CONTACTBABEL

The UK Contact Centre Decision-Maker's Guide 2017-18

(15th edition)

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"The 2017-18 UK Contact Centre Decision-Makers' Guide (15th edition)"

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CONTACTBABEL

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Enghouse Interactive

Enghouse Interactive is a leading global provider of customer experience and contact centre solutions. With over 10,000 customer worldwide we work with organisations of all sizes, industries and complexity to improve their service, productivity and operational efficiency.

Our integrated suite of solutions includes multi-channel contact centre, self-service, quality management including real-time speech analytics, reception & call handing, outbound communications and integration tools.

This wide portfolio places us in the unique positon to offer a complete, fully featured solution from a single vendor that can support a full range of deployment methods and are platform agnostic.

We have achieved particularly strong success with Microsoft Skype for Business. Enghouse has now made over 450 deployments on Skype for Business, totaling more than 10,000 active seats.

With the ability to align people, processes and systems at exactly the right time, in the right way to consistently deliver seamless customer experiences across all channels and devices is what we believe creates real differentiation.

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INTRODUCTION AND METHODOLOGY

The "UK Contact Centre Decision-Makers' Guide (2017/18 - 15th edition)" is the major annual report studying the performance, operations, technology and HR aspects of UK contact centre operations.

Taking a random sample of the industry, a detailed structured questionnaire was answered by 218 contact centre managers and directors between June and September 2017. Analysis of the results was carried out in September & October 2017. The result is the 15th edition of the largest and most comprehensive study of all aspects of the UK contact centre industry.

ContactBabel is grateful for the support received from all of the sponsors of the report. However, complete editorial independence has been maintained at all stages, and readers can be confident about the objectivity of the report's findings. Where sponsors' opinions are given, these are clearly marked as such.

HOW TO USE THE REPORT

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

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

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

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

SEGMENTATIONS

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

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

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

VERTICAL MARKETS

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

Figure 1: Vertical market definitions

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

SIZE BAND

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

Contact centres surveyed fit into one of three categories:

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

CONTACT CENTRE TYPE

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

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

THE STRUCTURE OF THE DATASETS

The data provided by the 218 contact centres interviewed in this study were broken down into discrete segments:

Vertical markets

- Finance – 22
- Housing – 14
- Insurance - 20
- Manufacturing – 15
- Outsourcing – 25
- Public Sector – 28
- Retail & Distribution – 20
- Services – 26
- Technology, Media and Telecoms (TMT) – 23
- Transport & Travel – 12
- Utilities – 11
- Other (not included In vertical market analysis) – 2.

Size bands

- Small (10 to 50 agent positions) - 76
- Medium (51 to 200 agent positions) - 81
- Large (200+ agent positions) - 58
- Did not answer (not included in size analysis) - 3.

Inbound / outbound

- Mostly inbound (75%+ inbound) – 123
- Mixed (between 26% and 74% inbound and outbound) – 68
- Mostly outbound (75%+ outbound) – 21
- Did not answer (not included in analysis) – 6.

Sales / service

- Mostly service (75%+ service) – 141
- Mixed (between 26% and 74% service and sales) – 52
- Mostly sales (75%+ sales) – 21
- Did not answer (not included in analysis) – 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 centre industry. Amongst others, these may include:

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

IMPROVING QUALITY AND PERFORMANCE

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

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

Topics include:

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

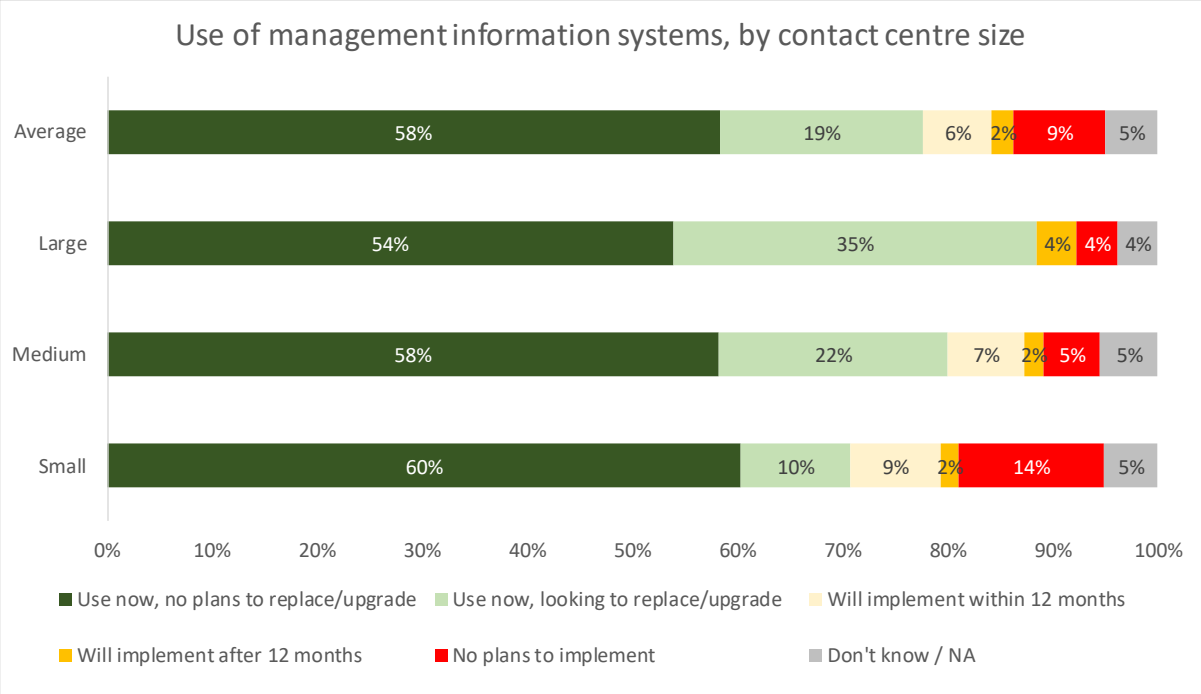
MANAGEMENT INFORMATION

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

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

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

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



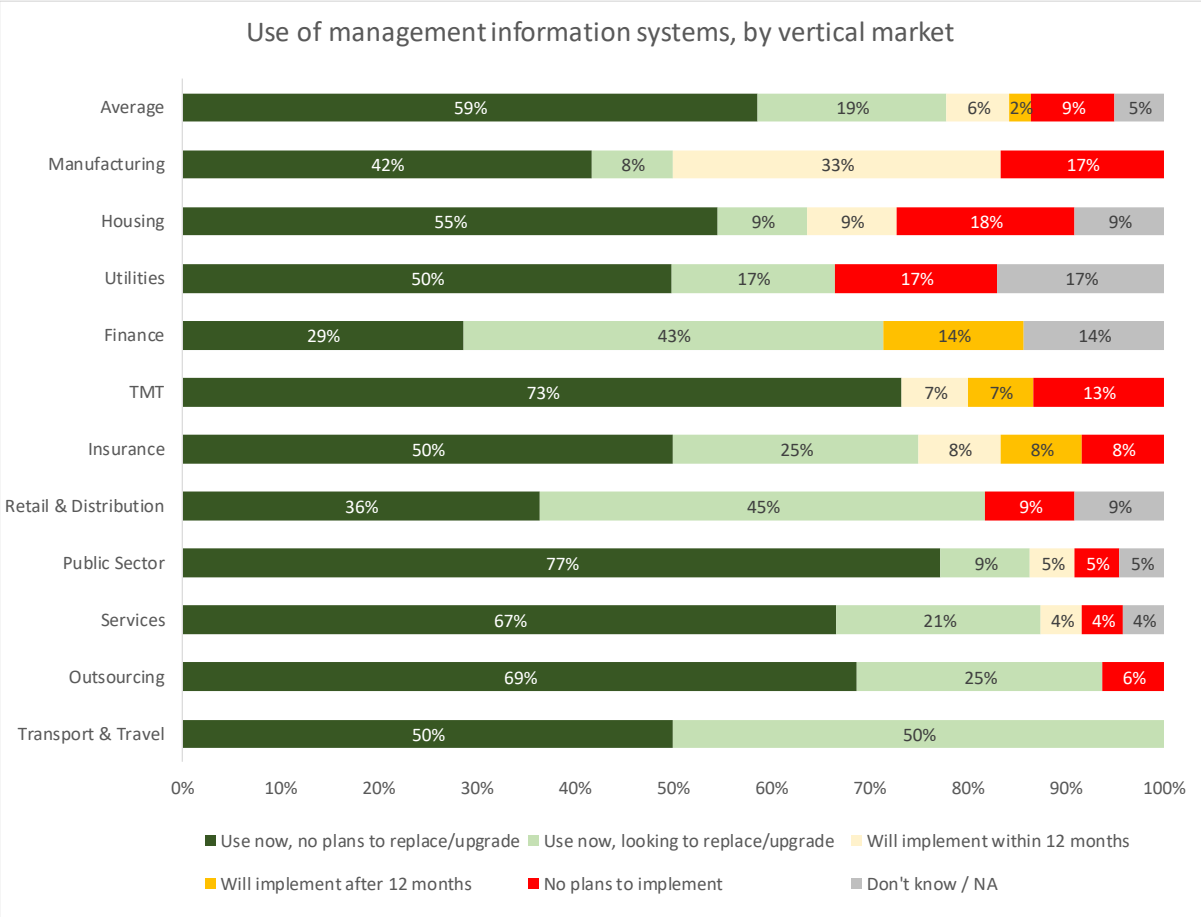
Management information systems are present in the majority of all sectors, with transport & travel, outsourcing and services respondents reporting the greatest usage.

Those in housing and manufacturing – amongst the smallest contact centres – report the least.

There is very significant interest in replacing or upgrading MIS being shown by several vertical markets, including finance, insurance, retail and distribution, services, outsourcing and transport and travel.

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

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



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

Internal metrics

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

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

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

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

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

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

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

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

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

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

Customer metrics

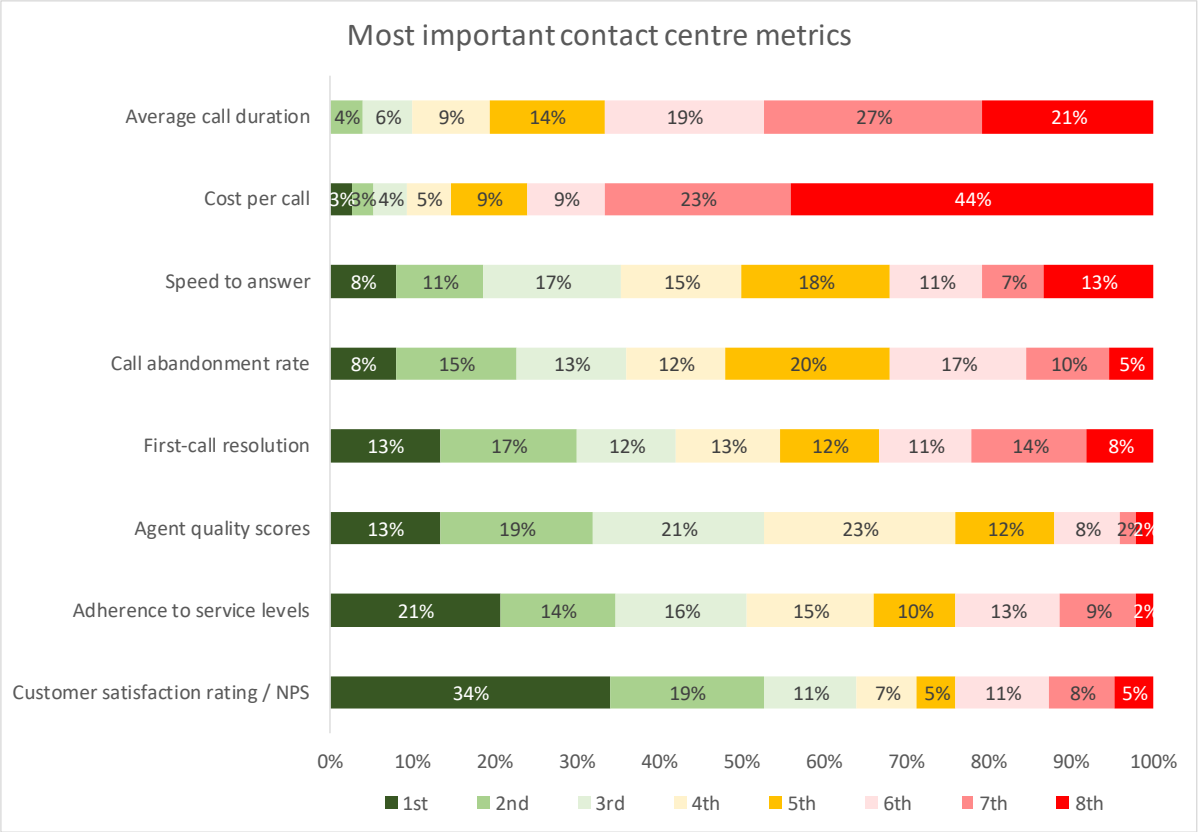
Customer satisfaction ratings: Customer satisfaction is seen to be directly linked to profitability through increased loyalty, share of wallet and customer advocacy. There is considerable debate about how satisfied (or delighted) customers have to be before it starts making a noticeable difference to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

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

First contact resolution: Improving first call/contact resolution (FCR) benefits customers (who are more happy / loyal / profitable / etc.); agents (higher morale; fewer frustrating calls); and business (lower cost of repeated calls; higher profitability): everyone wins. This can be hard to measure, as it is the customer, and not the contact centre that should be stating whether the issue has been resolved successfully.

Over the years, the importance of contact centre metrics has changed considerably. 10 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. This year, the options offered to respondents were changed slightly, with "call transfer rate" dropping from the selection, and "agent quality scores" and "adherence to service levels" featuring for the first time.

Figure 4: Most important contact centre metrics



34% of respondents chose customer satisfaction rating as being the most important measurement that a contact centre tracks. Customer satisfaction is in large part driven by the other metrics shown here, and can be seen as a consequence of how these other elements perform.

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

However, this year's survey, with the addition of two new internally focused metrics - adherence to service levels and agent quality scores – results in first call resolution dropping from 2nd place to 4th, with both of the newly introduced metrics being seen as more important than this key customer-focused measurement.

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

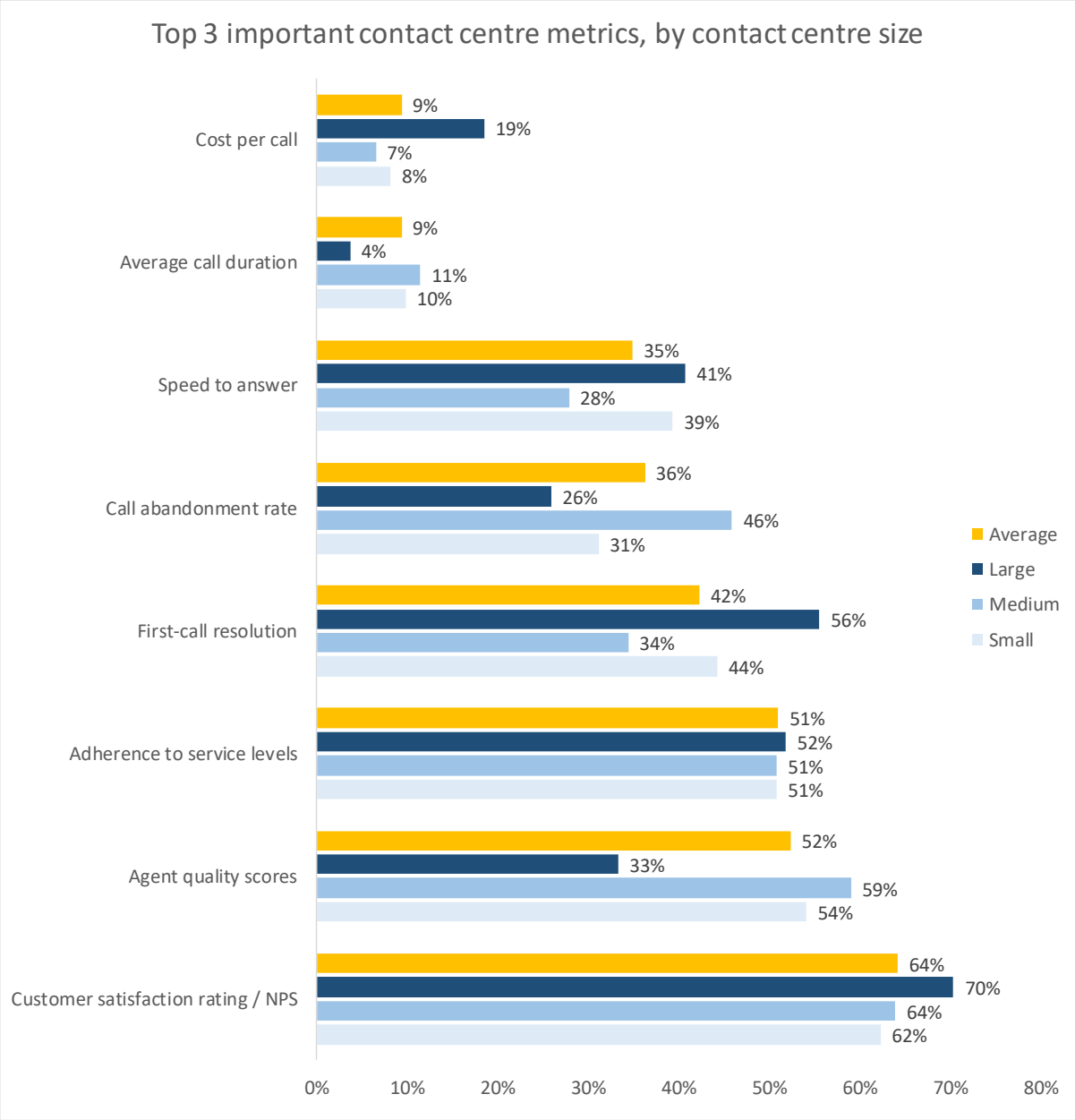
Similarly, adherence to service levels and schedule is important to the smooth running of the contact centre, without which high-quality customer experience cannot exist, yet from the customer's perspective, the effectiveness of the interaction is driven by its result, rather than on whether the agent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

When looking at the importance of contact centre metrics depending on contact centre size, several patterns emerge. Adherence to service levels is of equal importance to all three of the contact centre size bands surveyed, and customer satisfaction rating is seen as the most important metric by all.

First contact resolution rate is placed as the second most important metric by large contact centres, with 56% placing it as one of the top three measurements.

Large contact centres are also far more concerned about cost per call than small and medium-sized operations, and the focus upon this metric and first contact resolution impacts upon their perception of the importance of agent quality scores, which is placed in the top three by only 33% of 200+ seat contact centres.

Figure 5: Top 3 most important contact centre metrics, by size



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

- mean average speed to answer remains very similar to last year, with the median up slightly
- call abandonment rate drops slightly with the median falling from 4.5% to 4.0%
- mean first contact resolution rates rise from 73% to 78%, although the median hardly alters
- mean service call duration drops through 326 seconds to 302 seconds, although the median barely changes (suggesting the absence this year of a few outlying responses with extremely high durations)
- mean sales call duration drops very slightly, although the median drops considerably from 360 seconds to 320 seconds
- median call transfer rate rises from 4.9% to 5.9%, although the mean rises more slowly
- mean cost of an inbound call rises slightly from £3.85 to £4.00, with the median remaining almost exactly the same
- both mean and median outbound call costs have risen by between 10-20%.

Figure 6: Contact centre performance metrics

Metric	Mean average	Median average
Average speed to answer	34.4 seconds	22.1 seconds
Call abandonment rate	5.3%	4.0%
First-call resolution rate	78%	80%
Call duration (service)	302 seconds (5m 2s)	300 seconds (4m)
Call duration (sales)	401 seconds (6m 41s)	320 seconds (5m 20s)
Call transfer rate (excl. receptionists)	9.9%	5.9%
Cost of inbound call	£4.00	£3.29
Cost of outbound call	£4.07	£3.50

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.

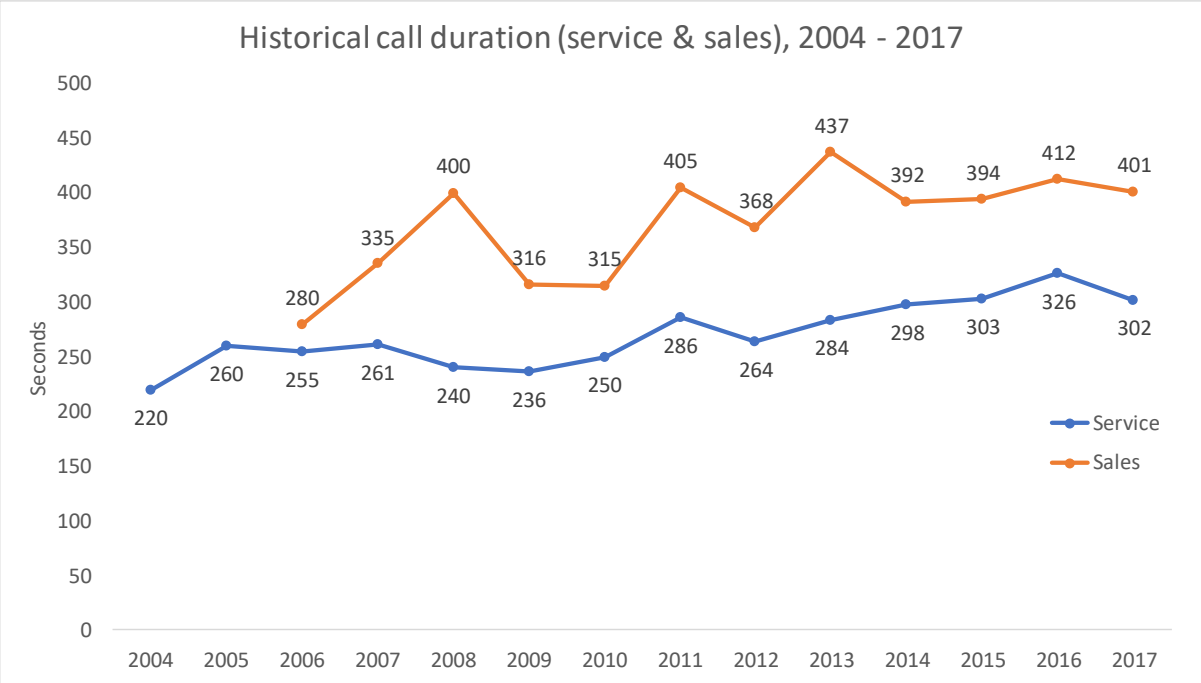
The next charts show how key metrics have changed over the past 14 years.

Average service call duration varied little between 2005 and 2010, being around the 240-260 second range. After a significant jump in 2011, 2012 onwards saw a progressive rise to a peak of 326 seconds in 2016. Although the figure has dropped to 302 seconds in 2017, this is still well above the historical average.

Sales call durations follow a more varied trajectory, probably because the sample sizes for sales calls are smaller than those for service calls. However, there is a clear upward progression from 2010, in the same way that can be seen within the service call duration data.

These findings support the results shown elsewhere that show call duration to be a far less important metric in recent times than it has historically been in the contact centre industry, as contact centres have allowed call times to increase as customer experience becomes more important, and self-service now takes up a greater proportion of the easier short calls.

Figure 7: Historical call duration (service & sales), 2004 - 2017

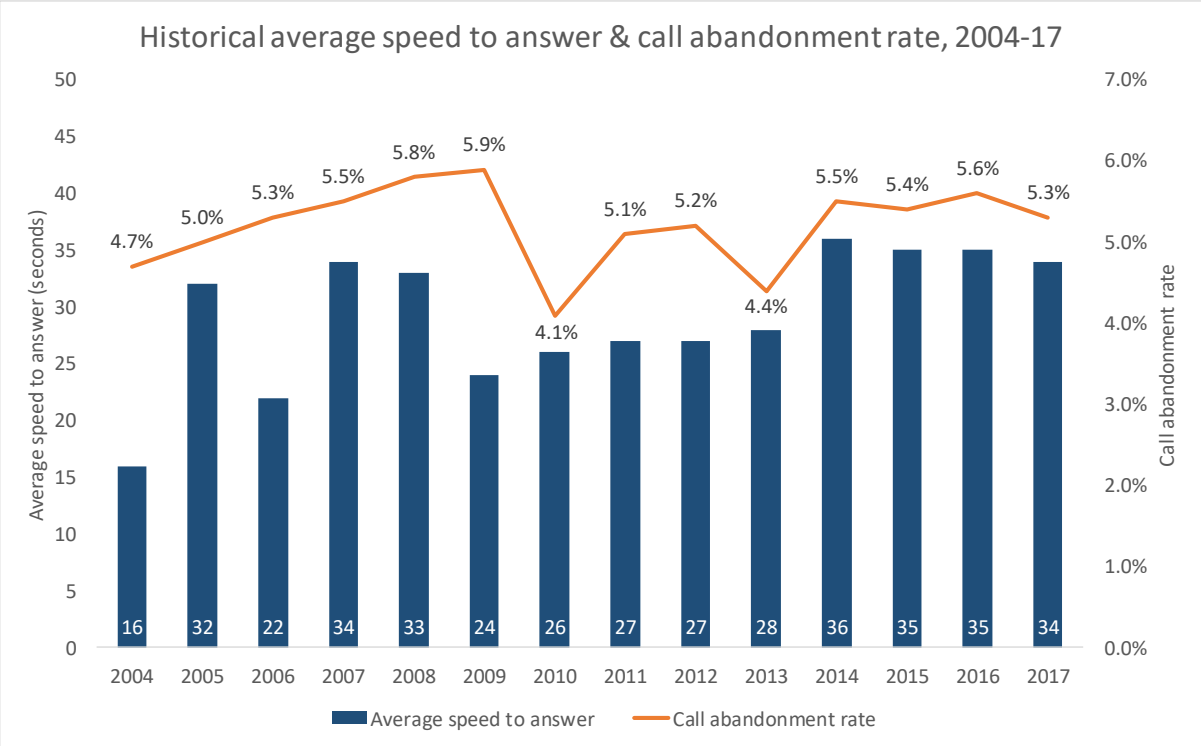


The following chart shows historical figures for average speed to answer and call abandonment rate.

The early years of data do not show a particular pattern in average speed to answer, with the figure doubling between 2004 and 2005 surveys almost certainly as a result of the relatively small sample sizes found in the early surveys. From 2009 onwards there has been a gradual increase in average speed to answer, with a spike to 36 seconds in 2014 which has been generally maintained since.

Call abandonment rate does not show any particular trend, with all but three of the 14 survey results showing data between 5% and 6%.

Figure 8: Historical average speed to answer & call abandonment rate, 2004 - 2017

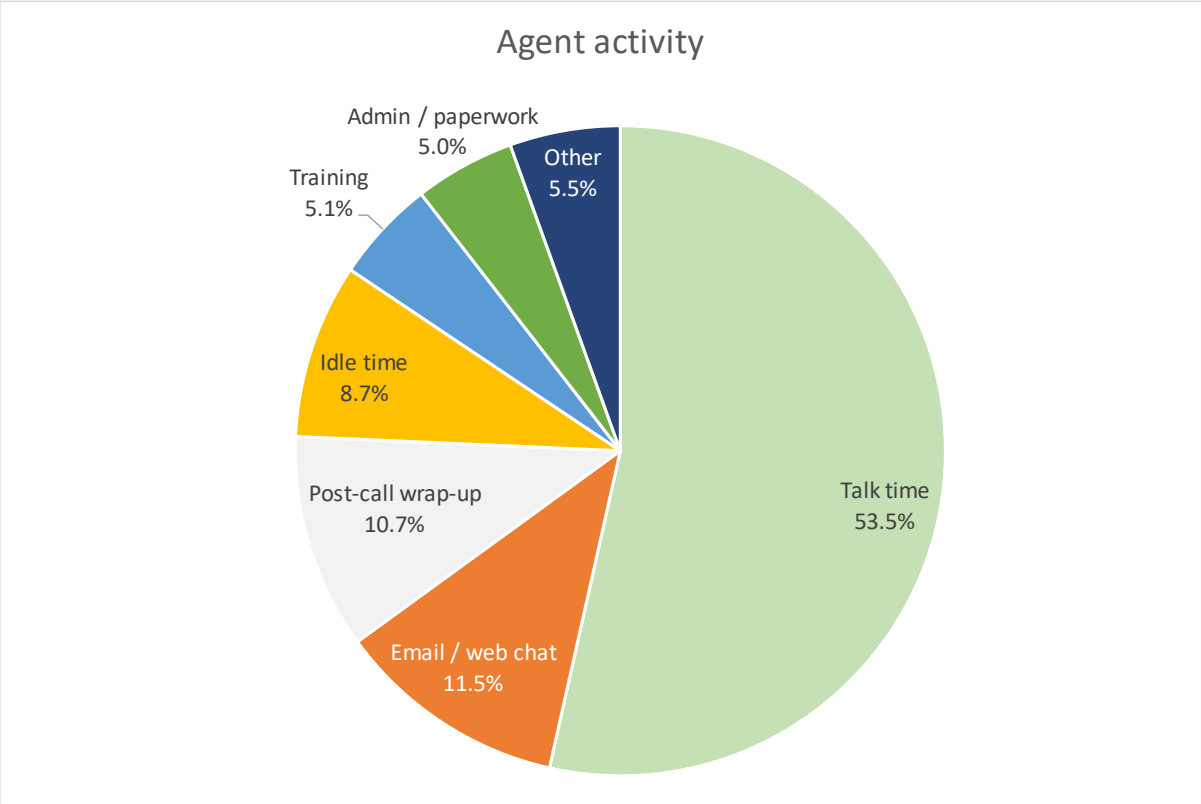


AGENT ACTIVITY

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

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

Figure 9: Agent activity



Talk time declines slightly to 53.5% this year, with post-call wrap-up steady, and idle time rising very slightly from 8.6% to 8.7%.

Taking into account email and web chat handling time as well, the overall agent/customer communication time is now 65%.

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 or administration, which goes a long way towards using the agent time that businesses necessarily pay for already, but which could not previously be accessed.

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

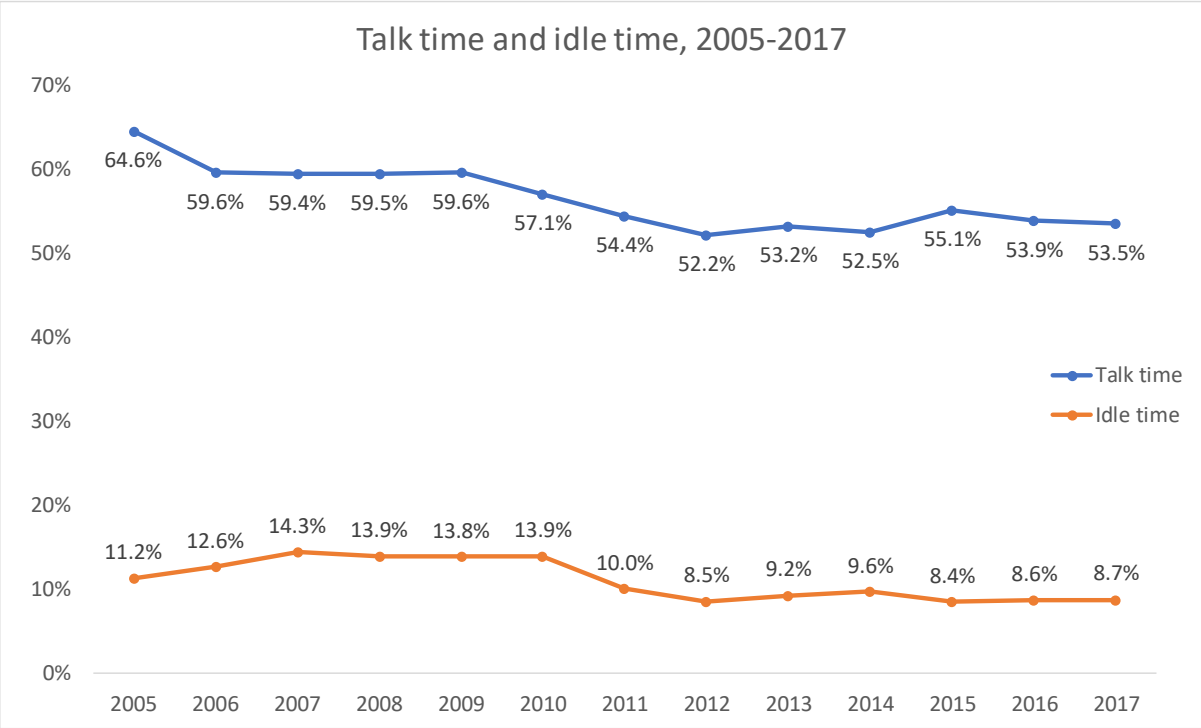
Post-call wrap-up time is also an area which could further be reduced in many contact centres. There are many applications in the market which are capable of reducing the amount of after-call work that an agent has to do by bringing together all of the systems and applications the agent needs on that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

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

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

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

Figure 10: Talk time and idle time, 2005-2017



Detailed analysis of all of the above performance metrics, including historical changes and segmentations by vertical market, contact centre size and type of activity are available in the "UK Contact Centre HR and Operational Benchmarking (2017-18)" report.

MULTICHANNEL WORKFORCE MANAGEMENT

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

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

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

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

The modern contact centre not only requires the basics of having enough people to answer the phone in a reasonable amount of time, but is increasingly demanding more sophisticated functionality, such as the ability to forecast and schedule agents within the daily activity, accurately staff across both multichannel and voice interactions, and 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 means that scheduling can take place in a more realistic way. Enterprises should also be able to factor in exceptions, such as advertising campaigns, training and public holidays, view when the best time for a meeting or training session will be, and measure the impact on the rest of the contact centre. Running regular hypothetical 'what-if' scenarios can show a scheduler how alterations to shift-patterns would impact performance, as well as assisting in business continuity by seeing what would happen in a flu epidemic, for example.

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). As such, workforce management is increasingly being used as part of an overall quality or performance optimisation suite, which can include quality monitoring, speech analytics, HR management and training as well as the traditional workforce management forecasts and schedules, as all of these factors affect each other.

For example, understanding when and how other departments will be operating means that workforce management tools can be used to forecast and schedule accordingly (e.g. a new TV advert may trigger a wave of specific calls). Additionally, contact centre management is able to brief agents - via a desktop broadcast if at short notice - about the correct responses and issues, as well as changing IVR prompts and messages to provide answers to the simpler questions, as well as 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 even at an intraday level to reflect reality.

SCHEDULING

Scheduling is not as simple as it may seem at first glance. The enlightened enterprise takes agent preferences and skill sets into account when scheduling. The “standard agent” approach to solving resource issues (i.e. treating one agent the same as any other) will cause problems with both agent satisfaction and customer service levels. Most companies using advanced workforce management software will have between six and nine skill-sets to work with, although a few contact centres use as many as 50.

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

Scheduling can get particularly complicated in a multimedia environment which usually has agents with multiple media-handling skills (e.g. voice, e-mail, web chat etc.) and multiple business abilities (e.g. sales, service, product knowledge, languages etc.), and which may well be operating within a blended environment.

ADHERENCE AND REPORTING

Adherence is the ability to compare forecasts with reality, and learn from mistakes. 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. Adherence allows a business to fine-tune its contact centre activity, and the more it is used, the more accurate forecasts and schedules become.

This is another area where the cerebral activity of traditional workforce management has become more dynamic. Real-time reporting on schedule adherence, and the ability to access this information through a web browser or mobile phone means that dynamic changes can be made to the system, with automated intraday changes being used increasingly, taking away the need for human intervention. Elsewhere in this report, adherence is reported as being seen as a more important contact centre metric than first contact resolution.

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

CURRENT AND FUTURE USE OF WORKFORCE MANAGEMENT SYSTEMS

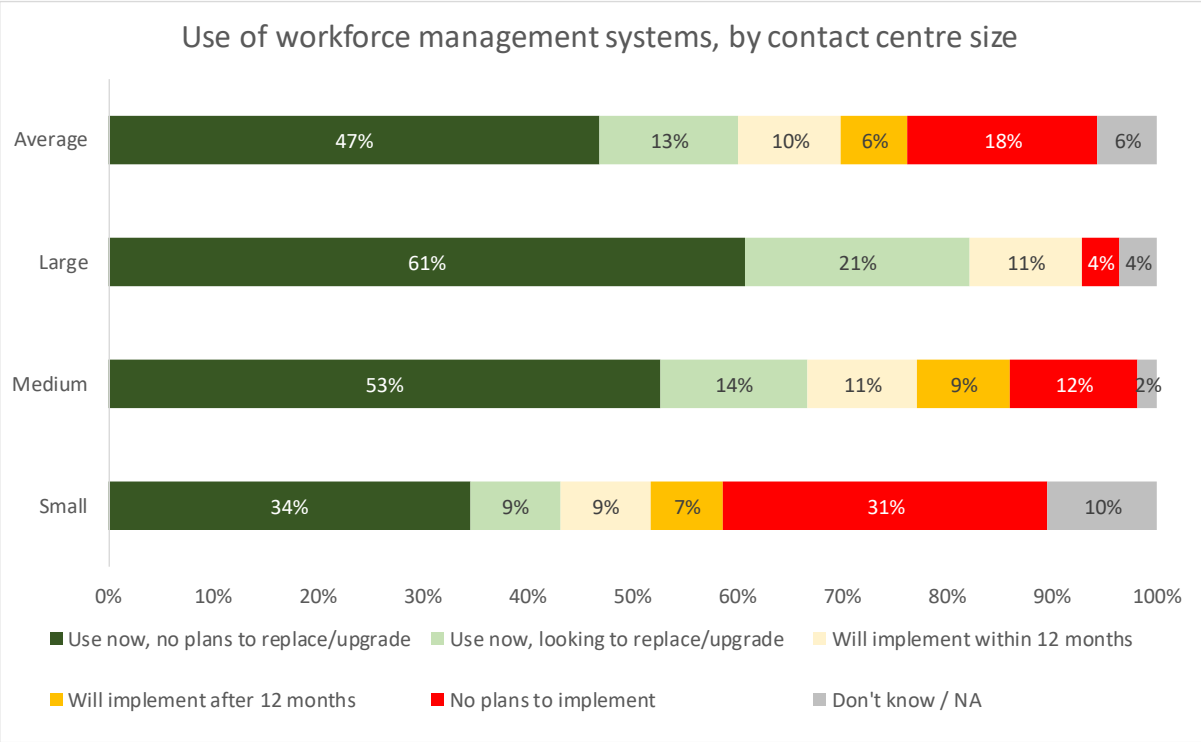
Until relatively recently, small contact centres were still very heavily involved in manual workforce management, which offers extremely limited opportunities for doing anything other than a static schedule that cannot easily be changed. In fact, forecasting and scheduling in this scenario is more of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

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

Workforce management systems are now common in contact centres, with a penetration rate of 60% industry-wide (up from 52% in 2016).

Of these users, 22% are actively looking to replace their WFM solution, and a further 13% indicate that they are likely to implement a system for the first time in the next 12 months.

Figure 11: Use of workforce management systems, by contact centre size



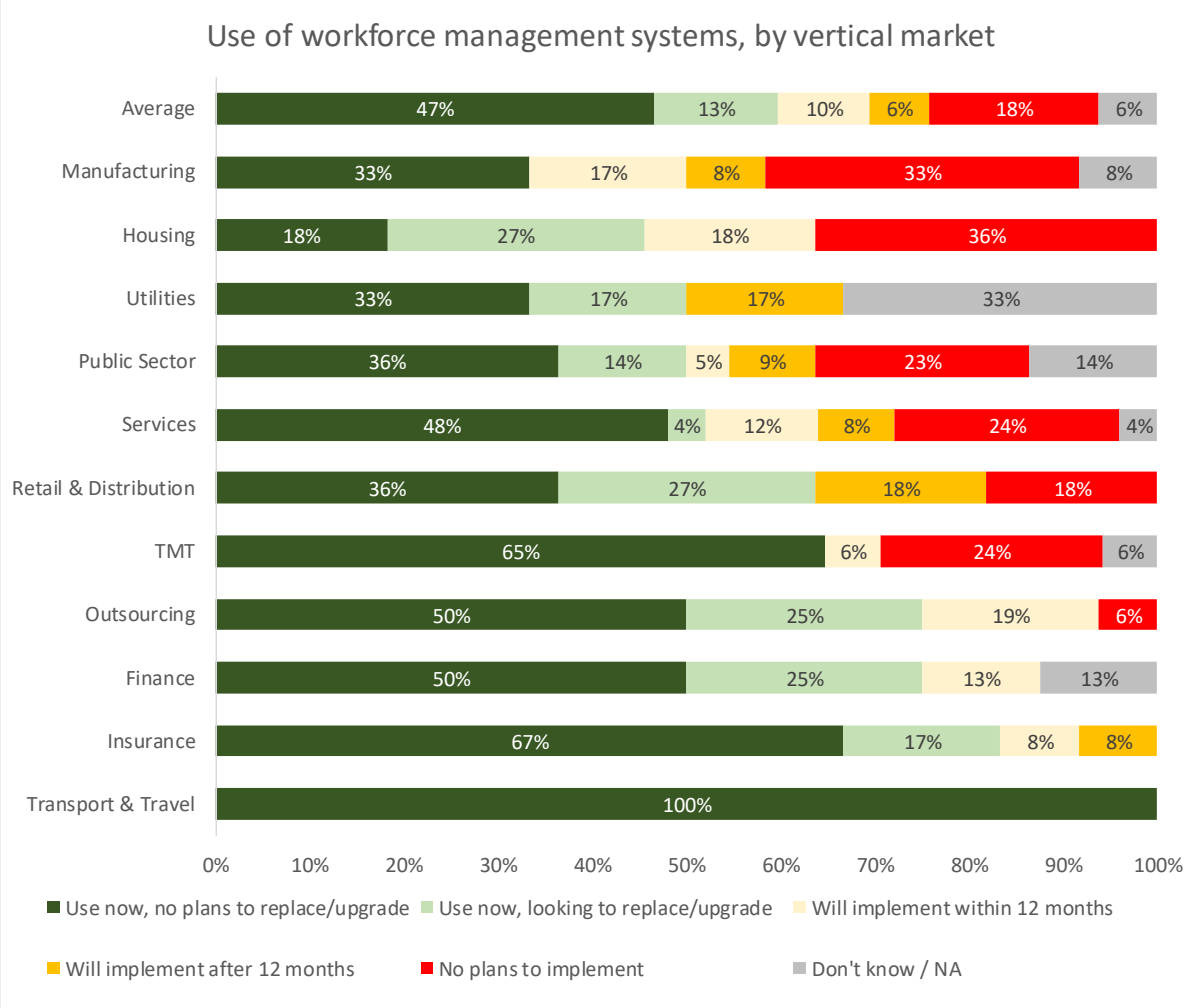
Medium and large operations are far more likely to use dedicated third-party workforce management applications into which historical data can be fed, providing a far more accurate schedule.

Small contact centres have traditionally been less likely to have implemented workforce management, due to issues over cost, complexity and whether it was even necessary in small operations. Recent years have seen opportunities via the cloud model, as well as subscription-based pricing alternatives, which enable accurate forecasting and scheduling options for smaller contact centres.

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

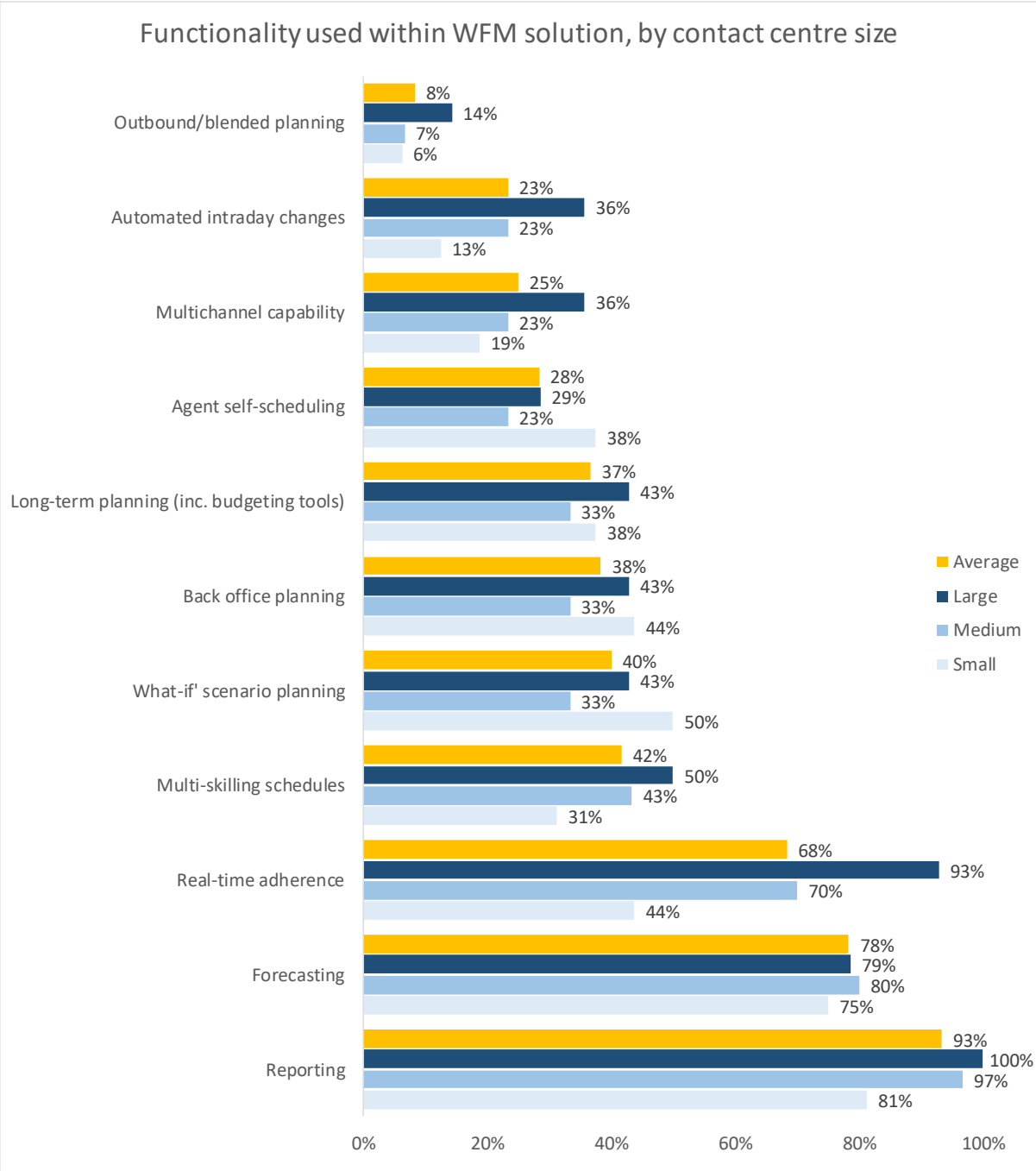
Those respondents in the housing and retail & distribution sectors seem most likely to be looking to upgrade their WFM systems, with those in manufacturing, housing and outsourcing sectors most likely to be implementing the solution within the next 12 months.

Figure 12: Use of workforce management systems, by vertical market



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

Figure 13: Functionality used within WFM solution, by contact centre size



As would be expected, forecasting and reporting scored very highly, with real-time adherence to schedule and multiskilled forecasting/scheduling also seen as being very useful, especially in larger contact centres.

Somewhat less than half of respondents used workforce management solutions for more strategic aims including 'what if' scenario planning and longer term forecasting.

Only 28% of respondents used agent self-scheduling, functionality which can be seen as a potential win-win for both agent and scheduler, in that it provides a more realistic schedule as well as giving the agent an element of control over when they wish to work.

Similar proportions used more recent forms of functionality such as multichannel scheduling and automated intraday changes. Large operations are more likely to be using WFM to scheduling multichannel work.

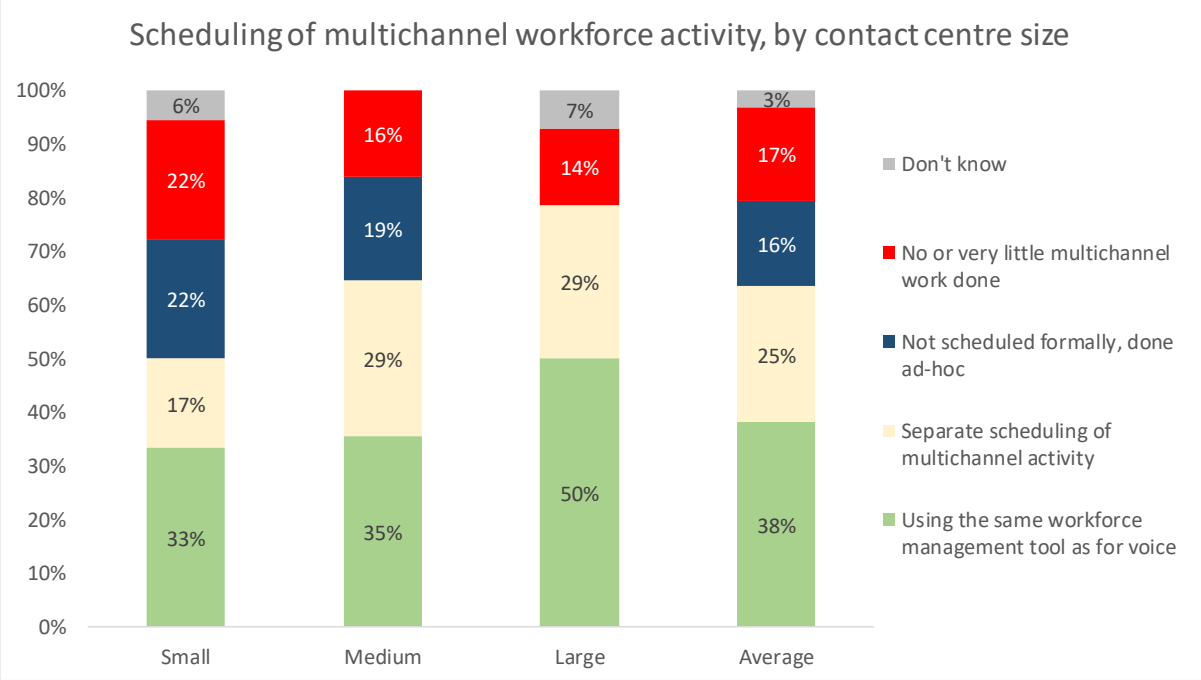
Back-office scheduling has grown greatly in recent times, functionality which supports businesses to deliver what the front office has promised.

