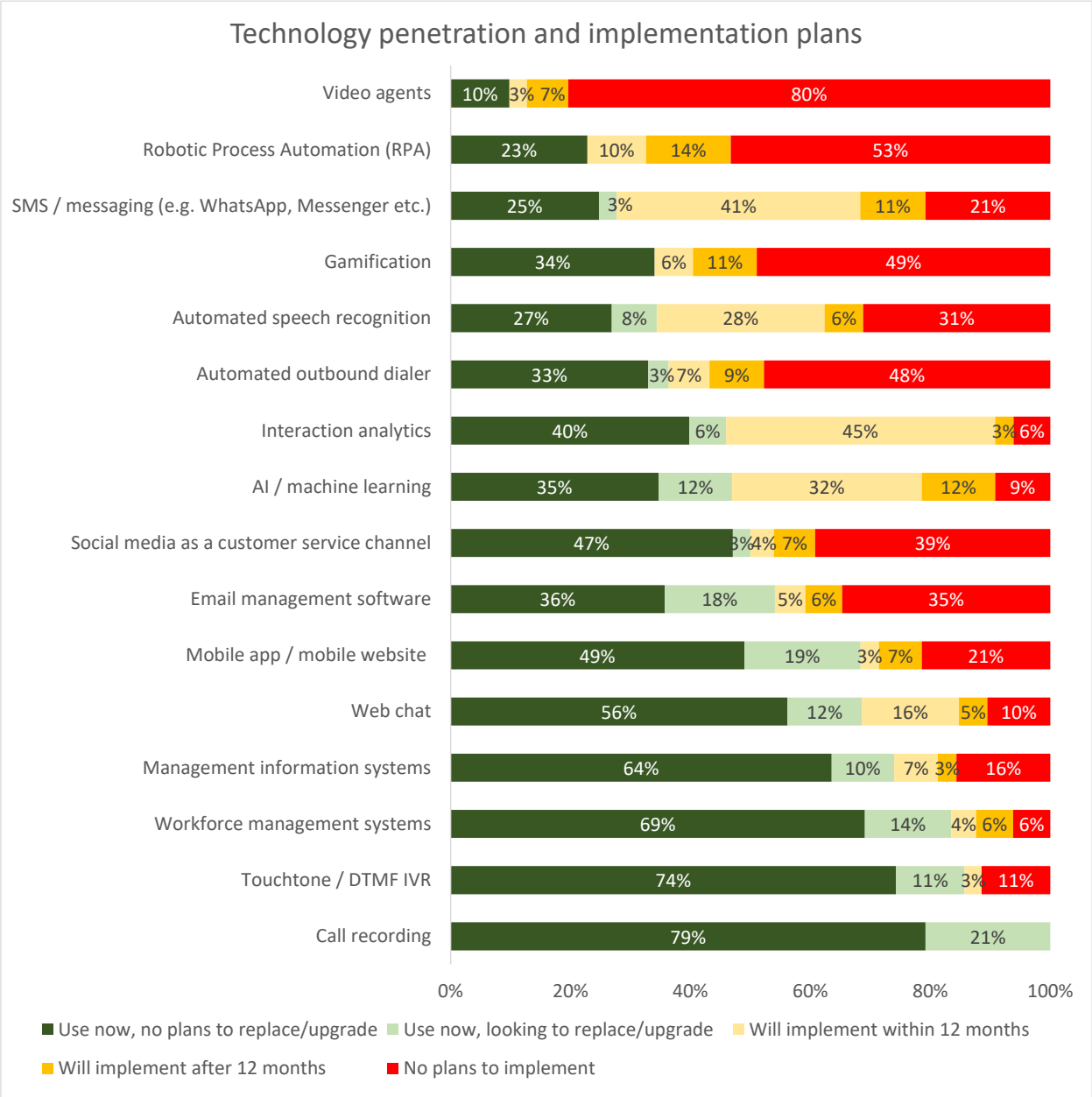
Open systems and infrastructure now make the implementation of automated identity verification and enhanced routing far more cost-effective and simpler to deploy. Linking with cloud-based CRM applications, the agent desktop can unify all of the legacy applications within a single customer view, significantly 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 center 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 colored by improving customer satisfaction and reducing customer effort, the drivers of where the contact center industry is headed long-term.

The following chart shows respondents' current and future use of specific contact center solutions.