Apart from 1 in 7 large operations, outbound / blended planning is relatively little used.

38% of respondents – especially those in larger contact centres - use a combined voice and multimedia workforce management application, with 16% using an ad-hoc approach. Small contact centres that handle multichannel work are most likely to schedule using a separate method (probably manual), depending on volumes of calls or multichannel interactions.

There was a noticeable use of standalone forecasting and scheduling for multichannel activity, both in larger operations which may run their non-voice operation as a separate part of the customer contact environment, and in smaller operations which may have a small number of dedicated multichannel agents.

Figure 14: Scheduling of multichannel workforce activity, by contact centre size



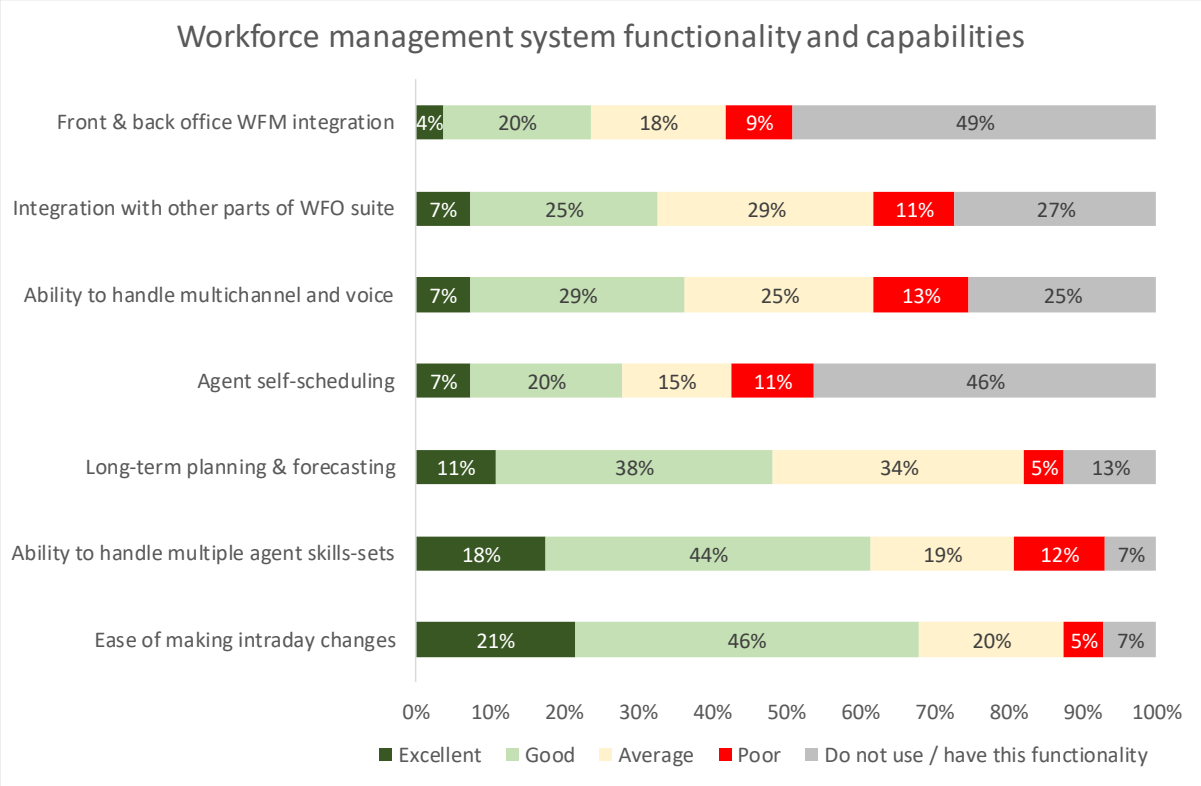
Respondents were asked to comment upon their opinion of the functionality and capabilities of their workforce management system as it stands.

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

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

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

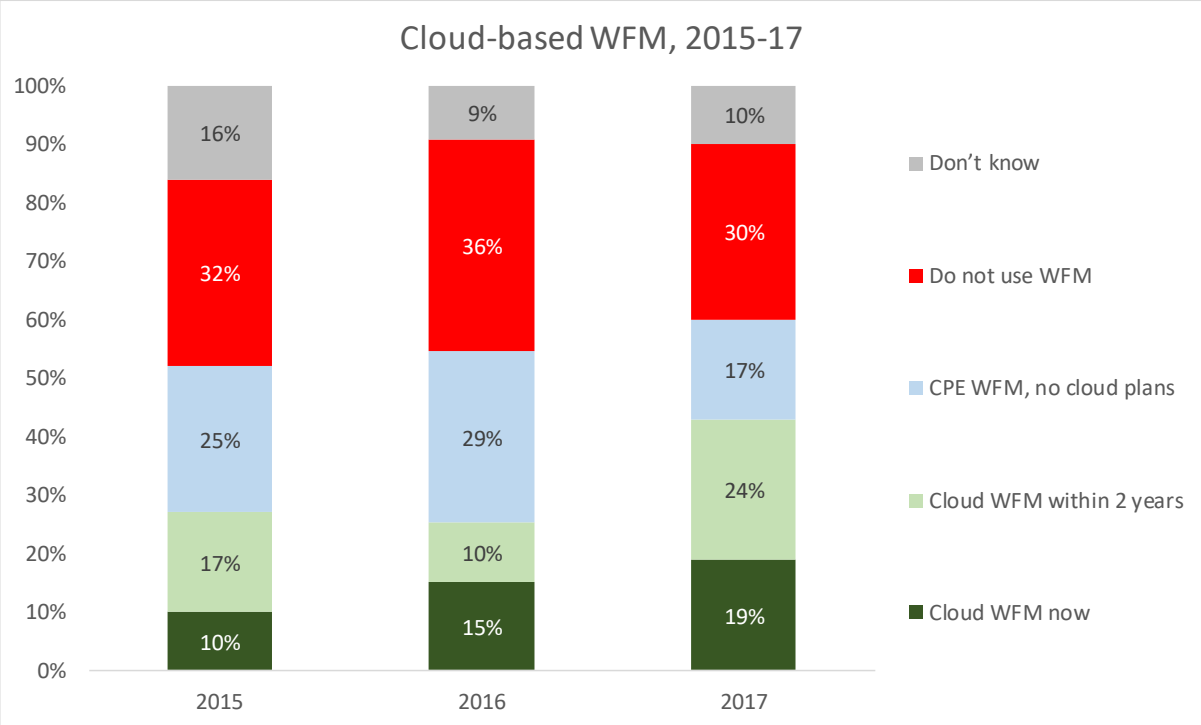
Figure 15: Workforce management system functionality and capabilities



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

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

Figure 16: Workforce management system functionality and capabilities



Workforce management solution providers are keen to expand out of the traditional contact centre, with the back offices and branches of large organisations being seen as potential goldmines. Far more employees work in these spaces than in the contact centre, although many back offices lack the same focus upon efficiency and the tools to improve it. With the increased focus on the entire customer journey, back office processes are starting to fall within the remit of customer experience professionals, who are likely to take their knowledge of contact centre workforce management and apply it in these new areas. The industry is likely to see back office and contact centre workforce management systems being closely integrated, or even working as a single centralised function that can track and analyse the effect of different departments and processes on others throughout the customer journey. It was noticeable that the use of back-office WFM functionality had grown greatly in the past year.

This is not to say that selling back office workforce management solutions is a simple matter of repackaging existing contact centre functionality, as the back office has somewhat different requirements to the contact centre – for example, presence management, deferred workload, forecasts built on contact centre events and volumes, longer service levels, different resource requirement calculations, adherence to schedule without data from an ACD and the identification of bottleneck processes. Yet the opportunity exists and contact centre workforce management vendors are in a prime position to make the most of it.

Omnichannel/multichannel forecasting and scheduling will become even more important, not just as overall digital interactions grow generally across the industry, but also as those operations that have been struggling to handle a small proportion of emails recognise that the problem is not going to go away, and look to invest in new workforce management solutions. While a considerable proportion of organisations still have dedicated digital teams, many small and mid-size operations have a much more flexible approach to multichannel, and the ability to move agents between channels in the near real-time capacity will be highly prized. It is noticeable in previous charts in the chapter that many operations are less than satisfied with current multichannel WFM functionality, so we can expect to see a focus from solution providers on improving this, although approval rates have gone up recently.

It’s important to understand that the number of channels will continue to increase: even traditional media such as letters and faxes still have their place in many contact centre operations, and next-generation social media such as WhatsApp and Messenger are positioning themselves in the customer contact space. 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.

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

Contact centres as a whole are now certainly less centralised than in the past: virtualisation and homeworking are well-entrenched in many organisations and 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 an increase in WFM functionality that allows shift-swapping, vacation bidding and short-notice shift changes, 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 we expect intraday capability to become standard functionality in future WFM solutions, meaning that the term itself may even disappear.

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

WFM will also integrate more deeply with other elements of the WFO suite: analytics is an obvious area where business intelligence and contact centre performance meet closely, but also the performance management and QA modules, identifying best practices and singling out agents skilled in particular types of interaction or channel. This will enable contact centres not just to have enough agents at the right place at the right time, but enough of the right agents. This insight will also feed into coaching and e-learning functionality, sharing best practice and identifying training opportunities.

HEADSETS

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

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

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

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

Headsets and the Connected Enterprise

The newest headsets support the 'enterprise as contact centre' model by allowing the employee to involve knowledge workers in a three-way conversation with the employee via Skype for Business (formerly Microsoft Lync), IBM SameTime or VoIP, for example. This could allow a 2nd-line technical support worker to help immediately with a difficult part of a query without a formal, long-winded escalation process taking place.

With 31% of contact centres using employees based outside the physical contact centre to take calls, it makes sense to support these knowledge workers with the tools they need. For more information, please read "The Connected Enterprise" chapter of this report.

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

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

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

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

The effect of headsets upon productivity

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

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

[1] Source: CCF magazine

ACOUSTIC SHOCK

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

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

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

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

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

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

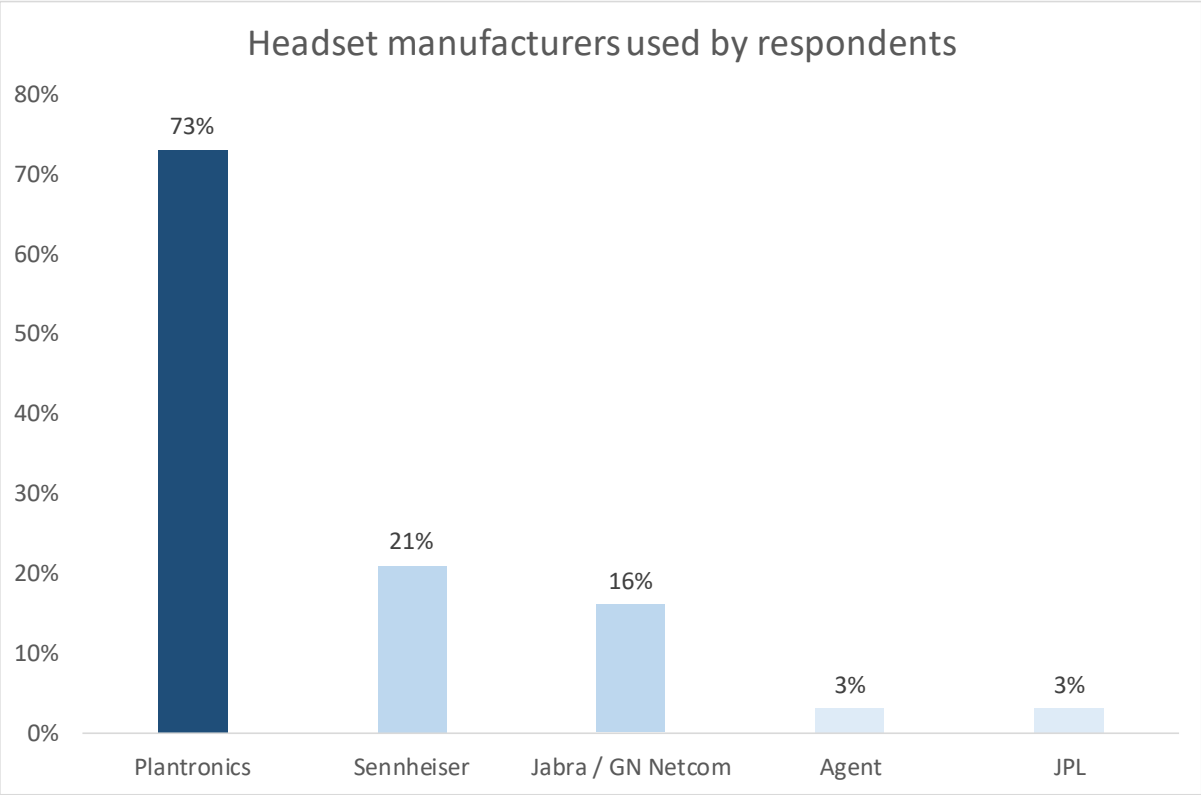
HEADSET MANUFACTURERS

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

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

As usual, Plantronics headsets are used by a clear majority of survey respondents. This year, more contact centres reported using Sennheiser than GN Netcom / Jabra.

Figure 17: Headset manufacturers used by respondents (NB: total is greater than 100% as multiple headset manufacturers may be used)



WIRELESS HEADSETS

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

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

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

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

Possible benefits to wireless headsets include:

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

Historically, there has been a strong negative correlation between the contact centre's size and its use of wireless headsets, but recently this pattern has all but disappeared.

62% of respondents in smaller contact centres use wireless headsets, with a penetration rate of 63% in operations that use them, whereas in larger contact centres, while 50% of operations have some wireless headsets, there is a penetration rate of only 14% in these contact centres, suggesting that it is the supervisors and team leaders who are using wireless headsets, rather than the employees.

Employees working in product or technical support tend to have wireless headsets, as do supervisors. Outbound sales staff may prefer to be more mobile on their calls, and ask for wireless headsets too.

Figure 18: Use of wireless headsets, by contact centre size

Contact centre size	% respondents using wireless headsets	% of headsets that are wireless (ONLY in contact centres using them)	% of headsets that are wireless (industry-wide)
Small	62%	63%	39%
Medium	58%	63%	37%
Large	50%	14%	7%
Average	57%	52%	30%

IP HEADSETS

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

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

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

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

Currently, 84% of respondents have some headsets that are able to cope in an IP environment, the highest figure recorded in this survey.

Of these respondents, 96% of their headsets can handle IP. Industry-wide, respondents report that 83% of their headsets are IP-capable.

Smaller operations are slightly more likely to be using IP headsets, although there is little major difference between size bands.

Figure 19: Use of IP headsets, by contact centre size

Contact centre size	% respondents using IP headsets	% of headsets that are IP (ONLY in contact centres using them)	% of headsets that are IP (industry-wide)
Small	89%	98%	87%
Medium	84%	98%	82%
Large	82%	94%	77%
Average	86%	96%	83%

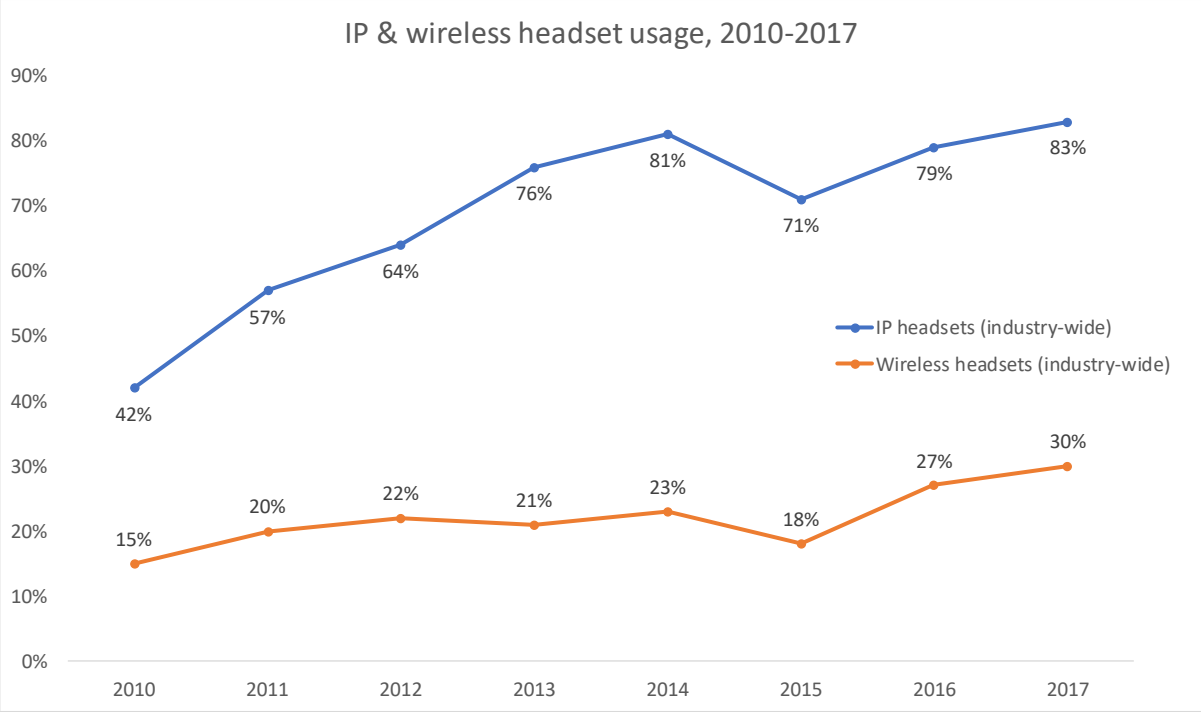
IP headsets and homeworkers

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

Looking at historical data from 2010 onwards, it can be seen that the use of IP headsets has grown very significantly, from a 2010 base of 42% to 83% in 2017, which is close to doubling.

Wireless uptake has been much slower, although there has been a gradual increase from 15% in 2010, to 2017's high of 30%. 2015's low figure of 18% seems to be an anomaly.

Figure 20: IP & wireless headset usage, 2010-2017

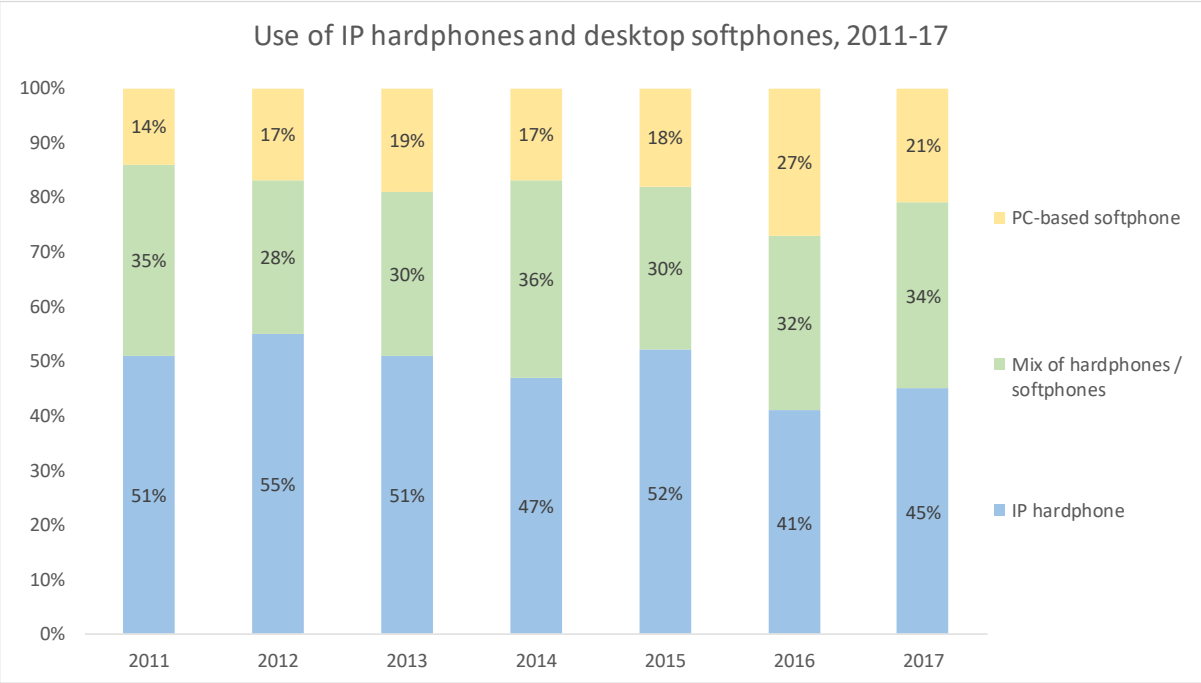


An IP-based contact centre can choose either: an IP hardphone, (a physical phone with a keypad and headset/handset), or a PC-based softphone, where the employee connects a headset to the PC, without having a traditional telephone at all.

One-third of respondents have a mixture of both types, with larger operations more likely to have a mix. As usual, respondents from mid-sized operations are most likely to be using softphones.

Looking at historical figures from 2011, there has been a gradual movement towards softphones, from 14% in 2011 to 21% in 2017 (after 2016's slight anomaly where 27% reported using softphones). Broadly speaking, any changes have not been particularly spectacular.

Figure 21: Use of IP hardphones and desktop softphones, by contact centre size, 2011-17

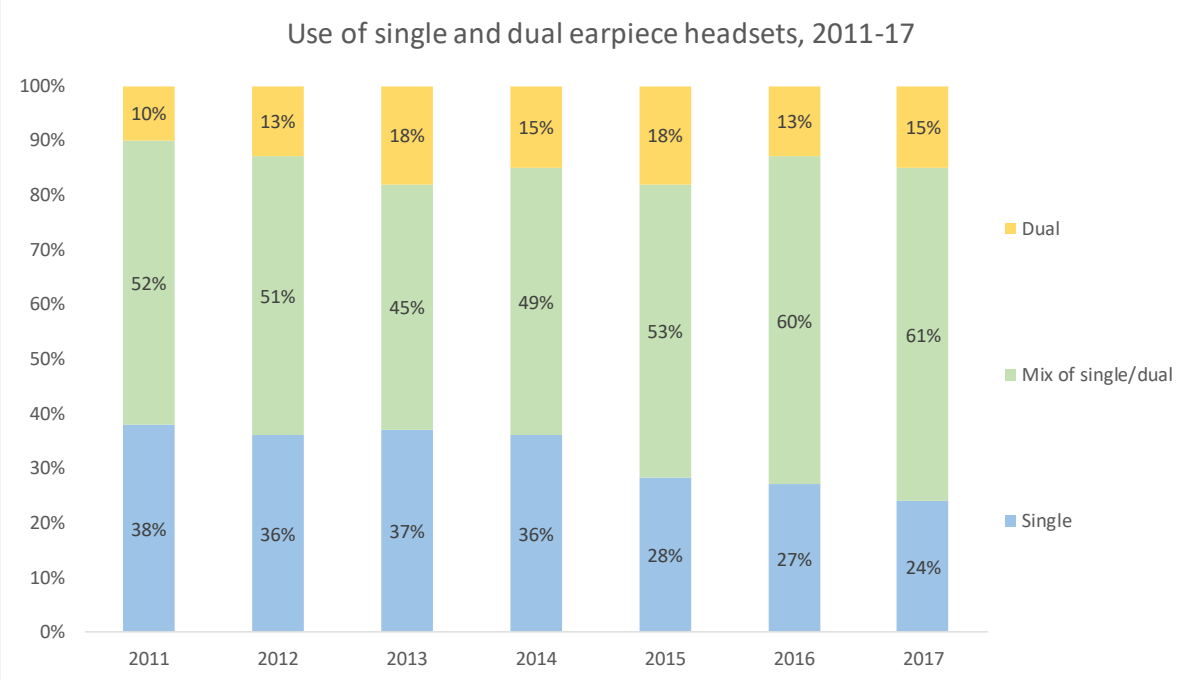


SINGLE- / DUAL-EARPIECE HEADSETS

Whether an employee or operations prefers single or dual earpiece headsets will tend to depend on the environment: those working in noisier backgrounds may prefer to reduce external distractions with a dual-earpiece headset, while others may prefer to be able to keep in touch with what's going on around them and choose a single-earpiece headset.

Historically, we can see a slight decrease in the proportion of contact centres using only single earpiece headsets, from a high of 38% in 2011 to a low of 24% in 2017. Dual earpiece has risen from 10% to 15% in this time, although the majority of contact centres in every year have used a mixture of both.

Figure 22: Use of single and dual earpiece headsets, 2011-17



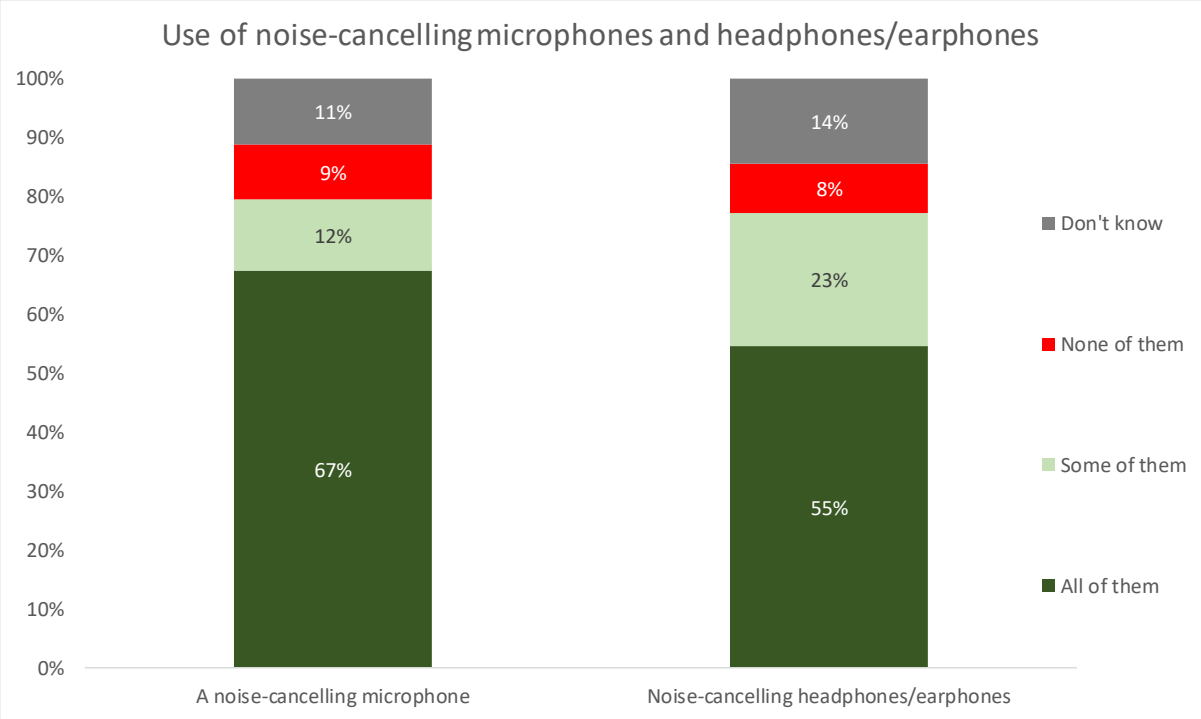
NOISE-CANCELLING HEADSETS

67% of respondents report that all of their headsets have noise-cancelling microphones, which cut out the background noise that can be distracting for the caller. 12% report partial use of these types of headset. Some headsets use a multiple microphone array within each headset to improve noise cancellation. The ability to alter the positioning of the microphone will also improve voice clarity.

55% have noise-cancelling headphones / earphones for all of their headsets, which means that some employees are still prone to noisy environments which can affect their concentration, accuracy and performance. 23% of respondents partially use this type of headset.

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

Figure 23: Use of noise-cancelling microphones and headphones/earphones



The unnecessary cost of mishearing

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

Inbound calls per year (handled by agents): 7.65bn[2]

If 10% of calls require a sentence repetition: 765m calls

Assume increased length of call due to repetition is 15 seconds

Average call duration: 5m 22s (322 seconds), therefore 4.7% of the call is repetition

Mean average cost per inbound call: £4.00

Cost of time spent on repetition: 18.6p per call

Therefore, theoretical industry-wide cost of repetition: £143m per year

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

Average calls per agent position per year: 12,688

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

Assume increased length of call due to repetition is 15 seconds

Average call duration: 5m 22s (322 seconds), therefore 4.7% of the call is repetition

Mean average cost per inbound call: £4.00

Cost of time spent on repetition: 18.6p per call

Cost of repetition per year for 250-seat contact centre with sub-standard headsets: £295,000

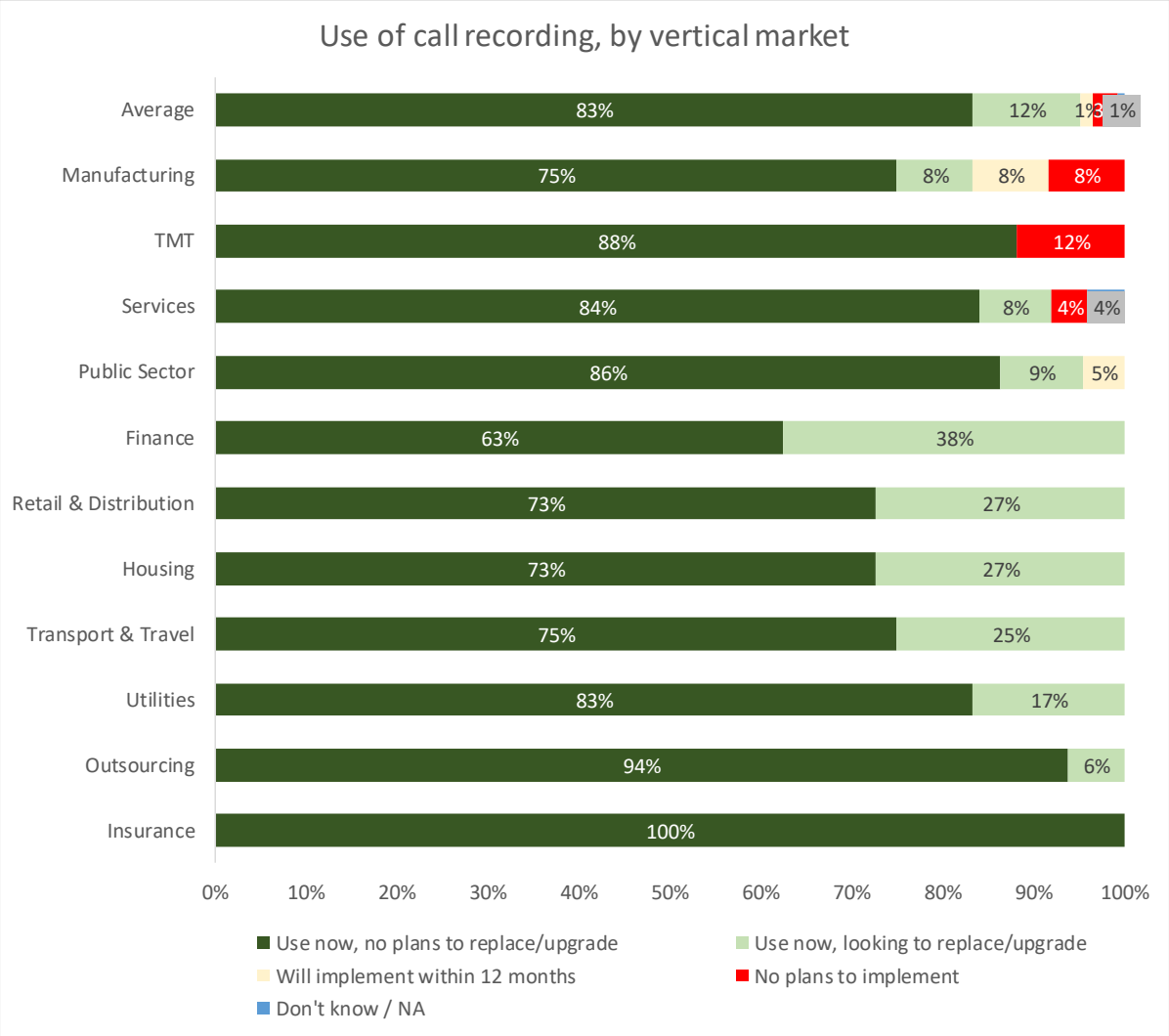
NB – using speech analytics, contact centres could analyse the proportion of calls requiring repetition and the actual extra time that this takes in order to calculate the unnecessary cost of repetition in their own operations.

[2] ContactBabel, "UK Contact Centres 2017-2021: The State of the Industry"

CURRENT & FUTURE USE OF CALL RECORDING

Consistently one of the most widely-used contact centre technologies, call recording is used by 95% of this year's respondents, 13% of whom state that they wish to replace or upgrade their current system. Only 3% of respondents have no intention of using call recording.

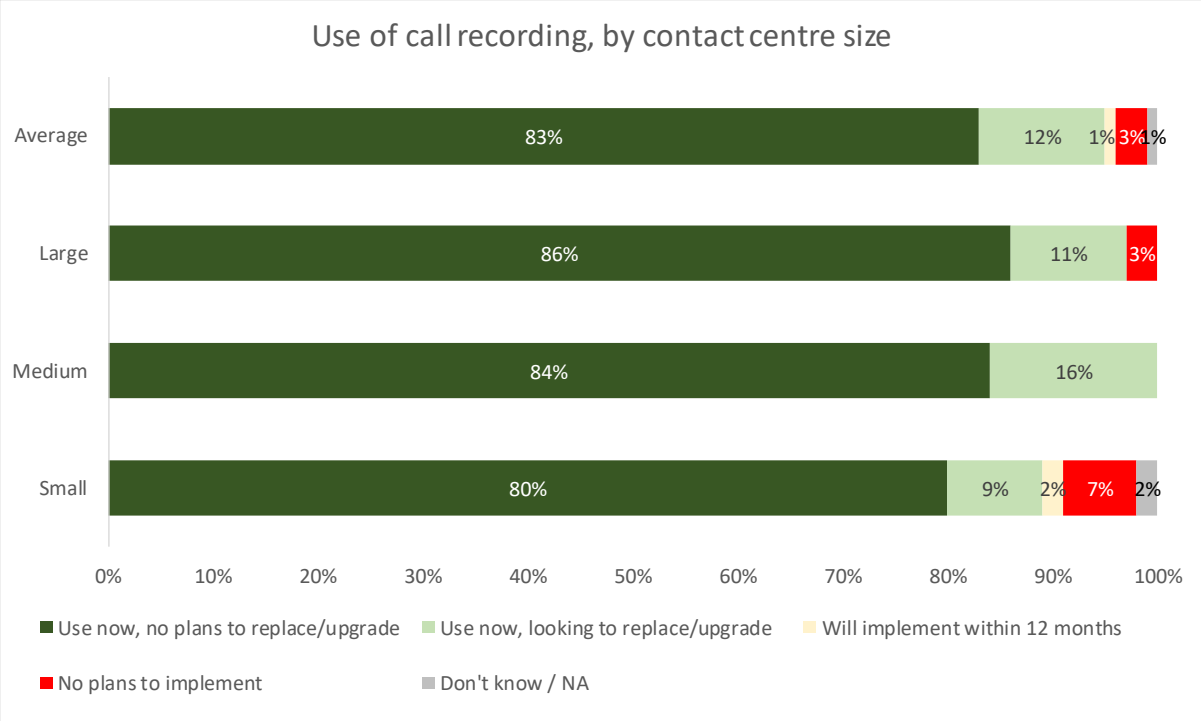
Figure 24: Use of call recording, by vertical market



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

The use of call recording has in the past been influenced by the size of the contact centre operation, although the current figure of 89% penetration in respondents from small operations shows that vendors have been able to offer solutions successfully at various price points and deployment methods.

Figure 25: Use of call recording, by contact centre size



SITUATIONAL CALL RECORDING

Call recording may be used in three modes:

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

35% of respondents that use call recording do so for all calls, with 65% having the option to record only a part of their overall voice interactions. 42% of 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 50% will do so based on the inbound number called. Only 36% identify the inbound caller's number and decide whether to record or not based on that. These figures are all growing slowly, year-on-year.

Figure 26: 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.)	42%
Based on CLI (calling-line identity, i.e. the number calling in)	36%
Based on DNIS (dialled number identification service, i.e. the number being called)	50%

As with any form of recorded and potentially sensitive customer data, the secure storage of recorded calls must be taken into account. 50% 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 (up slightly from 45% last year). This has usually been somewhat more likely to be the case in large operations, although there is little difference found across size bands this year.

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

HOW IS RECORDING USED BY THE BUSINESS?

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

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

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

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

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

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

Agents can add to the value of interaction recording: 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.

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

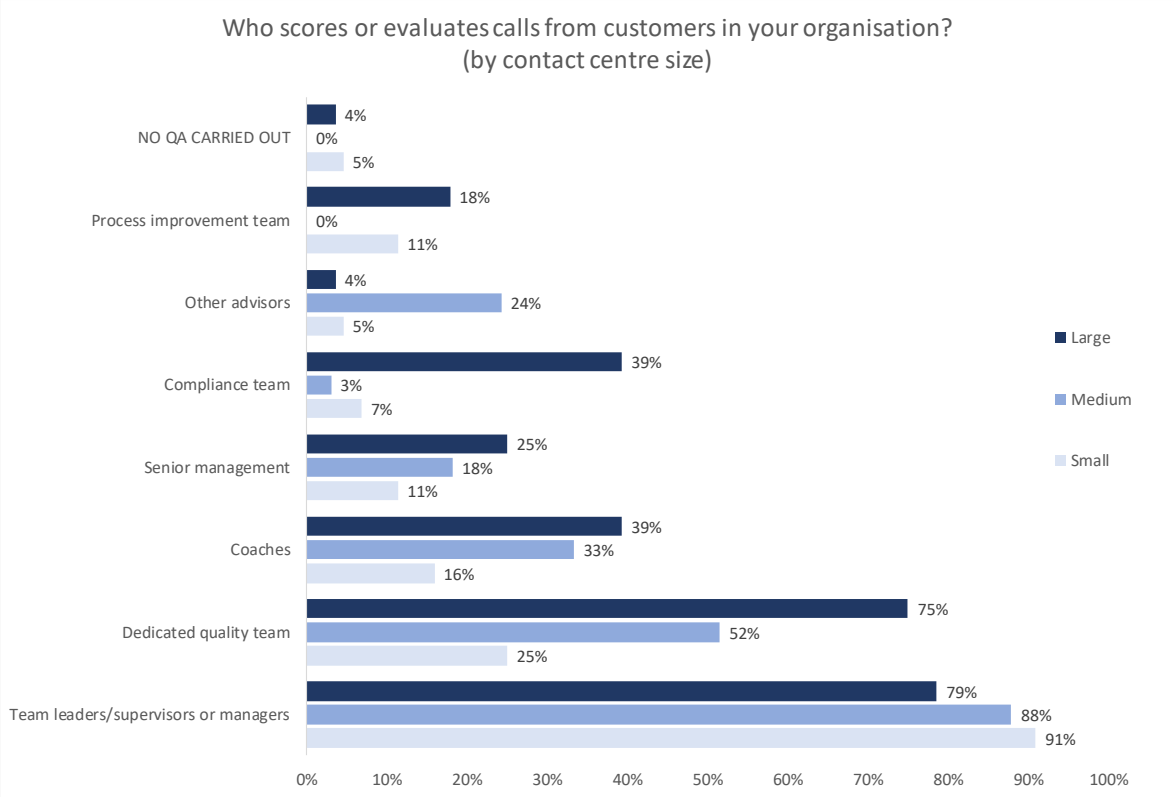
Using interaction recording, the performance of the contact centre as a whole can be viewed in terms of quality, not just quantity. Key performance indicators can be set and reviewed (such as average revenue per call), which are directly relevant to the needs of a business as a whole. Contrast this with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

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

The majority of UK contact centres have team leaders and line managers involved in scoring agent calls manually, with 75% of respondents from large operations having a specific, dedicated quality team involved as well. Large and medium operations are also more likely to have coaches evaluating calls, which will also feed into the process of understanding each individuals' need for specific improvement, as well as developing the wider training program. 25% of large operations have the contact centre manager involved in evaluating calls as well, although these may well have gone through an initial process of identifying calls relevant to the specific business or operational issue.

39% of respondents from large operations have a compliance team evaluating calls, and are much more likely to use a business process improvement team as well to learn from the QA output.

Figure 27: Who scores or evaluates calls from customers in your organisation? (by contact centre size)



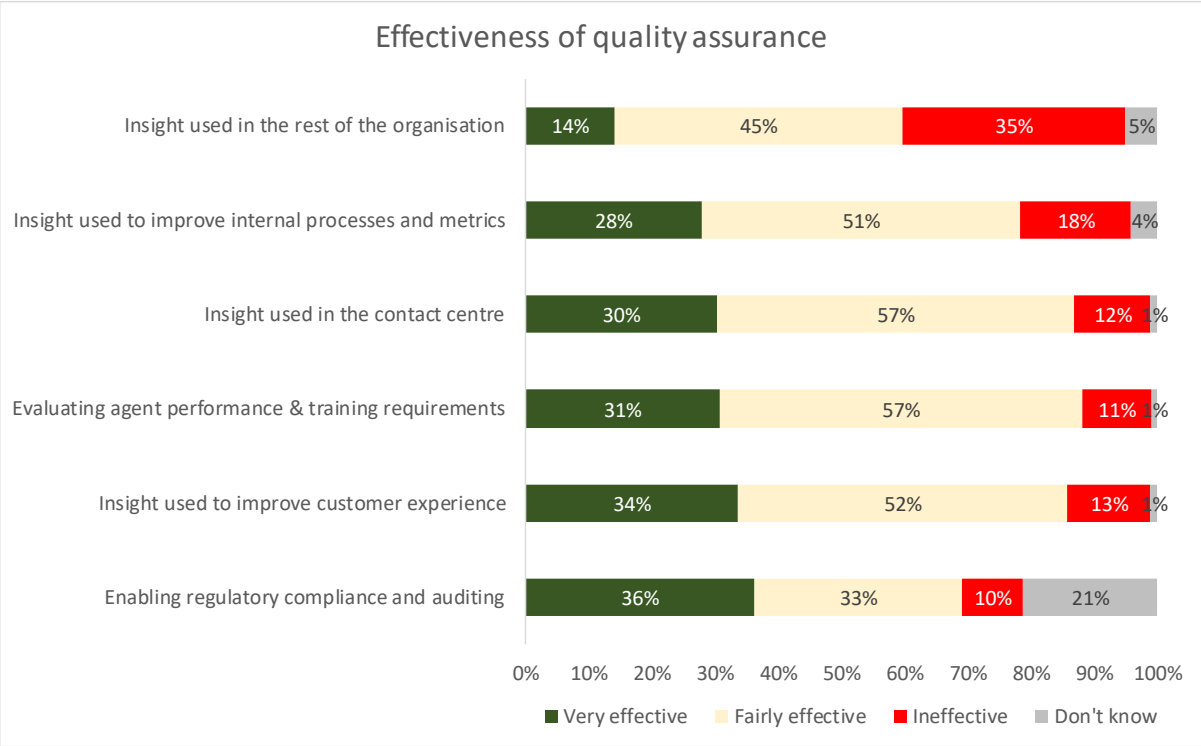
EFFECTIVENESS OF QA

When respondents were asked about how effective their QA processes are, it is noticeable that more of these respondents are lukewarm about the results of their QA processes than are actively enthusiastic: only "enabling regulatory compliance and auditing" 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.

34% feel that QA drives customer experience improvements significantly – a major improvement on 2016's figure of 21%. However customer insight gained from the quality assurance process stands a very significant risk of not being used effectively within the wider organisation, although the feeling is that it does generally help the outcome at agent level.

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

Figure 28: Effectiveness of quality assurance

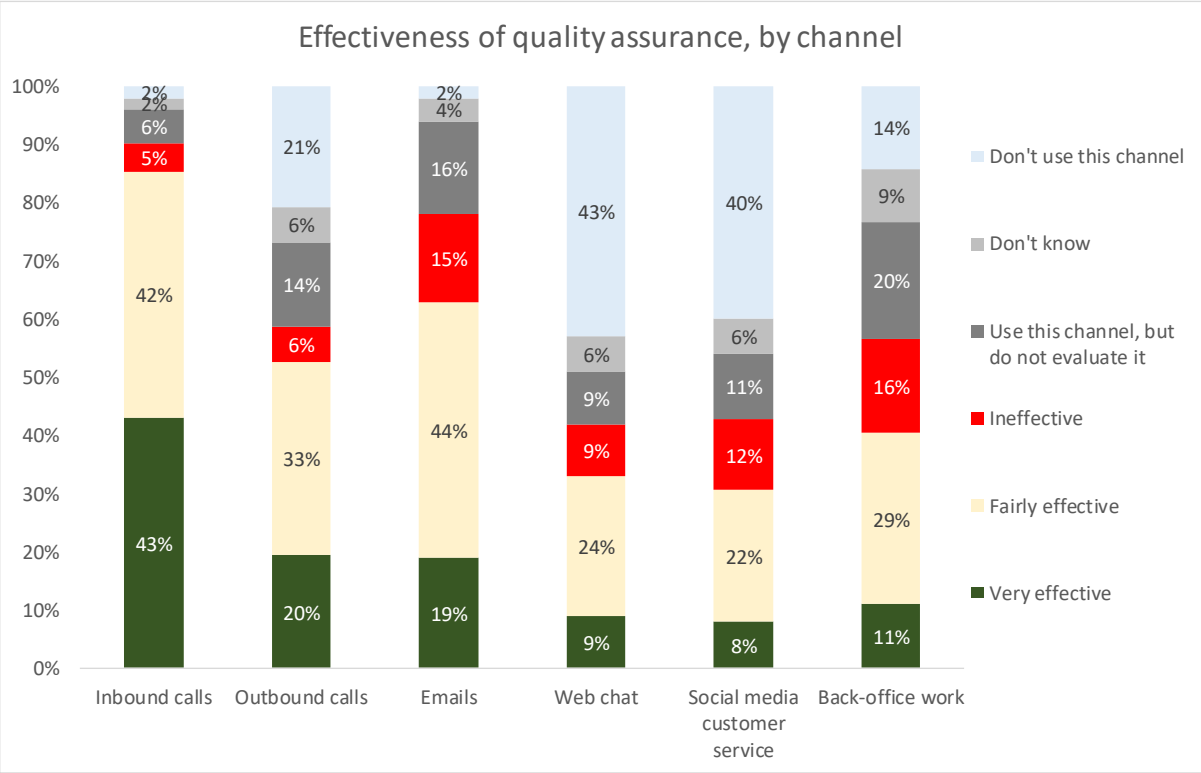


Survey respondents were asked their opinion on how effective they felt their quality evaluation was for specific contact centre activities, including inbound and outbound activity, and multichannel work. As might be expected from the activity that has been around the longest, inbound telephony was judged to have the most effective quality evaluation, with 43% of respondents stating that it was very effective. Evaluation of outbound calling was a little less positive, with 6% of respondents feeling that it was ineffective and 20% very effective.

For back office work evaluation, more respondents believed their QA to be ineffective than very effective, but 29% either did not have an opinion, or did not use quality evaluation for back office processes. As workforce optimisation solutions continue to evolve, and processes get tracked throughout the enterprise - not just in the contact centre - the back office will have considerably more attention drawn to it, as it is ripe for improvement in many organisations as these figures suggest.

Multichannel quality evaluation still has some way to go to reach the standard of telephony QA. While 19% of respondents stated that quality evaluation on emails was very effective, 15% believed it ineffective. For a channel that has been offered to customers for well over a decade by most businesses, this is not very impressive: both the newer channels of social media and web chat had no better results.

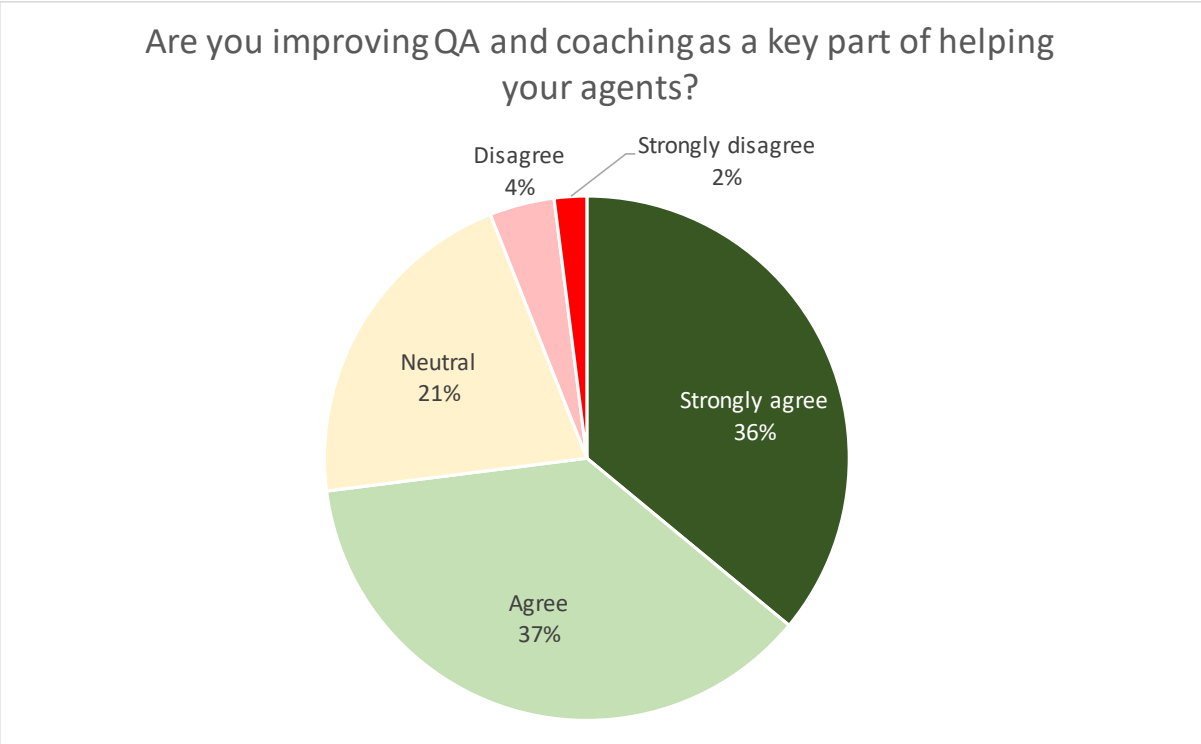
Figure 29: Effectiveness of quality assurance, by channel



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

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

Figure 30: Are you improving QA and coaching as a key part of helping your agents?

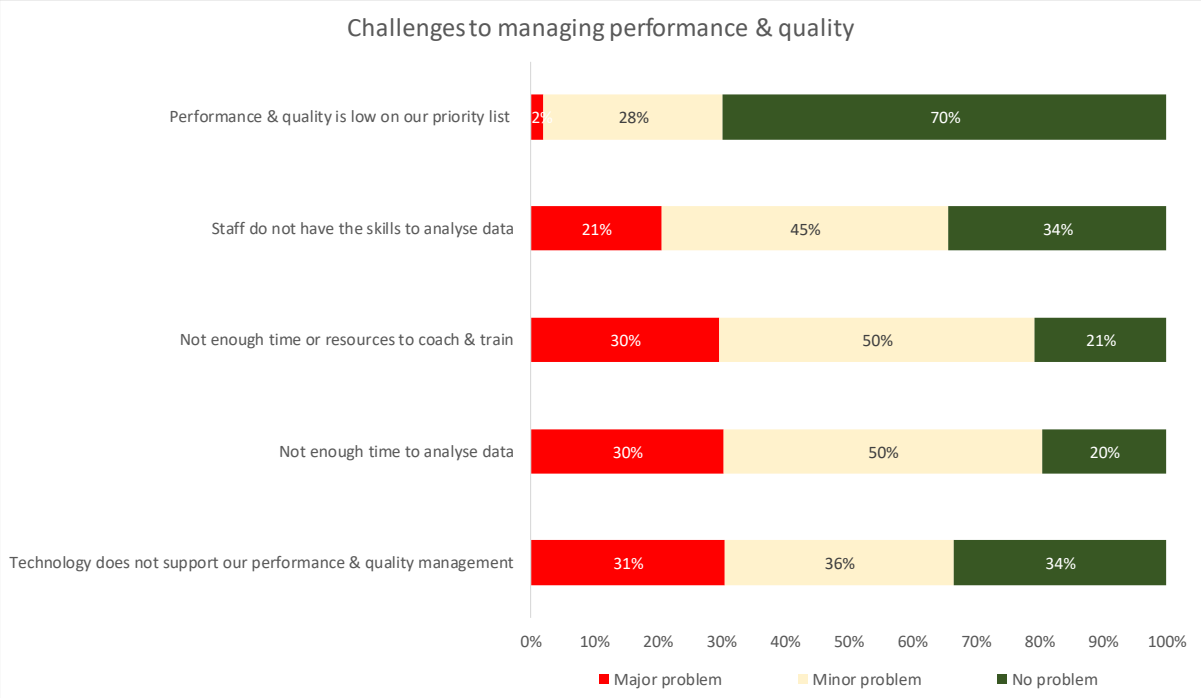


CHALLENGES TO EFFECTIVE QA

The greatest challenge to managing performance and quality is reported to be caused by not having sufficient time to analyse and use data, with 80% of respondents stating that this was a problem in some form, and 30% stating that it is a major problem for them: this is particularly the case in medium and large operations. 21% 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 67% of respondents state that their current performance and quality technology simply does not support what they would like to do.

Figure 31: Challenges to managing performance & quality



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

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

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

There are also some clear critical success factors:

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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 will be implemented to look at one particular pressing issue, such as automating the QA process, it will further develop over time into looking at business intelligence and process optimisation.

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

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

In the late 1990s, data warehousing was a big growth industry, especially in sectors such as retail, where the widespread usage of customer loyalty cards gave huge amounts of data about customers, their buying patterns and preferences. However, getting the data into storage was not the difficult bit: the greatest value came from being able to identify and analyse the relevant and insightful patterns within these data, through data mining. In many cases, the reality took a while to catch up with the hype, as the analytical capabilities of data mining tools and businesses' ability to use them effectively did not match the ease with which the data warehouse was filled in the first place.

Customer contact analytics solutions are similar to the data warehousing and mining applications in as far as they analyse huge quantities of data and identify important and insightful patterns in caller and agent activity. Hence, speech analytics also called audio mining, and text analytics, text mining. (It should be noted that some analytics solutions act in real-time, so the analogy is not quite exact). However, unlike the gap in functionality between data warehousing and data mining that we saw a decade ago, analytics solutions offer a proven and insightful option to release the customer value that is stored in these enormous quantities of information: insight about the customer, the agent, the business processes and the products and services that the business sells.

Like most contact centre applications, analytics can be used to cut costs, but its promise goes far beyond this. No other contact centre technology provides the business with this level of potential insight that goes far beyond the boundaries of the contact centre, and can offer genuine and quantifiable ways in which sub-optimal business processes can be improved. This is not to say that the science of customer contact analytics is at its zenith. Significant improvements are still being made to the accuracy and speed of the speech engines, the sophistication of analytical capabilities, the integration of various data inputs and the usability of reports. Some of the actionable findings from analytics may seem very simple - the recommendation to change a few words in a script, for example - but the overall potential impact upon the cost, revenue, agent capability and customer experience that is possible through analytics is perhaps unprecedented.

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

- Speech engine: a software program that recognizes speech and converts it into data (either phonemes - the sounds that go to make up words - or as a text transcription, although there are solutions which directly recognise entire spoken phrases and categorise calls based upon the occurrence of those phrases)
- Indexing layer: a software layer that improves and indexes the output from the speech engine in order to make it searchable
- Query-and-search user interface: the desktop application where users interact with the analytics software, defining their requirements and carrying out searches on the indexed data
- Reporting applications: the presentation layer of analytics, often in graphical format
- Business applications: provided by vendors, these pre-defined modules look at specific issues such as adherence to script, debt collections etc., and provide suggestions on what to look for
- Text analytics: this solution combines the transcription of customer calls with other forms of text interactions such as email and web chat. It then uses natural language processing models along with statistical models to find patterns
- Desktop data analytics: a solution that gathers metadata from agent desktop and CRM applications – for example, account ID, product order history and order value – and tags them to call recordings or digital records, enabling deeper insight.

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

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

DRIVERS FOR CUSTOMER INTERACTION ANALYTICS

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

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

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

Figure 32: Uses of customer contact analytics

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

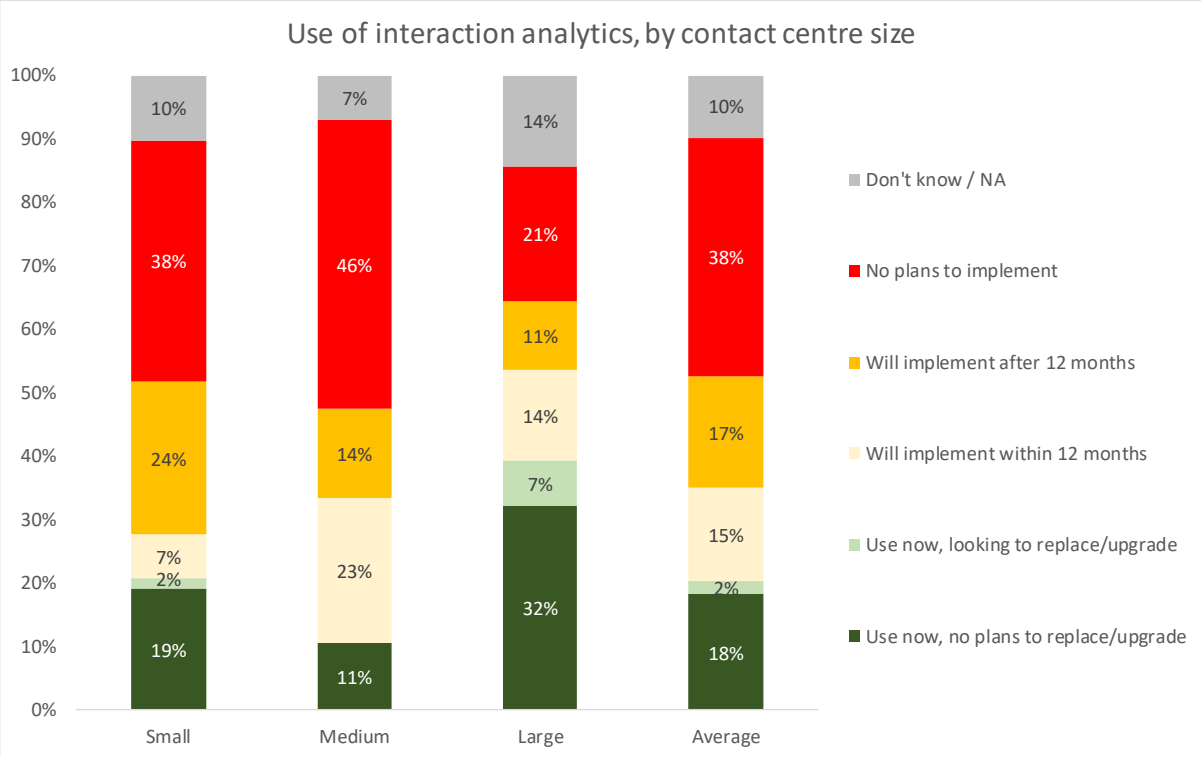
USE OF INTERACTION ANALYTICS

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

The positive correlation between size and penetration rate is very noticeable for interaction analytics, which may require significant investments. As importantly, having huge volumes of recorded interactions and a large customer base to learn from means that business patterns can be identified more accurately, and any improvements reap correspondingly higher rewards.

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

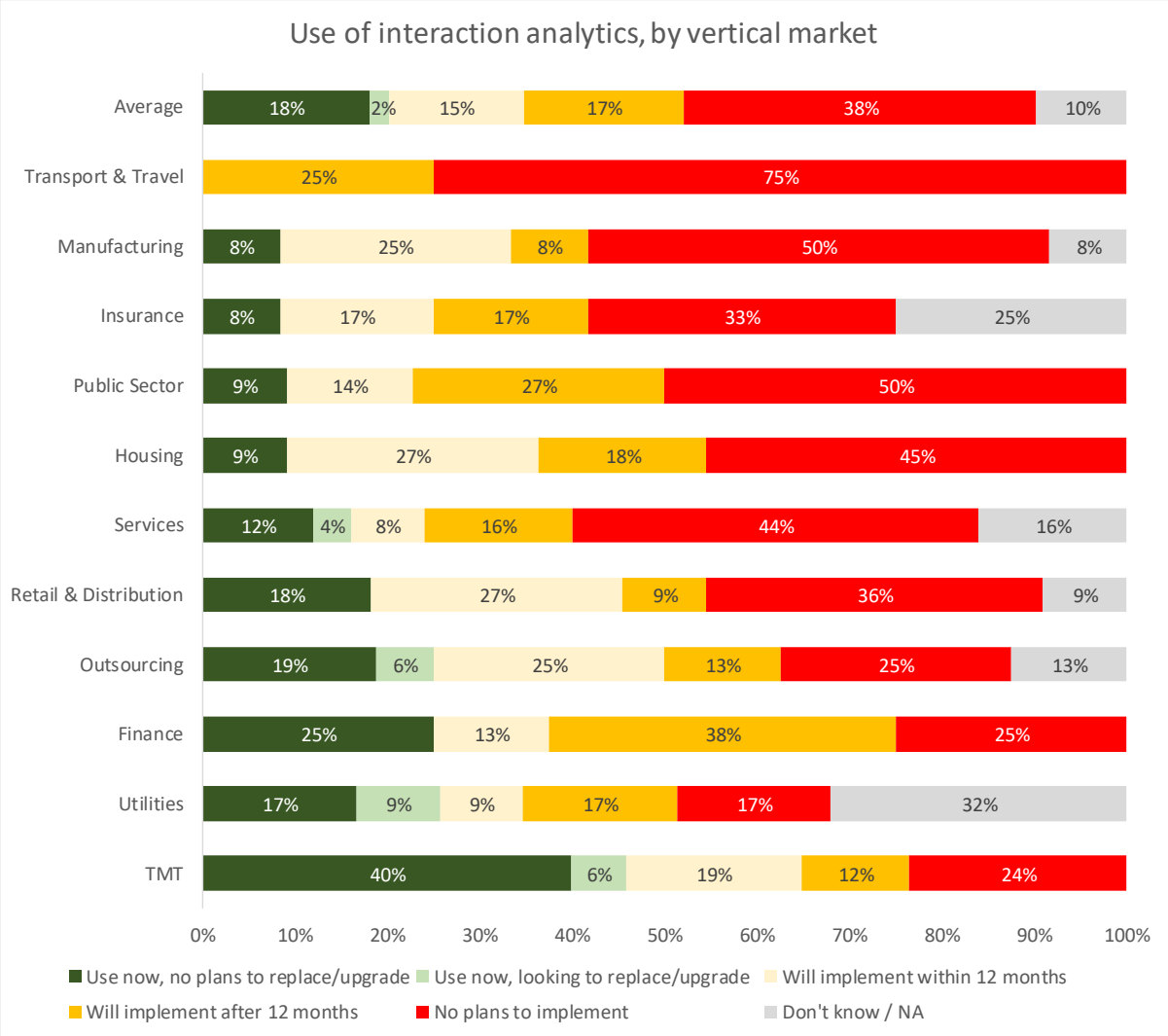
Figure 33: Use of interaction analytics, by contact centre size



Against a virtual ubiquity of call recording, the penetration rates of interaction analytics are much lower: 20% of this year's respondents use it now, with 32% stating that they have plans for implementation.

Respondents from the TMT, utilities and finance sectors report the greatest use of analytics this year, with those in manufacturing and transport & travel least likely to be doing so once again. It is probable that the use of interaction analytics is driven more by contact centre size in call volumes than through the requirements of specific types of business: manufacturing and transport & travel contact centres are smaller than average, whereas those in finance and utilities are amongst the highest.

Figure 34: Use of interaction analytics, by vertical market



As we might expect, the use of historical speech analytics - the bulk analysis of call recordings - is the most widely used type of interaction analytics functionality. 50% of analytics users have also implemented functionality which can analyse the agent desktop activity which is linked to these calls.

Real-time (or near real-time, i.e. within the call) speech analytics is used by 65% of interaction analytics users, with almost the same proportion stating that they use multichannel analytics. The rise in non-voice interaction volumes has meant that there is an increased requirement to understand and analyse the customer journey.

Figure 35: Use of various interaction analytics functionality (from only those respondents who use analytics)

Interaction analytics type	% respondents using this functionality
Historical speech analytics	75%
Real-time speech analytics	65%
Multichannel analytics (i.e. email, web chat, social media, etc.)	60%
Desktop analytics	50%
Customer journey analytics	40%
Back office analytics	25%

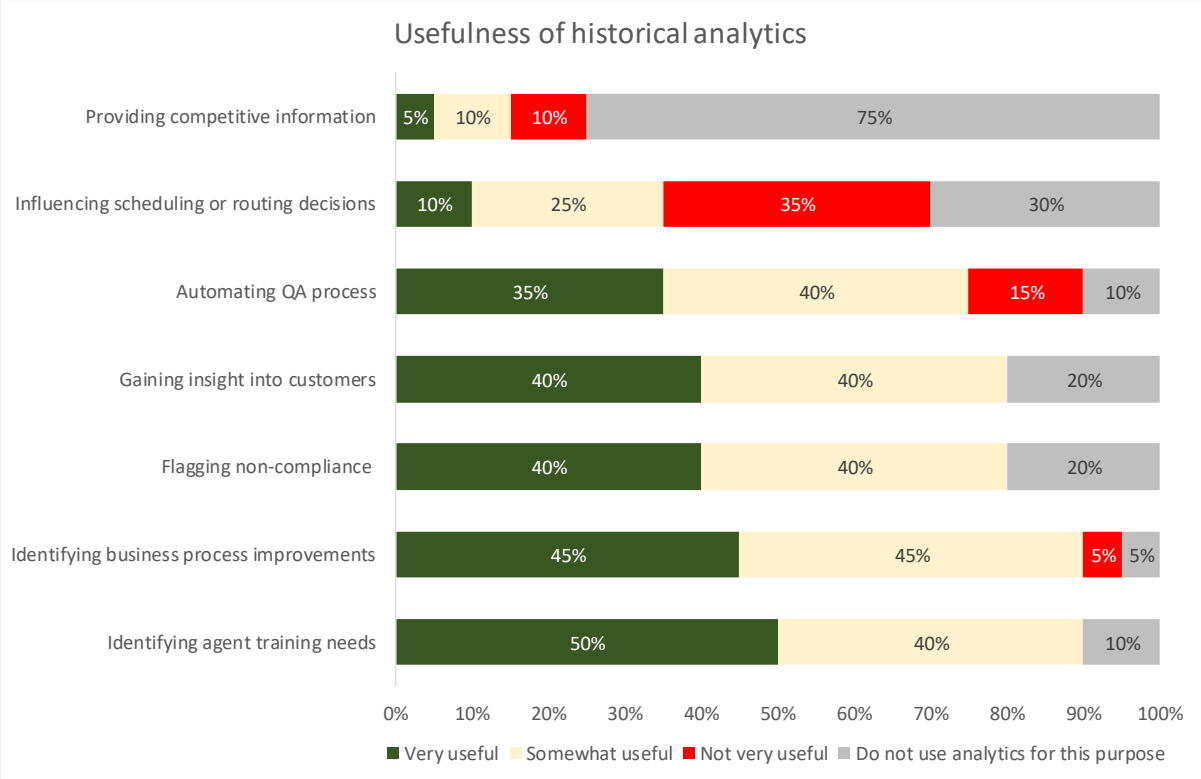
HISTORICAL ANALYTICS

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

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

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

Figure 36: Usefulness of historical analytics



The automated quantification of agent performance and capabilities, feeding into the training and skills upgrades required should be one of the most important outputs for interaction analytics, and 50% of respondents state that analytics is very useful for this purpose. 35% indicate that analytics is very useful for speeding up the overall quality monitoring process as well through automation.

45% of analytics users state that it is very useful identifying improvements to business processes. Optimising processes and gaining actionable insight that can be applied to the customer journey will become one of the most important uses of analytics, as users' sophistication increases and solutions' capabilities are explored more fully.

There is little real enthusiasm around the use of analytics for providing information about their competitors, with the majority not using it for this purpose at all. This is a very underused area of analytical usage at the moment, and one which we would again expect to see growing significantly in future years.

Few respondents have found that analytics helps influence scheduling or routing strategies, but as more tightly-integrated WFO suites are used, we would expect this to change for the better.

REAL-TIME ANALYTICS

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

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

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

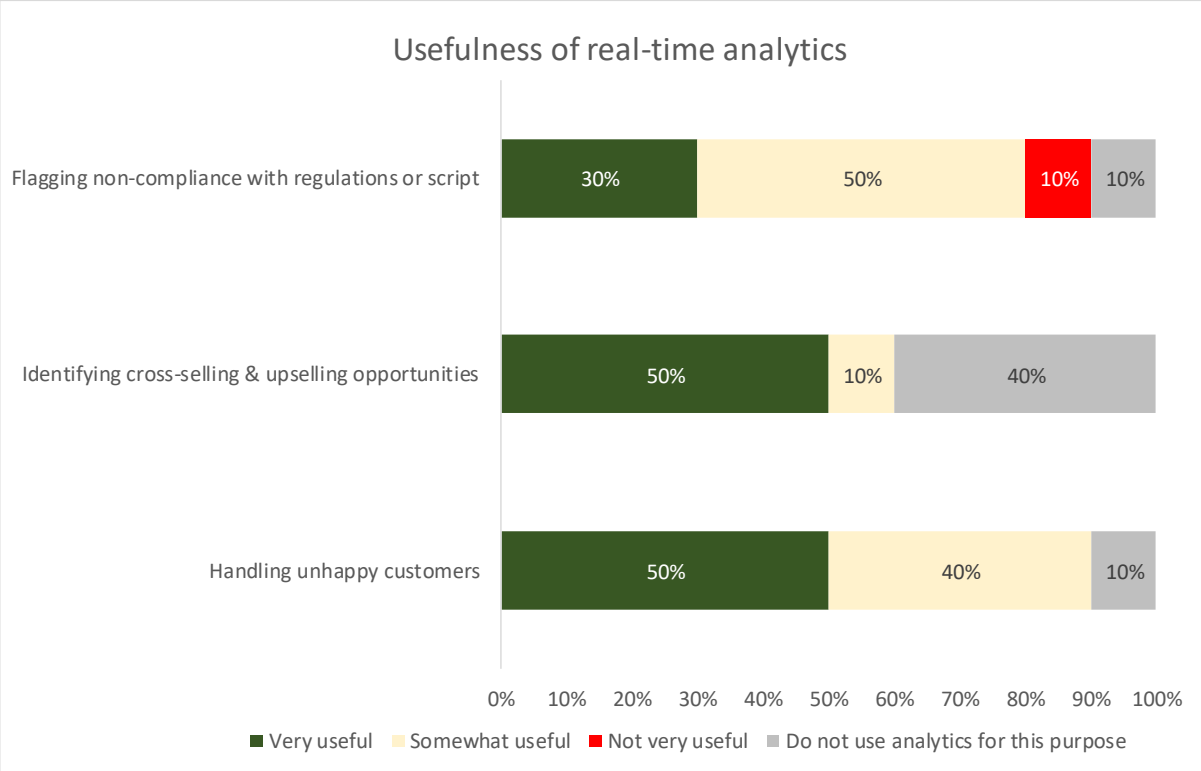
[3] http://www.oxforddictionaries.com/definition/english/analysis

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

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

Real-time offers a big step up from the traditional, manual call monitoring process, and is particularly useful for compliance, debt collection, and for forming legally-binding contracts on the phone, where specific terms and phrases must be used and any deviation or absence can be flagged to the agent's screen within the call. Finance, telecoms and utilities companies - and indeed, any business where telephone-based contracts are important - are particularly interested in this.

Figure 37: Usefulness of real-time analytics



TEXT ANALYTICS

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

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

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

PREDICTIVE ANALYTICS

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

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

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

Predictive behavioural routing uses millions of algorithms to decode the language used by agents and customers, in order to understand their state of mind, personality, communication style, engagement levels, empathy and transactional attributes (such as ability to overcome objections, willingness to sell, success rates, the number of times supervisor assistance is required, etc.). Through analysing historical interactions, each customer can be matched against a specific personality style. When this customer calls again, they are identified through the IVR or the dialling number, and the call is then routed through to an agent whose performance when interacting with this specific personality type has been seen to be positive. This increase in empathy and the matching of communication styles has seen these matched agent-customer pairings get significantly higher sales closure rates and better customer satisfaction scores.

Predictive behavioural routing has its roots in communication-based psychological models for assessing personality type and identifying behavioural characteristics. One solution, for instance, is based upon a personality model developed in the 1970’s to assist NASA with astronaut selection; the premise of this model is that individual personality type can be derived from a person’s use of language. By understanding the type of customer, calls can be routed to agents who are best at handling the caller. Agents who are skilled at handling many types of callers' personality styles can be saved for callers whose character type is unknown, perhaps as this is the first time that they have called.

By tracking agent performance across various personality types, information can be fed into the performance management process to help that agent improve, and agent capabilities are regularly reassessed to promote optimal routing.

SCREEN/DESKTOP ANALYTICS

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

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

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

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

BACK-OFFICE ANALYTICS

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

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

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

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

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

CUSTOMER JOURNEY ANALYTICS

Driven by the need to get beyond the siloed nature of multichannel interactions, customer journey analytics aims to gather together the various data sources, triggered processes, and customer touch points involved the customer interaction, in order to optimise the overall customer journey. By fully understanding the customer experience, businesses can identify and rectify inefficiencies, helping to break down the boundaries between channels and between the front office and the back office.

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

In the past few years, a widespread realisation amongst businesses that the complexity of the customer journey has increased in line with the number of new devices and channels available to customers to communicate with the business has led to the initiation of customer journey projects, backed by new management positions coming under the wider 'Customer Experience' banner.

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

There is an increasing requirement for, and interest in multichannel analytics, including email, text chat, IVR and web browsing sessions, to get the full picture of the customer's real journey in a single interaction, in order to identify and improve any channels that failed to fulfil their requirements. Improving self-service optimization is often a quick win that can provide immediate economic benefit to businesses: in the UK, a mean average of around 10% of calls that go into an IVR system are 'zeroed-out' - rejected by the customer in favour of an operator - and in the US this figure is much higher.

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

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

VOICE OF THE CUSTOMER ANALYTICS

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

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

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

Closed Loop

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

Coaching

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

Reporting

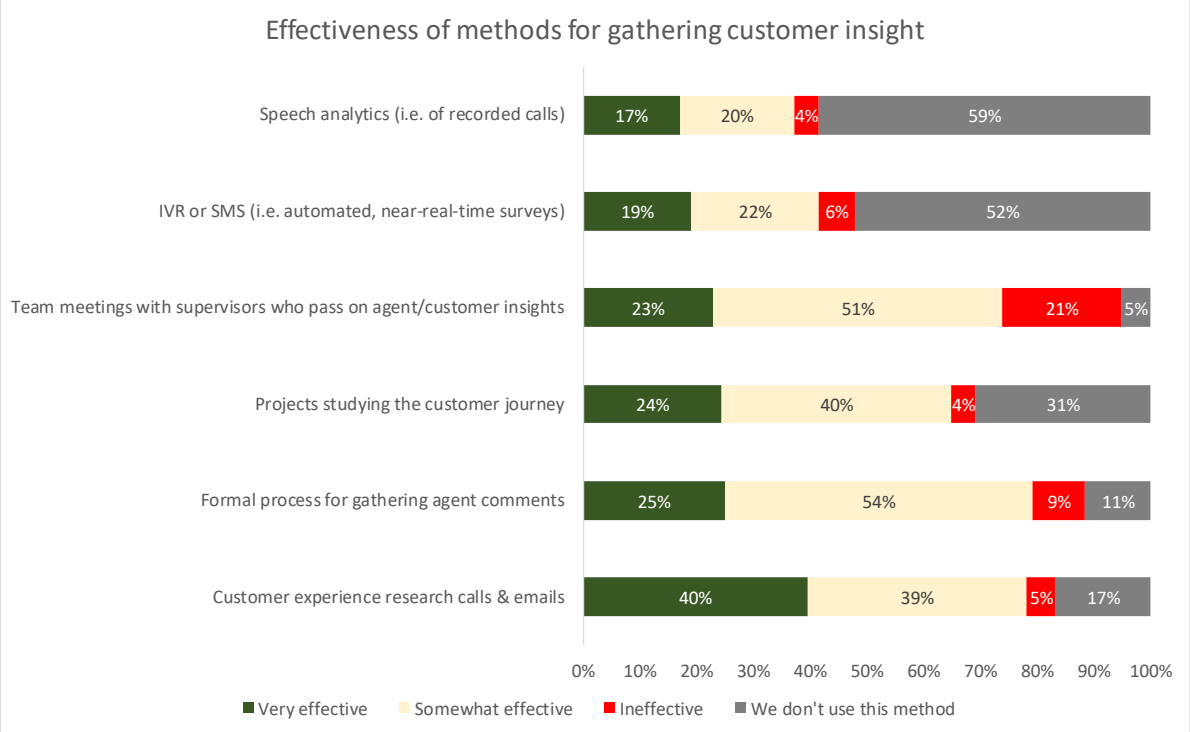
- Real-time Insight – text analytics zeros in on key issues from multichannel survey feedback
- Role-based Reporting – define type and frequency of report delivery based on responsibility, title, geography and more
- Call Recording – drill-down detail can include IVR and live agent call recording for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

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

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

The chart below looks at contact centre professionals' opinions of the effectiveness of each method of gathering customer insight. Automated analytics solutions get considerable approval (with 41% of those that actually use this method stating it to be very effective), and IVR/SMS surveys are similarly useful. However, these methods are used only by a minority of respondents. Despite the higher incidence of their use, neither the informal nor formal gathering of insight directly from agents or supervisors are judged as being as useful as analytics.

Figure 38: Effectiveness of methods for gathering customer insight



MEASURING THE ROI OF ANALYTICS

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

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

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

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

Variables to be considered for ROI measurements include:

Cost reduction:

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

Revenue increase:

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

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

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

Against these potential positives, costs to consider include:

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

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

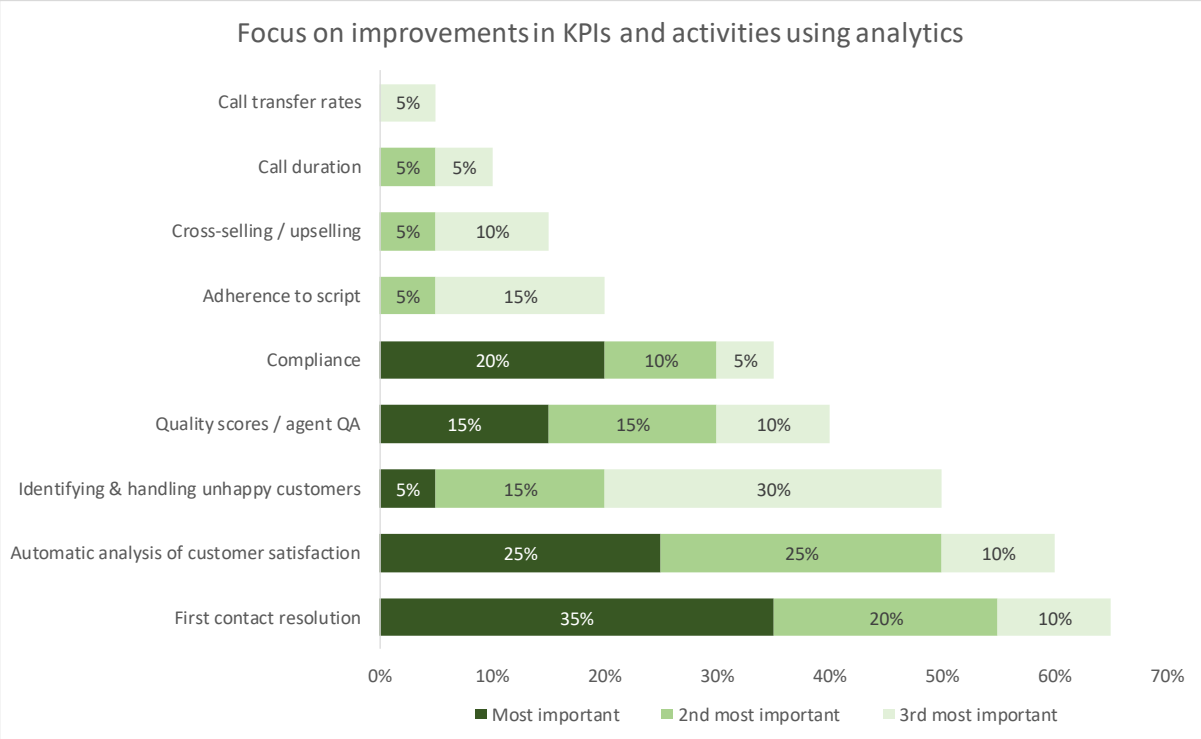
USING ANALYTICS FOR IMPROVEMENTS

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

It is reported elsewhere in this report that first contact resolution (FCR) is seen as being key to customer satisfaction. Interaction analytics can assist with this goal through automatically grouping and assessing the nature of the enquiries that required multiple customer callbacks, and through identifying whether the call should be classed as a callback in the first place (e.g. by searching for relevant words or phrases, such as "I've called about this before", or "this is the second time I've called"), which would further assist in the notoriously difficult process of accurately calculating first contact resolution rates. As FCR and customer satisfaction ratings are closely linked - being consistently quoted as the number one way to achieve high customer satisfaction ratings - the use of analytics to identify FCR accuracy and improvements is a very positive finding.

It is positive to find that the second and third greatest focuses on improving KPIs (automatic customer satisfaction analysis, and the identification and handling of unhappy customers) are also related to customer satisfaction.

Figure 39: Focus on improvements in KPIs and activities using analytics



DEVELOPING THE USE OF ANALYTICS

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

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

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

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

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

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

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

MAXIMISING EFFICIENCY AND OPTIMISATION

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

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

Solutions and issues include:

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

SELF-SERVICE

TELEPHONY SELF-SERVICE

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

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

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

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

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

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

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

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

Figure 40: Advantages and disadvantages of telephony self-service

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

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

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

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

Figure 41: Some functions for self-service, by vertical market

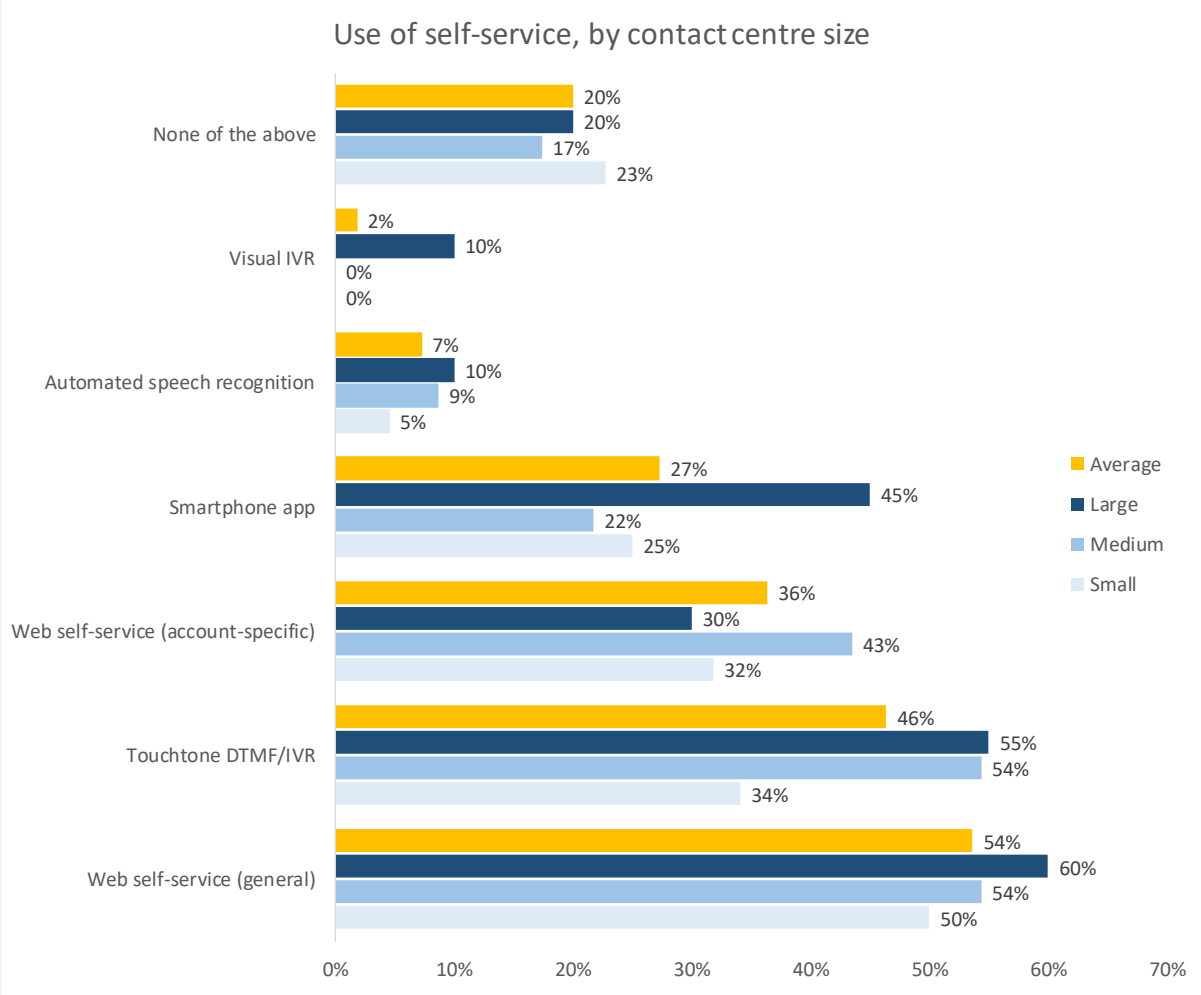
Self-service activity	Typical sector offering this form of self-service
Problem reporting and resolution	IT helpdesk
Account access & card payments	Banking
Product information & registration	Retail
Online registration	Any
Order entry	Retail, travel
Balance enquiry	Banking, credit cards
Dealer or store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

80% of respondents use offer some form of self-service to customers, with general web self-service being available to more than half, and account-specific by 36%. The former allows a search of the site as a whole, perhaps using FAQs or text search, whereas the account-specific variety requires a customer login in order to access functionality and information specific to that customer.

Touchtone (DTMF) IVR is used more widely by larger contact centres, with a similar pattern amongst those using automated speech recognition. 10% of respondents from large contact centres use visual IVR, although no respondents from small and medium operations report doing so.

Larger contact centres were also more likely to have invested significant amounts in developing smartphone apps.

Figure 42: Use of self-service, by contact centre size



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

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

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

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

THE USE OF TELEPHONY SELF-SERVICE

Looking at the prevalence of voice self-service, 46% of respondents offer a full telephony self-service channel, with the finance and utilities sectors leading the way as usual. The manufacturing, retail & distribution and insurance sectors were least likely to be doing so.

There is a distinct pattern in full self-service when considering contact centre size, with 54% of respondents from large operations doing this, compared with 47% in the mid-sized sector and only 37% of small contact centres, although this correlation is smaller than in previous years.

There is a similar pattern when looking at sales vs service: 53% of service-focused operations and 39% of mixed respondents used full telephony self-service, but no sales-orientated contact centres did so, which is to be expected.

Of those contact centres offering telephony self-service, a mean average of 1 in 5 calls were handled entirely by self-service without requiring an agent.

Figure 43: Overall proportion of calls handled entirely through self-service (only in respondents which offer telephony self-service)

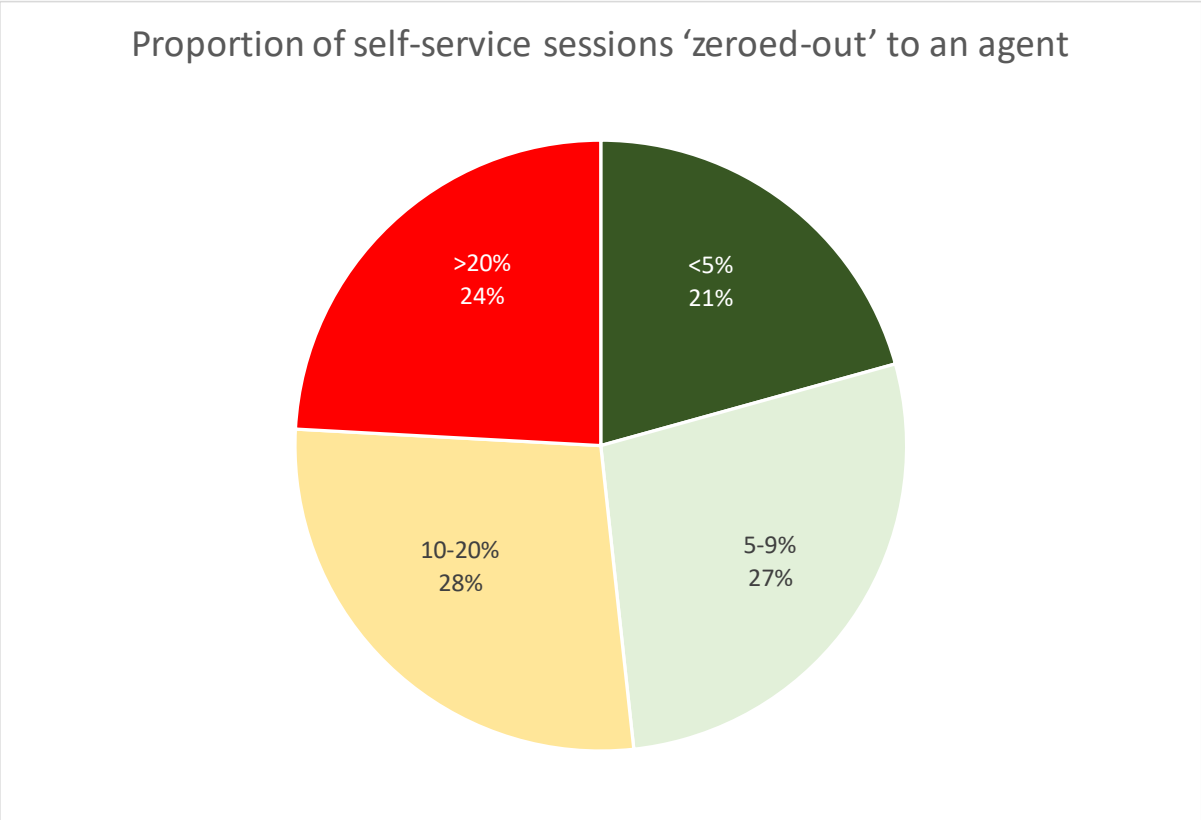
	Proportion of calls handled entirely through self-service if offered
1st quartile	26%
Median	9%
3rd quartile	5%
Mean	20%

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

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

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

Figure 44: Proportion of self-service sessions 'zeroed-out' to an agent



Overall, a mean average of 17% of calls that go into the self-service option are "zeroed-out": instances where the customer decides that they in fact wish to speak with an operator, which is closer to an historical norm (last year's figure was 15%, 2015's 21%, 2014's statistic was 14%, and 2013's 13%).

NB, 1st quartile performance for 'zeroing-out' is 5%, the median is 10% and the 3rd quartile is 25%.

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

Due to the potential additional flexibility and functionality offered by automated speech recognition over DTMF IVR, we would expect the zeroing-out rate (which can be viewed as connected to customers' rejection of the self-service option) to be lower for speech recognition than DTMF IVR, and for once, this is the case:

- In contact centres where the majority of self-service is offered through speech recognition, the mean zero-out rate is 6%.
- In contact centres where the majority of self-service is offered through DTMF IVR, the mean zero-out rate is 18%.

2017 is the first year where this pattern has emerged and future years will see if this is a one-off or a trend. It may be that in the past, customers were simply more used to DTMF IVR; that speech recognition often offers an option to speak to an agent early in the script (which is taken as the easy way out); or that customers did not know what to say to an automated system to make it work, so look to speak with a live agent. That customers may actually currently prefer to choose from a finite group of options is an interesting conundrum, but it may be that customers are becoming increasingly used to using natural language with a self-service application.

Cost differentials in self-service and live voice support

- The cost of a live service telephone call varies considerably, but has a mean average of £4.00
- Historically, the average cost of a telephony self-service session is estimated to be around 50-70p.

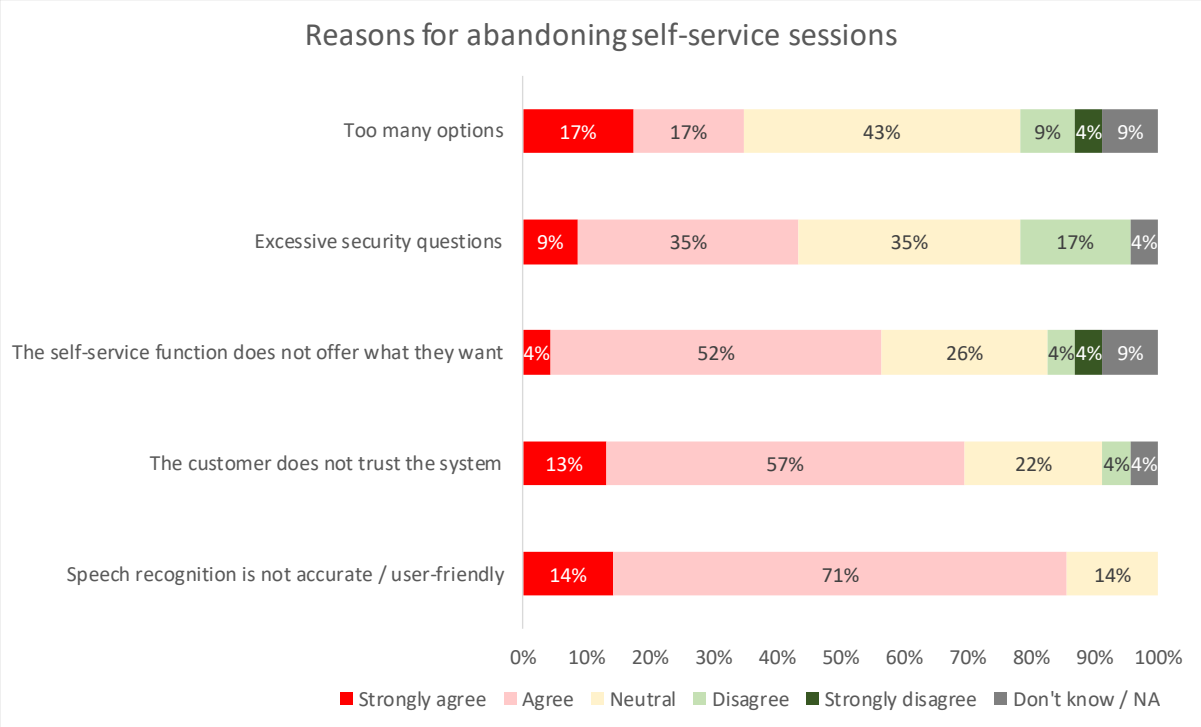
More than half of respondents agreed that customers abandoned self-service sessions because the self-service function simply does not offer what the customers want. While this at first glance may appear negative, it is the case that even in the most commoditised and transaction-driven environments a substantial proportion of customers will want to speak to a person, either because the system does not allow them to do what they want, there is a complicating factor involved, or simply that they wish reassurance or have multiple questions.

In such circumstances, it is the customer's choice to abandon the session, and this does not have to be a particularly negative experience as long as a clear exit path that leads to a live agent is marked early in the process. Situations where businesses hide their agents from customers, making them go around in IVR loops are the ones that give all telephony self-service a bad name.

17% of respondents strongly agree that having too many options presented to customers is a major reason for them seeking human assistance, and it is noticeable that 70% 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, 85% of respondents agree or strongly agree that speech recognition is unpopular with customers due to lack of accuracy and user-friendliness. This is perhaps more to do with customer habits and lack of confidence with how to use the system than anything more technical. As customers continue to be encouraged to use natural language (both by successful interactions with corporate self-service applications, but perhaps more importantly through digital virtual assistants such as Siri and Alexa), this issue should decline.

Figure 45: Reasons for abandoning self-service sessions



DEVELOPMENTS IN DTMF IVR

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

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

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

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

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

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

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

Speech-based IVR is particularly useful in cases where very long lists of items such as place names or surnames may be chosen, for which the more structured DTMF IVR is unsuited. 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 the high self-service abandonment rates seen earlier. 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.

In previous years, the main issue that held back speech-enabled self-service was that their business wasn't really suited to automation. However, previous research has shown that more than half of the contact centres that currently offer no full self-service options could see some benefit in automating at least some part of their processes.

As such, there are likely to be issues around expenditure, operational costs and customer reaction to address for these potential users of self-service. Respondents are more concerned than previously they do not have the in-house IT resource to run automated speech self-service, and many believe that the ongoing costs and effort would not be worth it. However, the biggest inhibitor was the initial investment, which could be alleviated through a cloud-based model. As DTMF IVR, when badly-implemented, is a major bugbear for customers, replacing it with a quicker and more powerful alternative (ASR) could be seen as a benefit.

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

VISUAL IVR

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

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

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

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

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

Figure 46: Visual IVR: benefits for businesses and customers

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

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

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

WEB SELF-SERVICE

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

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

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

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

SEARCH

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

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

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

It is one thing to be presented with a long list of documents while sitting in front of a large screen of a PC, where scrolling up and down the page is not an issue. For the same flawed search functionality to be placed onto a mobile website, expecting the user to zoom in and out, scrolling up and down, and then to potentially scan through numerous documents whose text is too small to read properly is probably a step too far even for the most enthusiastic and loyal of your customers.

FAQS

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

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

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

VIRTUAL AGENTS

Virtual agents, otherwise known as virtual assistants, are software applications that engage customers in conversations in order to provide them with an answer to their queries. They may be personalized to reflect the company's branding, and often act as the first point of contact between the website visitor and the business.

Most virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyse and search for the answer which is deemed to be most suitable, returning this to the customer instantly. Many virtual agent applications will allow customers to give all sorts of information in any order, and either work with what it has been given, or ask the user for more detail about what they actually meant. Having been unconsciously trained over the years to provide their queries in a way which standard search functionality is more likely to be able to handle (for example, a couple of quite specific keywords), customer must be encouraged and educated to use natural language queries in order for virtual agents to be able to deliver to their potential.

The virtual agent application is different from standard search functionality, ignoring bad punctuation or grammar, and using longer phrases rather than just searching on keywords. Sophisticated applications attempt to look for the actual intent behind the customer's question, trying to deliver a single correct answer (or at least a relatively small number of possible answers), rather than a list of dozens of potential answers contained in documents which may happen to contain some of the keywords that the customer has used. The virtual agent application may also try to exceed its brief by providing a list of related questions and answers to the original question, as it is well known that one question can lead to another. Solution providers and users train the system to pattern-match the right words or association of words with the correct result: the application, unlike older forms of web search techniques, does not simply guess what the customer wants, or how they will express themselves. Through 'listening' to what the customers actually say - perhaps through a mixture of large quantities of audio and text – the initial set-up configuration can achieve a good accuracy rate, which really benefits over time as a positive feedback loop is established. Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Virtual agent functionality 'understands' the context of what the customer is asking, with the result being more akin to that of an empathetic human who also has had access to what the customer has been trying to do. For example, if asked "When can I expect my delivery?", the context and the required answer will be different depending on whether the customer has placed an order and is enquiring about its status, or has only a hypothetical interest in turnaround times in case they decide to place an order.