Figure 121: Technology penetration and implementation plans



Call recording, email management software, workforce management and mobile apps 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 centers.

In terms of expected new implementations, AI and interaction analytics dominate once again, with messaging and speech recognition also receiving serious interest.

In the longer-term, AI, messaging and RPA 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.

Recognizing that the reality of contact center investment does not always match the intention shown in the previous chart, the following table gives closer analysis of IT investment priorities.

Figure 122: Top 5 most important areas of contact center IT expenditure in the next two years (proportion of contact centers placing solution in their top 5, 2016 & 2025)

Technology solution	2016	2025
Artificial Intelligence	14%	68%
CRM / Agent Desktop software	40%	57%
Interaction Analytics	20%	43%
Performance & Quality Management	35%	38%
Desktop Automation & Analytics	24%	35%
Omnichannel (i.e. single view of the customer across channels)	44%	31%
Web Self-Service	18%	31%
Web Chat	26%	31%
Back-Office Integration	20%	27%
Interaction Routing (including ACD/CTI-like functionality)	8%	16%
Headsets	7%	15%
Mobile Service	11%	15%
Telephony Self-Service (includes DTMF IVR, speech recognition & visual IVR)	18%	13%
Telephony Infrastructure (including IP)	12%	13%
Social Media	15%	9%
Email Management	21%	9%
Cloud	16%	8%
Management Information Systems	17%	8%
Outbound Automation	8%	8%
Hardware (including PCs & servers)	7%	7%
Voice Biometrics	5%	7%
Workforce Management	35%	7%
Call Recording	30%	4%
Homeworking	22%	0%
Gamification	7%	0%
Virtual Contact Centers	18%	0%
Video/Web RTC	5%	0%

The percentages in the table above are based on the proportion of respondents placing the specific solution within their top 5 from a list of 27 possible contact center solutions.

By showing an example of historical data from 2016, patterns will emerge showing the solutions that are gaining the most interest over the years, and those which are losing their appeal.

Artificial intelligence is of great interest to survey respondents in the next two years, with 68% placing it in their top 5 priority technologies. Much of current AI investment has been spent on intelligent chatbots, although AI-enabled agent desktop support is expected to grow very strongly. Interaction analytics is also of much more interest than it has been in the past.

CRM (including improvement to the contact center 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 to omnichannel in 2016. In 2022, CRM rated only in 7th position, suggesting that it had been implemented in a large proportion of operations already, but has bounced back strongly since then.

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 31% of respondents this year, moving even further away from the top position that it had held for many years. The various supporting applications, such as web chat and email management systems still have significant proportions of respondents placing them within the top 5, although they are dropping away as more operations implement them.

After some years of relative stagnation, interest in self-service (especially web) has grown significantly since 2016, driven in large part by the promise of artificial intelligence and chatbots / voicebots providing a superior self-service experience than had previously been the case.