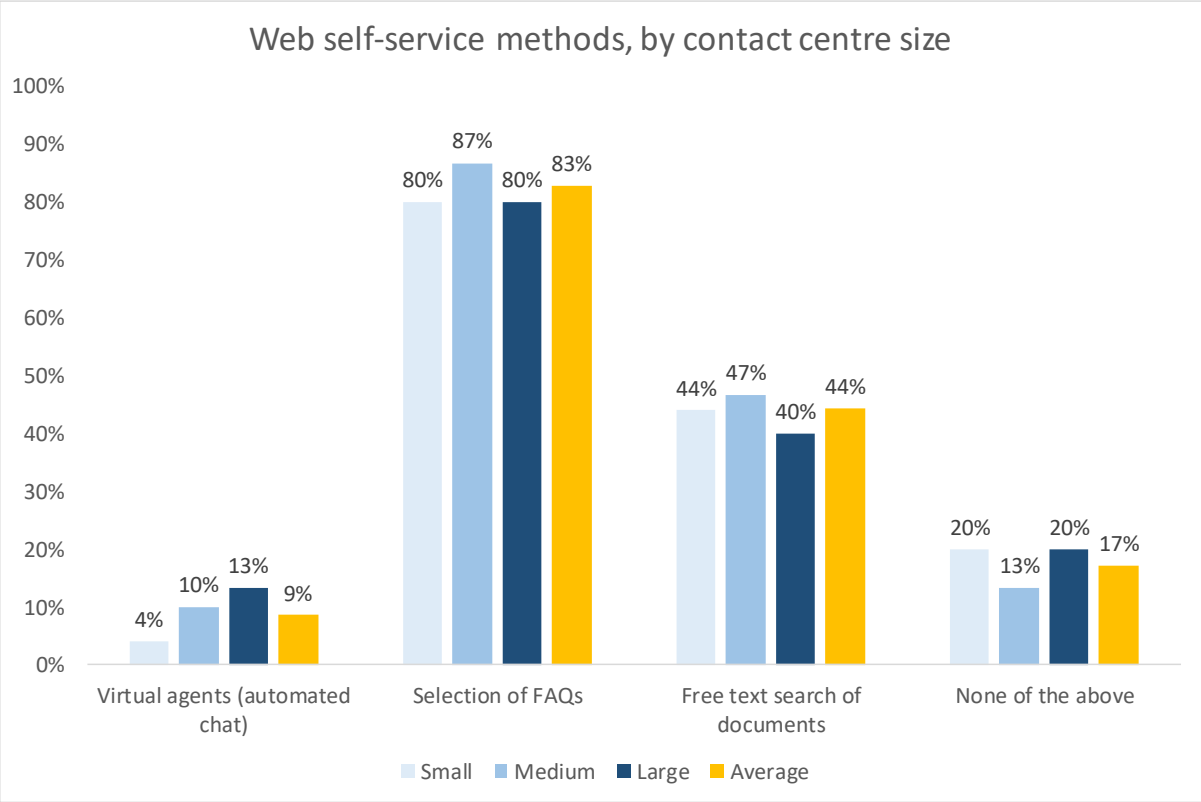
When the virtual agent application has low confidence that it has returned the correct result, it is able to escalate the customers query seamlessly to a live chat agent, who then has access to the self-service session history, enabling a greater chance of a successful resolution without repetition. (It is generally considered best practice that escalations to real agents are not hidden from customers). The eventual correct response can be fed back to the automated virtual agent (and the knowledge base underlying it), which will make it more likely that future similar requests can be handled successfully through automated agents.

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

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

By far the most prevalent form of web self-service is that of the FAQ (frequently-asked question), which is used by 83% of respondents. The free text search of the document library is somewhat less well supported, at 44%. Virtual agents are employed by only 9% of respondents, more often those within large enterprises. 17% of respondents offer no web self-service at all.

Figure 47: Web self-service methods, by contact centre size

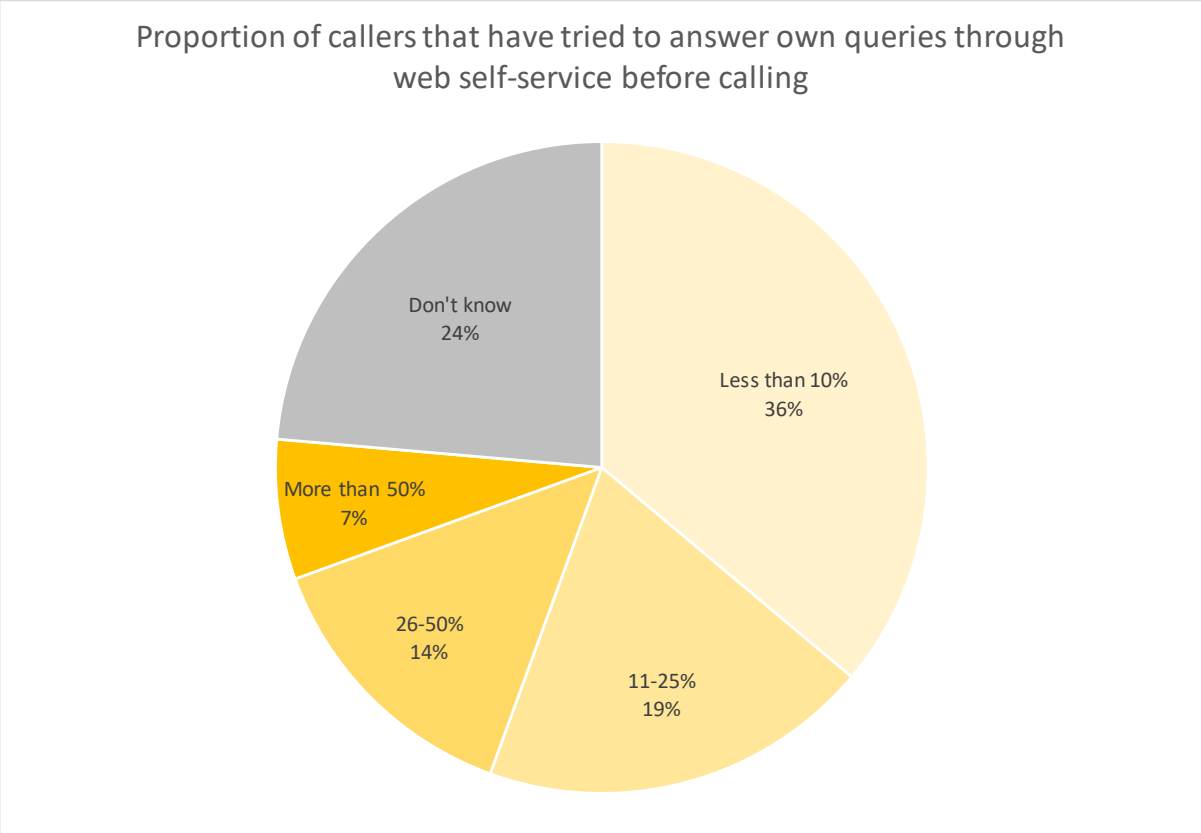


ESCALATING FROM WEB SELF-SERVICE TO LIVE TELEPHONY

Although 36% of respondents state that fewer than 10% of customers have tried to resolve issues online before calling the contact centre, 21% state that more than 1 in 4 calls come from people who have failed to complete their objective on the website first.

Worryingly, 24% of respondents using web self-service do not have any idea of its success from the customers' perspective.

Figure 48: Proportion of callers that have tried to answer own queries through web self-service before calling



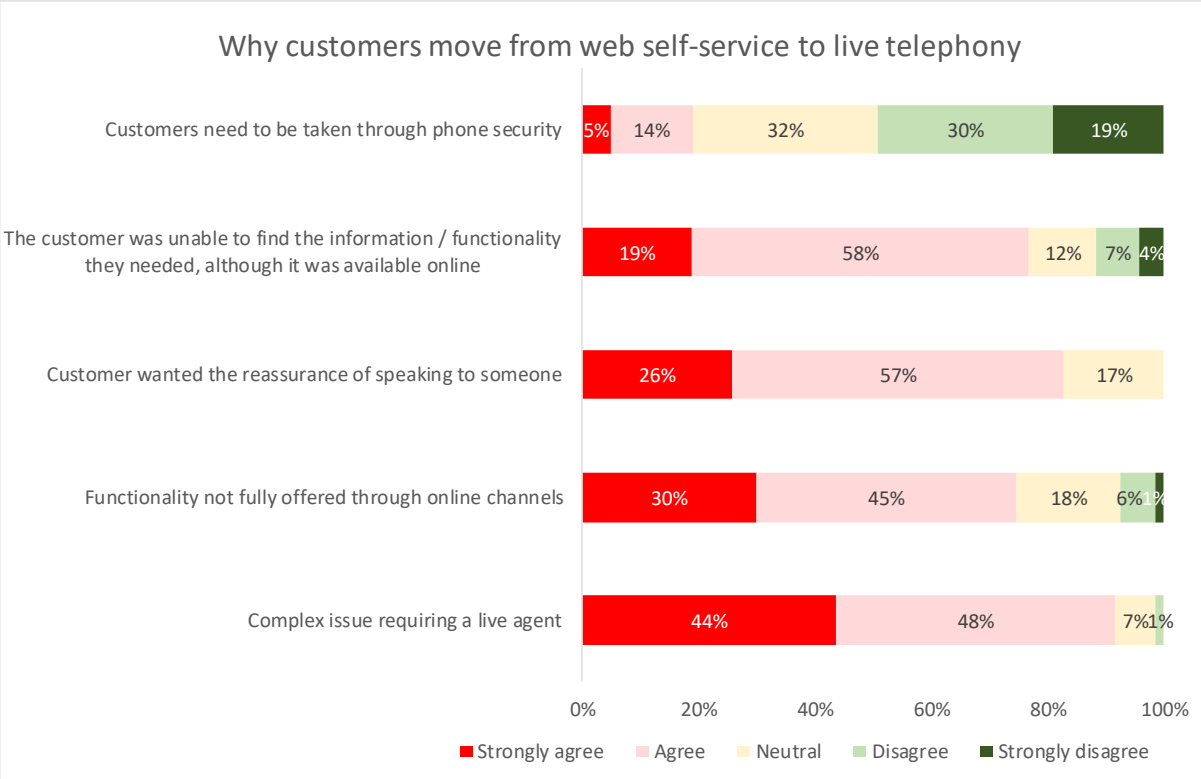
By far the most important reason for moving from web self-service to live telephony was said to be that the escalation involved a complex issue requiring a live agent to complete successfully.

83% of respondents also felt that customers wanted the reassurance that a live agent brings to a conversation.

75% stated that the functionality that the customer calling in required was not available online, but interestingly, 76% stated that they received calls about issues that could be resolved online, but customers were unable or unwilling to do so.

Very few respondents believed that website security authentication was an issue in receiving inbound calls, with the wide availability of automated password reset being a factor in this.

Figure 49: Why customers move from web self-service to live telephony



ROBOTIC PROCESS AUTOMATION AND THE BACK-OFFICE

Contact centres place back-office integration as one of the most important solutions that they are considering in the next two years, with 48% of survey respondents placing it in their top 3 technologies from a shortlist of more than 20 solutions. This shows that that the need for end-to-end integration - not just between the agent and the customer, but also throughout the entire contact centre and back office - is to the forefront of the minds of contact centre decision-makers.

Throughout this report, respondents' need to integrate processes and systems, providing up-to-date and accurate view of performance and issues, is a consistent message. Yet the tools provided for the agent and their management have often been added on piecemeal, requiring bespoke or partial integration at each step, growing the level of complexity to such an extent that the full potential of the solution is never fully realised. Only with a truly integrated solution - from the customer, through the agent, into the back office processes and back again as required - can an accurate level of performance and identification of requirements be truly achieved.

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

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

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

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

THE AGENT DESKTOP

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

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

Figure 50: Use of multiple applications across vertical markets

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

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

With 93% of respondents requiring their agents to use multiple applications within a call, there are significant dangers around forgetting to key in information, not asking for the required information, starting the correct processes or failing to type in consistent data. The use of multiple applications will have a negative effect on training times and accuracy rates for new agents as well.

This is not merely an issue in large, complex environments. Only 13% of sub- 50 seat operations use a single in-call application, although those in medium and large operations are substantially more likely to be using four or more applications on the agent desktop.

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. RPA can gather the information and data relevant to the situation, and then start the back office processes required by the call’s outcome.

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

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

RPA-assisted 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.

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

The following table shows some key contact centre performance metrics that were analysed in the context of the number of in-call or post-call applications that agents use. It is important to note that although there appears to be a correlation between superior performance metrics and the use of fewer in-call and post-call applications, this does not necessarily demonstrate causality: this pattern of statistics do not mean that it is possible to say definitely that the use of fewer applications within a call will in itself improve contact centre performance. However, it can be supposed that not having to navigate through multiple screens or spend significant periods at the end of the call typing out notes or making changes to multiple databases, and being given access to dynamic scripting that provides the correct information without having to search for it will encourage shorter post-call wrap-up, improved agent availability, and lower call abandonment rates.

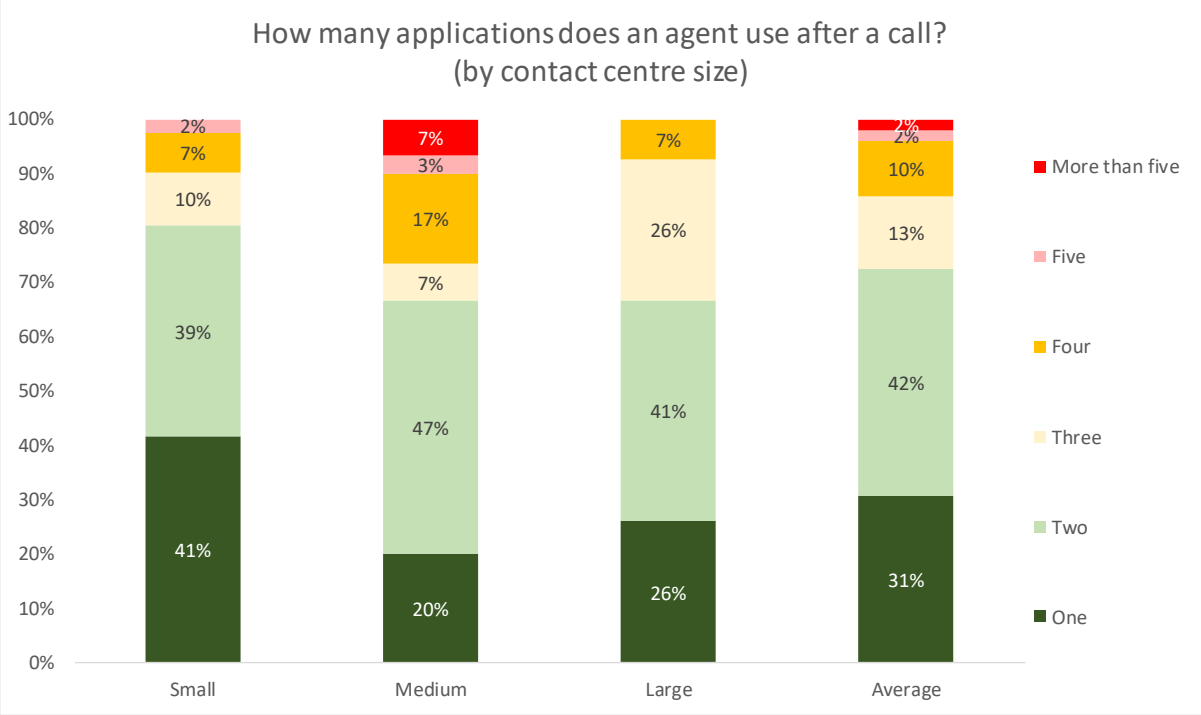
Figure 51: Selected performance metrics, by number of in-call or post-call applications used

Metric	Respondents using 1 in-call / post-call application	Respondents using 4 or more in-call / post-call applications
Average speed to answer	12 seconds	44 seconds
Call abandonment rate	4.2%	6.4%
Post-call wrap-up as % of call	10.2%	13.3%
NB: ASA and abandonment rate apply to # in-call applications. Post-call wrap-up % refers to # post-call applications.		

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

This, as well as the need to enter information in multiple applications (as shown below), will tend to increase post-call wrap-up to a point where the agent spends a great deal of their time unavailable to take more calls. Historically, 10-15% of an agent's time is spent on post-call wrap-up.

Figure 52: How many applications does an agent use after a call?

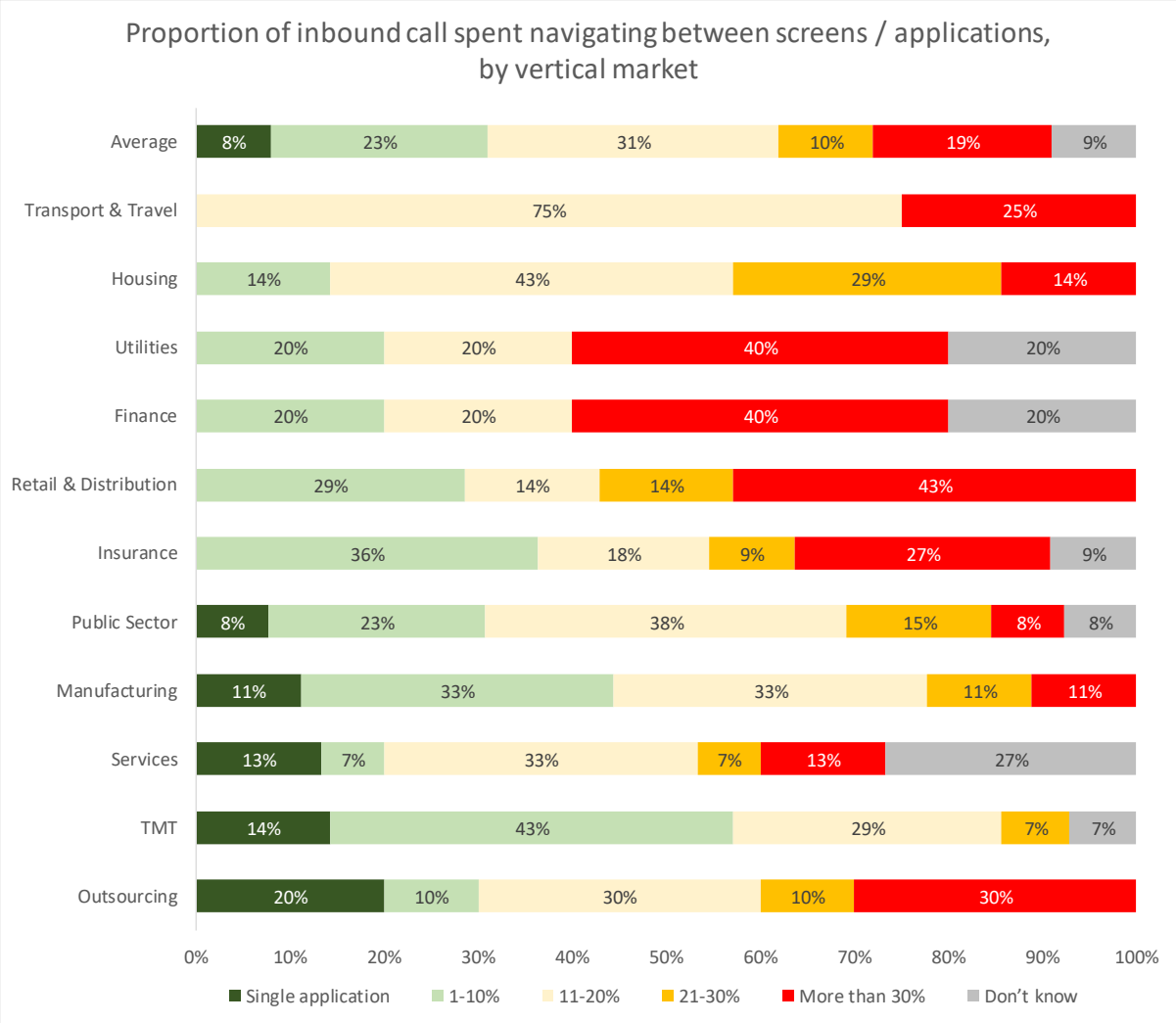


Additionally, manual inputs involved in transferring data during wrap-up commonly lead to data entry and processing errors, causing an adverse effect on operational efficiency, contact centre cost, performance and customer satisfaction. Cost per call rises, productivity per agent declines and first-call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

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

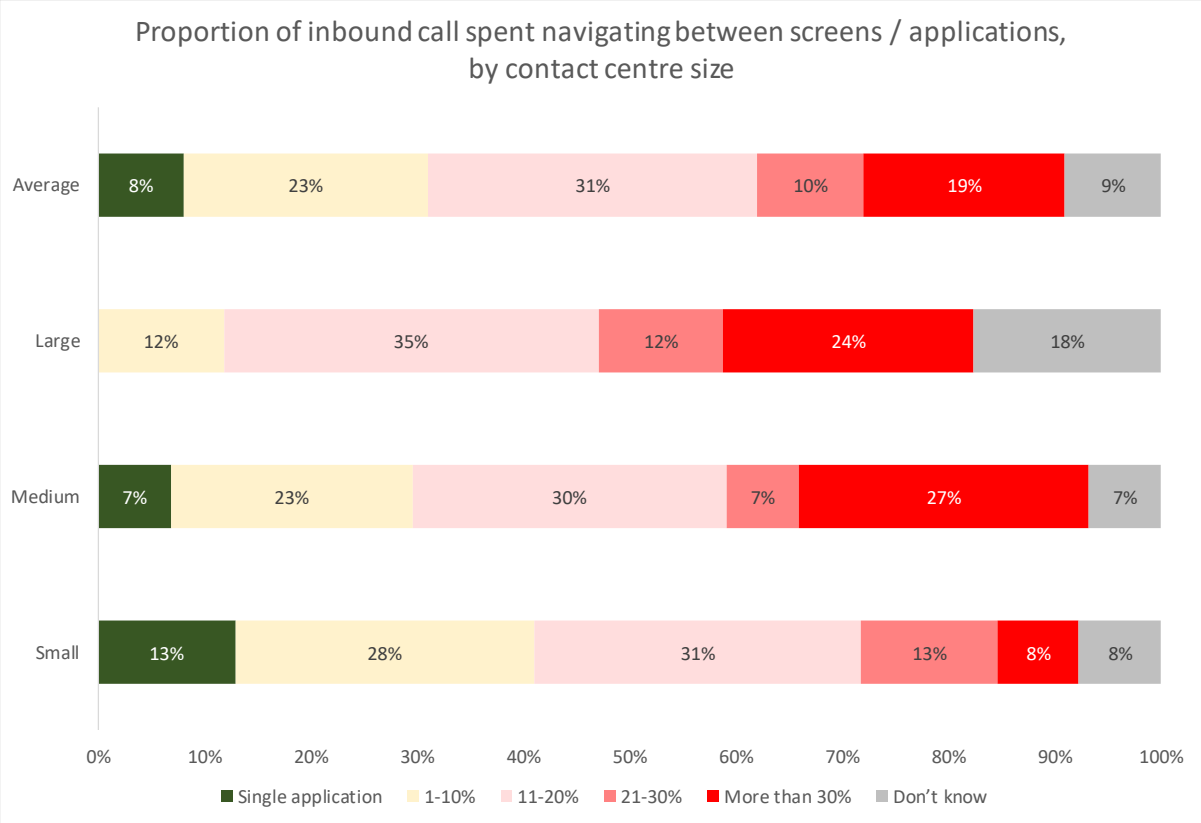
Survey respondents were asked how much time their agents spent navigating between screens or applications as a proportion of the overall call length. 60% reported that their agents spent over 10% of the call's time in flicking between screens, and those in retail, finance, utilities, insurance and outsourcing reported over a quarter of the call time was spent doing this.

Figure 53: Proportion of inbound call spent navigating between screens / applications, by vertical market



Larger operations, which generally have more systems, screens and processes to handle, are most likely to require an agent to spend very significant amounts of time in navigating between applications while on a call. 36% of large operations and 34% of medium-sized contact centres report agents spending over 20% of call time on navigation.

Figure 54: Proportion of inbound call spent navigating between screens / applications, by contact centre size



It is possible to estimate the overall cost of the time spent navigating between applications, and the figure is dramatically high industry-wide. Based on an average cost per inbound call of £4.00 and estimated UK inbound call volumes of 7.646bn inbound calls per year in an industry of 766,000 agent positions[4], the following chart and table show the cost per year of navigating between screens and applications during a call.

Figure 55: Annual cost of navigating between screens & applications within a call, by vertical market

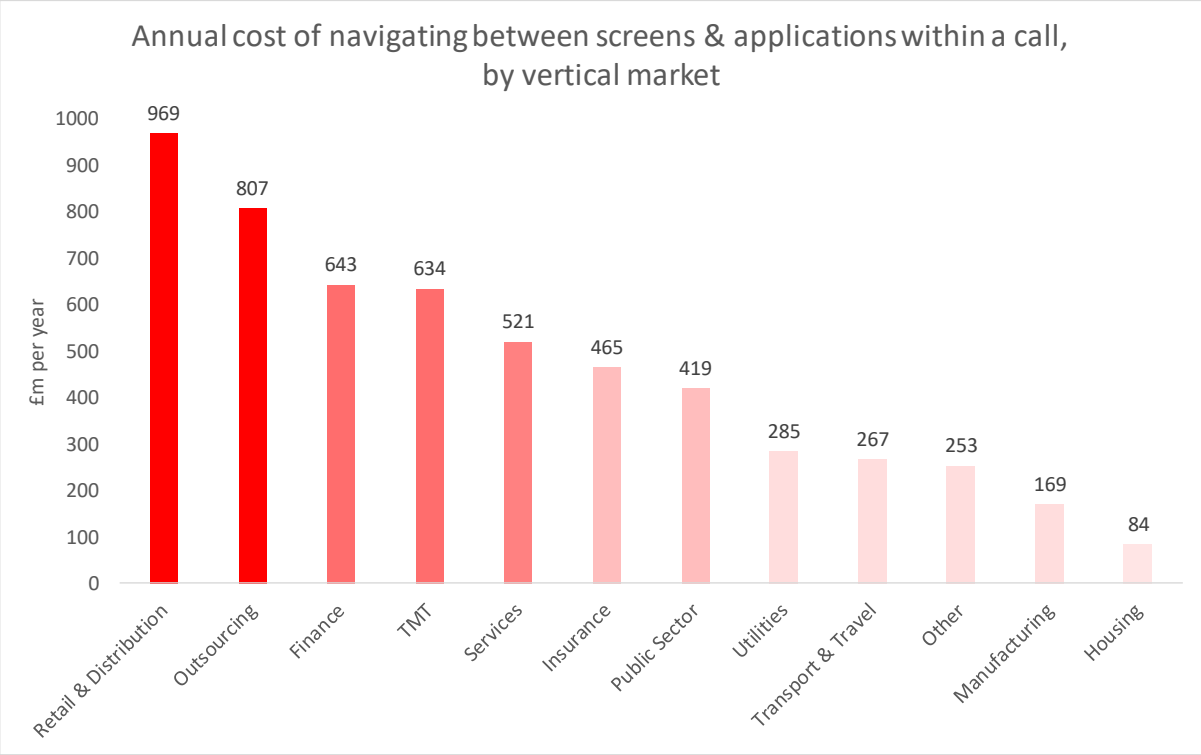


Figure 56: Annual cost of navigating between screens & applications within a call, by contact centre size

Contact centre size	£ cost per year
Small (10-50 seats)	£642m
Medium (51-200 seats)	£1.78bn
Large (200+ seats)	£3.1bn
Total	**£5.5bn**

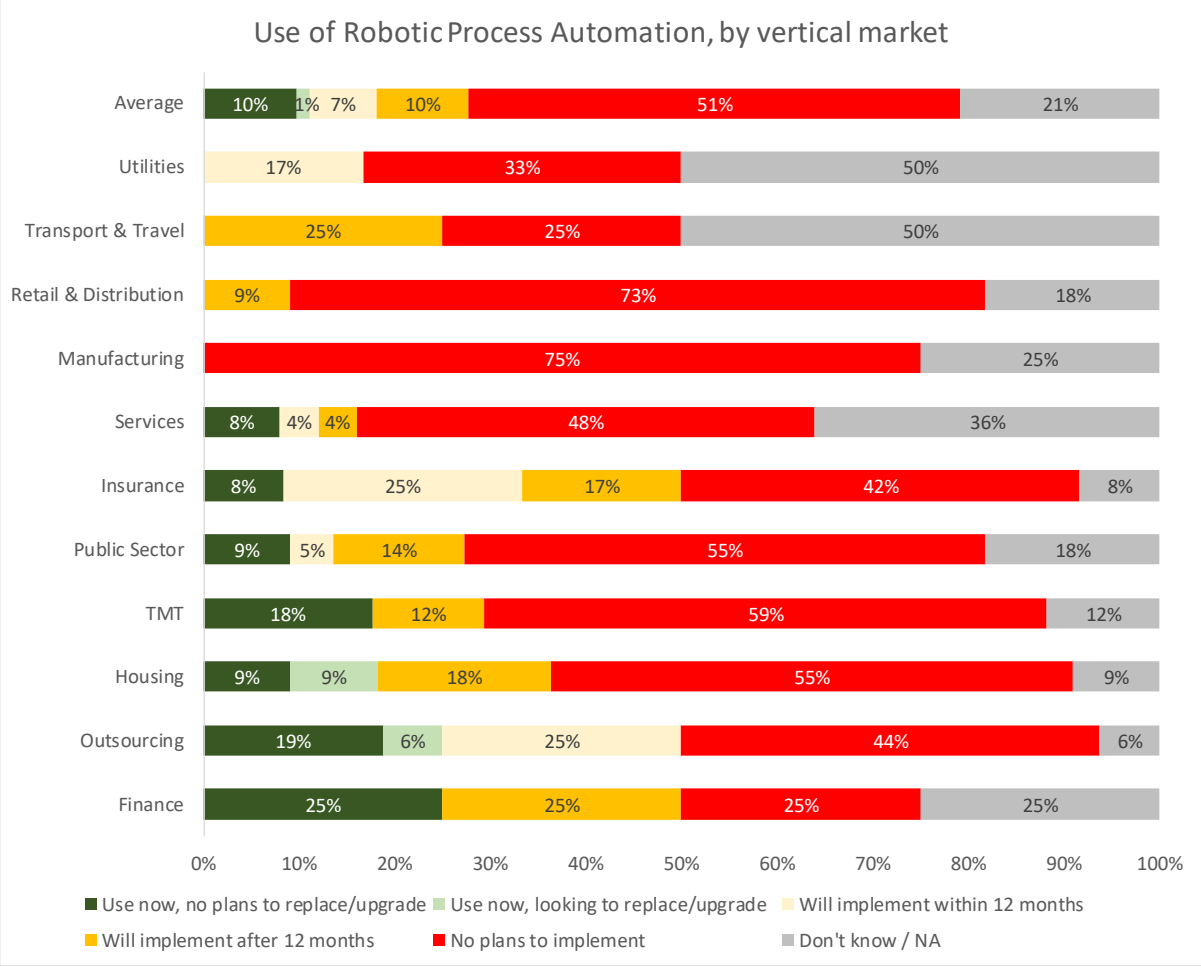
[4] ContactBabel, "UK Contact Centres 2017-2021: The State of the Industry"

CURRENT AND FUTURE USE OF ROBOTIC PROCESS AUTOMATION

Current reported levels of RPA usage are relatively low, with 11% of respondents stating that they are using it in 2017. Those in finance are most likely to be using it, although penetration rates are low in every vertical market.

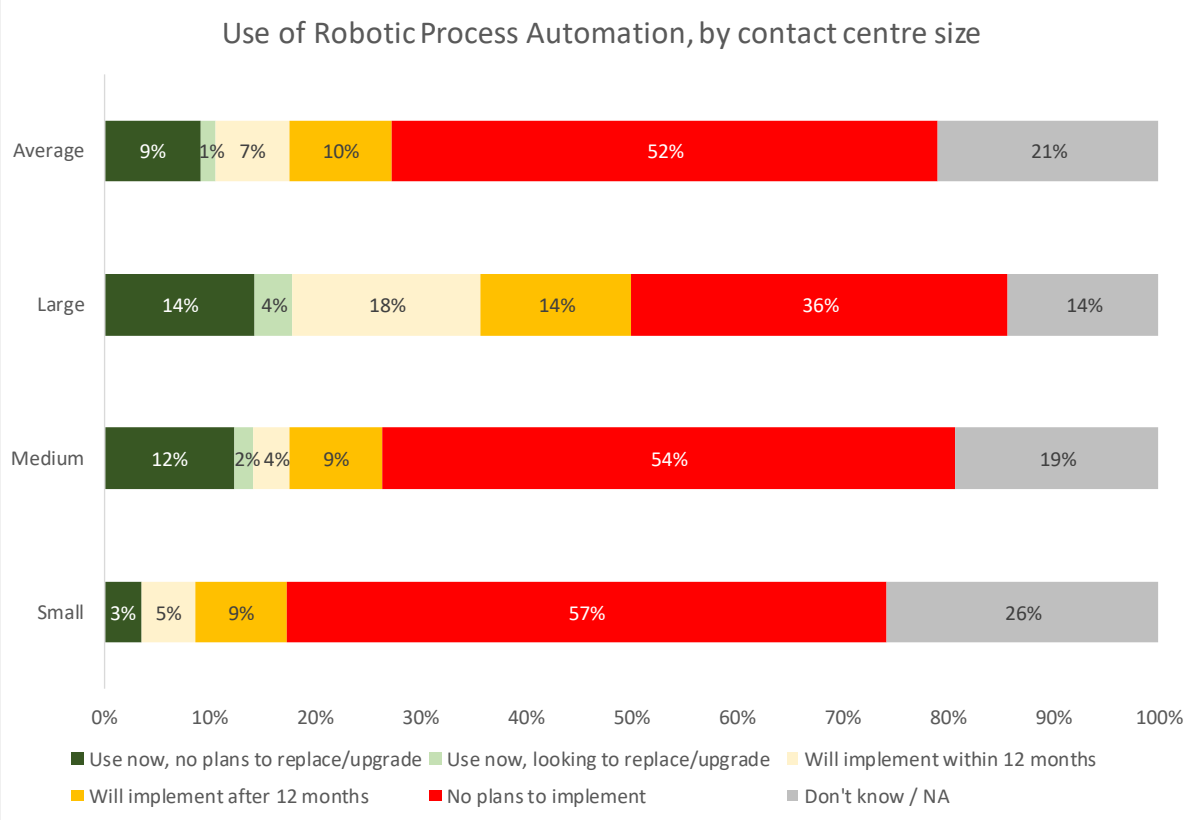
However, there is a significant interest in doing so, especially in insurance, utilities and outsourcing, where back office processes can play a large part in the success of the overall customer experience, and where there may be many systems, processes and applications for an agent to familiarise themselves with.

Figure 57: Use of Robotic Process Automation, by vertical market



Looking at the use of RPA by contact centre size, it is unsurprising to see that large 200+ seat contact centres are most likely to be using it now, and also exhibit the greatest level of interest in the relatively short term.

Figure 58: Use of Robotic Process Automation, by contact centre size



The following charts show the impact of some of the potential business drivers for RPA implementation. 75% of respondents from large contact centres agree or strongly agree that new agents find it difficult to familiarise themselves with systems when they first start in the contact centre, which leads to sub-optimal performance, errors in processes and low morale. 88% of large operations agree or strongly agree that it is necessary for agents to duplicate or cut-and-paste data multiple times across systems, leading to wasted time and transcription errors.

Figure 59: Agreement with statement: "New agents find it difficult to familiarise themselves with our systems", by contact centre size

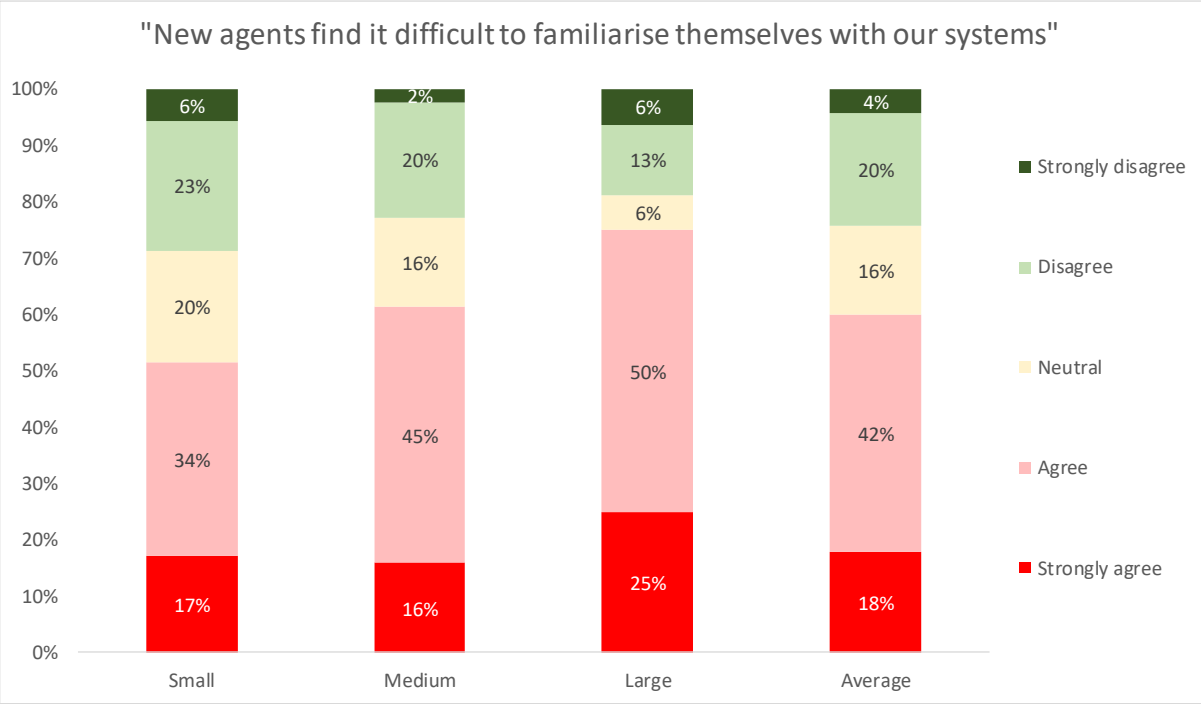
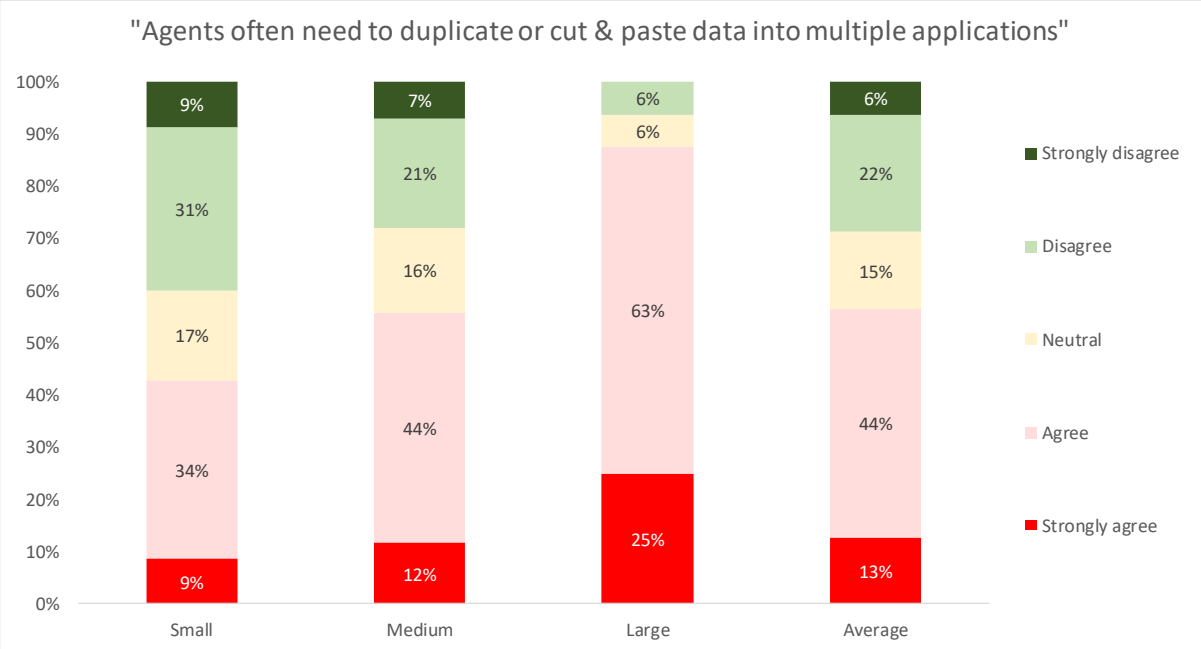
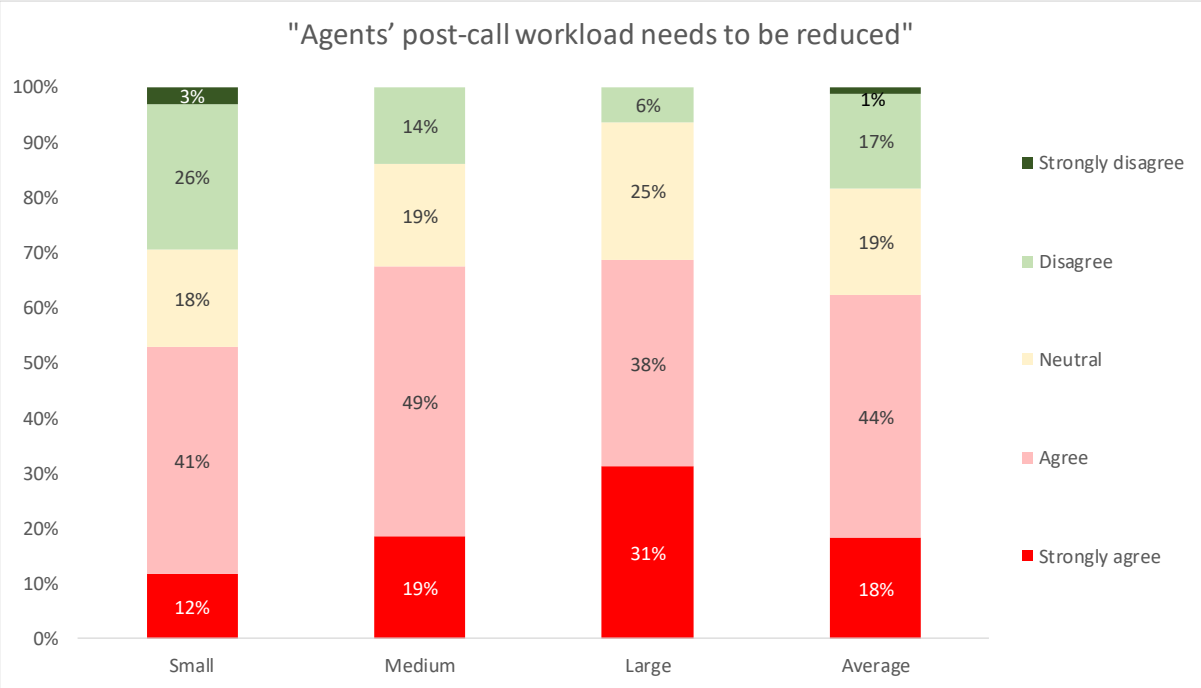


Figure 60: Agreement with statement: "Agents often need to duplicate or cut & paste data into multiple applications", by contact centre size



With agents spending 10-15% of their time on post-call admin, starting up back office processes, or making sure that data has been entered in all appropriate fields and databases, the resultant negative effect on agent availability and queue lengths can be considerable. Once again, large contact centres report the greatest problems, with 69% of these respondents agreeing or strongly agreeing that post-call workload needs to be reduced, although a majority of respondents from small and medium operations also felt the same way.

Figure 61: Agreement with statement: "Agents' post-call workload needs to be reduced", by contact centre size

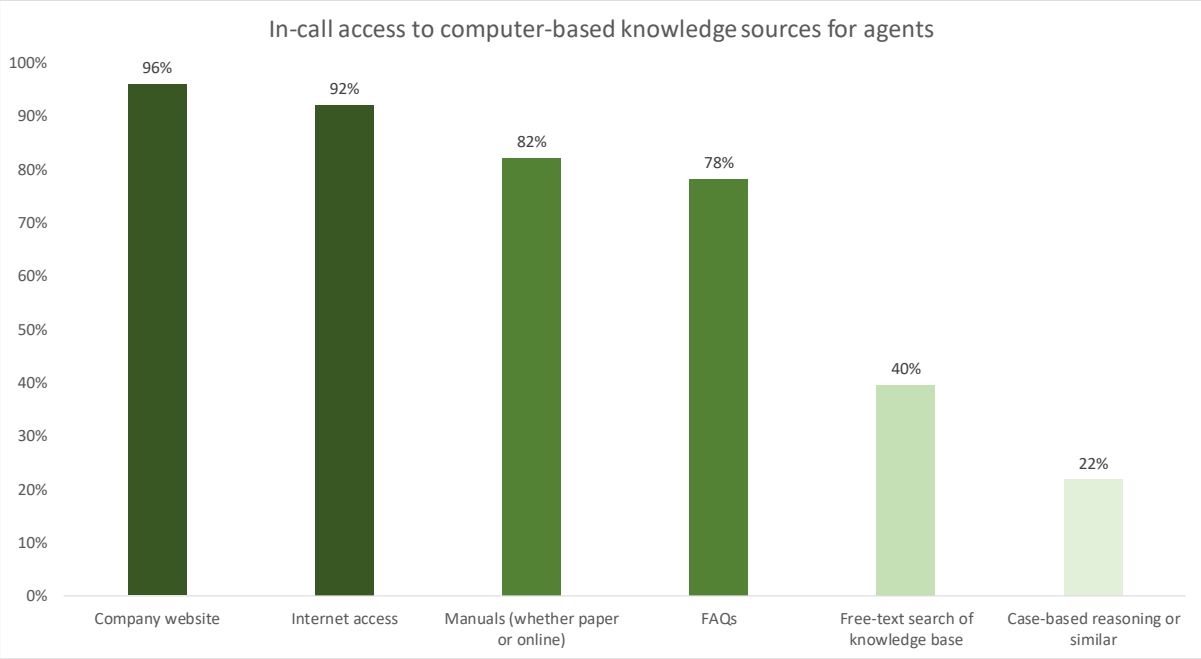


AGENT DESKTOP KNOWLEDGE MANAGEMENT

It is not only the post-call work that impacts upon agent time. Within the call, the agent is likely to have to use multiple knowledge sources, which will also take longer and run the risk (especially for new agents) of missing vital information that is available but perhaps hidden away. RPA can gather knowledge sources and provide them to the agent in a unified manner, and any updates to this information can be shared automatically across applications and systems, providing an immediate, up-to-date and consistent source of information. RPA can assist with agent tasks in the background, provided guided assistance at specific stages of the call, including dynamic scripting and compliance hints.

The following table shows the knowledge resources that agents have within a call. Finding, reading, assimilating and using information actually within a call as very difficult and is rarely done seamlessly. An application such as case-based reasoning, which prompts the agent to ask specific questions, drilling down to find the right answer, is very useful but only 22% of agents have access to this sort of dynamic application. Most have to search around on a company website or FAQ page, or rely on a wide, unsupported search of knowledge bases or the wider Internet, hoping to get lucky.

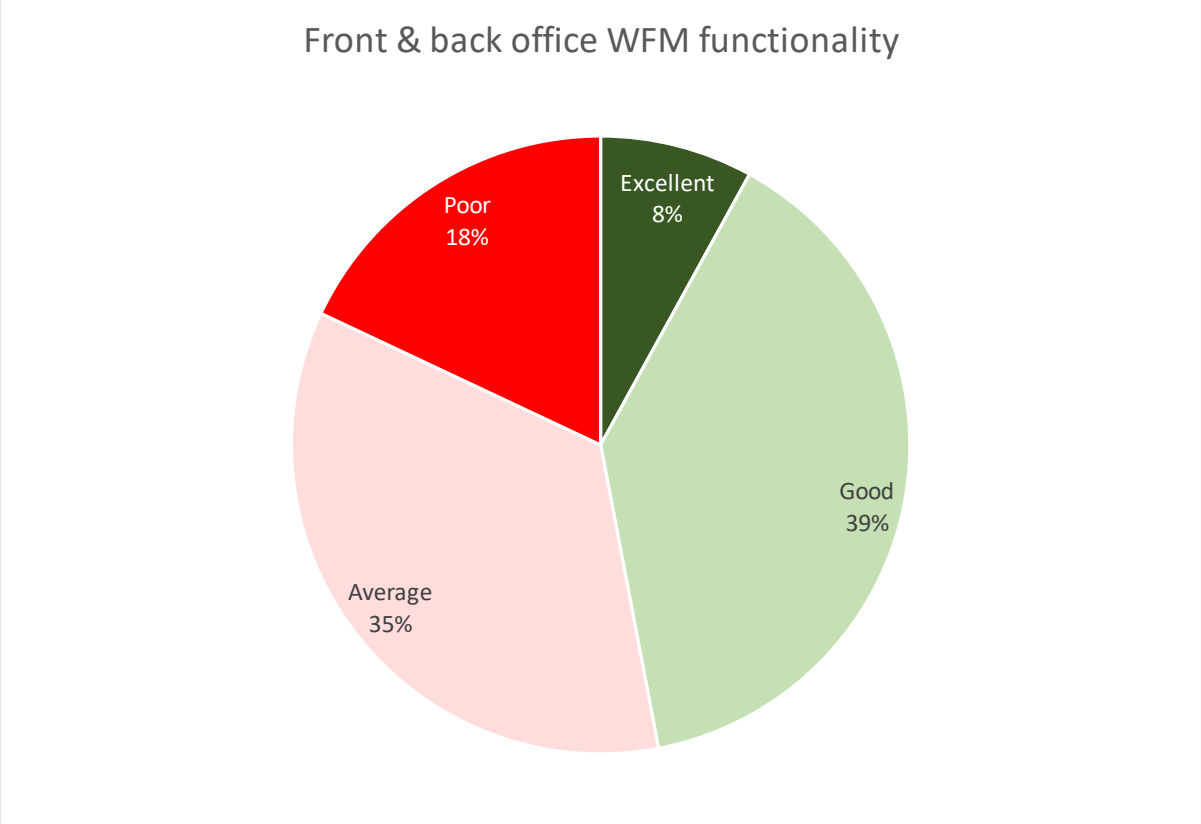
Figure 62: In-call access to computer-based knowledge sources for agents



Not only do most agents have numerous in-call / post-call applications as well as non-integrated knowledge sources to contend with, but most also have hard-copy documents in their workspace that they have to refer to as well. Only 18% of respondents had effectively a clean-desk policy with no hard copy reference material available to agents, a figure which was lower for agents working in a mixed service/sales environment, who tend to have to cover a wide range of varying topics.

Back office integration is placed as a top 3 priority by almost half of contact centres (particularly large ones – see the 'Strategic Directions chapter for more information) – but the current reality for many is that the back office exists for many businesses as an entity separate from the contact centre. An example of this can bee seen when looking at how businesses schedule back office work: although the back office depends in large part on what the front office / contact centre is doing, the scheduling of back office resources is not always integrated with the contact centre – front/back office workforce management is used in only 51% of contact centres that use WFM solutions – and is the following chart shows, is thought of as being average or poor in more than half of these cases.

Figure 63: Integrated front & back office workforce management functionality



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

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, strong 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. 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 a 'Spanish Inquisition' before being permitted to make their enquiry or place their order – not only reducing customer satisfaction, but also costing businesses time and money. It takes an average of over 30 seconds to verify a customer's identity manually, and this mounts up considerably: the UK contact centre industry spends billions of pounds each year, just to verify the caller is who they claim to be, and are permitted to do what they are asking.

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

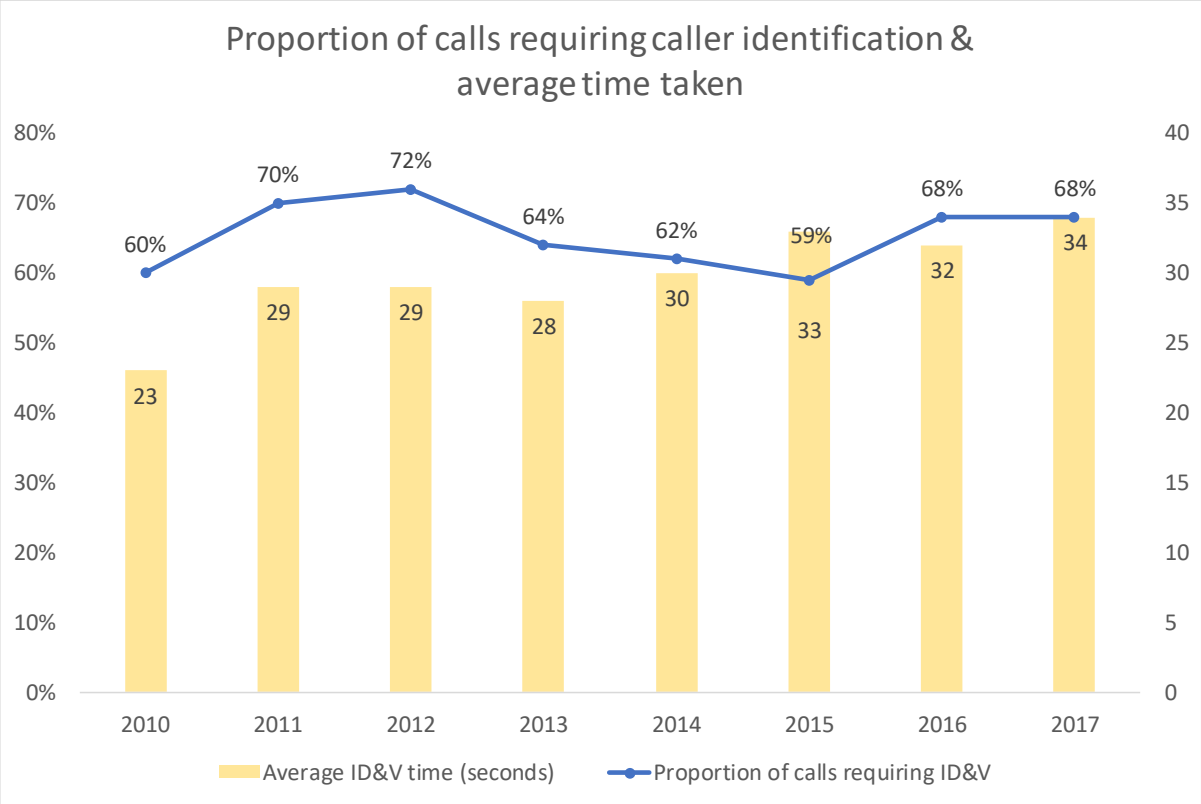
- something you know - e.g. password, PIN or memorable information
- something you are - a biometric such as a fingerprint, retina pattern or voiceprint
- something you have - a tangible object, e.g. a PIN-generating key fob, or the 3- or 4-digit security code on payment cards.

Combining these factors creates a more complex, and potentially more secure two-factor or three-factor authentication process, although being able to rely upon a previously enrolled voiceprint, rather than have to remember various pieces of information or carry round a code-generating device makes life far quicker and easier for the customer.

Over the past ten years, our surveys have found that around 60%-70% of calls require identity checks, which take considerably longer due to more stringent testing (a rise of almost 50% since 2010).

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

Figure 64: Proportion of calls requiring caller identification & average time taken



Industry-wide, a mean average of 68% of calls require caller identity verification this year.

41% of respondents state that all callers go through identity verification, with only 14% stating that they never do so. Insurance, finance, services and utilities operations are the sectors most likely to require identity verification. Transport & travel respondents (which include travel information lines) and manufacturers (often B2B account management and product support) are the least likely.

As we would expect, service-oriented operations are far more likely than sales-focused contact centres to require authentication.

Figure 65: Proportion of calls requiring caller identification, by vertical market

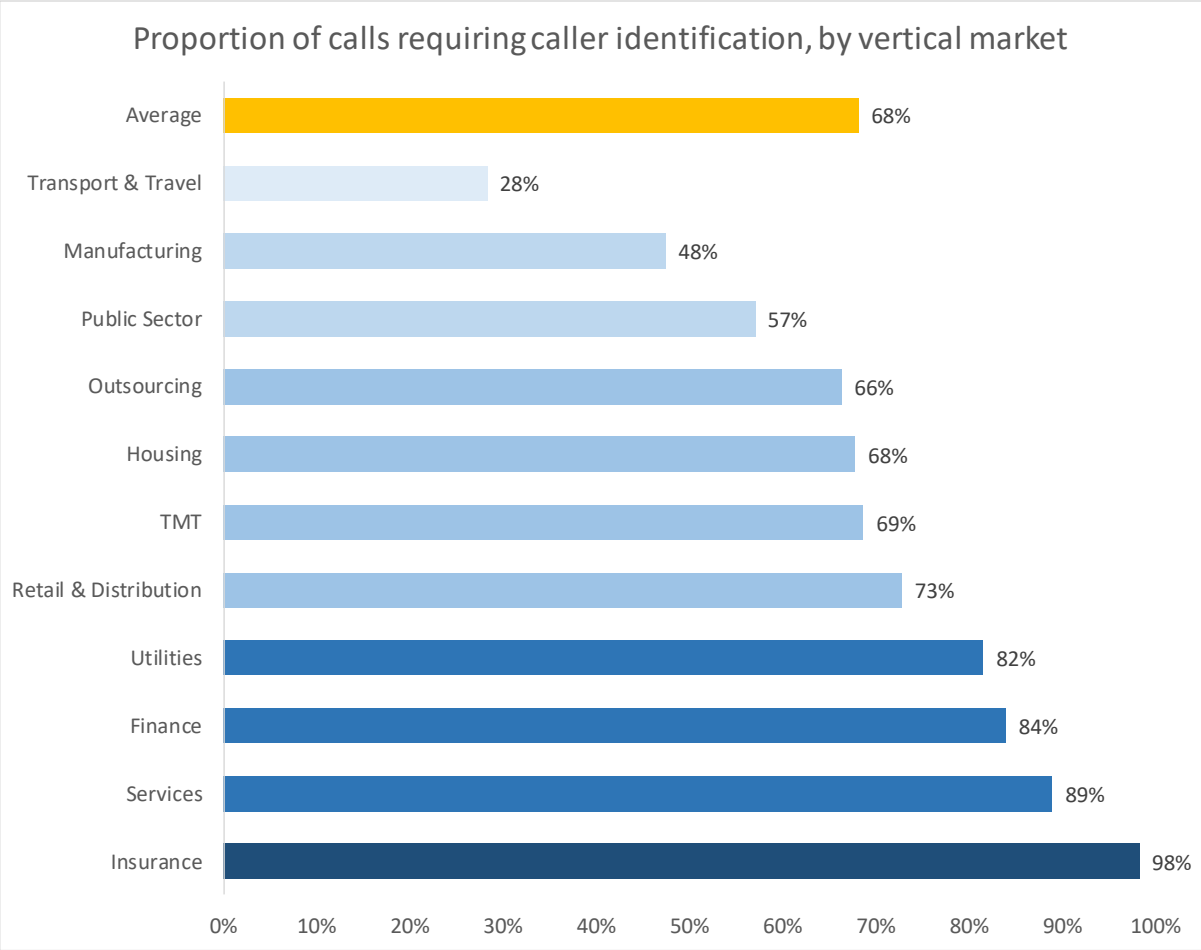


Figure 66: Caller identity authentication methods (only those contact centres which authenticate some or all calls)

Identification method	Proportion of callers identified using this method
Agent	94.2%
DTMF IVR (touchtone)	4.9%
Speech recognition	0.8%
Voice biometrics	0.1%

94% of respondents who authenticate identity do so through human means, taking an average of 34 seconds to do so.

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

The mean average time taken to authenticate using an agent remains fairly steady, at 34 seconds. The figure for authentication using an IVR is very similar, although the main difference is that the agent's time is not used, so the call duration (from the operation's perspective) and cost per call is reduced.

Figure 67: Time taken to authenticate caller identity using an agent (seconds)

	Seconds to authenticate caller identity using an agent
1st quartile	15
Median	21
3rd quartile	48
Mean	34

The unnecessary cost of caller authentication

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

68% of all calls require a security and identification process to be completed first. This year, 94% of calls were reported to be authenticated by agents. On average, it takes 34 seconds to go through security. Using these statistics, it is possible to estimate how much UK contact centres spend each year on screening customers by using agents.

Inbound calls per year (handled by agents): 7.65bn[5]

Proportion of inbound calls that require security and identification checks: 68%

Average length of agent-handled security and identification check: 34 seconds

Average call duration: 5m 22s (322 seconds), therefore 10.6% of the call is ID&V

Mean average cost per inbound call: £4.00

Cost of time spent on agent-handled security and identification check: 42.4p per call

Proportion of calls requiring ID&V: 68%, of which 94% require an agent

Therefore, overall cost of agent-handled security and identification checking: £2.07bn per year

[5] ContactBabel, "UK Contact Centres 2017-2021: The State of the Industry"

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

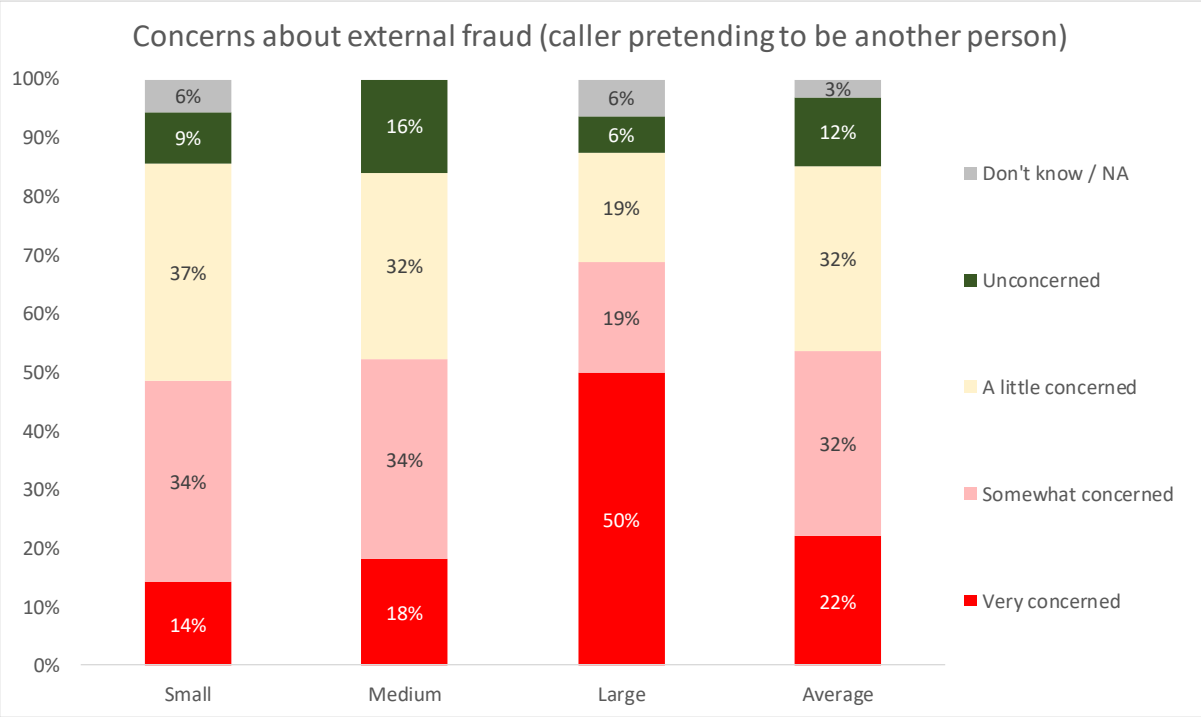
- businesses want to reduce the cost of fraud
- customers want convenience, but also their personal information and assets protected
- businesses need to comply with existing and new laws and regulations
- the contact centre industry spend excessive amounts of money on identifying and verifying customer identities
- 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.

THREATS FROM FRAUD

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

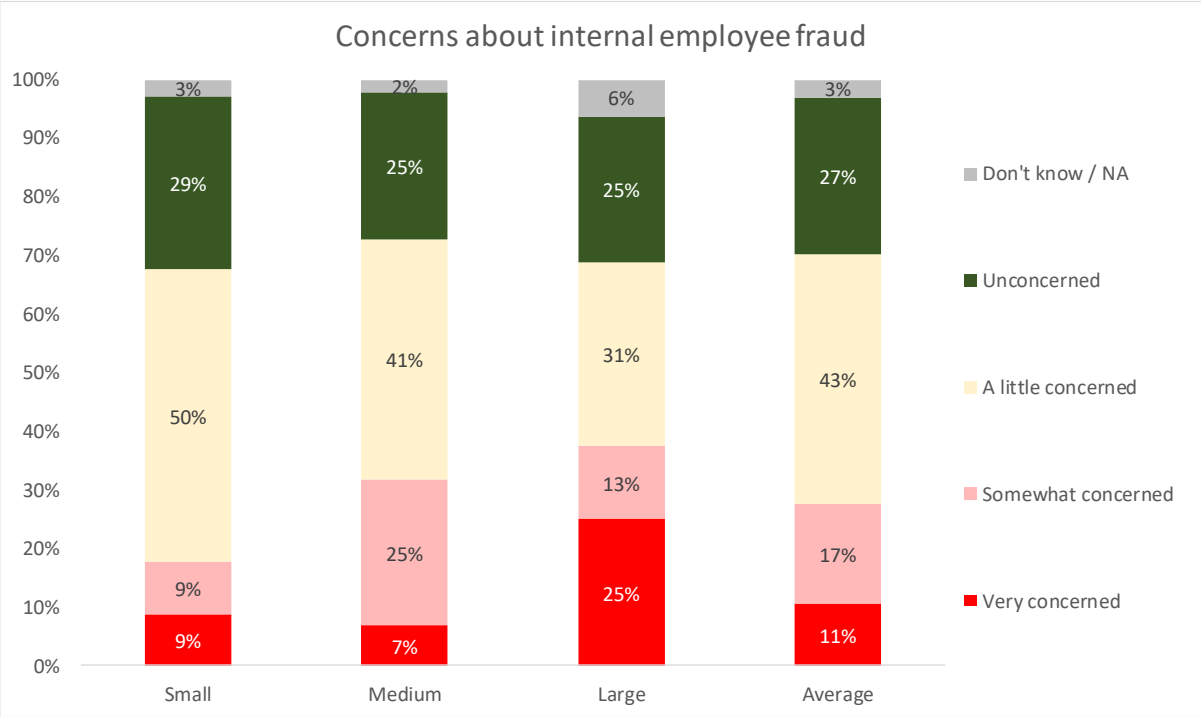
Half of respondents from large contact centres stated that they were very concerned about external fraud, defined within the survey as the caller pretending to be another person. This shows that customer identity verification is taken very seriously, and that many organisations do not feel that they have an acceptable level of fraud control.

Figure 68: Concerns about external fraud (caller pretending to be another person), by contact centre size



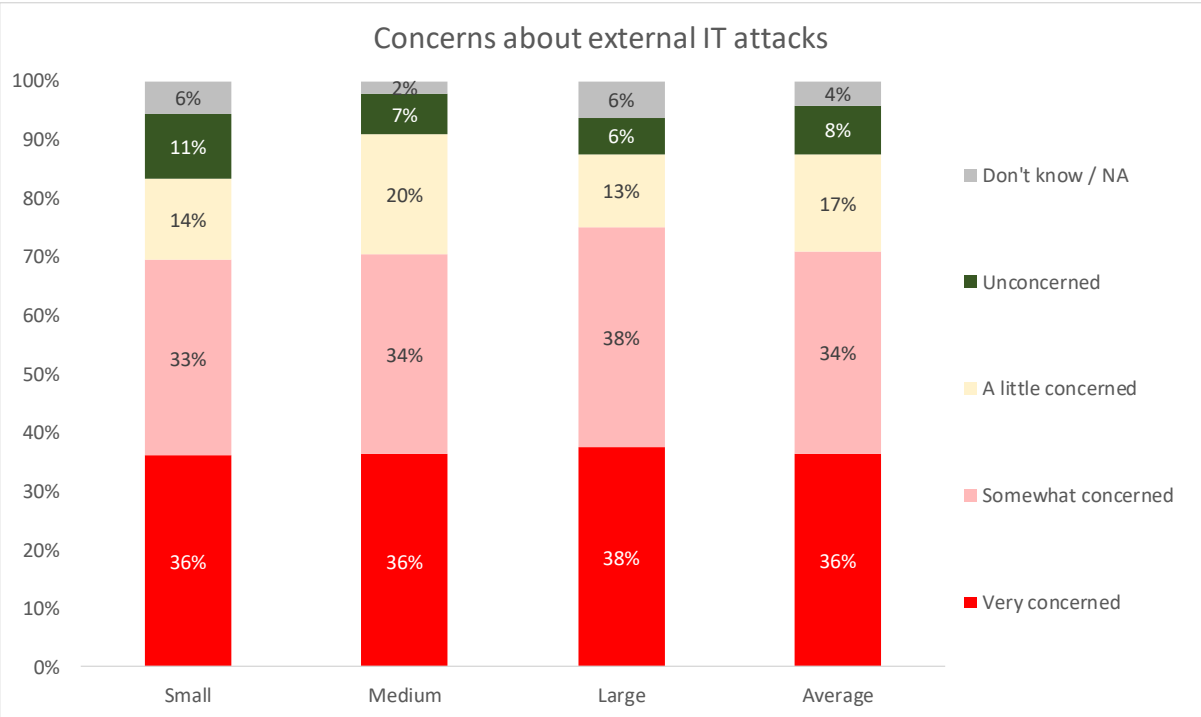
Levels of concern about internal employee fraud were generally much lower, although a quarter of respondents from large contact centres were very concerned about this.

Figure 69: Concerns about internal employee fraud, by contact centre size



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

Figure 70: Concerns about external IT attacks, by contact centre size



THE EMERGENCE OF BIOMETRIC TECHNOLOGIES

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

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

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

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

With this advanced technology, contact centres can:

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

However, voice biometrics, while an excellent authentication tool, is not enough to deter fraud attacks. In fact, in 2015, researchers at the University of Alabama[6] 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.

[6] http://www.biometricupdate.com/201509/uab-researchers-find-that-automated-voice-imitation-can-spoof-voice-authentication-systems

The customer's experience

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

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

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

The business benefits

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

A contact centre receives 10 million inbound calls per annum with the existing identity verification procedure taking on average 34 seconds and being performed by an agent:

- Eliminating the time taken by an agent to verify a caller's identity can save 40p per call (£4m per annum)
- Secure automated identity verification enables a broader range of fully automated services to be offered, reducing agent cost.

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

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

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

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

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

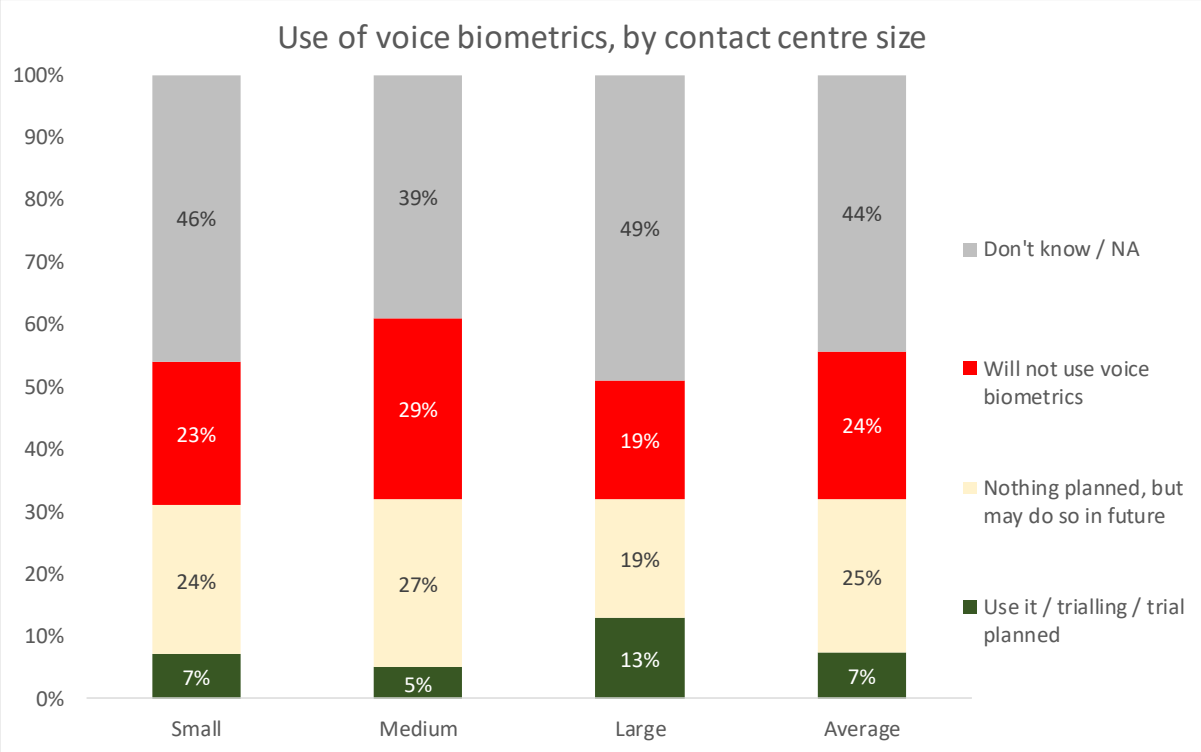
For procedures such as internet password resetting, the higher level of security achieved with voice verification can enable businesses to offer real-time password resets or reminders. This benefits both customer and business and can reduce up to 70% of helpdesk calls.

FUTURE USE OF VOICE BIOMETRICS

The interest in using voice biometrics for customer authentication is tipped more towards larger operations, which are more likely to have high call volumes, meaning that 30 seconds or more cut from each call would add up to a very considerable saving, without affecting the customer or agent experience negatively.

Finance and TMT respondents were most likely to look favourably on voice biometrics, and although the argument has certainly not yet been won, there is a very significant increase in interest compared to previous years. However, almost half of respondents do not yet have a firm view on whether or not voice biometrics is a solution they would even consider implementing.

Figure 71: Future use of voice biometrics, by contact centre size



INHIBITORS TO VOICE BIOMETRICS

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

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

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

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

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

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

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

Biometric security fooled by twin's voice

In May 2017, the BBC carried a story[7] about an experiment that a BBC reporter and his twin had tried on a UK bank. The reporter had enrolled in a bank's voice identification system, but his twin was able to access the account after ringing the bank and pretending to be his brother.

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

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

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

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

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

One alternative method of customer identity verification is 'phoneprinting', which is perhaps focused more on identifying and preventing fraud than on simply authenticating genuine customers.

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

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

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. The PCI SSC wished to clarify and align their various fraud prevention measures and regulations into a single agreed global framework. PCI DSS provides guidance to merchants as well as payment card processors around how to process, store and transmit information about the payment card and its owner, with the aim of reducing the incidence of card fraud and promoting best practice in information security. Although compliance with PCI DSS is not enforced by law, the card brands may fine those which do not follow its regulations, or even deny the merchant the ability to take card payments at all.

There are 12 requirements to fulfil in order to achieve PCI DSS compliance (full details are available here[8]), with many specific sub-requirements within them, although for many businesses a large proportion of them may simply not apply. In version 3 of the standard additional self-assessment questionnaires (SAQs) were introduced to assist merchants and service providers to report the results of their PCI DSS self-assessment.

Depending on the merchant level (i.e. how many card payments are taken), businesses can either self-certify PCI compliance or use a Qualified Security Assessor (QSA) who is accredited by the PCI SSC. Only Level 1 merchants with over 6 million transactions per year or who are a 'Compromised Entity' (having experienced attacks before) must have an annual on-site QSA audit rather than one of the self-assessment questionnaires (SAQs) now available in current PCI DSS standards.

A formal Attestation of Compliance (AOC) which is usually signed by the Financial Director 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. Each card brand provides a list of compliant service providers on its website. QSA-audited PCI certification offers independently confirmed security, which removes the issue of how an organisation might interpret a PCI requirement in an internal self-assessment. Businesses should see QSAs as expert consultants, rather than as auditors who are just there to tick boxes, agree compliance and then disappear for a year, but should question them as to which SAQs are most appropriate for their business.

The vast majority of contact centres do not require a full audit, and self-assessment questionnaires are becoming far more popular. The PCI DSS 3.0 standard introduced a number of different types of SAQ, recognising that one size did not fit all. It was acknowledged that it was inappropriate for smaller and less at-risk companies to have to complete the same list of requirements as a large multinational taking many millions of card payments each year. A list and explanation of each SAQ is available from the PCI Security Standards Council here.

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

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

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

However, this method of handling card payments risks cutting out those customers who are unable to complete card payments via touchtone (i.e. relevant in contact centres using DTMF suppression) and 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 CVV code), or else use the speakerphone, which is not always appropriate. If a frustrated or confused customer decides just to read out the card details and let the contact centre deal with it, the call recording system will pick these up and immediately put the operation back in scope and become non-compliant.

SAQ-C-VT is an alternative option for those operations that wish to offer a manual payment service for customers unable or unwilling to use a keypad to enter their card information. While there are more requirements to complete within this SAQ, organisations should consider the overall ongoing cost and effort involved in implementing the technology and processes required for each SAQ to be completed successfully, as well as how to deal with customer exceptions. Completing SAQ C-VT successfully will involve encrypting card details in transit, training staff in data protection, and making sure that no card details are recorded, but does give the option of manually taking card payment details over the phone.

It is important for businesses to understand that there is no single right way of handling card payments. Each organisation should carefully assess the level of risk, the time and effort taken to complete the relevant SAQ(s), the cost of technology and the effect on customer experience.

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

Proving compliance is also about understanding which parts of the business fall into the scope of the PCI compliance audit. It is important that whoever runs the PCI compliance 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 minimise?

Whether contact centres decide to go down the self-assessment route or work with a QSA all the requirements of PCI DSS have some impact upon the way in which they work. It is generally considered that Requirements 3, 4 and 12 may have the greatest relevance. It should also be noted that sections 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 minimising 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.

Sensitive authentication data such as the card verification code should normally never be stored, even in an encrypted format. PCI DSS requirements also indicate that the full card number (PAN) should only be available on a need-to-know basis, and should otherwise be hidden, with 1234-56XX-XXXX-7890 considered the minimum masking format. For businesses which choose for agents to type in card details, post-call masking and role-based access to the full PAN should be considered, along with strong cryptography when stored.

For contact centres, the most obvious place where data is stored as in the recorded environment, and there is an increased use of RAM scrapers, which is a form of malware that takes data from volatile memory as it as being processed and before it is encrypted.

Organisations have to determine all of the locations which credit card data could potentially be stored, even if it is not part of the formal card handling process. For example, there is nothing to stop the customer sending their credit card details, including the card verification code, by email or web chat. However, if it were to happen, then a formal and documented policy would be required to evidence that the card data had been either removed or securely deleted: if the email or chat interaction is found to be stored, then a risk exists, and the operation is not PCI DSS compliant. There is an increasing use of data loss prevention solutions as a way to track data that has somehow moved out of the original environment, and PCI DSS version 3.2 states more clearly than previously that businesses need to have a good inventory not just of the equipment and infrastructure, but also of their logical environment as well.

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

In the event of a security breach, it is important to make sure that credit card data (such as the PAN, or 'long card number') is not readable, through the use of strong cryptography not only at its stored location but also as it is being passed across the network. The network is only as strong as its weakest link, and badly configured wireless networks, with out-of-date security and weak passwords are a particular concern.

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

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

Compensating controls

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

Potential danger points within the contact centre fall into three main areas: storage, agents and infrastructure. The storage element will include customer databases and the recording environment - both voice and screen - and the potential opportunity for dishonest employees to access records or write down card details should also be considered. In terms of infrastructure, this is not simply a matter of considering the CRM system or call recording archives, but also includes any element that touches the cardholder data environment. This could include, but is not limited to the telephony infrastructure, desktop computers, internal networks, IVR, databases, call recording archives, removable media and CRM / agent desktop software.

The various elements of card data may be handled in different ways.

Figure 72: Data elements and storage in PCI DSS

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

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

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

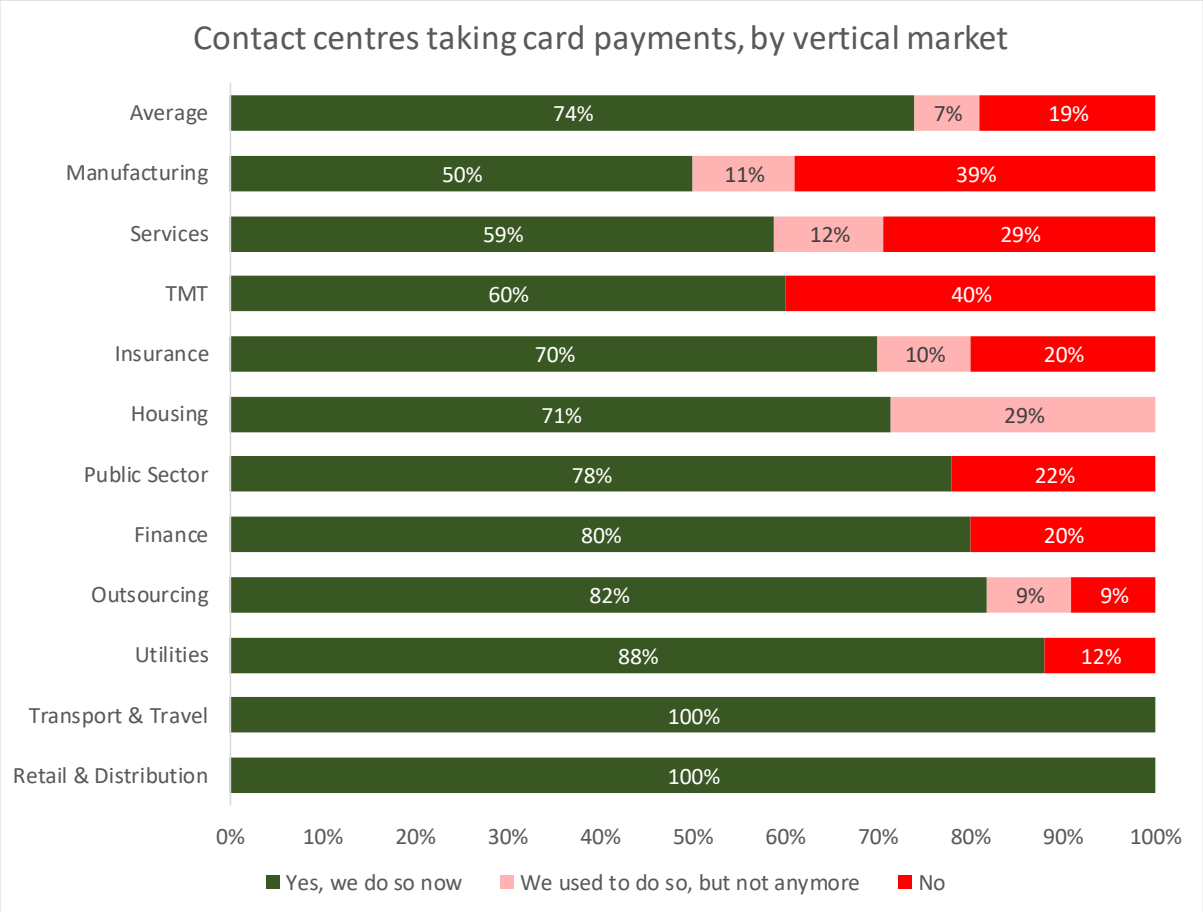
It is worth noting that with the takeover of Visa Europe by Visa, US security methods are more likely to be brought into Europe. The requirement to supply the CVV code (3 digits on the back of the card) is something which UK merchants and customers are now trained to do, but it is worth noting that many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

The majority of respondents in all vertical markets (except for manufacturing which is 50/50) are taking card payments in their contact centres.

The following charts show that the ability to take card payments is not an inexorably growing process, with 7% of respondents no longer doing so. This is especially the case for respondents from the housing sector.

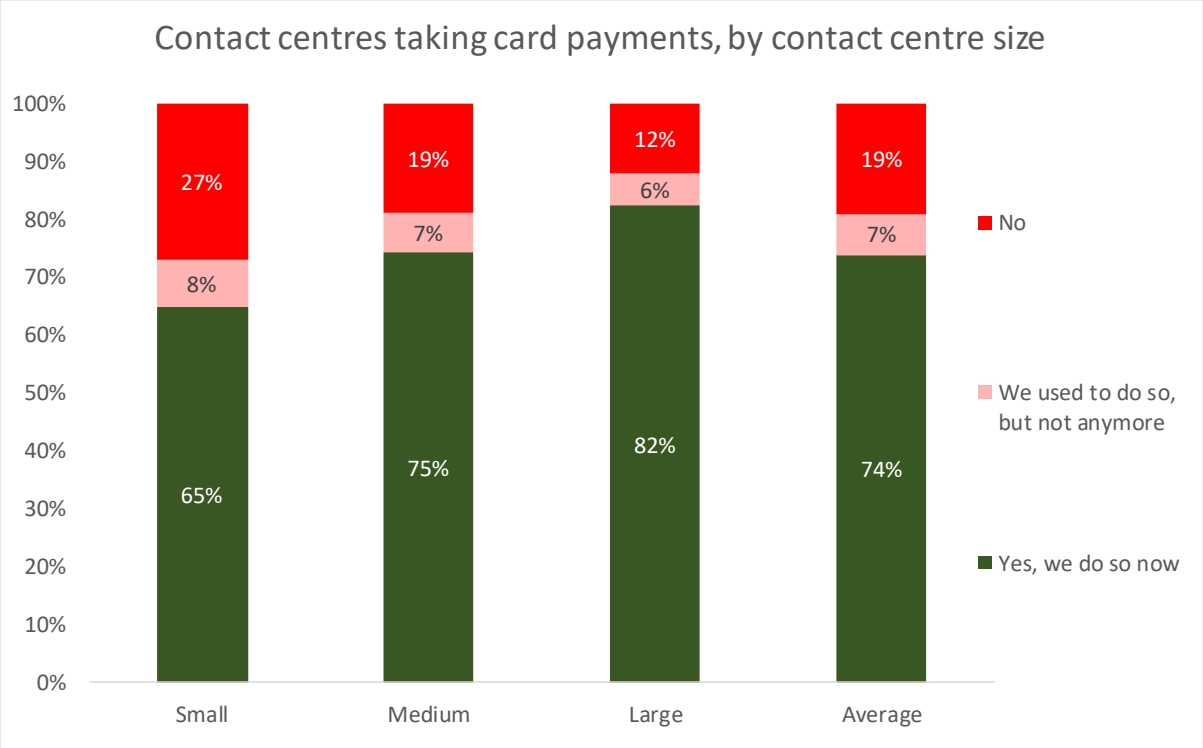
Although the survey does not ask for the specific reasons why card payments are no longer taken, it is unlikely to be the case that customers now prefer to pay via other methods. More likely, the increasing requirements and costs associated with more stringent payment technology, processes and training outweigh the benefits of being able to take card payments over the phone.

Figure 73: Contact centres taking card payments, by vertical market



While the usual positive correlation between size and card payment is again present this year, it is noticeable that even some of the largest operations no longer offer this facility to their customers, suggesting that the cost and effort of implementing a PCI DSS compliant environment is greater than the potential benefits of being able to take card payments.

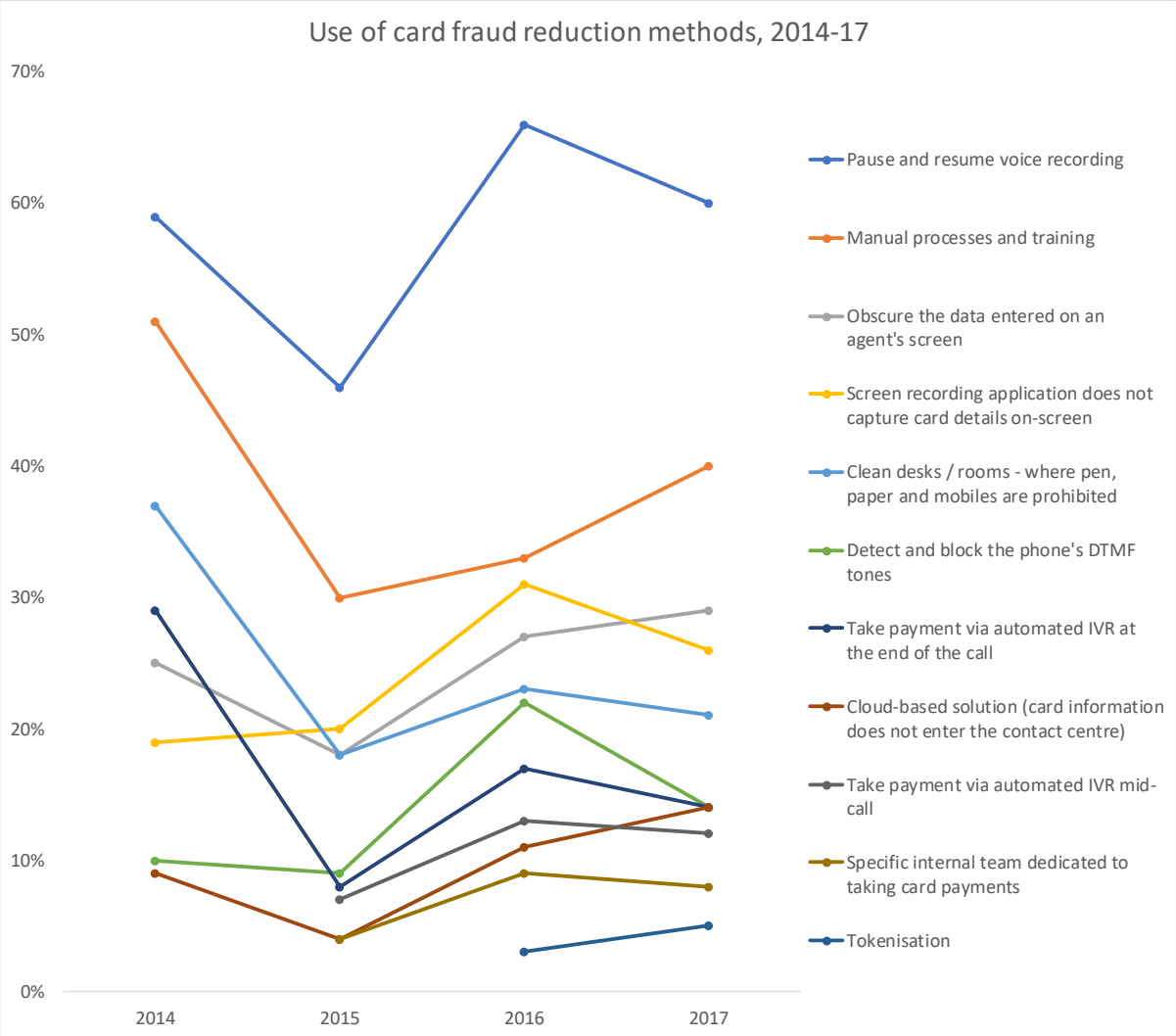
Figure 74: Contact centres taking card payments, by contact centre size



Respondents were presented with a long list of solutions, approaches and business processes that aimed to reduce the risk of card fraud within the contact centre, and were asked to indicate which they used. It should be noted that some of these methods used do not in themselves render the operation fully PCI-compliant, although methods that do not allow the card data into the contact centre at any point (even encrypted) will take the operation out of the scope of PCI. Respondents used an average of 2.5 card fraud reduction methods.

The chart below shows the use of card fraud reduction methods over the past four years. Pause & resume voice recording and manual processes & training are consistently the two methods most used. A few methods, such as cloud-based solutions and automated mid-call IVR show a gentle but consistent growth, as does DTMF masking.

Figure 75: Use of card fraud reduction methods, 2014-17



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

Pause and Resume (60%)

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

Improving Manual Processes and Agent Training (40%)

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

Clean Rooms (23%) and Dedicated Payment Teams (8%)

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

IVR Payments – post-call (14%) and mid-call (12%)

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

Detect and Block the Phone's DTMF Tones (14%)

14% of this year's respondents use DTMF suppression in order to assist with card fraud reduction. DTMF suppression describes the practice of capturing DTMF tones and altering them in such a way that cardholder details cannot be identified either by the agent, the recording environment or any unauthorised person listening in. DTMF suppression aims to take the agent out of scope as well as the storage environment, as card details on the agent's screen may be masked as well as the DTMF tones being neutralised (thus removing any - albeit theoretically small - danger of a handheld recorder being used).

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

Third-Party Cloud-Based Payment Solution (14%)

14% of this year's respondents use third-party cloud-based payment solutions, which is far more likely to be the case in larger operations. Using a hosted or cloud-based solution to intercept card data at the network level means that no cardholder data is passed into the contact centre environment, whether infrastructure, agents or storage. As such, this can be seen to de-scope the entire contact centre from PCI compliance. Like any cloud or hosted 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 most seem to be engineered in such a way as to minimise changes to the contact centre systems, processes or agent activities.

Tokenisation (5%)

In this discussion, the practice of **tokenisation** should also be mentioned, although it is used in only 5% of respondents' operations. Tokenisation takes place in order to protect sensitive card information such as the PAN (primary account number or 'long card number') by replacing it with non-sensitive data which merely represents the initial data. The purpose of this is to devalue the data so that even if it is hacked or stolen, it is of no use to a criminal. One of the main benefits to tokenisation is that it requires little change to the existing environment or business processes, as apart from the addition of a decoding mechanism, the flow of data, its capture and processing works in the same way as if it were true card information coming into the contact centre environment.

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

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

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

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

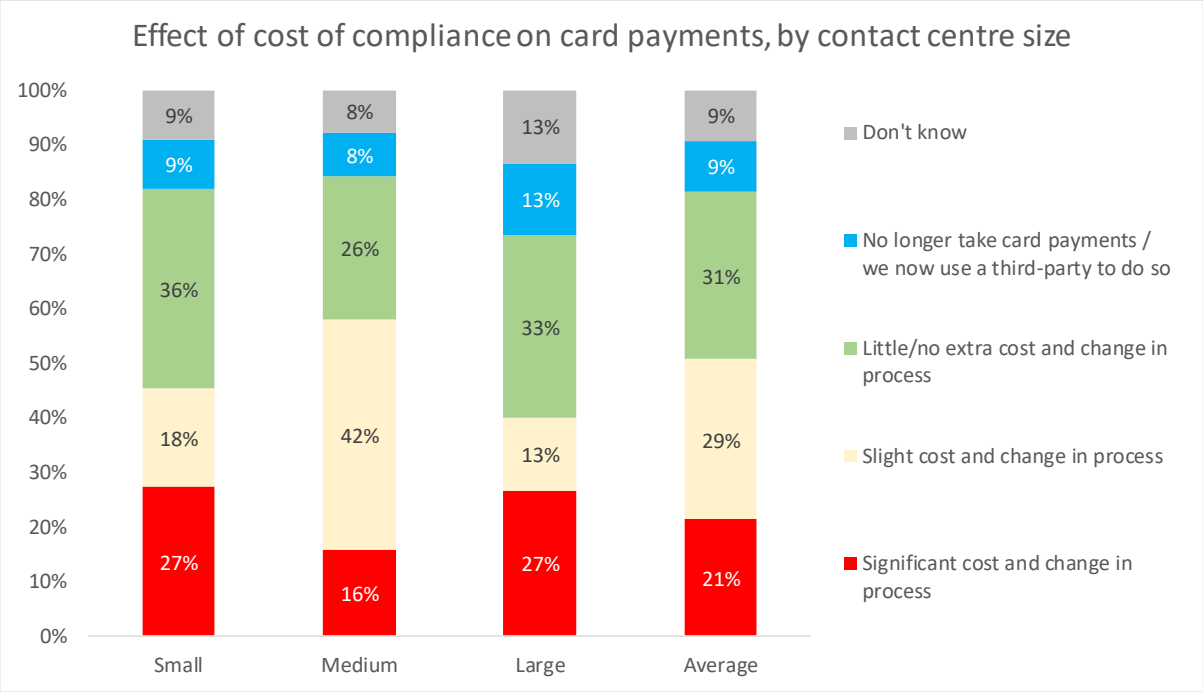
Of course, cardholder data is not the only DTMF-provided information coming into the contact centre environment, as other data such as IVR routing options and the entry of account numbers often requires capture of DTMF tones as well. Various configuration options exist within solutions, based upon the specifics of the business in order to circumvent confusion. Customers should check that any hosted tokenisation solution will not alter the performance of any required card number validation checks, including card length, range validation and 'Luhn' checks (to make sure a card number 'looks right' before presenting it to the payment services provider). The PCI SSC has published tokenisation product security guidelines9.

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

The following chart shows that a significant proportion of contact centres have found that the cost of PCI DSS compliance is very considerable, with 27% of respondents from both large and small operations stating that they have seen a significant cost associated with compliance.

Furthermore, 13% of respondents from 200+ seat contact centres state that they either no longer take card payments or use a third-party to do so, in order to take the contact centre out of scope.

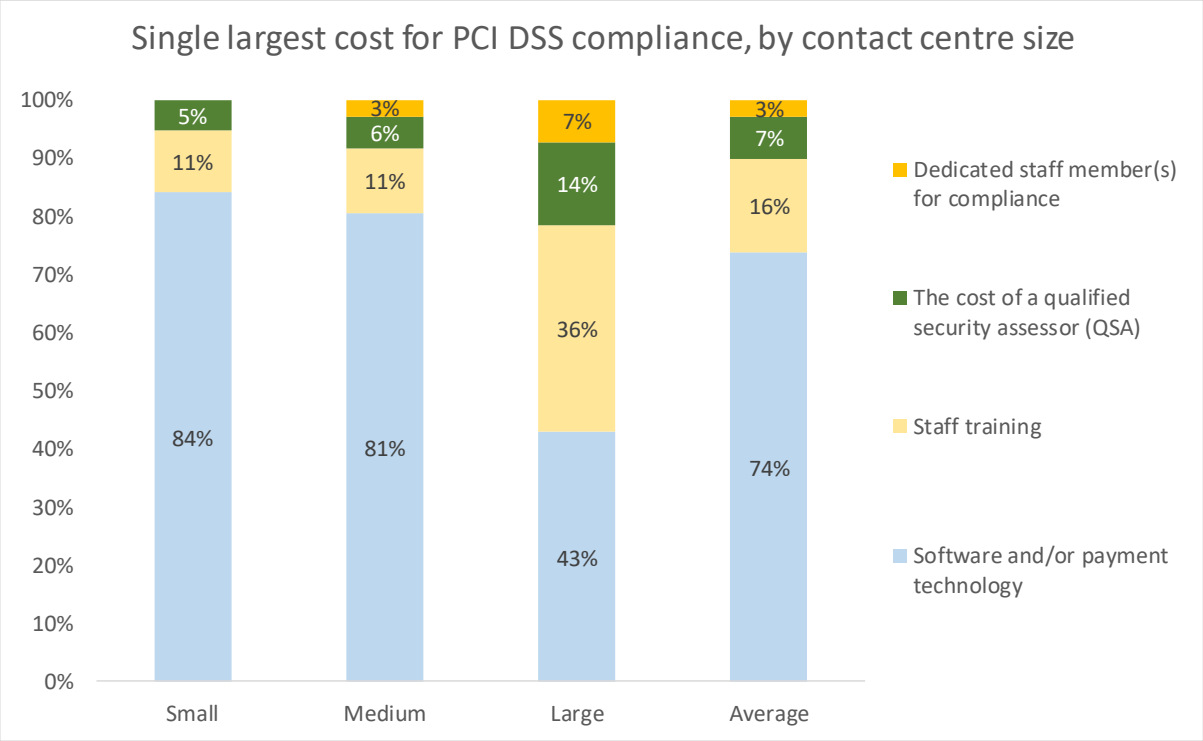
Figure 76: Effect of cost of compliance on card payments, by contact centre size



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

In the largest contact centres, the cost of training staff in card fraud prevention techniques and processes is said to be the largest cost in 36% of cases.