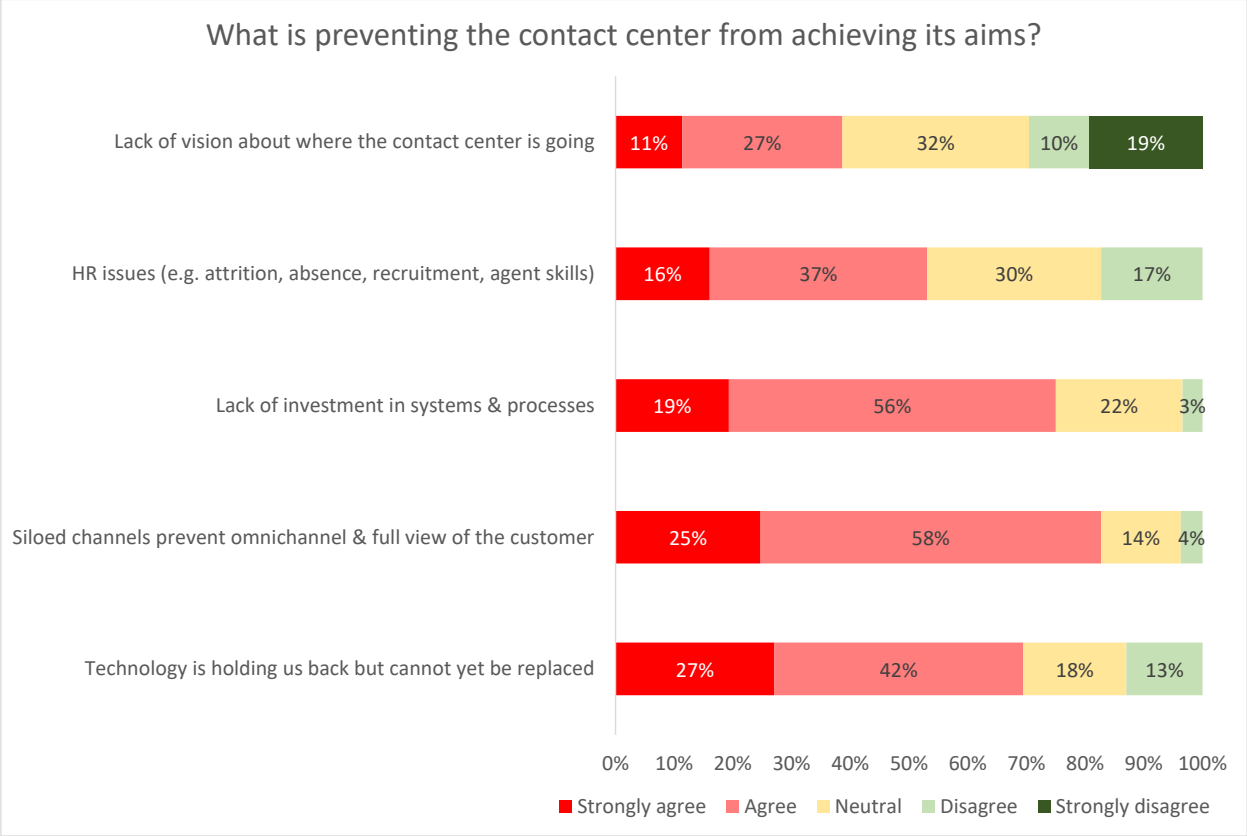
Back-office integration dropped in importance but is now back up to the 9th highest priority. While respondents are still very aware of the need to underpin the entire customer contact infrastructure – both front and back office – with a robust, stable and non-siloed infrastructure that allows a single view of the customer, the resurgent interest in self-service and new enthusiasm for AI has pushed this down the list.

Traditional contact center solutions with high existing levels of implementation, such as WFM, call recording and MIS have dropped down the list as AI and digital channels come to the forefront.

HELPING THE CONTACT CENTER ACHIEVE ITS AIMS

Respondents were asked to give their views on what was preventing the contact center from achieving its aims, assuming that there was a gap between what was being achieved and what would be ideal.

Figure 123: What is preventing the contact center from achieving its aims?



69% 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-customized and bespoke legacy environment that the business feels it requires to operate.

83% 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.

75% agree that systems and processes are holding the contact center back from achieving its aims.

53% were concerned about the limitations of their HR, although a lack of vision about the future of the contact center was seen to be a problem by only 38% of survey respondents.

ABOUT CONTACTBABEL

ContactBabel is the contact center industry expert. If you have a question about how the industry works, or where it's heading, the chances are we have the answer.

We help contact centers 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.

The coverage provided by our massive and ongoing primary research projects is matched by our experience analyzing the contact center industry. We understand how technology, people and process best fit together, and how they will work collectively in the future.

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  - Agent Engagement & Empowerment
  - AI-Enabled Agent Assistance
  - Chatbots, Voicebots & Conversational AI
  - Cloud-based Contact Center Solutions
  - Customer Engagement & Personalization
  - Customer Interaction Analytics
  - First-Contact Resolution
  - Fraud Reduction & PCI Compliance
  - Omnichannel Workforce Optimization
  - Remote & Hybrid Working Contact Center Solutions
  - Self-Service
  - Voice of the Customer
- **The UK Contact Centre Decision-Makers' Guide**
- **The UK Customer Experience Decision-Makers' Guide**
- **Exceeding UK Customer Expectations**
- **UK Contact Centre Verticals**: Communications; Finance; Insurance; Outsourcing; Retail & Distribution; Travel; Utilities
- **AI in UK Contact Centre Verticals**: Finance; Insurance; Retail & Distribution; Utilities
- **The US Contact Center Decision-Makers' Guide**
- **The US Customer Experience Decision-Makers' Guide**
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- **US Contact Center Verticals**: Finance; Insurance; Outsourcing; Public Sector; Retail & Distribution
- **AI in US Contact Center Verticals**: Finance; Insurance; Retail & Distribution.