Figure 77: Single largest cost for PCI DSS compliance, by contact centre size



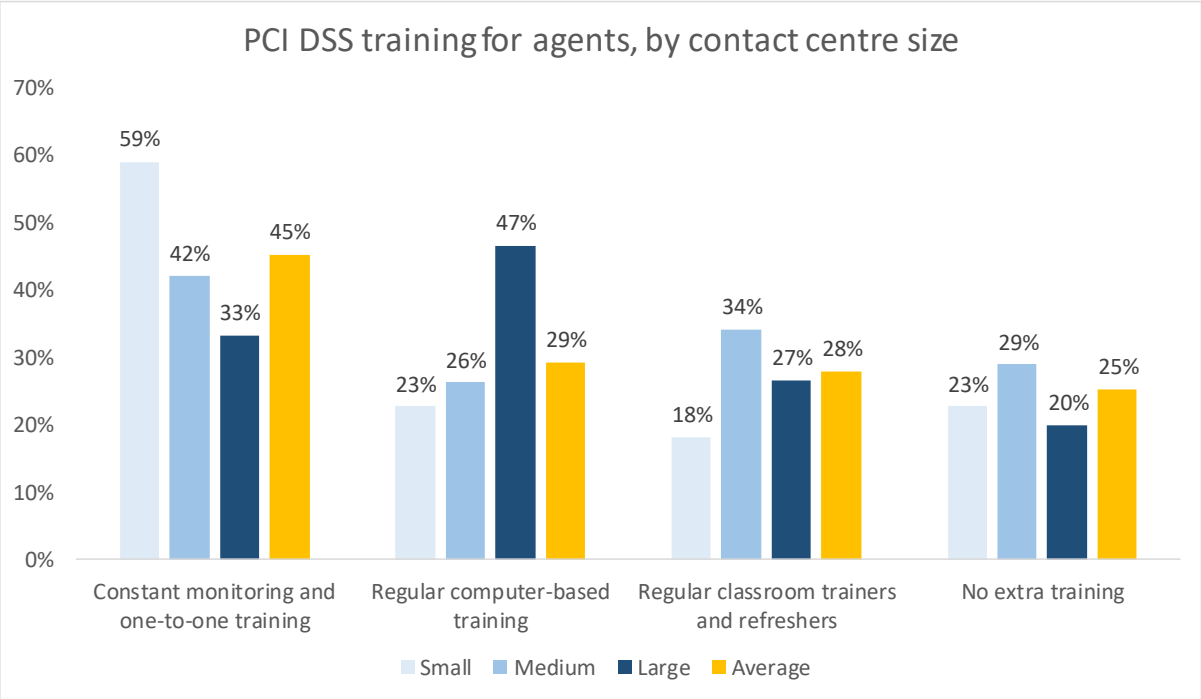
Despite the cost of staff training being a major drain on resources for large contact centres, the following chart shows that such operations are not providing individual levels of training far in excess of agents in small and medium-size contact centres are receiving, more that the sheer scale of the operation means that high levels of actual resources and time are needed.

Agents in small operations are more likely to be receiving constant monitoring and one-to-one training, a level of support which may be unsustainable and unaffordable in large-scale contact centres.

Larger contact centres are much more likely to be using regular computer-based training in order to educate agents about card fraud reduction practices, as this is likely to be scalable and require less personal support from managers and security specialists.

A minority of contact centres from all size bands provide regular classroom training and refresher courses, and around a quarter of operations do not provide any additional PCI DSS or card fraud reduction training for agents whatsoever.

Figure 78: PCI DSS training for agents, by contact centre size

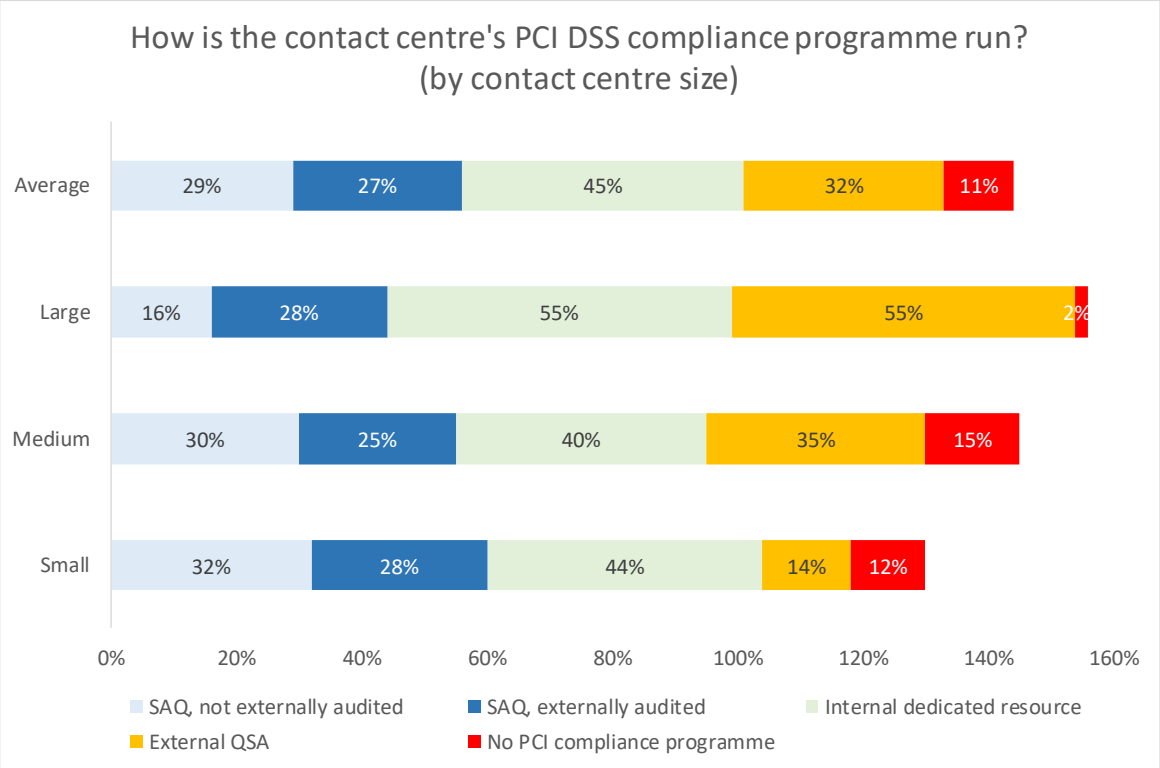


12% of small operations and 15% of medium-sized operations state that they have no PCI compliance programme at all, which is a concern.

Small operations are most likely to use self-assessment questionnaires, quite evenly split between externally audited and internal-only. Larger operations are more likely to use dedicated internal resource and/or an external Qualified Security Assessor (QSA).

Neither SAQ-A or SAQ-C-VT require an external audit.

Figure 79: How is the contact centre's PCI DSS compliance programme run? (by contact centre size)



NB: totals in the chart above add up to more than 100%, as multiple selections are allowed.

QUEUE MANAGEMENT & CALL-BACK

THE PERCEPTION OF QUEUING

A key finding to bear in mind while reading this chapter is that only 12% of customers wanting to communicate with a company choose to use a contact centre in the first place. 37% prefer email, 18% a face-to-face communication if possible, and 14% would visit a website first.

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

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

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

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

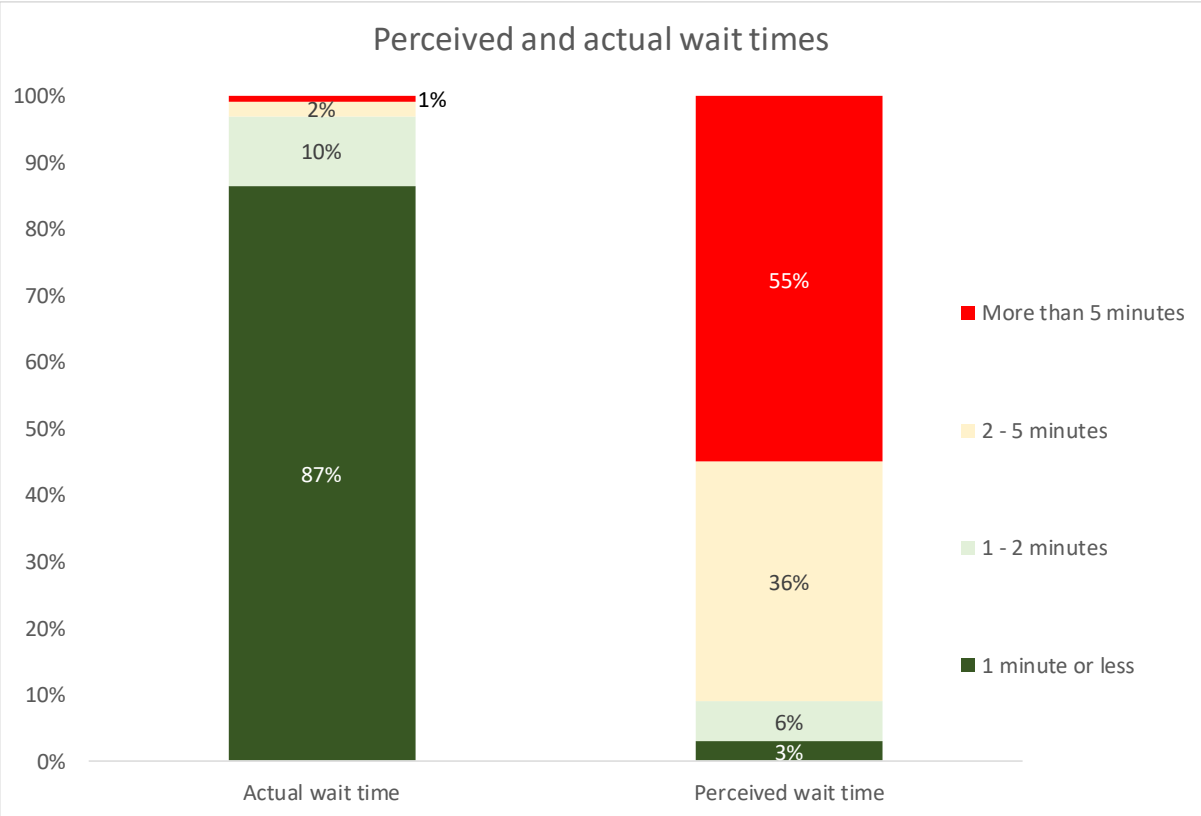
[10] Survey of 2,000 UK customers carried out by ContactBabel. Full findings available from http://www.videlica.com/videlica_report/

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

Gathered from primary research with hundreds of UK contact centres, the left-hand column in the chart below shows the average speed to answer customers' calls. 97% of UK contact centres report an average speed to answer of under two minutes. Of course, queues can be far longer at certain times of day, but as an average, this has been very steady over many years.

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

Figure 80: Contact centre queue times: perceptions and reality



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

The Cost of Excessive Queue Time

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

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

For example:

- 22,514,000 UK households use gas (Sources: Department of Energy and Climate Change; consumerfocus.org.uk; Office for National Statistics)
- Typical household expenditure on gas per year: £753 (Source: Office for National Statistics, Jan 2015)
- Total gas expenditure per year: £16.953bn
- % of customers stating they changed utilities supplier because of excessive queue lengths: 2.64%
- => 2.64% x £16.953bn = £448m per year

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

THE PROBLEM WITH QUEUING

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

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

Figure 81: Reasons given for dislike of contact centre queuing

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

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

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

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

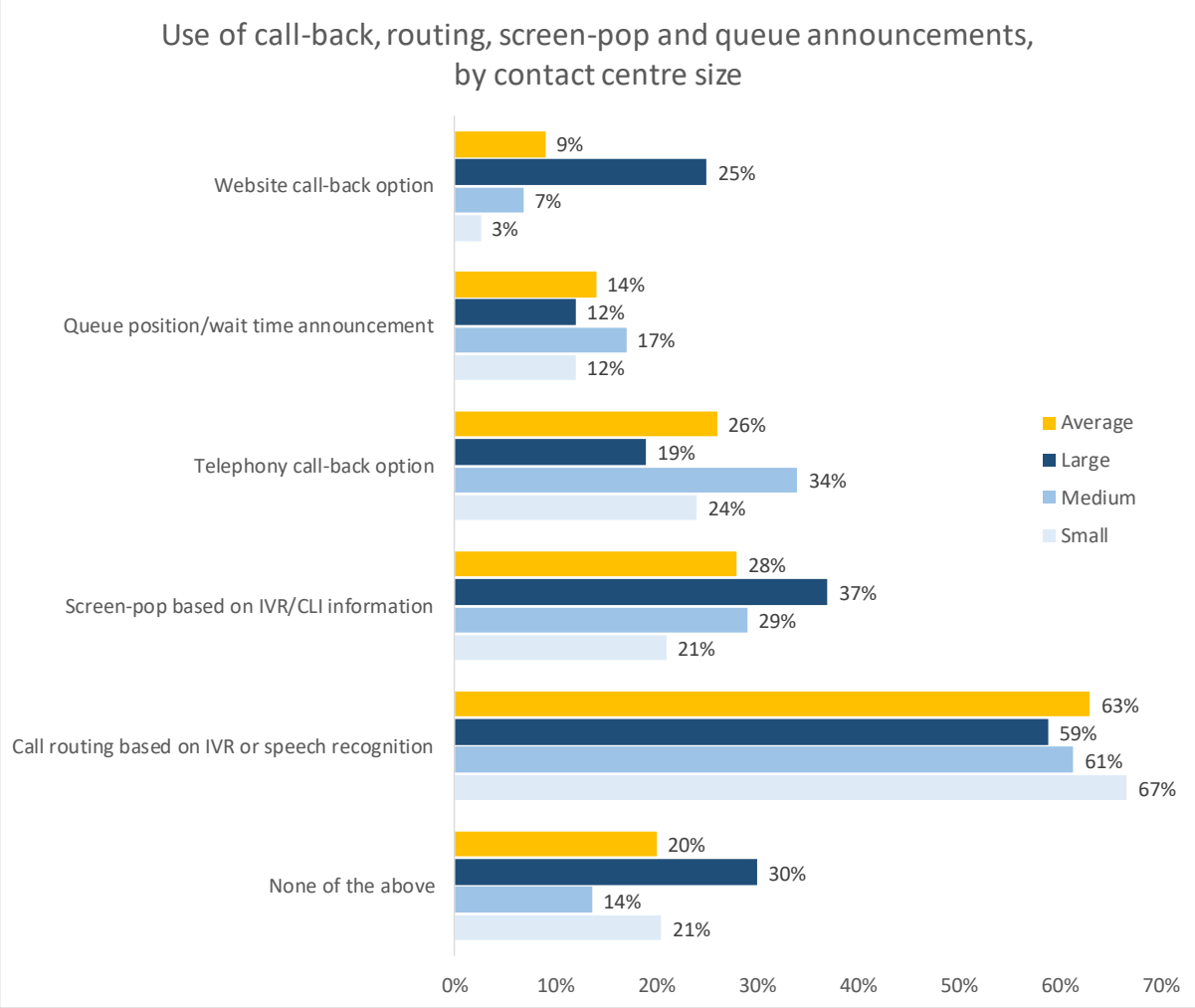
QUEUE MANAGEMENT SOLUTIONS

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

The use of a website callback button (which initiates an outbound call at a time specified by the recipient) is weighted towards operations that carry out significant sales, but is present only in the case of 9% of this year's respondents. We would expect to see this grow further for sales operations, and potentially play a part in providing customer support especially via smartphone channels.

26% of this year's respondents offer a telephony queue call-back option, and 14% announce the position of the call in the queue. Rather more respondents use call routing based on IVR or CLI (63%) and screen-popping functionality (28%), putting information about the caller and possibly their requirements on the agent desktop, and making sure the call is delivered to the right agent.

Figure 82: Use of call-back, routing, screen-pop and queue announcements, by contact centre size



QUEUE POSITION ANNOUNCEMENTS

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

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

CALL-BACK

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

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

By replacing real hold time with this virtual version, customers are free to do other things, thus removing four of the five problems that they have with queues - unknown queue times, hold music, the inability to do anything else and repetitive announcements.

Scheduled call-back options differ from a FIFO experience, in that customers do not keep their place in queue, but are called back at some time in the future that is more convenient for them (for example, when they know they will be back at their desk and available to take a call).

There are several types of scheduled virtual queuing:

- Datebook-type scheduling systems allow customers to schedule appointments for days in the future, with times blocked-out that are unavailable for scheduling, and limiting the number of call-backs available. This system also allows customers that reach a contact centre out-of-hours to schedule a call-back during normal working hours
- Timer scheduling systems promise a call-back after a specific amount of time, regardless of queue conditions. While this ensures an on-time call-back for the customer, a surge in call volume or staff reduction due to a shift change can create problems for the contact centre's queue, lengthening wait times for other callers
- Forecast-based scheduling systems offer appointments during times that are expected to have low call volumes. These times may not be convenient for the customer, and the contact centre runs the risk that their scheduling may be inaccurate.

Respondents offering a telephony call-back option were asked to state which types of call-back were presented to callers. More than half of respondents that offered call-back functionality allowed callers to request a FIFO call-back (i.e. acting as a placeholder in the queue), with significant minorities allowing customers to specify a scheduled time.

Figure 83: Types of telephony call-back offered to customers (only from respondents offering telephony call-back)

Type of call-back	Proportion of respondents offering call-back that use this
FIFO (first-in, first-out) - holds the caller's place in the queue, then calls once they are at the front	60%
Timed (called back at or before a specific time, regardless of queue conditions)	40%
Forecast-based (called back at a time to suit the contact centre)	30%
Datebook (caller can specify a day to be called back on)	15%

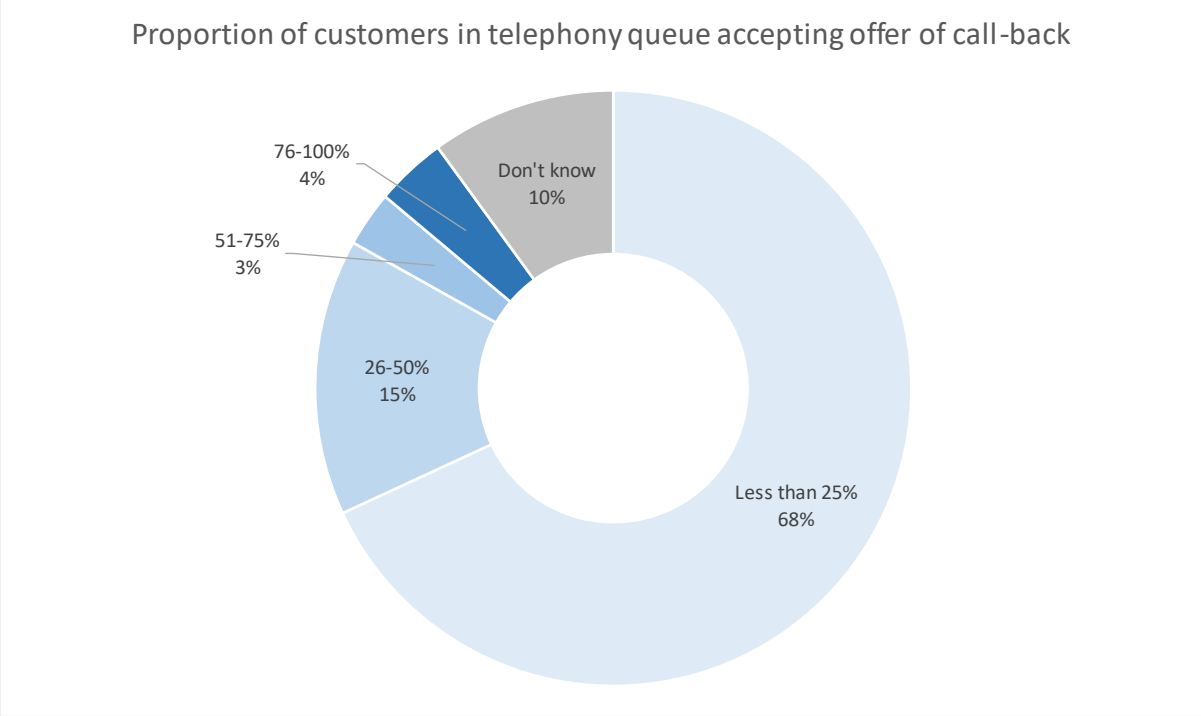
More than half of respondents who offered call-back reported that FIFO placeholder call-backs were far more requested than one of the delayed call-back types. On analysing the contact centre activity type (i.e. sales or service), those callers making sales enquiries were more likely to want a placeholder-type of call-back. This could possibly be explained by the differing states of mind of customers calling to purchase something, or to make a query or payment. The former is more likely to have chosen to call the contact centre to make a purchase that they are enthusiastic about, and/or which is time-sensitive, and as such, want to speak to the business as soon as possible.

Respondents indicate that telephony call-back tends not to be universally available to callers, with businesses only offering it after a certain period of wait time or once the queue becomes so long that it triggers the functionality to be offered. Half of respondents trigger call-back functionality based on the actual time that the customer has spent waiting, with around 30% looking at the estimated wait time based on ACD statistics. The remainder of respondents use a mixture of actual and expected queue time.

Two-thirds of contact centres using call-back state that it is offered after the caller has spent up to two minutes in the queue, although 10% say that it takes longer than five minutes before call-back is offered, at which point many customers have already given up.

Of those who are offered a call-back, most respondents report that fewer than a quarter of callers chose this option. This may be because customers lack confidence that the business will call back when they say they will, are relatively unfamiliar with the technology and/or do not have the call-back option offered to them early enough and so have already abandoned the call.

Figure 84: Proportion of customers in telephony queue accepting offer of call-back



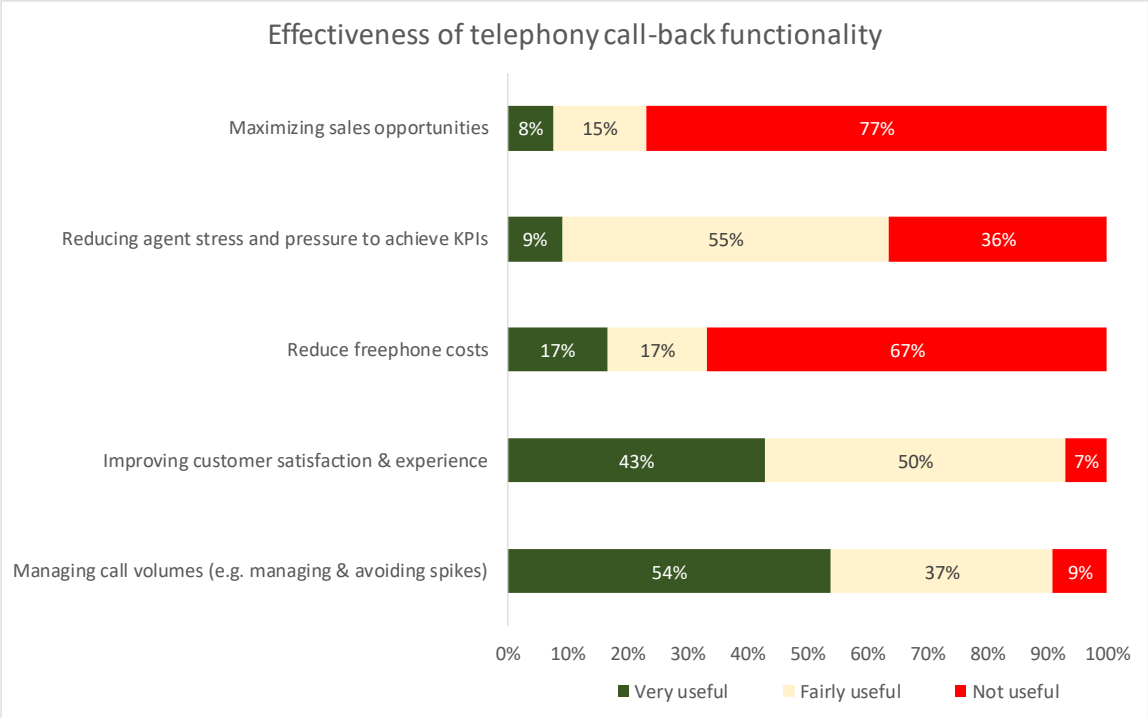
The previous finding is concerning, as call-back has great potential for both customers and businesses: virtual queuing and call-back, when implemented - and explained properly to customers - can be a win-win for both business and customer by:

- Increasing customer satisfaction and experience by being called back by an agent who already understands the customer's context and identity
- Reducing average speed to answer and call abandonment rates
- Reducing call lengths as customers should spend less time complaining and adding-on unnecessary queries "while they're on...", pressuring agents trying to meet targets
- Reducing toll-free/freephone costs, as virtual queuing time does not incur telephone charges borne by the business.

Respondents offering telephony call-back functionality stated clearly that is was most useful for managing call volumes and spikes in busy periods, thus improving customer satisfaction and experience. Being able to spread calls out over the day and allow callers to keep their place in the queue - without actually having to queue – is seen by users as being of great use to both company and customer.

Telephony call-back is not seen by businesses as having a particularly positive effect upon reducing agent stress and pressure to achieve key metrics, and it is definitely not viewed as maximising sales opportunities from customers who would otherwise go elsewhere. Few respondents considered it particularly useful in reducing their freephone costs from customers who were queueing at the businesses' expense from considerable amount of time. It is not to say that telephony call-back does not provide these benefits, only that respondents do not use call-back with these in mind.

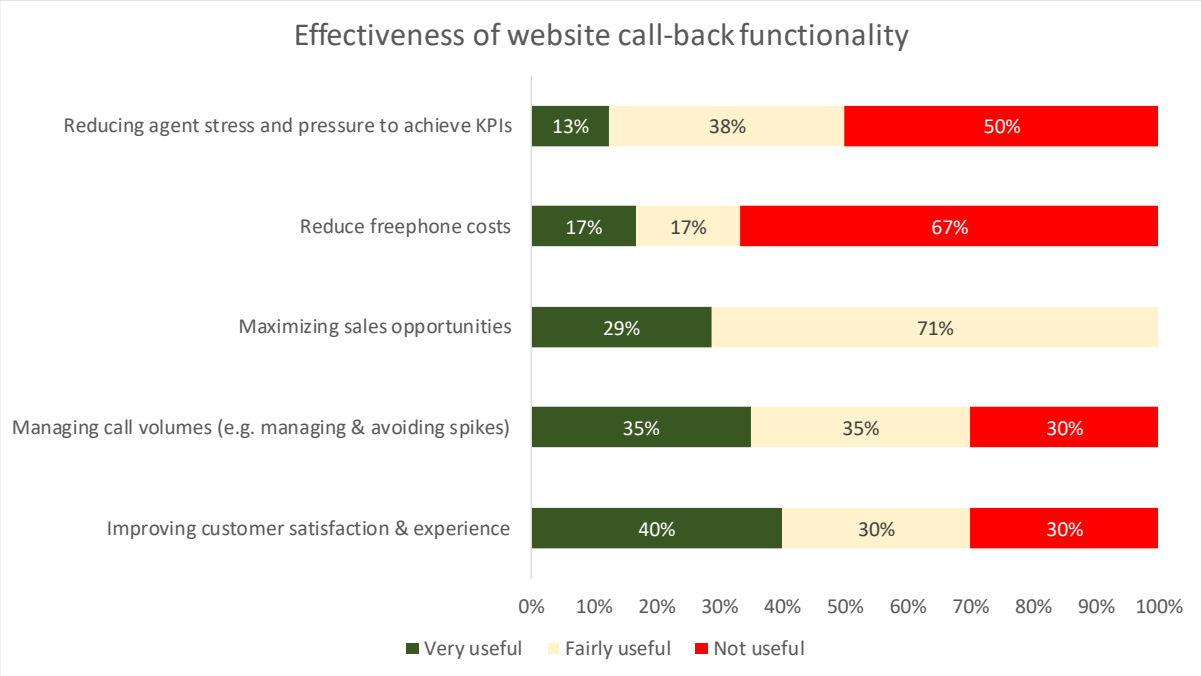
Figure 85: Effectiveness of telephony call-back functionality



Looking at the perceived effectiveness of website call-back functionality, it is worth noting that respondents believed web call-back was less beneficial than telephony call-back for improving the customer experience or providing relief from call-spikes.

However, there was much more positivity that website call-back was useful in maximising sales opportunities, allowing the customer to be contacted at the point of purchase.

Figure 86: Effectiveness of website call-back functionality



THE CONNECTED ENTERPRISE

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

The drivers for this include:

- the presence of multiple contact centres - possibly gained through mergers and acquisitions (especially in the finance, insurance, telecoms and utilities sectors) which are not linked together in any way, thus not gaining from any economics of scale
- increasing levels of staff attrition and difficulty in finding the right staff to replace them, especially highly-skilled agents
- the requirement of many contact centres for better-qualified staff, rather than just “warm bodies” to answer phones as a result of self-service take-up increasing the average level of interaction complexity that an agent now handles
- the need to keep the contact centre open for longer, despite agents not wishing to work anti-social hours or businesses wanting to pay for a full shift when only a couple of hours are needed. Homeworking is also more environmentally friendly and supports a flexible lifestyle
- the rising concern about coping with call spikes, which could be dealt with by logging agents on for an hour or two, rather than having them come in for a full shift
- the desire to increase the size of the contact centre, which may not be possible in that location due to market saturation and a shrinking labour pool.

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

VIRTUAL CONTACT CENTRES

The application of technological abilities to commercial issues created the virtual contact centre which, although located in multiple sites, can still be run as a single logical entity. The virtual contact centre consists of many operations (including homeworkers or satellite offices) which are linked together so as to be viewed and managed as a single site, allowing significant economies of scale and improvements in performance to take place, but with fewer of the attendant problems around environment, morale and attrition that plague many very large operations.

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

- For businesses involved in acquisitions or mergers, the number of contact centres they run have increased, particularly in the finance, insurance, telecoms and utilities sectors
- Rapid contact centre growth in certain geographical hotspots has caused agent recruitment issues. This has meant that businesses have to consider new physical locations in which to establish and grow their operations
- A rise in teleworking and remote locations means some agents may never see their parent contact centre. This is increasingly the case in 2nd- and 3rd line technical support, where skilled agents can be scarce and expensive to replace
- Some companies prefer to offer a local touch to customers by basing operations in the area or country which they serve, or in which the company already has a non-contact centre operation, but with capacity available to develop a new telephony department
- Improvements in networking and communications, such as cloud and IP telephony, have meant that the virtual contact centre is now much more easy to realise at an affordable cost with reduced upfront investment required
- Companies have increasing needs to serve global customers, necessitating either contact centres operating in different time zones, or paying overtime for working anti-social hours
- Operational redundancy, disaster recovery and continuous service are possible with multisite contact centres
- Smaller contact centres tend to have lower staff attrition rates than large operations, meaning that a large virtual operation made up of several smaller sites could benefit from this.

Treating multiple contact centres as a virtual contact centre allows great efficiencies to be made through economies of scale. This is especially true where businesses are using skills-based routing. All agent competencies are displayed to the scheduler - regardless of agent location - who can be more flexible, simply because the available resource pool is so much deeper.

Figure 87: Virtual contact centre commercial and operational benefits

Effect of virtual contact centre	Commercial advantage
Larger pool of skills available	More likely to be able to match the call to the customer effectively. This improves first-call resolution, customer satisfaction and also improves agent morale, as they are able to help more customers first-time. It also means that businesses can route calls based on more detailed criteria than previously, as the available pool of skills is greater (e.g. if there are 5 contact centres, but only 1 person in each contact centre speaks a specific language, then it only becomes feasible to offer this as a routable skill once the contact centres are linked together to create a virtual language team)
More balanced work across contact centre locations	In a stand-alone multiple contact centre environment, there is a very real risk that agents in one contact centre will be overworked (leading to stress and increased queue times), whereas those in another may be underused yet unable to help their colleagues. The ability to overflow calls between physical locations is a key advantage of virtual contact centres, which can improve both customer and agent experience
Skills may be widely deployed and managed	Virtual contact centres can look at agent skills and competencies with a view to scheduling staff and routing calls accordingly. This allows specialised virtual teams to emerge
Forecast and schedule only once	Where many contact centres are treated as a single entity, work can be shared across sites as the contact centres are viewed as a single resource. Viewing the operations and skills available as one entity makes scheduling easier and more flexible. The resource pool is much deeper, allowing customers to be offered more skills, and the time and cost of scheduling is greatly reduced
Increase global coverage	For global businesses which have contact centres spanning distant time-zones, the opportunity exists to create a follow-the-sun contact centre, where the customer can be served 24/7, without the need to increase headcount or bear the costs and inconvenience to staff of working anti-social hours
Deploy applications in a standardized way	Virtualisation can mean that improving and standardizing the functionality available to agents in separate locations can be easier through a cloud-based hosted solution. Making the same functionality available to each agent regardless of their location means that a consistent level of customer service and agent experience can be achieved
Offer 24/7 availability and use more flexible and imaginative agent resourcing	Agents which work from home or smaller offices allow the business to expand dynamically, offering 24/7 cover without the cost of keeping the major contact centre operation open. Virtual contact centre technology also allows businesses to reach out to new labour pools such as the housebound and other non-traditional sources
Allows dynamic choice of outsourcers	If a company uses multiple outsourcers, these outsourcers can bid dynamically for the work available, e.g. the company does 80% of the work with its own people, but outsources the overflow as and when needed

Linking contact centres together has often been a complex task, especially in circumstances where the business had multiple types of switch and other infrastructure, perhaps as a result of merger and acquisition history. In recent years, the widespread take-up of IP-based infrastructure 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 single open platform, this investment becomes much lower, and leaves the way open for businesses to add locations, channels and applications as needed. The single open platform should be a concept which is always in the minds of people making decisions about the future of their multi-site, multi-platform operations, with the cloud now featuring in many businesses' decisions.

Respondents from the finance and outsourcing sectors are most likely to have multiple UK operations, with public sector and manufacturing the least.

The following chart shows the current and historical status of multiple site virtual UK contact centre operations in 2007, 2012 and 2017.

There has been a slight rise in stand-alone single contact centres, with a decrease in stand-alone multiple sites from 17% to 9% over the past 10 years.

There has also been a considerable rise in organisations with a mix of virtual and standalone operations, and a similar dip in organisations with a single virtual contact centre.

While the reasons for this cannot be proven, it could be that organisations with multiple standalone operations have at least tried to become more virtual, although there may be technical, operational or budgetary issues preventing them achieving a single virtual site. The rise in single contact centres may have come as a result of the closure of small operations and the desire to increase agent numbers under one roof, and over the past few years, the press has reported numerous contact centre closures in multisite organisations where the remaining site then increased its size.

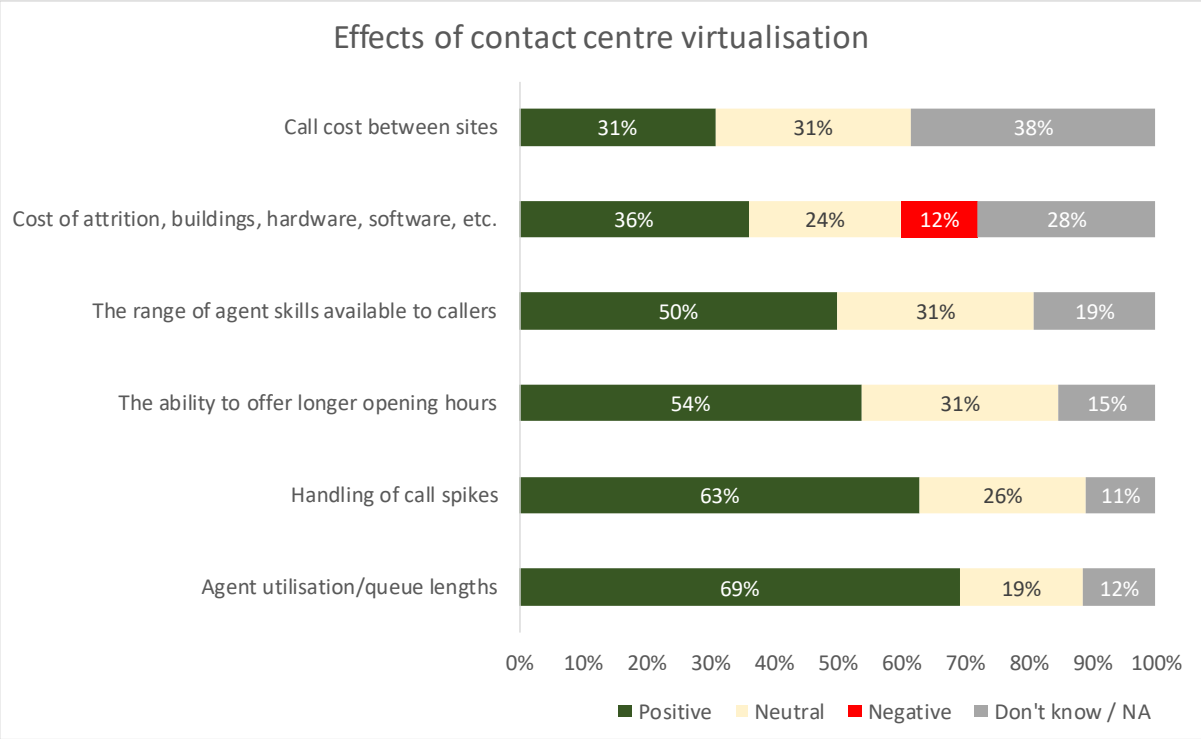
Figure 88: Multiple-site and virtual operations, 2007, 2012 & 2017

Vertical market	2007	2012	2017
Single contact centre	58%	62%	63%
Multiple: stand-alone	17%	11%	9%
Multiple: mix of virtual and stand-alone	3%	11%	12%
Multiple: single virtual contact centre	22%	16%	15%

While 37% of this year's respondents' centres are part of a multiple-site operation, and as such, are potentially part of a larger virtual contact centre structure, only 41% of multi-site contact centres act as part of a full virtual contact centre operation, with a further 32% acting as a part of a partial virtual operation (e.g. in cases where only a few of the overall number of UK operations are linked together).

Respondents with virtual contact centres have generally been very pleased with the gains in efficiency and service level that they have experienced. The ability to smooth out call spikes by moving them between contact centres, and the reduced wait times were particularly mentioned, although all of the potential virtual contact centre benefits mentioned were rated positively, showing a maturity and bedding-down of the technologies. However, there is some lack of unanimity amongst respondents about the effect of virtualisation on the net cost effect.

Figure 89: Effects of contact centre virtualisation



The issue of coping with call spikes has grown year-on-year, and virtual contact centres allow agents from other locations (including homeworkers) to make themselves available to deal with a different queue, being seamlessly moved back to their original work when the spike has flattened or the length of their own primary queue triggers a move back to their original work. Dealing early with such call spikes can often remove the issue before it becomes a real problem, and such movement between call groups can be done automatically by setting thresholds in each queue. Such flexibility of agents means that there is a fairer agent utilisation, as the situation of a set of agents sitting idle while others are under great pressure is less likely to happen.

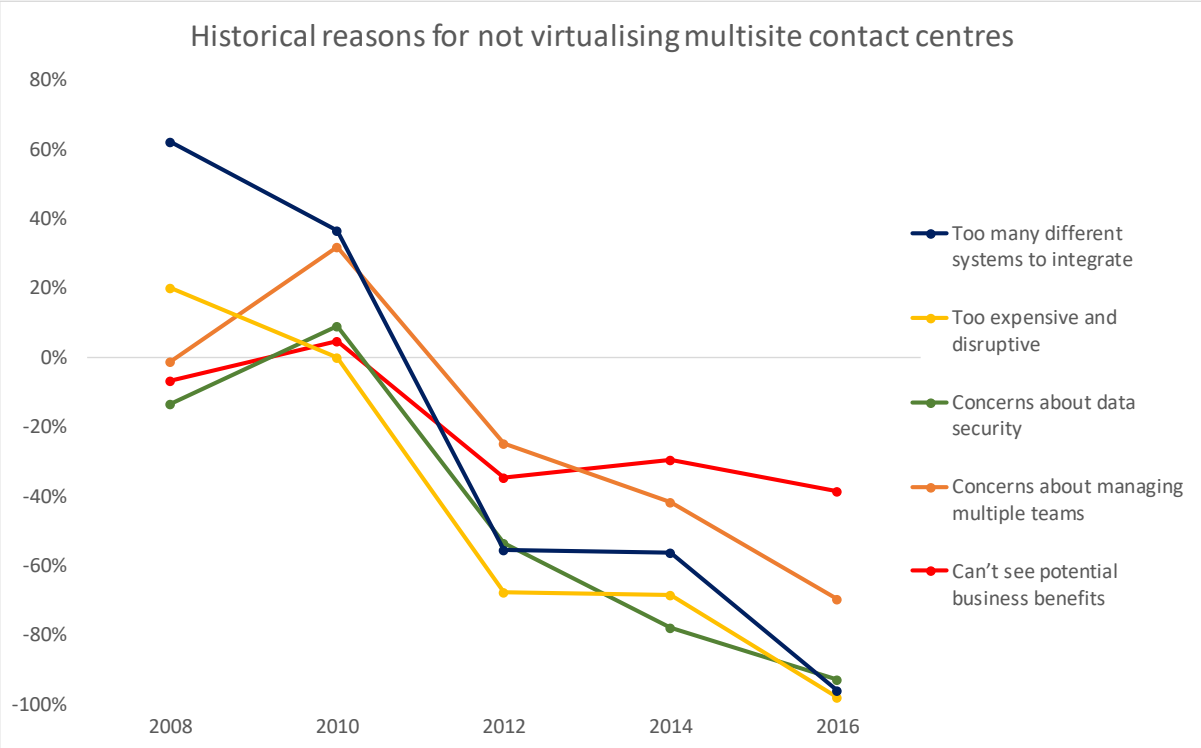
The following chart shows the reasons given for not virtualising multisite contact centres in four surveys carried out from 2008. Respondents were asked whether they strongly agreed, agreed, disagreed or strongly disagreed with various reasons for not virtualising their operations, or were neutral. The proportion of answers were then weighted and recalculated in order to give an overall net score, with strong agreement or disagreement being scored twice as highly as simple agreement or disagreement. Neutral responses received no score.

As an example: if 10% strongly agreed, 10% agreed, 40% disagreed and 40% strongly disagreed with a reason, the calculation would be ((2 x 10%) + 10% - 40% - (2 x 40%)), which would give an answer of -90%, indicating a strong disagreement with the stated reason. Simply put, the higher the figure, the greater the agreement, and vice versa.

The following chart shows that in 2008, there was a strong feeling that virtualisation is difficult because there are too many different systems to integrate, and to a lesser extent, that it was too expensive and disruptive. These feelings declined somewhat in 2010, although there was a general feeling of concern about the practicalities of managing multiple teams across multiple sites. In 2012 and onwards, there was much less agreement across the board that any of these reasons were major inhibitors for non-virtualisation. In 2016, there were very few concerns about the difficulty of integration, the expense or data security, although there was still an underlying feeling amongst a significant proportion od respondents that the potential business benefits were still unproven.

This timescale fits in well with the major drive towards cloud-based contact centre solutions that has been seen in the past five years, which has helped implement a consistent underlying architecture and given rise to many new browser-based tools and applications that can support a virtual contact centre operation, as well as the growing acceptance that cloud-based solutions are generally secure.

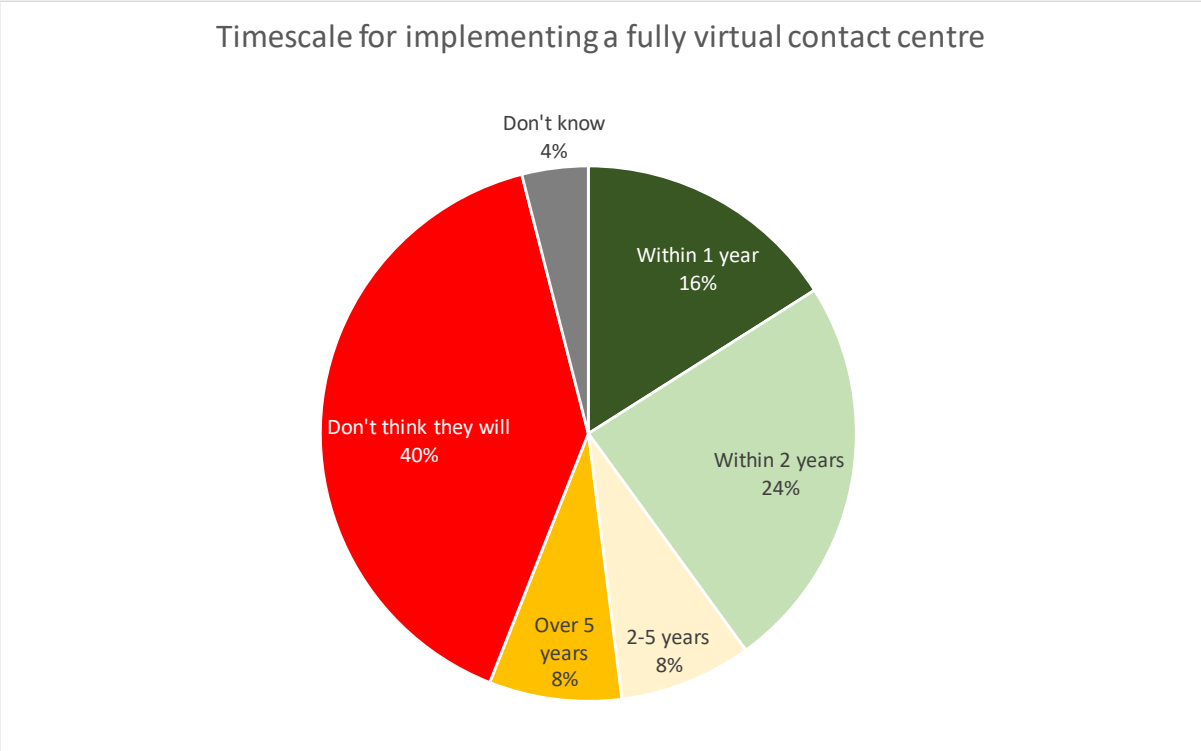
Figure 90: Reasons for not yet implementing a fully virtual contact centre



Despite the widespread acceptance that the inhibitors to virtualisation have been generally addressed, the following chart shows that 40% of multiple-site respondents who have not yet fully virtualised do not believe that they will ever do so.

Despite the strides that open, scalable systems have taken in recent years, this shows not only that concerns over the feasibility and risk of joining operations together are still very real for some contact centres, but also perhaps that the benefits of doing so are still not seen to be strong enough to get over the inertia of the status quo.

Figure 91: Timescale for implementing a fully virtual contact centre



THE ENTERPRISE AS THE CONTACT CENTRE

For many years, the larger contact centre solution providers have been encouraging businesses to look beyond the four walls of a typical operation and consider how and when to involve other knowledge workers in the enterprise, whether office- or field-based, in the business of customer service.

IP contact centre and cloud-based solutions can break down the boundaries between the contact centre and the wider business, allowing every employee to act in the capacity of a contact centre agent if in the best interests of the business. In many cases, the drive and interest towards IP telephony has come from the internal corporate telephony and IT departments, especially in the multi-office environments where real savings can be made.

From a contact centre perspective, there are potentially massive advantages to having non-contact centre personnel available to speak with customers on occasion: superior customer service (and the attendant improvements in customer spend and retention), immediate interaction with the right person, reduced call abandonment rates and shorter resolution times, as well as more intangible benefits like the ability of executives to listen to the customer first-hand and learn from the experience.

Those respondents in the TMT, utilities and housing sectors report the greatest levels call handling in non-contact centre staff (the TMT sector includes many IT helpdesks where subject matter experts can be brought in if needed).

Figure 92: Non-contact centre staff handling substantial numbers of calls, by vertical market

Vertical market	% respondents using non-contact centre staff to handle calls
TMT	67%
Utilities	60%
Housing	57%
Public Sector	31%
Services	29%
Outsourcing	27%
Finance	20%
Insurance	20%
Manufacturing	15%
Retail & Distribution	14%
Transport & Travel	10%
Average	31%

Knowledge workers can be incorporated into the contact centre on a part-time basis, without actually becoming a customer service agent. Although only used by 29% of the respondents who use non-contact centre staff to handle calls, 'presence management' links workers from diverse back office departments into the contact centre by allowing communication and collaboration across sites and functions. Presence management shows if a user is available to communicate via a specific medium, such as instant messaging, email, telephony etc. Availability can be defined either by the knowledge workers themselves, or via device detection. It is possible to route calls to experts using the same criteria as in the contact centre.

Presence can be seen as an extension of multi-channel contact routing by being integrated into software-based contact routing solutions, and can take multimedia routing further, particularly in a SIP environment where presence can be detected in a greater variety of modes.

There are, of course, some potential dangers:

- Highly-paid knowledge workers may be overworked by the demands and interruptions placed on them by agents, and become less productive
- Most collaborative tools include directory search, instant messaging and presence for every individual, however, it is skill sets rather than names that should be used, to discourage dependency on one expert.

Intelligent routing should be used to govern requests for help to experts, creating routing rules to decide when experts should be used, and at what times. This should have the benefit of keeping the knowledge workers onside, and not choosing to show their presence as unavailable to avoid interruptions. Each skill area or department could offer a schedule to make sure that someone is available for the contact centre, thus ensuring the privacy of the others in that virtual team, although this is used by only 23% of these respondents.

Figure 93: Integration of non-contact centre staff with systems and processes (only respondents using non-contact centre staff)

Level of integration with contact centre systems and processes	Non-contact centre staff capability
Same access to customer information as a contact centre agent	65%
Can be viewed in real-time as being available or unavailable	29%
Rota / schedule for on-call experts	23%

Around two-thirds of staff outside the contact centre have access to the same level of customer information as an agent within the contact centre.

HOMEWORKING

Homeworking and homeshoring promise contact centres significant benefits, but is perhaps not for every agent or contact centre. Amongst the potential advantages are:

- the environmental benefits of working at home, reducing carbon emissions and decreasing congestion on the roads
- offshored contact centres are often unpopular, yet businesses are looking at ways to cut costs
- increased flexibility in working hours means rapid response 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 the sorts of people who might not otherwise seek employment in a typical contact centre but who would happily work in their own home taking calls. For an industry facing cyclical difficulties in recruitment of employees who themselves are having to become more highly skilled and deal with more complex issues year-on-year, this opportunity to deepen the labour pool without widespread pay increases should not be ignored. The contact centre could also use limited homeworking (for example, one day a week) as a reward for its top agents, encouraging their loyalty and offering a tangible promise to others.

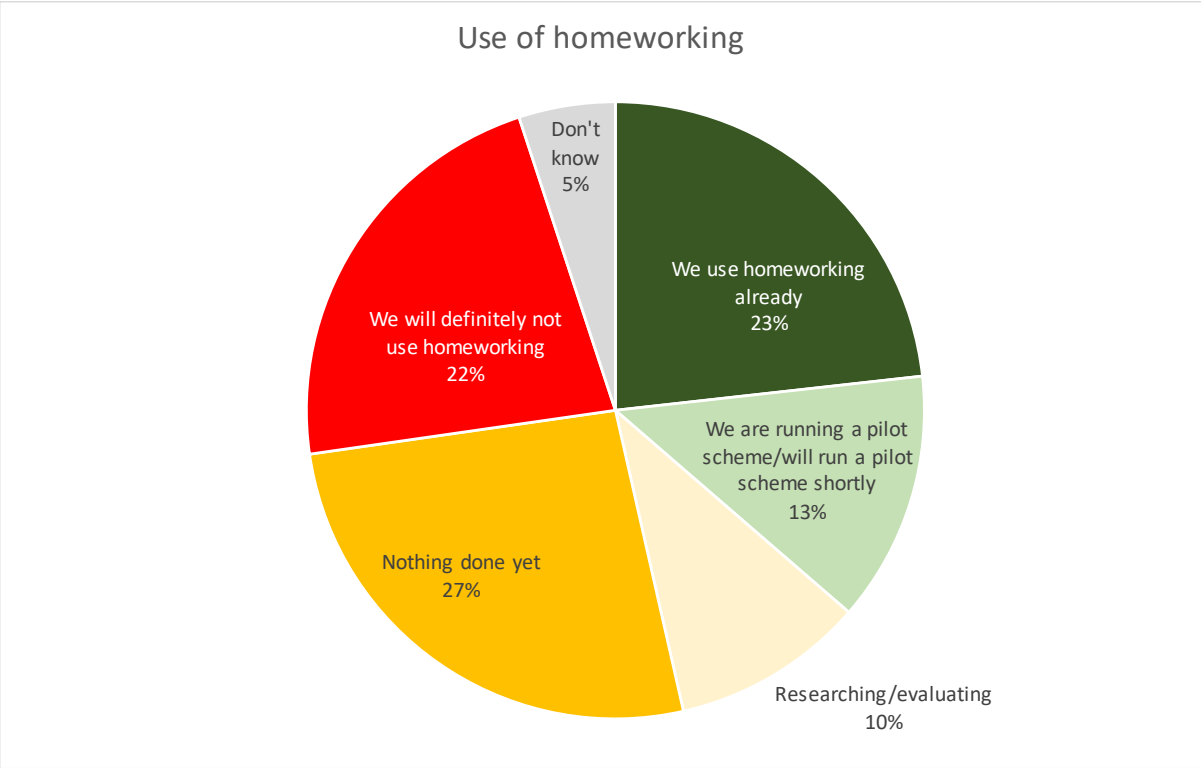
Remote agents, whether working at home, or in a telecottage (small, remote sites), can be a part of the larger virtual contact centre by being linked to the main operation via DSL or a leased line (in the case of telecottages). Some solutions permit least-cost routing and redundancy, where if the IP voice quality deteriorates, the call can be switched onto a back-up connection until the IP quality improves sufficiently to move it back to IP. Agents need only a PC which may act as a softphone, a headset (or IP phone) and a data connection.

USE OF HOMEWORKING

23% of respondents are already using homeworking, with 13% running a pilot scheme or about to set one up. This is certainly higher than reported by 2016's respondents, is likely to have been a statistical anomaly. Although the historical trend for homeworking is steady (see the following table), the interest in pilot schemes / trials is substantially higher than usual this year, suggesting a renewed interest in homeworking.

27% of respondents have not acted either way on homeworking, and 22% state that they have made a firm decision that homeworking is not for them.

Figure 94: Use of homeworking, by contact centre size



There are not enough data points for all vertical markets to state findings with any great confidence, however, transport & travel, services and insurance respondents lead the way.

By 2015, the proportion of contact centres using homeworkers had almost doubled since 2008, and the overall number of homeworking agents had increased by almost 300% since 2010. This leads to the conclusion that the increase in homeworkers was due more to existing homeworking operations adding to the numbers of their homeworking agents, outpacing new users of homeworking.

2016's figures were substantially lower than the historical record would expect, with both the proportion of respondents using homeworking and the average number of their agents that are homeworkers both declining, to produce a low extrapolated figure of 2.4% for the industry-wide proportion of agents who work at home.

2017's figures returned closer to the historical norm in terms of the proportion of contact centres using homeworking, although the proportion of homeworking agents in these contact centres is lower than usual.

Figure 95: Changes in use of homeworkers, 2008- 2017

Year	% respondents using homeworkers	Mean % of agents that are homeworkers industry-wide
2008	12%	n/a
2009	13%	n/a
2010	15%	1.9%
2011	18%	2.5%
2012	23%	3.6%
2013	22%	4.1%
2014	21%	4.6%
2015	23%	5.1%
2016	17%	2.4%
2017	23%	3.4%

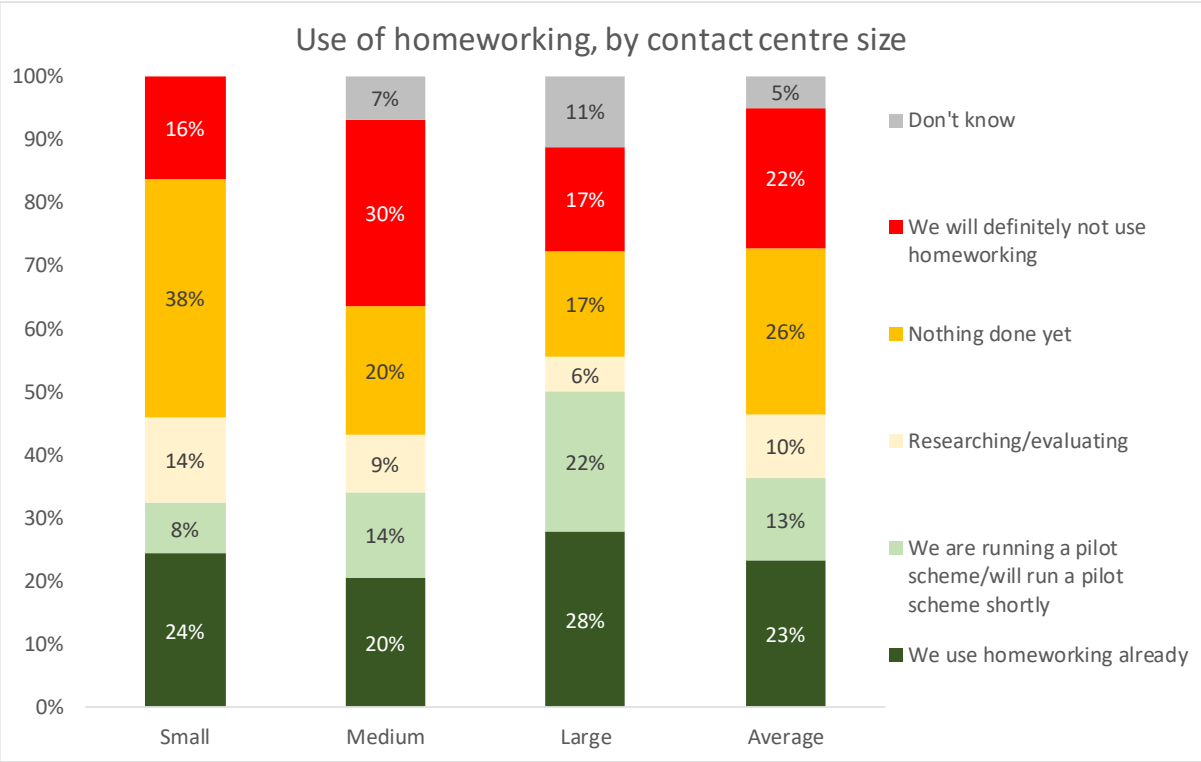
NB: estimate for "mean % agents that are homeworkers industry-wide" is calculated from "% of respondents using homeworkers" multiplied by the mean % of agents that are homeworkers ONLY from these operations (i.e. 23% x 14% in 2017)

Respondents that use homeworking reported that a mean average of 14% of their agents were homeworkers (with a median of 10%, first quartile of 20% and third quartile of 4%).

An average of four-fifths of a homeworker's time is spent working at home, meaning that around one day each week is spent at their parent operation.

Unlike the US, where there is a continuing and growing trend that larger operations are more likely to use homeworkers than small operations, UK respondents from smaller operations are usually as likely as 200+ seat contact centres to be using some form of homeworking.

Figure 96: Current use of homeworking, by contact centre size



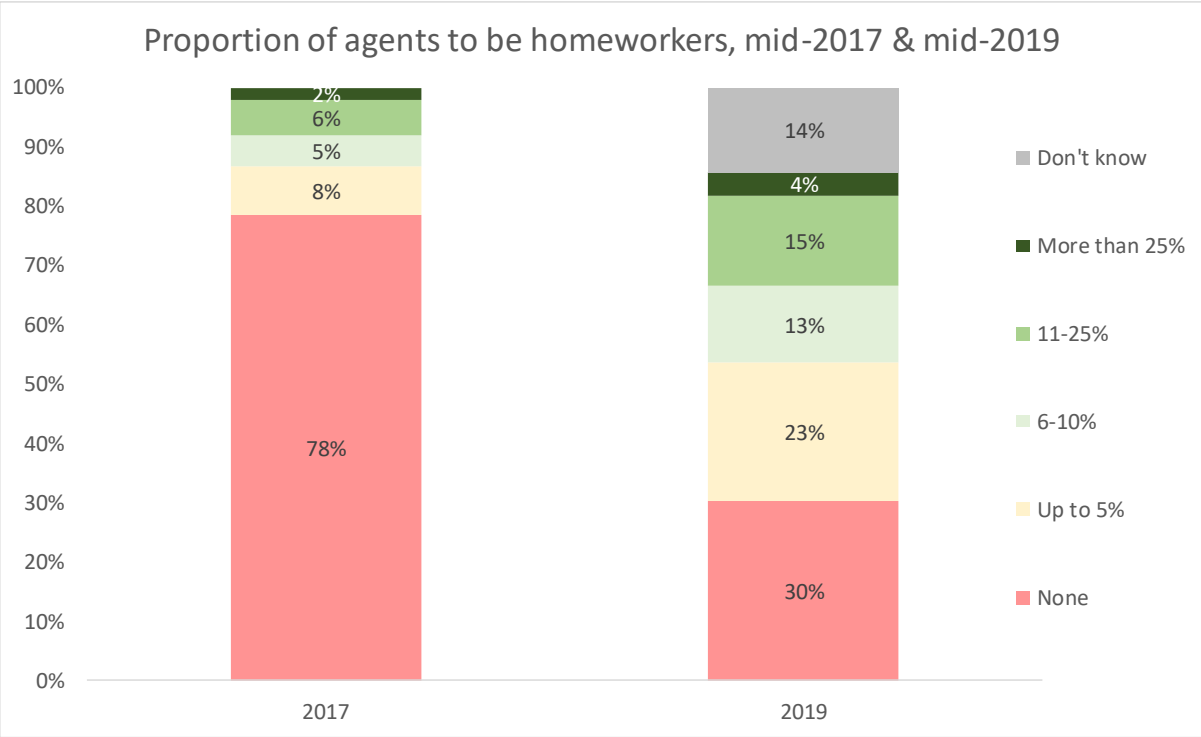
Respondents from purely outbound operations are less likely than inbound or mixed contact centres to use homeworkers, and are far more likely (50% vs 20%) to have made a definite decision not to do so.

Although asking survey respondents to predict the future is a risky business - much of the time, organisations tend to be somewhat overenthusiastic, and underestimate how long is needed to achieve anything - it is interesting to see that the proportion of contact centres not using any homeworking is predicted to decline from 78% to 30% within the next two years.

Based on previous years' expectations vs delivery, we would be extremely surprised if this level of growth in homeworking materialised in reality, but it is indicative that there is a broadly positive expectation around the future of homeworking, even amongst many of the contact centres that do not use it today. There is also a broad expectation amongst current users of homeworking that this will be expanded within their organisations.

This finding supports our belief that the reported drop in the homeworking figure is not due to an industry-wide decline in enthusiasm for homeworking, as these respondents – although their current use of homeworking is low - are actually more optimistic about homeworking's growth than previous years' respondents.

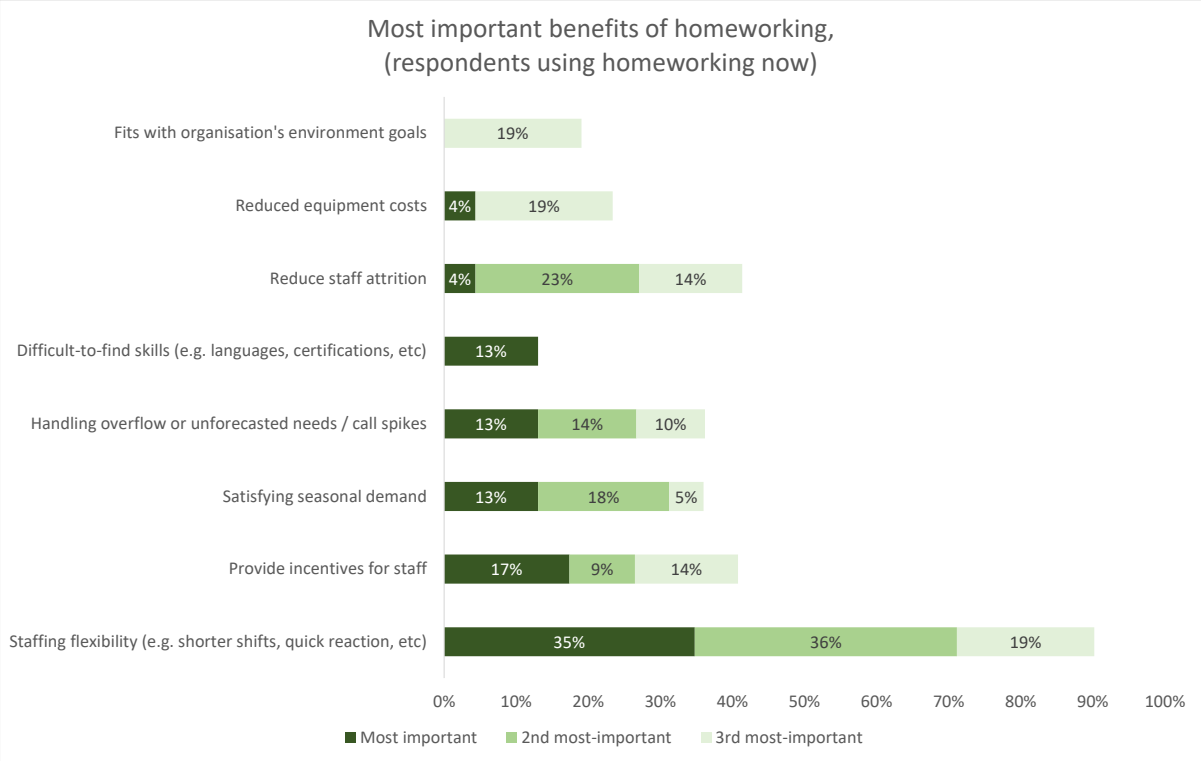
Figure 97: Proportion of agents to be homeworkers, mid-2017 & mid-2019



When considering the main benefits of homeworking - both expected and actual - side-by-side analysis was carried out to understand any differences between those who are considering using homeworking and those who have actual experience of doing so.

In both cases, the main benefits are reported to be around improved staffing flexibility and improved ability to handle overflow or unexpected volumes of traffic: in the same way that the virtualisation of multiple contact centre sites allows agents to be moved between virtual queues instantaneously, having a large pool of homeworkers to draw upon very quickly, as needed, can be a great advantage in handling call spikes. Those using homeworking also believe it to be a motivating factor for staff.

Figure 98: Most important benefits of homeworking, (respondents using homeworking now)



To some extent, homeworking is both expected and found to reduce agent attrition, as it takes away the stress, cost and time of the commute and enables the employee to work in less stressful, more personal surroundings. This allows the business to offer a more flexible working day to their employees, for example, a 4- or 5-hour shift in the middle of the day, allowing the employee to pick up and drop off their children at school, which may also coincide with the busiest period of the day for the organisation. In such cases, the employee is happy to work the hours that suit them, and the organisation bears less cost. Agents are far more likely to be able to work an hour or two in the evenings as well, allowing the contact centre opening hours to be longer.

When looking at the inhibitors to homeworking, concerns over security and fraud are stated by 1 in 3 respondents to be the greatest hurdle, especially in the financial services sector, which is noticeably less enthusiastic in general about homeworking.

Working in an unsupervised environment is likely to mean that the potential risks for data theft and fraud are greater than in a closely-supervised environment such as a traditional contact centre, especially if any physical paperwork is involved, payment card details taken or passwords written down. With the home workspace accessible to family members and visitors as well, risks are not just restricted to the homeworker.

The use of an automated mid-call or end-call payment card application 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 mothers returning to work part-time, or older people who wish to reduce their working hours but who are not yet ready to retire completely are particularly suitable to be considered for homeworking roles, which require experience and maturity in the agent. With real-time adherence and call management systems in place, there is no real reason that a virtual contact centre made up of homeworkers is more difficult to manage than a 'typical' operation, although the role of the team-leader (being someone to help actively) has to be re-addressed.

For some contact centre workers, it would be difficult to have a room away from the noise of the household, and this is a concern for some businesses. Obviously, it's important to consider working location on a case-by-case basis to assess the suitability of the agent for homeworking.

Non-homeworking respondents are far more likely to expect homeworkers to be less productive than centralised staff, perhaps as they are not in such a high pressure environment, with supervisors encouraging them, peer pressure and wallboards telling them the state of play. To some extent, it depends on the definition of 'productive': if it is a matter of call volumes, then not having these cues to hurry up may well have an effect. On the other hand, there are perhaps fewer distractions in the home. In any case, there is no reason to expect that quality will suffer - possibly quite the opposite - and the homeworking model is particularly suitable to moving agents between queues rapidly, which in fact will improve the productivity of the entire operation.

One the historically greatest inhibitors is that there is seen to be no need to change the status quo: many respondents do not believe that homeworking would help with any business issue that they face. There is also a considerable belief that homeworking would not fit into the organisational culture.

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:

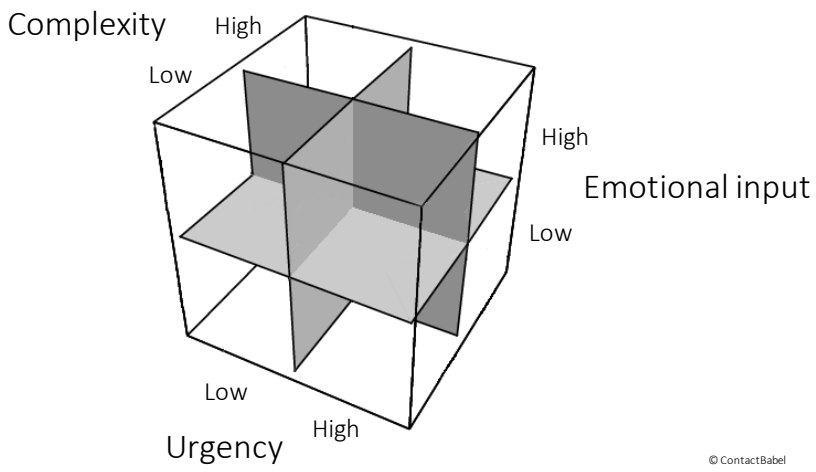
- Omnichannel
- Digital Channels
- Artificial Intelligence and Machine Learning
- Cloud-based Contact Centre Solutions.

THE CUSTOMER INTERACTION CUBE: UNDERSTANDING CUSTOMER REQUIREMENTS

There are two main factors that influence contact centres within any vertical market: the commercial activity within that sector, and customers' requirements and preferences for contacting organizations. It is not only the nature of the specific business vertical market that needs to be considered. The urgency, complexity and emotional importance of the interaction is perhaps at least as important as the nature of the business that is being called: for a customer calling a bank, a simple balance request and an urgent call about the progress of the mortgage application are very different types of call, and should be treated as such.

The 'Customer Interaction Cube' is a structure developed to 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 analyse their volumes of each type of interaction, cross-referencing it with other variables such as the time of day these types of interaction are received, and the customer demographic preferences seen elsewhere in this report in order to support the relevant channels through the promotion of alternatives to live calls, and the correct levels of resourcing. Doing this will not only improve the customer experience, but also reduce the cost of service through anticipating the likely resourcing required and even proactively engaging with the customer on lower cost channels first.

The Customer Interaction Cube



Using this 2x2x2 cube as a structure, there are eight types of interaction, a combination of either low or high urgency, complexity and emotional input. Our hypothesis is that each of these eight interaction types may best be suited to specific channels, and that both business and customer could benefit from matching channel with interaction type.

The examples shown below of various scenarios and the channels most suitable for these are suggestions, and will differ between customer types, businesses and vertical markets, but may offer a framework for readers to build their own scenarios.

Figure 99: The Customer Interaction Cube and associated channels

Emotional importance	Urgency	Complexity	Examples of interaction	Primary channel	Secondary channel
Low	Low	Low	Meter reading; casual product research	Self-service	Web chat
Low	Low	High	Instructions on how to program a TV remote; find out about proposed planning / house building	Self-service	Email
Low	High	Low	Top up mobile credit; check payment has been made	Self-service	Phone
Low	High	High	Details of how to make an insurance claim; understand mobile roaming charges before imminent trip abroad	Web chat / self-service	Phone
High	Low	Low	Book train tickets for important engagement	Self-service	Phone
High	Low	High	Complaint about incorrect billing	Phone	Email
High	High	Low	Simple question about imminent desired purchase (e.g. delivery, personalization, return policy)	Web chat	Phone / social
High	High	High	Household emergency advice; 999	Phone	Web chat

There are many other variables that could be considered alongside these that will impact upon the suitability of channels:

- Demographics
- Ownership of smartphone / broadband impacts upon channel availability
- Time of day (i.e. is this an out-of-hours enquiry? Is the customer at home, at work, or travelling?)
- Whether the request is specific to an account, or a generic issue (i.e. is it necessary to pass through security first?).

While the 2x2x2 cube can help businesses to estimate the current and potential volumes and resourcing required to serve the customer base, it is important to remember that similar types of customer interaction may require very different handling depending on circumstances. For example, a query about product delivery may be a small part of a wide-ranging research process carried out by a particularly thorough prospective customer, or may be asked by a customer who has just realized he's forgotten about an important birthday and needs immediate, accurate information.

McKinsey talks about the 'moment of truth' in customer interactions[11], 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. Current real-time speech analytics solutions can indicate a measure of stress in the customer's voice, flagging this up to the agent within the call, but agents should be in any case capable of 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.

[11] http://www.mckinsey.com/business-functions/organization/our-insights/the-moment-of-truth-in-customer-service

For this reason, a true omnichannel approach is vital which offers the same high level of service and knowledge through each channel. Equally important is the freedom for agents to act in way appropriate to the situation – for example, if a 'high-emotion' interaction happens on social media, which can't be handled on that channel (e.g. it needs to go through security, or is too complex and lengthy for a non-voice channel), the agent should be given the license to place an outbound call to that customer in real-time, rather than advise them to call the contact centre. While this will impact upon the social media channel's service levels while the agent is away from it, the moment of truth offers the opportunity to lock-in that customer's loyalty. For contact centre operations traditionally run on a structured command-and-control basis, this may sound chaotic, but businesses have to decide if the occasional relaxation of their own procedures is an acceptable trade-off for providing the customer with something that they truly value. Agents need to be given carte blanche to deliver in 'moments of truth', and the training and support to 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 centre is because self-service cannot deliver what they need. If companies focused their efforts on providing more sophisticated and reliable self-service applications, there is no reason why these could not deliver at least as much customer benefit at these moments of truth.

For example, if a passenger misses their plane, they are then likely to engage in a long and complicated discussion with a live agent (either at the airport or in a contact centre), involving alternatives, connections and payments. If, on missing the last call for the plane, the customer were immediately provided with an SMS or email detailing the various options available to them, which they could then select and rebook at once, this would be more convenient for the customer and significantly reduce the cost of service to the business. Perhaps more importantly, the customer would feel that the airline is looking out for them, creating long-term loyalty out of the negative experience of missing a plane.

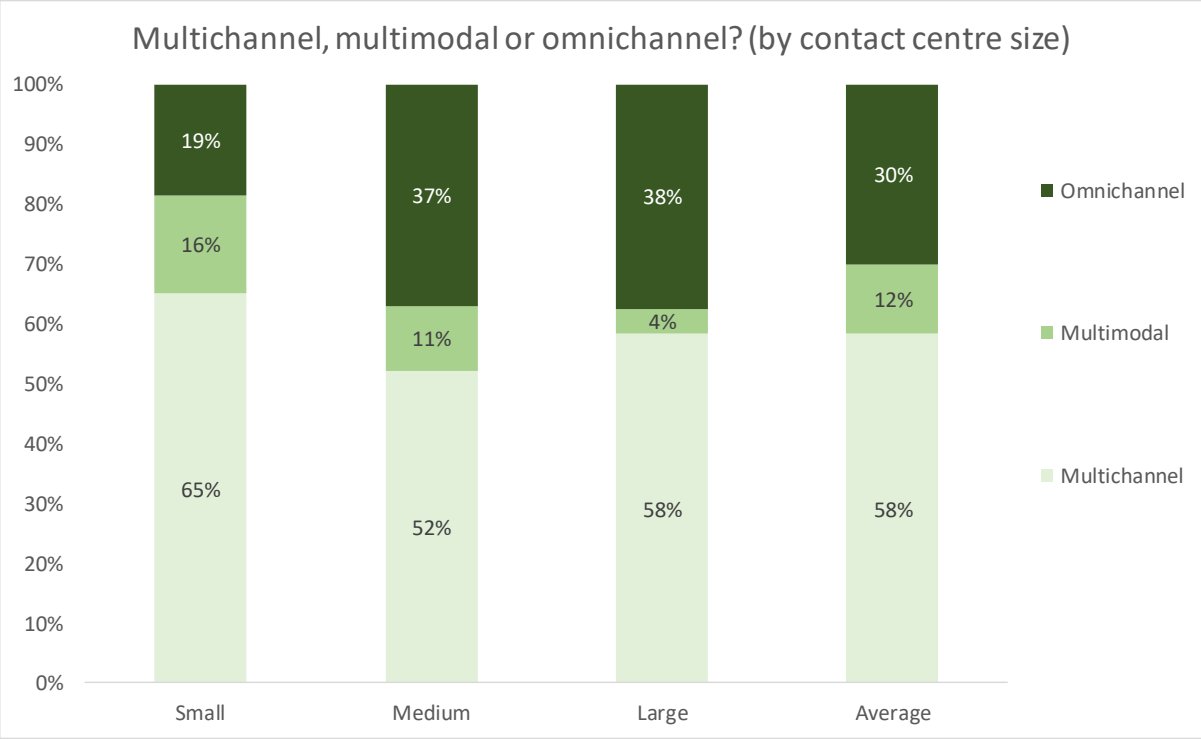
OMNICHANNEL, MULTICHANNEL OR MULTIMODAL?

Recent years have seen the word 'omnichannel' introduced as describing the goal of customers being able to contact (and be contacted) through any channel - switching between them during the interaction as appropriate, while taking any relevant data and history along with them – with a single, unified view of the customer's journey being available to the agent.

For the purposes of describing how far along the omnichannel process our survey respondents are, those who offer multiple communication channels to customers were asked to place themselves into one of three categories:

- Multichannel: "We offer a choice of channels to customers (i.e. several of voice, email, social media, web chat), from which they can use one in a single interaction. If they change channel, the context and history is lost"
- Multimodal: "We offer a choice of channels, and customers can use more than one in the same interaction (e.g. an agent can send an email or SMS to a customer while they are talking on the phone)"
- Omnichannel: "We offer a choice of channels, and can use more than one over multiple interactions, while retaining the history and context of the original enquiry. Relevant information follows the customer across channels and interactions".

Figure 100: Multichannel, multimodal or omnichannel? (by contact centre size)



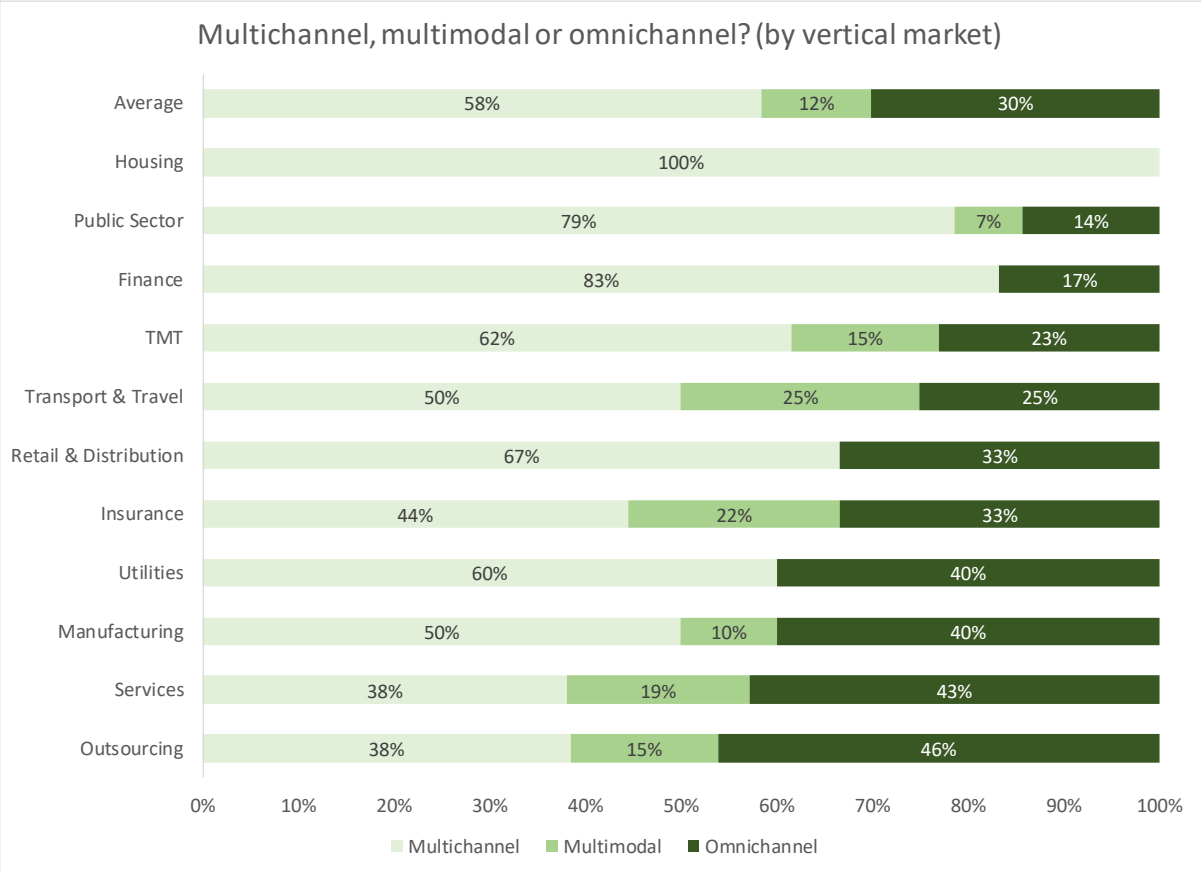
30% of respondents described themselves as omnichannel, with 12% assessing themselves as multimodal and 58% multichannel.

A factor based on contact centre size seems to be emerging - smaller, sub-50 seat operations were more likely to identify as either multichannel or multimodal than larger operations – as the investment and process optimisation involved in moving to a true omnichannel environment is significant, with the platform, infrastructure, applications and resources available to identify, route and switch interactions between agents and channels seamlessly while keeping all relevant data gathered in the course of the interaction requires major effort and investment.

At a vertical market level, outsourcing and services respondents were most likely to describe their operations as omnichannel. While 40% of manufacturing respondents describe their operations as omnichannel, the generally limited levels of contact centre investment seen in this sector as a whole make this a surprising finding, and it may be that this sector sets the omnichannel bar quite low.

A more expected finding is that housing and public sector respondents are least likely to describe themselves as omnichannel.

Figure 101: Multichannel, multimodal or omnichannel? (by vertical market)



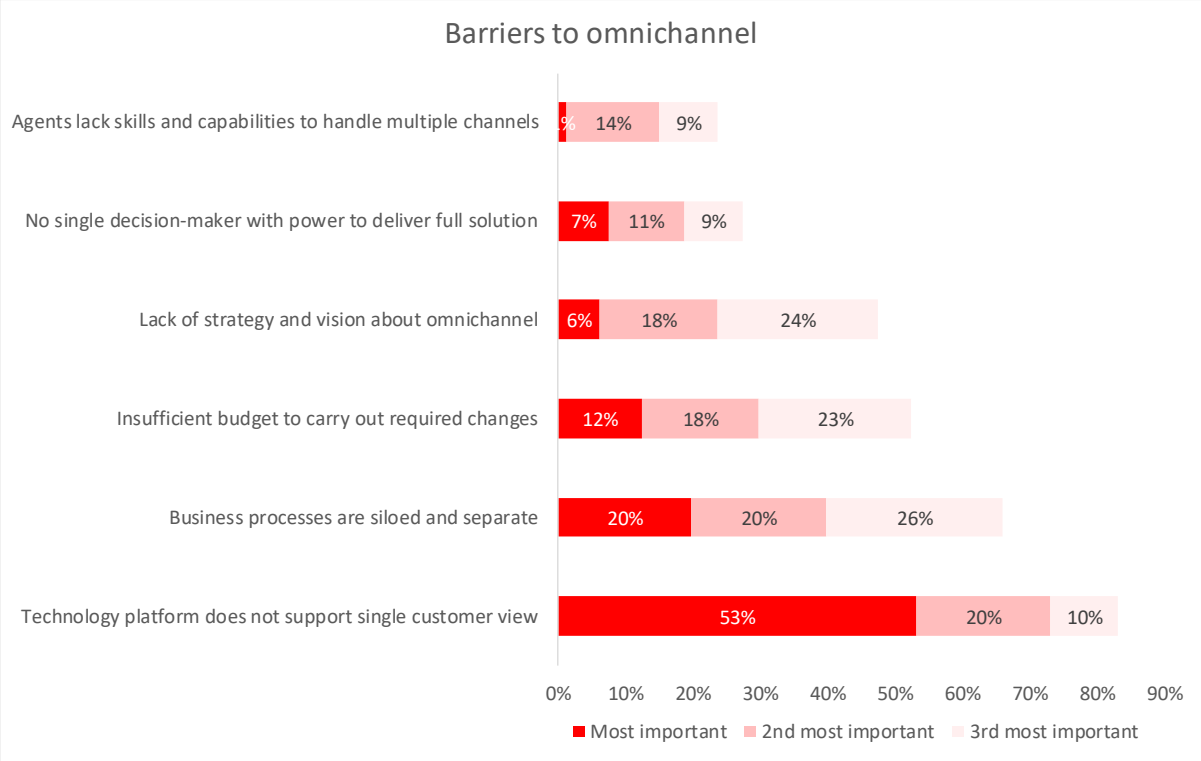
Respondents believe that there are three main barriers to omnichannel, any of which in isolation would be hard enough to overcome, but together appear to be quite daunting:

- the technology platform does not support a single view of the customer
- there is insufficient budget to carry out the required changes
- business processes are siloed and separate.

While these inhibitors to omnichannel are certainly formidable, they are not insurmountable. From a technical viewpoint, the starting point is to have a single integrated platform that is capable of identifying a customer regardless of the channel which they choose to use. This will involve mean evolving from the siloed, channel-focused point solutions that were put in place to handle a specific need, and using a services architecture that is extendable to different channels in the future. It is also important to have a master dataset for product and customer data which is a 'single source of truth' that can be drawn upon by any customer or agent through any channel.

A key aim of omnichannel is to provide a consistency of customer experience, and this requires access not only to the same master dataset, but also the same knowledge bases and business logic must be applied equally. There must be real-time data flow and updates between channels and databases, as without this, consistency is impossible.

Figure 102: Barriers to omnichannel

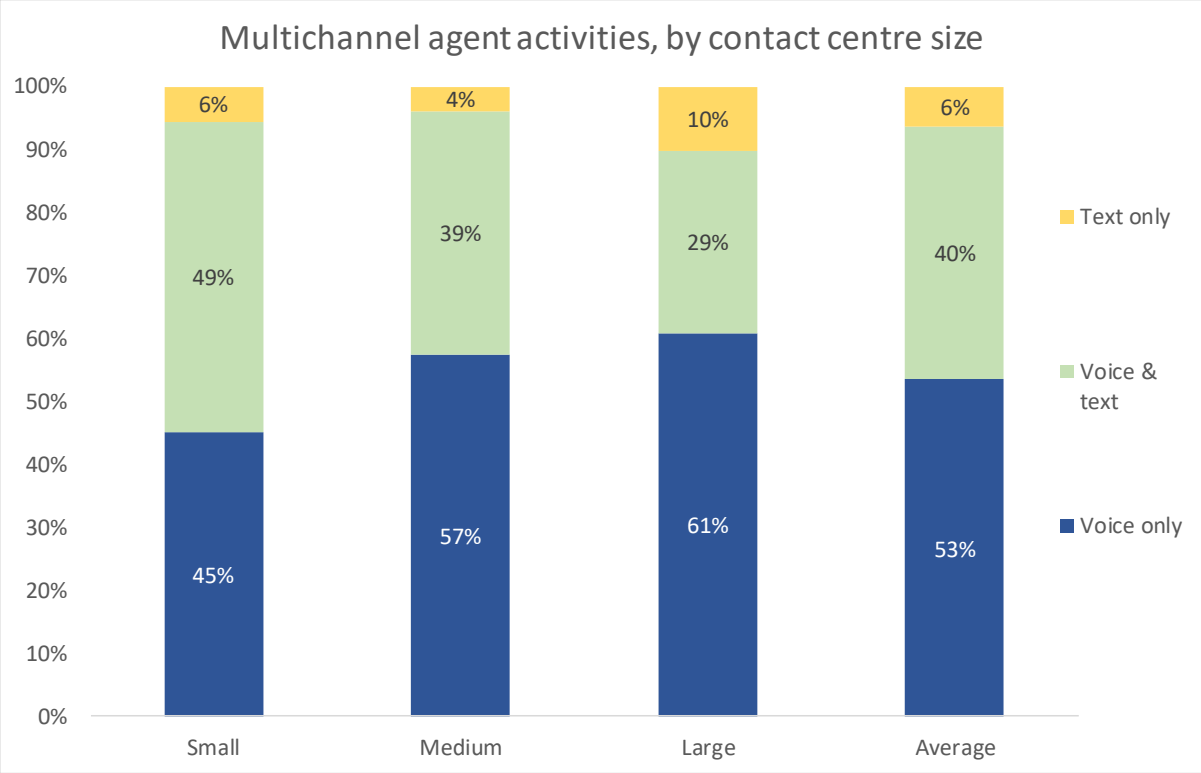


Concern that agents lack the skills and capabilities to handle multiple channels is not seen as one of the major inhibitors, as the majority of respondents do not feel that this holds them back from offering customers a full omnichannel experience.

Respondents were asked a question of how they used agents to handle multichannel. In medium and large contact centres, around 60% of agents handle only voice, with around 5-10% handling text only (including email, web chat and social media).

As has been found in previous years, smaller contact centres - which tend not to have the depth of resource available to operate a dedicated single channel teams - are far more likely to have agents moving between voice and text interactions as required. This approach, whether ad hoc or through a more formal blended approach, has been proven many times in past years' data to be positively correlated with improved agent attrition. This is not to claim causality, but that a variety of work may impact positively upon agent engagement and attrition rates is a point to consider.

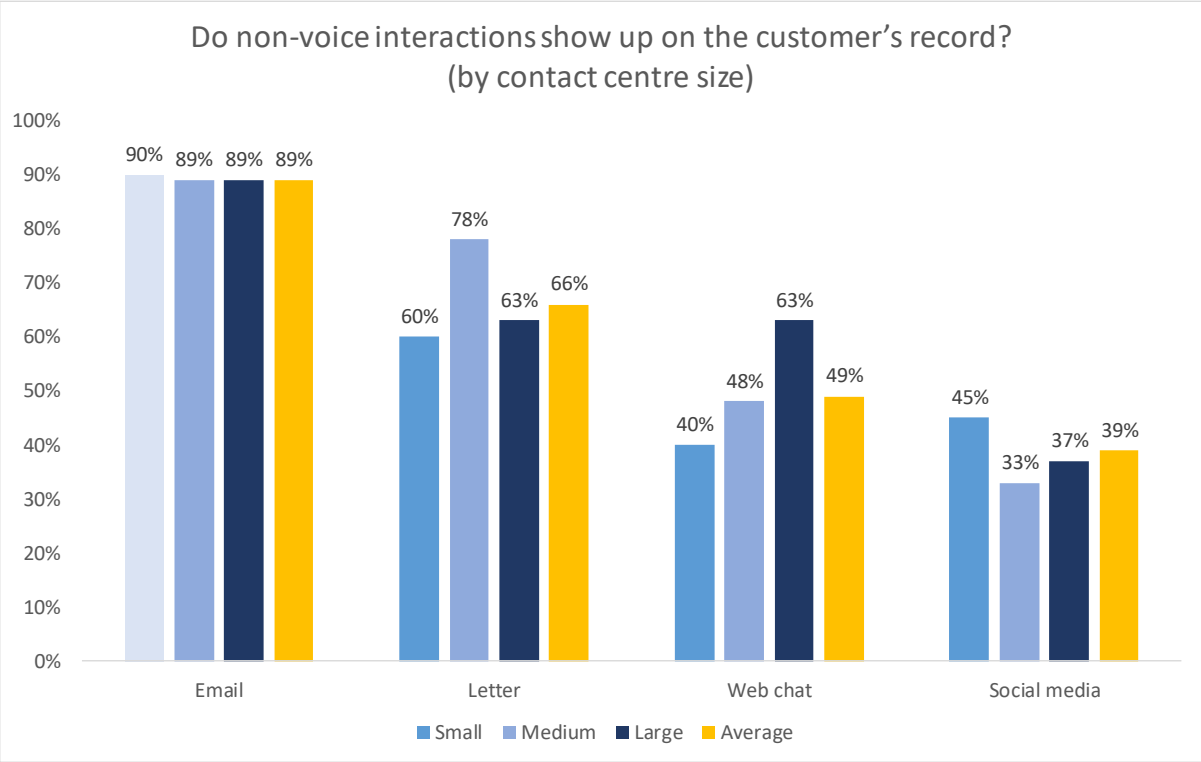
Figure 103: Multichannel agent capabilities, by contact centre size



The importance of master dataset and real-time updates cannot be overestimated. The following chart shows just how far most contact centres have to go in achieving even a small portion of this, as the majority of respondents do not even update customer records with details of non-voice interactions such as web chat, letters or social media interactions. Without this relatively basic information, omnichannel is impossible to achieve.

However, one positive finding is that customer emails will tend to be linked to the master customer record: the challenge is to make sure that all interactions are.

Figure 104: Do non-voice interactions show up on the customer's record? (by contact centre size)

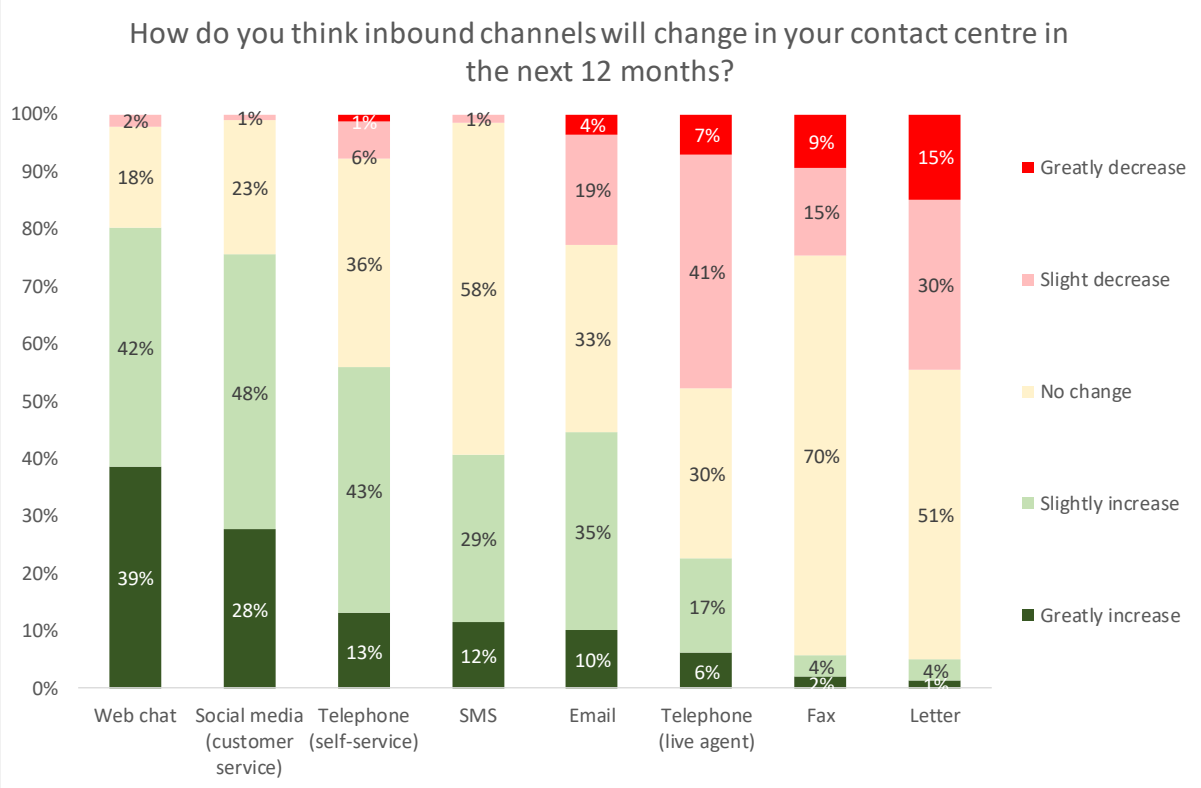


One of the main irritants for a customer is having to contact the business on numerous occasions, often through different channels, about the same issue. Omnichannel promises a way in which this experience can be made less painful and more effective for both customers and businesses, by providing a single view of the customer's journey - not just that particular interaction, but the entire experience - so that agents do not have to ask the same questions again and again, and can treat the customer's request more effectively and intelligently.

A question was asked to respondents about how they identified the topics or reasons that caused customers to contact the organization multiple times. Knowing this should allow an organization to amend its business processes to reduce this demand, proactively assisting customers by removing a problem or issue entirely. However, it was found that the majority of respondents rely mainly upon agent feedback to identify reasons for recurring calls, which as a method is very dependent upon the culture of the organisation and the agents' own initiative. The second most popular method was to run customer experience surveys, with some respondents also using supervisory monitoring and reporting. Very few used interaction analytics to identify the root cause of repeat calls, and this is an opportunity which will surely grow in importance in the future.

As not all of the same respondents take part in this survey every year, a jump or drop in the usage of a minor multimedia channel could be an industry-wide phenomenon or a case of a handful of early-adopters skewing the results, which is certainly possible where only a few use a channel, and where mean averages are used. As such, a question is asked to respondents about how each inbound channel will change, so being able to judge if any alterations in the use of channels is due to real changes at a contact centre-level, or is more of a statistical blip caused by a different set of respondents providing data each year.

Figure 105: How do you think inbound channels will change in your contact centre in the next 12 months?



As usual, the traditional media of letters and fax will have a net decline in our respondents' eyes, although still have their place in the likes of the insurance, medical and manufacturing industries. Interestingly, more respondents this year once again believed the live telephony channel volumes would drop (48%) than thought they would rise (23%), a finding that growing each year, and which signals a trend in the industry that is explored in the next chart.

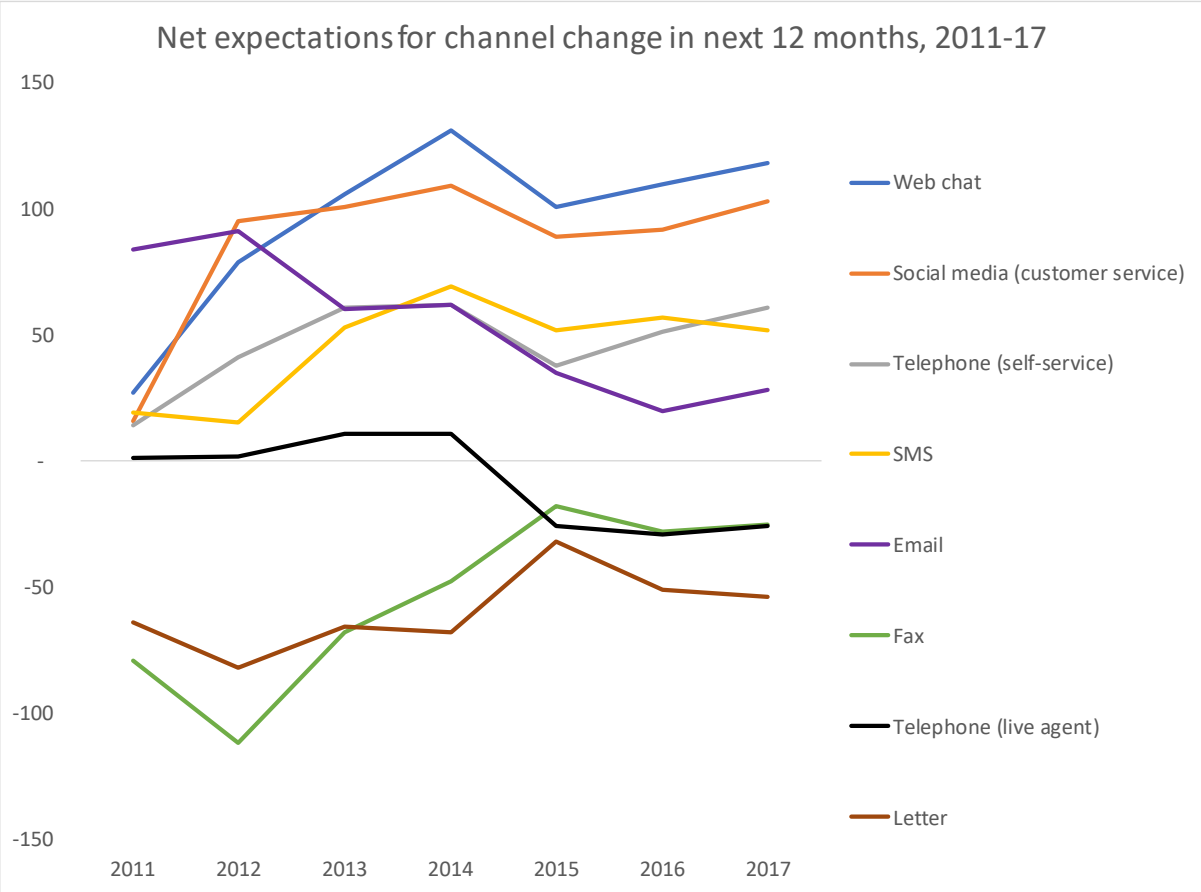
Strong growth is once again expected in web chat and social media customer service interactions (and SMS, from a very low base), with email volumes still predicted to grow although at a much lower rate than previous years. Telephony self-service is expected to grow once again this year, with its twin benefits of customer convenience and low cost still very much relevant. New approaches, such as visual IVR, are likely to encourage further use of self-service. Although not shown on this chart, almost 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 - even letters and fax will continue to be supported - but rather augmented, and businesses have to accept that they need to develop an omnichannel approach, as that's what their customers are expecting. This means that the pressure to unify the view of the customer across channels is a challenge that isn't going to go away.

The following chart shows a historical representation of answers to this question, showing how the enthusiasm and expectation of channels has changed. Respondents could choose one of five options connected with how they believed each channel would grow in the next 12 months, and a score was given to each to reflect its effect: greatly increase (+2); slightly increase (+1); no change (0); slightly decrease (-1); greatly decrease (-2). This would give a net score of between -200 and 200, with positive scores expecting growth and negative scores decline. For example, a channel where 70% expected a slight increase and 30% a slight decrease would receive a score of +40 (i.e. "70" + "-30").

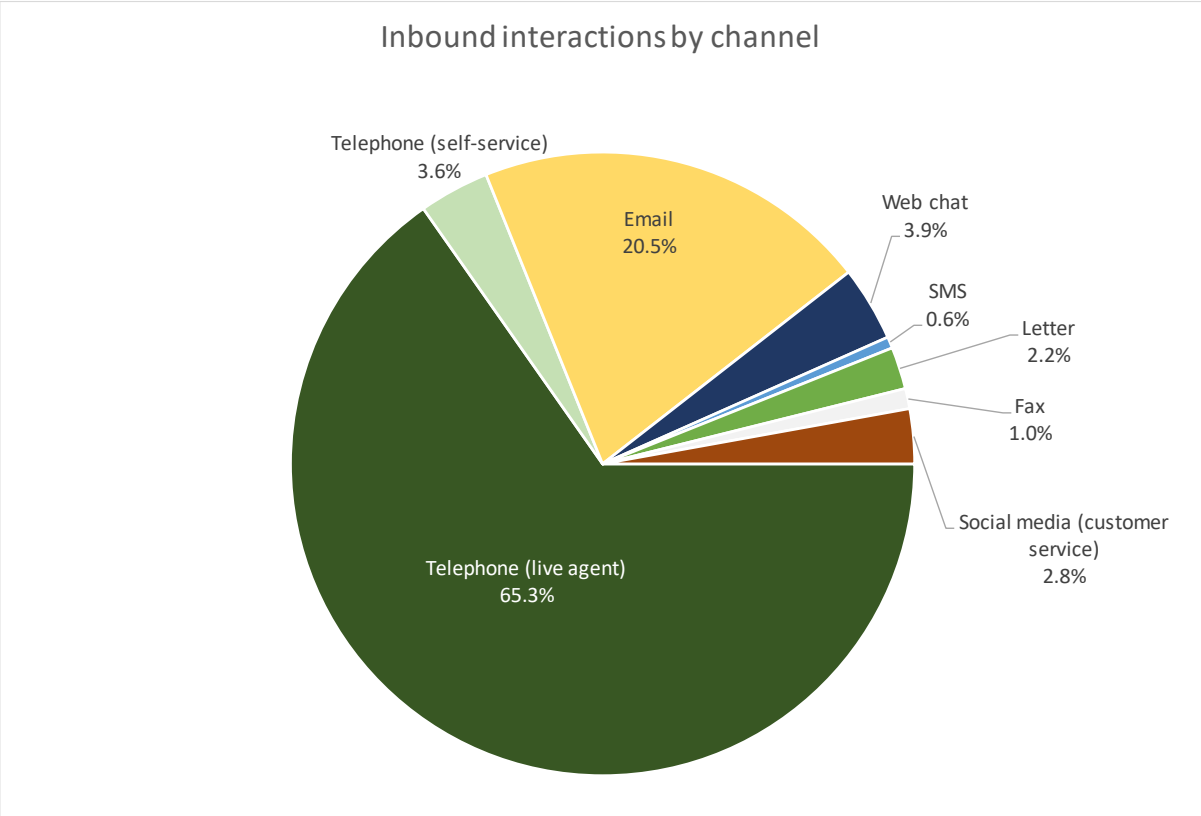
Web chat and social media show very strong growth, having net scores of 100 or over since 2012. Email, while historically strong, has shown a cooling in expectations since 2012, although is still in positive (expected growth) territory. Live agent telephony has been relatively neutral, although has fallen slightly negative since 2015, showing an expected slight decline in its relative importance. Self-service is generally expected to grow, albeit unspectacularly, and letters & fax continue their decline.

Figure 106: Net expectations for channel change in next 12 months, 2011-17



Looking at the reality of multichannel, multimodal and omnichannel activity, the UK contact centre industry has now strongly embraced the various forms of non-voice customer communication.

Figure 107: Inbound interactions by channel



The proportion of live inbound interactions by telephone dropped to 65.3% in 2017, its lowest recorded level, in line with a long-term gentle downward trend.

The proportion of telephony self-service interactions remains low, despite expectations of its future rise.

The email channel increased significantly this year, after being around 15% for a number of years. Next year's figure will show whether this is the result of a single year having a higher than usual proportion of major email users amongst its survey respondents.

Web chat and social media show continued growth, although they are still minor channels compared with voice.

Looking at vertical market figures, agent-handled calls are most important to respondents in the public sector, transport & travel, housing and insurance sectors, with manufacturing, services and TMT respondents reporting lower levels of telephony.

Email is well represented in most vertical markets, with the manufacturing, outsourcing, TMT, retail and services sectors highest.

Telephony self-service seems strongest in the utilities sector as usual.

Web chat is developing a much stronger presence in retail, so as to encourage and close online sales, but is still a way off being a major channel for any other vertical market, although finance respondents report more web chats this year.

No sector reports being ahead in terms of social media customer contact.

Figure 108: Inbound interactions by channel, by vertical market

Vertical market	FS	HS	INS	MAN	OS	PS	RD	SVCS	TMT	TT	UTILS	Mean
Telephone (live agent)	63%	81%	76%	59%	64%	78%	61%	56%	57%	81%	62%	65.3%
Telephone (self-service)	3%	1%	0%	1%	1%	6%	1%	5%	5%	1%	15%	3.6%
Email	19%	11%	15%	27%	23%	12%	20%	28%	25%	17%	12%	20.5%
Web chat	8%	2%	1%	2%	5%	1%	11%	4%	6%	0%	4%	3.9%
SMS	0%	1%	0%	0%	1%	0%	1%	1%	2%	0%	0%	0.6%
Letter	4%	1%	6%	1%	3%	0%	1%	2%	2%	2%	3%	2.2%
Fax	0%	0%	0%	7%	0%	0%	1%	1%	0%	0%	0%	1.0%
Social media (customer service)	2%	3%	2%	3%	3%	3%	4%	3%	3%	0%	3%	2.8%

NB: “0%” refers to a number lower than 0.5%, rather than necessarily a zero value.

Care should be taken when considering vertical market statistics, as the research sample size may be small. Use only as an indication of relative importance.

WHY AREN'T CHEAPER 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.

Looking at figures from hundreds of UK contact centres, it seems fair to say that although there is some cost differential between email, phone and web chat, it is by no means dramatic. One of the main reasons for this is that there is still a relatively low level of automation being used in many businesses. For emails, it is also the case that if the query is not answered satisfactorily within a single response, the time and cost associated with multiple replies and possibly phone calls is soon greater than if the customer had simply called in the first instance.

Figure 109: Cost per inbound interaction (phone, social media, email & web chat)

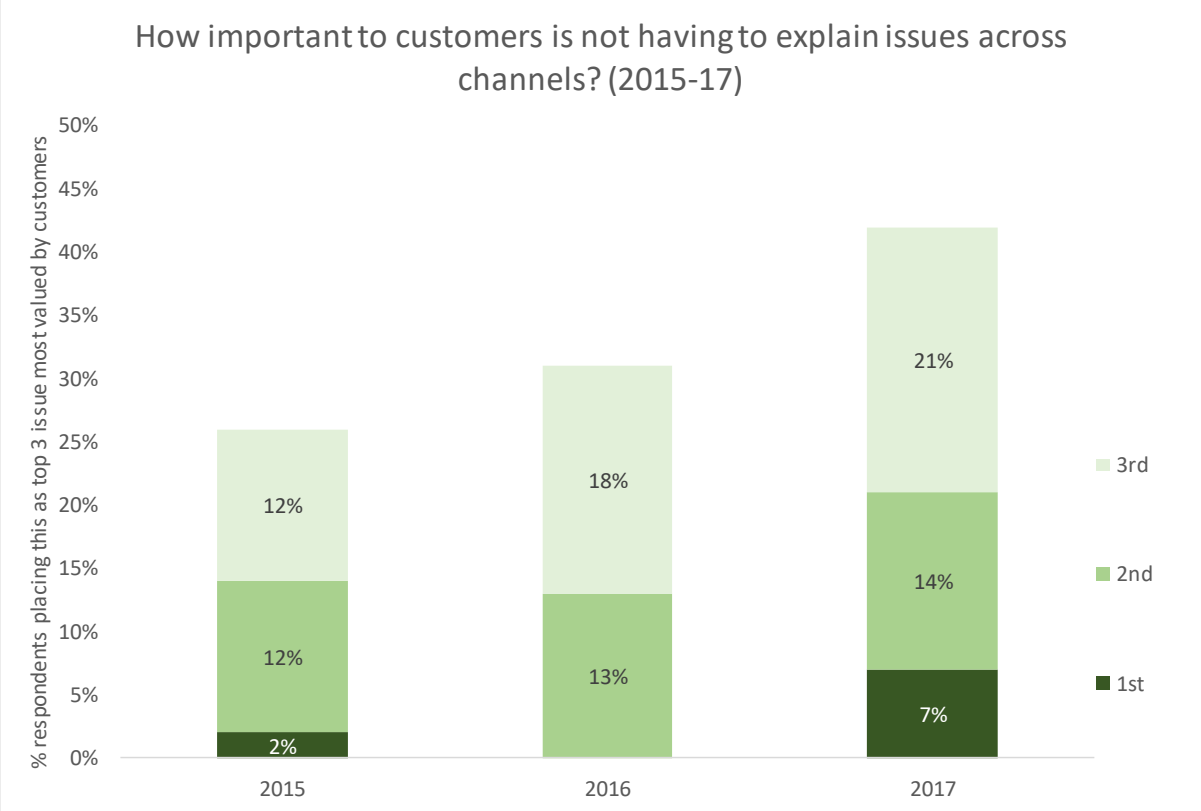
Channel	Mean	1st quartile	Median	3rd quartile
Phone	£4.00	£5.53	£3.29	£2.38
Email	£3.37	£5.00	£3.09	£1.96
Web chat	£3.82	£5.50	£3.00	£1.98
Social media	£3.07	£5.50	£2.50	£2.00

Even if, inexplicably, businesses did not increase the level of automation and sophistication with which they answer web chats and emails, customers' appetite for choosing to communicate with the business in the way in which they wish (often, a non-voice method) would make any reversal of the multichannel/omnichannel strategy impossible.

The next chapter, "Digital Channels", looks in-depth at social media, email and web chat. Within this Omnichannel chapter, the focus is upon these channels working together seamlessly to give a closed-loop customer experience, where at all stages, the relevant information is available to whatever system of agent needs it.

The importance of having an integrated omnichannel solution can be seen in the chart below, which shows the importance that customers place upon not having to re-explain issues or re-enter information if they have to move between channels to complete an interaction with a business. The question was asked as to which were the top 3 factors that impacted most upon customer experience and satisfaction, with a long list of factors presented. Although first-contact resolution was consistently seen as the no.1 issue, not having to re-explain issues when moving between channels has risen from relative unimportance in 2015, to being seen as a top 3 customer experience issue by 42% of respondents in 2017.

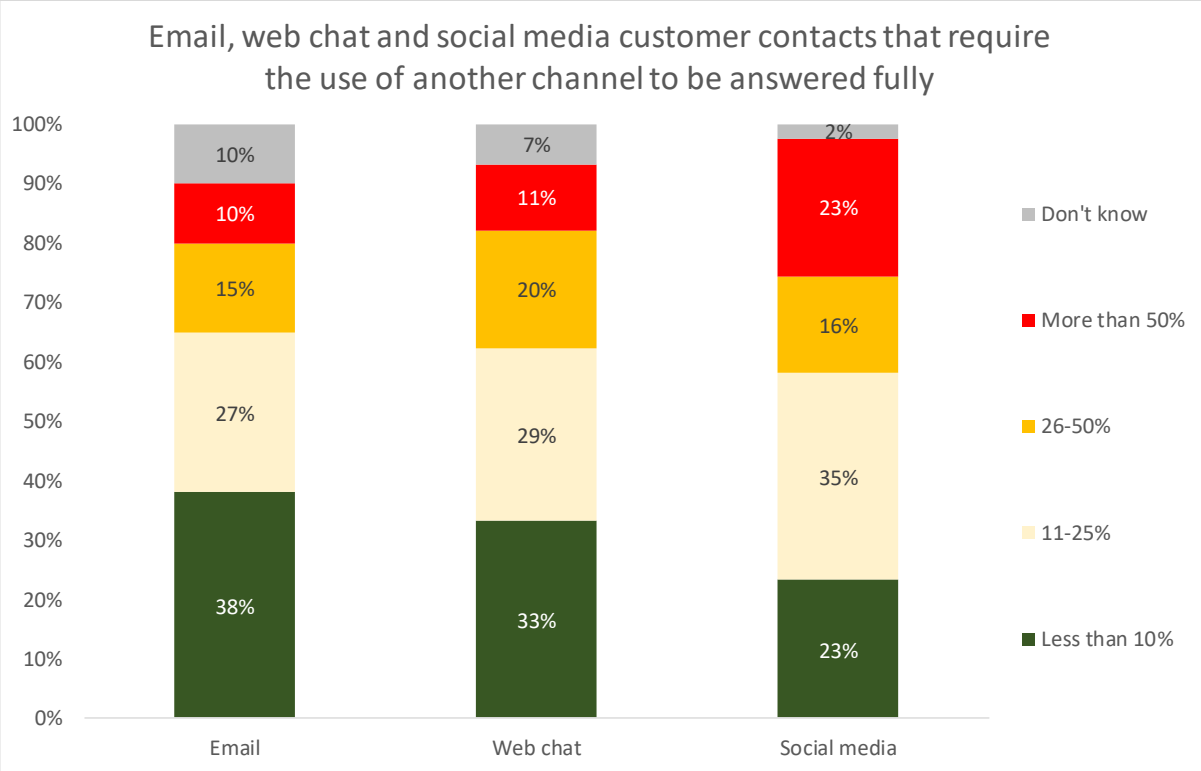
Figure 110: How important to customers is not having to explain issues across channels? (2015-17)



Having identified a seamless transition between channels as being of growing importance to the customer experience, the chart below shows that using multiple channels is still a very likely requirement for many customers and interactions.

Only 38% of respondents state that emails can be handled over that specific channel more than 90% of the time, with a lower proportion of respondents stating that web chat or social can be handled entirely over that channel more than 90% of the time. 23% of respondents state that more than half of social media requests have to use another channel to resolve them effectively, highlighting the previous finding that customer satisfaction is increasingly affected by whether the customer has to repeat issues across different channels. Omnichannel aims to provide a seamless transition between channels, and is ever more necessary to provide a superior customer experience.

Figure 111: Email, web chat and social media customer contacts that require the use of another channel to be answered fully



Getting the Balance Right in the Age of Digital Transformation

Delivering high-quality customer service in the age of digital transformation is an ongoing challenge. For most businesses, it is a question of balance. They first need to acknowledge that the balance of power has swung in the customer's favour. Today's customers increasingly demand service anytime, anywhere, anyhow and many are therefore turning to self-service as a means of quickly obtaining the answers they need.

Most businesses understand the need to put self-service channels in place to meet this growing customer need. Unfortunately, many go too far and focus on opening up as many new self-service channels as they can with little thought for the specific needs of their particular customer base. By presenting the customer with too many options, the business makes it more likely that an inappropriate one will be chosen for the task in hand – applying for a mortgage over Twitter, for example - or that customers will end up switching and toggling between different channels, thereby increasing effort and interaction time.

Frequently too, the evolution of the self-service approach is unplanned and unstructured, with new pockets of functionality added haphazardly, and rarely interconnected. To succeed in this evolving digital environment, organisations need to adopt a more carefully pre-planned approach. They need to spend time upfront ensuring they get to know their customers, their likes and dislikes and preferred interaction modes. They need to think about customer personas and how they can segment them by type.

Planning the Customer Journey

Once they understand their customers and what they are trying to do - organisations can focus on designing the structure of the interaction. They can begin to consider the optimal journey and process that they would go through to get what they want as quickly, seamlessly and easily as possible. To do this, businesses need to gauge what journey types lend themselves to automation and self-service pathways and which to human intervention. But it's also important they understand the complexity of this new digital landscape. After all, different customers carrying out different tasks will need different channels at different points on the journey.

That's key because one of the issues that most aggravates customers is having to expend time and effort in providing information in one channel, only to find they have to repeat it when they switch to another. A typical example might be: the customer starts off using a web form, types up details of who they are and what their problem is and then gets moved into the call centre, where the first question is: 'what's your name?'

So, in this context, the ability to align channels sensibly and to 'carry the customer's information through the journey', in what is effectively a case folder, can be a key differentiator for any business. It allows agents to come pre-prepared to a call by understanding the interaction history, in turn enabling the business to reduce customer effort and save themselves time.

Other technology types can help here in providing seamless and straightforward customer service. Real-time speech analytics can listen in the background and retrieve key information to help the agent to achieve a better interaction. Applications like the Skype for Business presence capability enable organisations to draw on the skillsets of the whole organisation. Solutions like Microsoft Teams allow different constituencies within the organisation to work together within a safe sandbox environment to share information and help to resolve that problem.

Again, the key theme of balance is key: balance in terms of capability across the different channels and the ability to draw on resource to aid the customer service effort from across the organisation, not just the contact centre.

Critically also, even as they roll out more self-service capability, businesses also need to be balanced in understanding that some queries will always need to be solved by human interaction. So, the savviest among them, while focusing on self-service, recognise that much of the money saved needs to be reinvested into ensuring that when people have a complex, high-value problem and need to speak to staff directly, they can get connected into the business and access someone with the relevant knowledge to solve their problem.

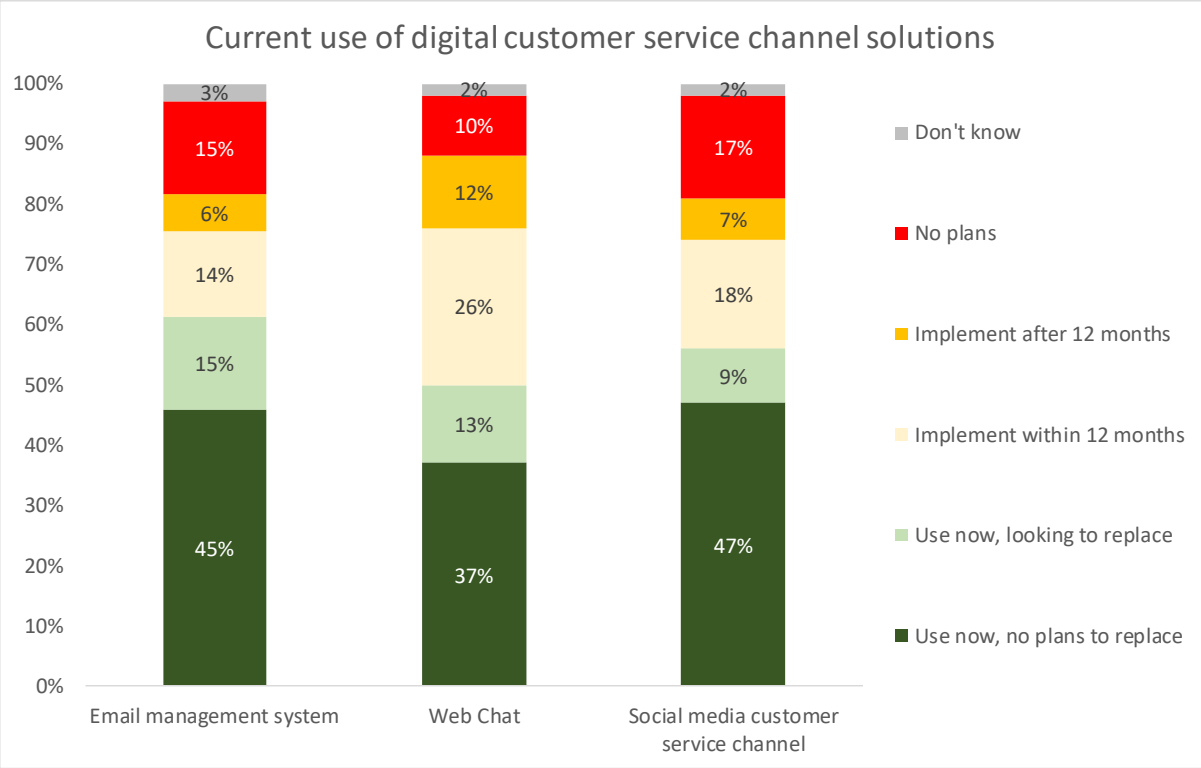
It's yet another example of why in today's fast-moving digital age, it is so important to get the balance right.

DIGITAL CHANNELS

The 'Digital Channels' chapter looks in-depth at the widely-used digital channels – email, web chat and social media – to understand their prevalence and how they are being handled, along with the service levels provided and how they compare with more traditional channels.

The following chart shows the solutions that are being used to support digital channels, with at least half of respondents using automation or agent-supporting solutions for each of web chat, email and social media. Interest in these solutions from those not already using them remains strong.

Figure 112: Current use of digital customer service channel solutions



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 10 years.

Email should stand as a salutary lesson that it is not businesses that make new channels a success, but customers. Put bluntly, email in its first incarnation failed almost entirely. Too many businesses rushed to push customers to this new channel - commonly supposed to be cheaper than voice - without having the processes, solutions or staff to manage this properly. What happened next can be understood as a 'herd inoculation': enough customers had enough bad experiences from enough organisations that the entire channel was discredited, even for those businesses which were providing a reasonable service through email or just keeping a watching brief.

The reason for this rejection was the appalling level of service provided by many of the early multimedia businesses. With response times stretching into many days, if not weeks, the companies failed to understand that any communication with the business has a degree of urgency to it, else why would they be trying to speak with the business at all? Of course, even when a response was eventually provided, the issue might have gone away, or been dealt with by calling the contact centre, meaning that customers' existing confidence in the voice channel was further reinforced at the expense of the email channel. It is also the case that email does not fit the type of enquiries that people make in some cases, such as the need for quick, simple and confidential information (such as an account balance), and the increasing requirements for identity checking places a cap on the usefulness of email as a channel for some types of business.

It took many years, much investment and the coaxing of customers to try new channels again for email to emerge as being credible. Of course, businesses and customers now both realise that email is more suitable for some interaction types than others (the rise of web self-service has meant email is no longer the only online communication method available), and complex issues such as complaints, or other enquiries requiring a formal paper trail are well-suited to email. In fact, much of the demise in the letter and fax as channels can be traced to a direct replacement by email. Email is also an excellent outbound channel, providing reassurance, great levels of detail and attachments, and is able to link to other specific areas of information via hyperlinks. As an inbound channel, it has inherent weaknesses: an inability to carry out customer authentication and to carry out a real-time 2-way conversation being amongst them, as well as the lengthy wait to get a response. In the longer term, it is likely to be superseded to some extent by more immediate online channels such as web chat and social media. It does however have the advantage over virtually every channel that there is no queue time at all - the customer writes the email and presses 'Send' immediately - a 'fire and forget' interaction.

Usually, it is the retail respondents which report the greatest proportion of inbound traffic as email, with the B2B manufacturing and services sectors also reporting high levels of email, as in past years. The former's email volume is often driven by sales via a website, with TMT/IT's more about technical support.

The insurance sector again shows reasonably high levels of email after many years of very little activity, and this may be due to a change in working practices which allows customers and intermediaries to send through documents via email rather than by the more traditional fax and letter.

Figure 113: Inbound interactions that are email, by vertical market

Vertical market	% of inbound interactions that are email
Services	28%
Manufacturing	27%
TMT	25%
Outsourcing & Telemarketing	23%
Retail & Distribution	20%
Finance	19%
Transport & Travel	17%
Insurance	15%
Public Sector	12%
Housing	11%
Utilities	12%
Average	20.5%

As with previous years, emails are proportionally less important for large contact centres, although this gap has shrunk over recent years.

Figure 114: Inbound interactions that are email, by contact centre size

Contact centre size	% of inbound interactions that are email
Small	23.3%
Medium	19.2%
Large	17.0%
Average	20.5%

The cost of email has risen compared to last year, and while it is usually a little lower than live telephony (which tends to be around £3.50 - £4.00), it is considerably more expensive than a self-service session. This may indicate that emails – in a similar way to live phone calls – are getting longer and more complex, as the easier work is handled through self-service.

Figure 115: Estimated cost per email

	Email cost
Mean	£3.37
1st quartile	£5.00
Median	£3.09
3rd quartile	£1.96

Do you need an email response management system?

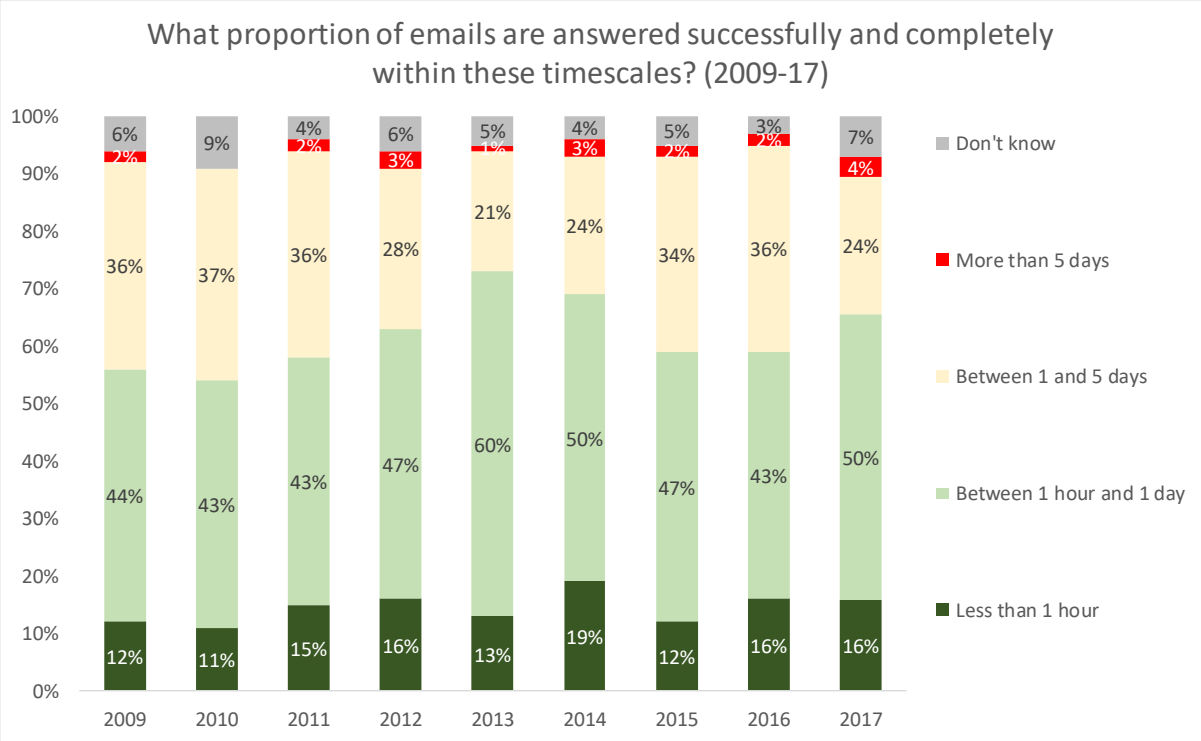
An organisation that has relatively small volumes of email will tend to handle it initially on an ad-hoc basis, often using Microsoft Outlook to do so. At some point, the contact centre will realise that costs are going up and quality going down, and that they need to implement the more sophisticated email response management system. What signs are there that show this is the right time to do so?

- While there is no fixed figure for email volume, as it will depend on the complexity and time required to handle each one, organisations receiving greater than 100 emails per day are likely to have issues handling and tracking them
- There are a significant number of customer telephone calls that refer to emails that were sent, but which never received a response
- Prioritisation and routing of emails to agents with specific skills sets is no longer a matter of a few minutes of management time
- Email handling times are not going down, despite most being about a small number of topics
- Complex emails may take days or even weeks to resolve, and different agents may be working on similar types of issue without even realising it, thus duplicating the effort
- You lack flexibility in dealing with spikes in email traffic, as it is too difficult to bring secondary email agents to bear without damaging the voice channel's service level
- Visibility and accuracy of service levels for email channel is worse than that for the voice channel
- It is difficult to report on the content of the emails that you receive as this has to be done manually.

For businesses that handle substantial volumes of email, while it is not suggested that they should aim to answer an email in the same amount of time that it takes to complete a phone call, it is desirable to manage all interactions closely to consistent business rules, and to act quickly if service levels slip. Too often it seems, contact centres have become so used to managing the telephony queue that they neglect multimedia interactions. The result is that multimedia response times (mostly email) have historically been sacrificed to meet telephony service levels, although there have been steady and significant improvements in the response rates in recent years.

In 2015, reported email response handling times reversed the improvements of recent years, especially in the all-important 'less than 1 hour' segment. This year, improvements have been seen in the proportion of emails answered the same working day (up to 66%), while those taking more than 1 day has decreased to 28% (although there are a high proportion of respondents that simply do not know). Taking longer than one day to answer an email runs the risk of the customer losing patience, and going elsewhere or phoning the contact centre, placing a greater cost burden on the business than if they had just called in the first place.

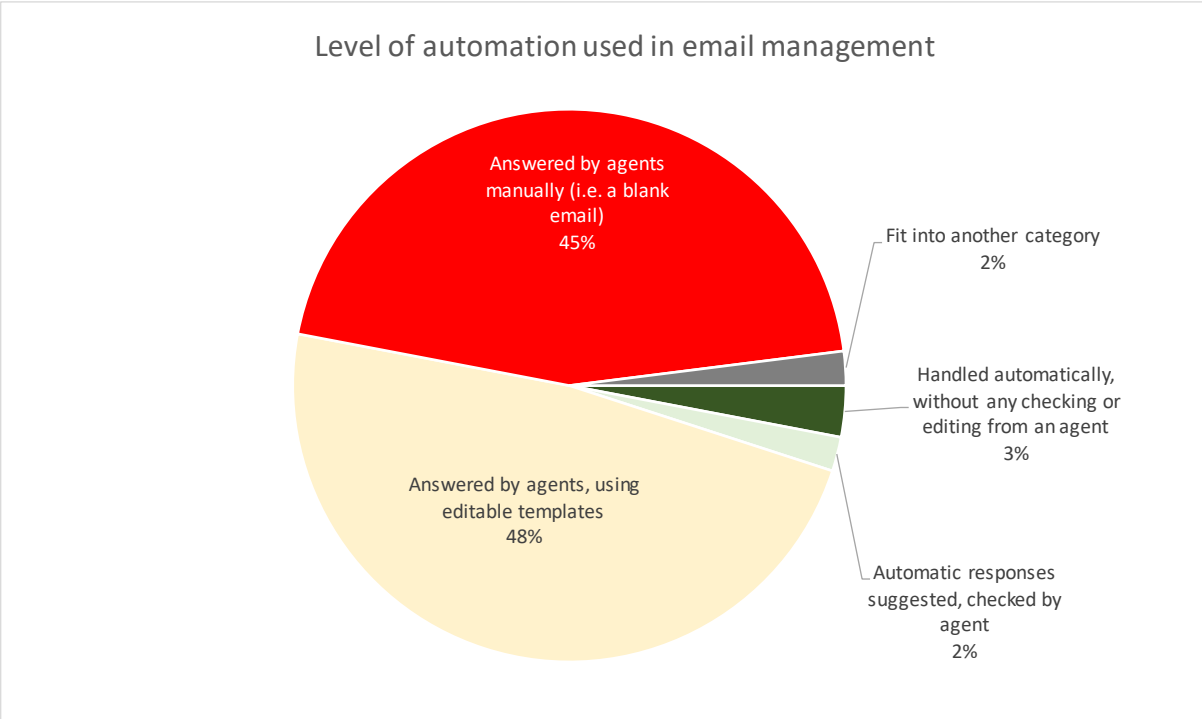
Figure 116: What proportion of emails are answered successfully and completely within these timescales? (2009-17)



The most popular methods of answering inbound email are to use agents, rather than rely on automation. 48% of emails are answered by agents who start with templatized, editable responses and change them accordingly, thus not having to compose every email from scratch, but also being able to draw from a common pool of knowledge. Starting with a blank email and letting agents complete it themselves is not only likely to take longer, but also leads to an increased risk of poor grammar, spelling and punctuation, as well as a less consistent response.

Only 5% of emails have automated responses, (these statistics do not include simple automated acknowledgements), and of those, around half have to be checked by agents before sending.

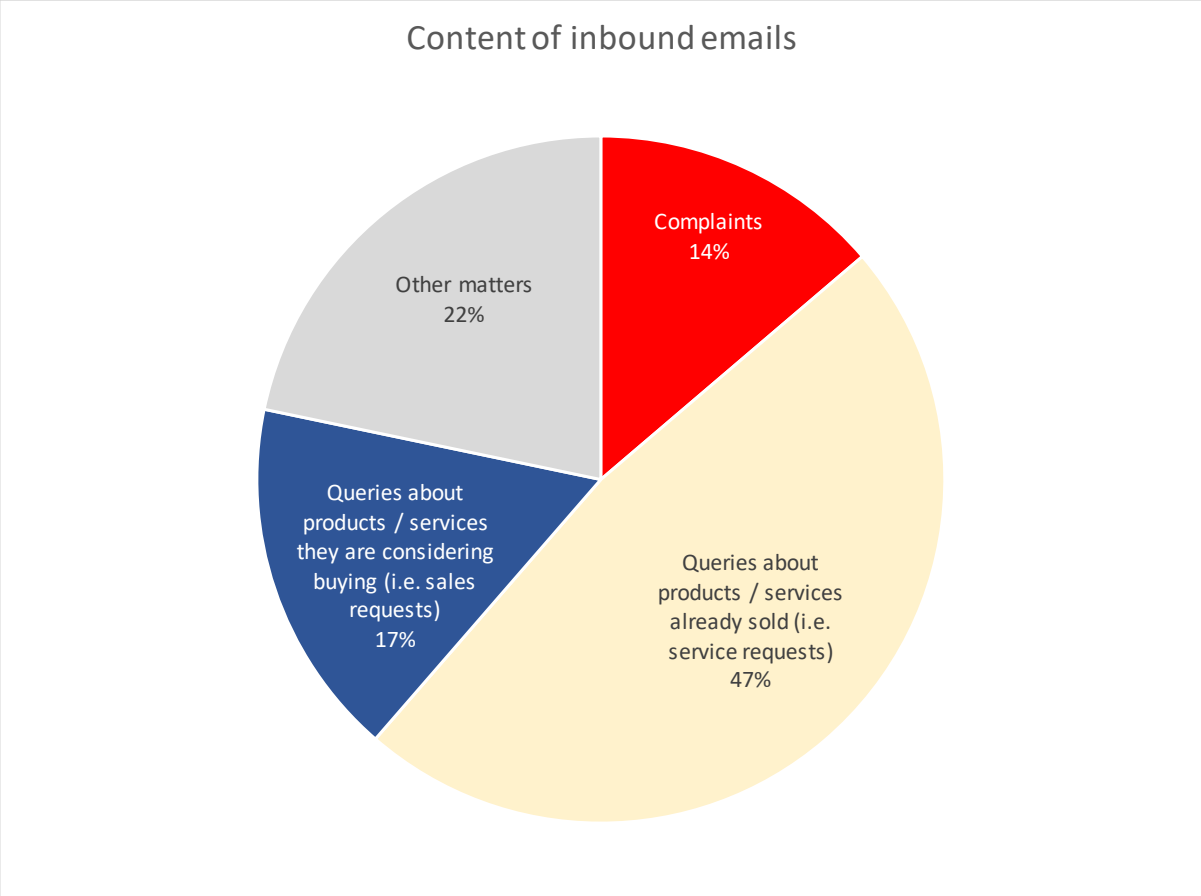
Figure 117: Level of automation used in email management



Respondents state that 47% of their inbound emails are queries about products or services that have already been bought, with only 17% being from prospective new customers, who have queries about products or services which they are considering buying.

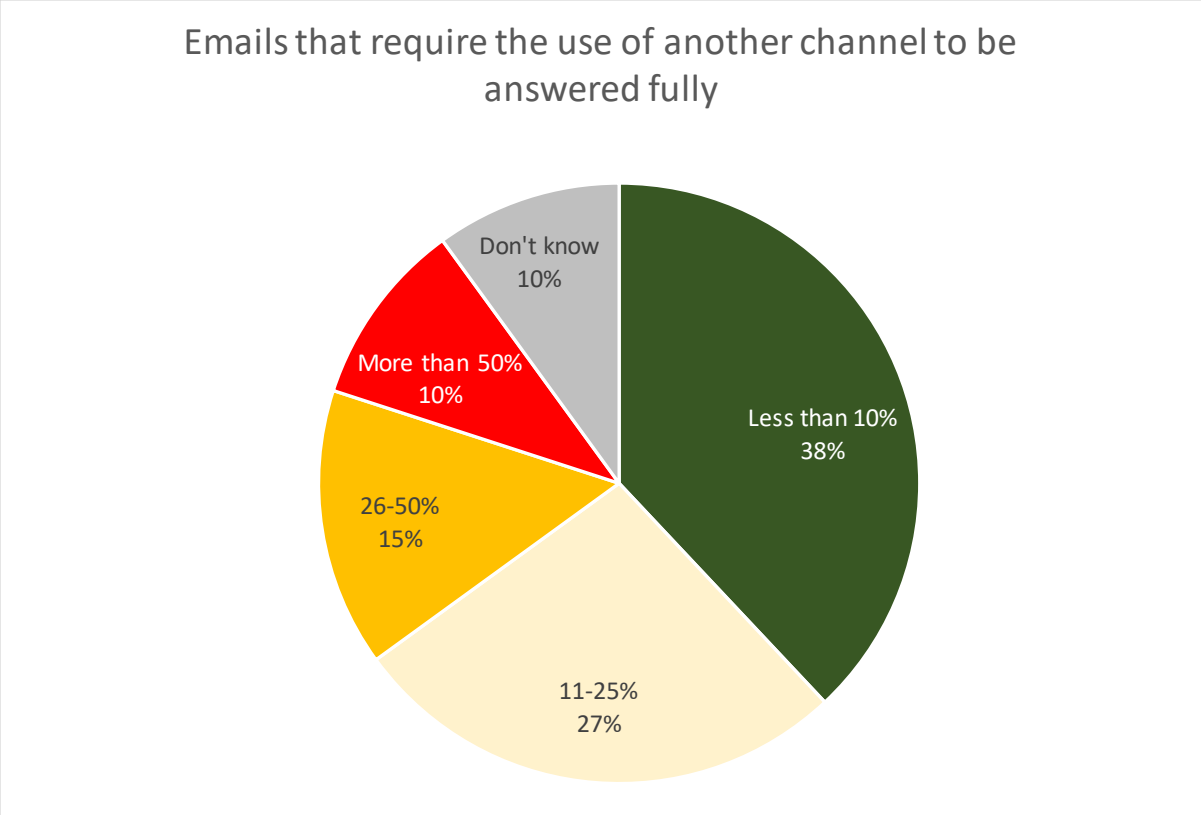
Complaints represent around 14% of inbound email traffic for our respondents, compared to the telephony figure which is consistently well below 10%.

Figure 118: Content of inbound emails



Respondents were asked to estimate the proportion of emails that required the use of another channel to be answered fully. 38% of respondents stated that fewer than 10% of their emails could be answered fully without recourse to alternative channels, with 10% stating that more than half of their emails needed supplementary channel assistance.

Figure 119: Emails that require the use of another channel to be answered fully



Respondents that indicated that a proportion of their emails require the use of another channel to be answered fully were asked to give the top three reasons causing this.

Two interlinked responses came out clearly ahead: the multiple, back-and-forth nature of the queries are quicker to answer on a call; and that complex issues are better handled with a phone call rather than an email.

The ability to take customer through security checks more easily in a different channel was also considered important (i.e. given a top 3 place) by 58% of respondents, and 37% considered that email agents do not always have access to the sources of information that they need to answer the question fully.

Figure 120: Reasons for using another channel to answer emails fully

Reason for using another channel	1st	2nd	3rd
Multiple / back-and-forth queries, which are quicker to answer on a call	37%	30%	18%
Complex response which requires a phone call	32%	43%	17%
Need to take them through security checks before query can be answered	22%	9%	27%
Need access to other sources of information not available to email agents	7%	11%	19%
Regulations or legislation	1%	5%	6%
Sensitive / confidential information which requires a letter to be sent	1%	2%	13%

MULTIMEDIA BLENDING

There is no general agreement within the industry on how best to deal with email, although there are genuine reasons to encourage email/voice blending. On one side, there is a case made that letting agents answer email makes the job more interesting for them, lowering attrition and improving skills. The other side to this says that the skills required by email agents are different from voice agents, and that it is difficult to find the agents to do both jobs. Both sides make sense logically, and historically, of those contact centres which use voice/email blending, only around 1 in 5 have experienced problems finding the right staff for these types of role, a figure that decreased each year that it was surveyed.

The great majority of respondents in most sectors allow at least some of their agents to carry out both email and telephony. However, email requires certain skills, including grammar and punctuation, which not every agent has, even with assistance from an email management system's response template.

On average, 70% of agents in a blended multimedia environment are allowed to do both email and voice work, a figure which had been growing year-on-year, but which has steadied recently.

Those in small and medium operations are much more likely to use the same agents to handle email and telephony, probably because there is not the option to have the specialised teams found in large contact centres, which are much more likely to have a dedicated group handling email.

Simply because a contact centre uses the same agents for email and voice does not mean that all operations use the same level of multimedia blending. For some operations, multimedia blending is a strategic decision which has been invested in with the right levels of technology and training being provided. For others, it is a necessity, with agents encouraged to answer emails in slack call times. Small and medium operations - which in the past may not have had sufficient email volumes or the investment available to formalise the blending by forming a universal queue to deal with all types of interaction - are now as likely to use a universal queue as the ad hoc method. Many larger contact centres prefer to use dedicated email groups.

However, this preference of many larger contact centres to form specialised multimedia groups may not provide the same levels of service. Previous years' data indicated a formalised blending environment, such as a universal queue, has a beneficial effect on email response times. Respondents using a formal blended environment reported that twice as many emails were successfully handled within an hour, although the proportion being dealt with in the same working day were fairly similar, regardless of whether formal blending, ad-hoc distribution of work, or dedicated email teams were used.

WEB CHAT

Most web chat (or instant messaging / IM) sessions act by offering a live assistance option to the process of web browsing. Like email, it has been around for many years, but only very recently has started to grow volumes to the extent where it has become a mainstream channel for customer-business interactions.

Web chat offers an organisation a chance to cut costs through running more than one chat session at a time with customers, using the time that a customer spends reading and replying to an agent's response to deal with other customers concurrently. Some solution providers have stated that an agent can deal with 4 or more web chat sessions at the same time, but whether this is a sustainable model for the agent or provides an acceptable quality of service for the customer is quite another question (and one that is answered below). Agents can respond to frequently-asked questions by using 'hot-keys', which provide templatised answers and can escalate queries if required, but current levels of automation are low.

Web chat has often been used as a 'point of crisis' channel, for example, to convert an online shopping basket into a sale by providing timely service, or if a browser is paused on a webpage too long, perhaps as they can't find what they are looking for. In such cases, there are two main benefits to the business in providing web chat: revenue maximisation, and the avoidance of unnecessary calls.

Web chat can also act as a safety net for the customer if an online self-service attempt fails. An analogy can be made with voice self-service, where a failed session is often ended with the customer 'zeroing-out' - pressing zero to get in touch with an agent. Failed web self-service sessions may end with a phone call being made, but web chat can avoid a number of these, which is a cost saving for the business, and better for the customer as well.

Many customers – and not just the younger generation - are often accomplished Instant Messengers, and will be keen to use the web chat option with the businesses they work with. However, web chat is in reality most useful for general information and sales purposes, as many users aren't taken through security processes, meaning the agent can't help with specific account queries; the same usually applying to email. Putting some form of trusted biometric device on a PC or mobile device (such as a thumbprint reader) which then assures the businesses' system of the user's identity could possibly overcome this issue. Alternatively, and more simply, there doesn't seem to be any reason why the web chat agent can't ask the standard security questions to the customer via chat, but this is rarely done today, perhaps as some customers are wary of giving out personal details online.

VIRTUAL AGENTS

One form of value-added web chat functionality is a Virtual Agent, which may appear to a browsing website visitor to be a human agent, offering web chat. However, it is an automated piece of software which looks at keywords and attempts to answer the customer's request based on these, including sending relevant links, directing them to the correct part of the website or accessing the correct part of the knowledge base. If the virtual agent cannot answer the request successfully, it may then seamlessly route the interaction to a live web chat agent who will take over. It is possible that the browser will not even realise that any switch has been made between automated and live agent, particularly if the web chat application is sophisticated enough to pass the context and the history to the agent, although some businesses believe it is best practice to identify clearly between virtual and real agents.

Most virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyse and search for the answer which is deemed to be most suitable, returning this to the customer instantly. Many virtual agent applications will allow customers to give all sorts of information in any order, and either work with what it has been given, or ask the user for more detail about what they actually meant. Having been unconsciously trained over the years to provide their queries in a way which standard search functionality is more likely to be able to handle (for example, a couple of quite specific keywords), customers must be encouraged and educated to use natural language queries in order for virtual agents to be able to deliver to their full potential.

The virtual agent application is different from standard search functionality, ignoring bad punctuation or grammar, and using longer phrases rather than just searching on keywords. Sophisticated applications attempt to look for the actual intent behind the customer's question, trying to deliver a single correct answer (or at least a relatively small number of possible answers), rather than a list of dozens of potential answers contained in documents which may happen to contain some of the keywords that the customer has used. The virtual agent application may also try to exceed its brief by providing a list of related questions and answers to the original question, as it is well known that one question can lead to another. Solution providers and users train the system to pattern-match the right words or association of words with the correct result: the application, unlike older forms of web search techniques, does not simply guess what the customer wants, or how they will express themselves. Through 'listening' to what the customers actually say - perhaps through a mixture of large quantities of audio and text – the initial set-up configuration can achieve a good accuracy rate, which really benefits over time as a positive feedback loop is established. Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Virtual agent functionality 'understands' the context of what the customer is asking, with the result being more akin to that of an empathetic human who also has had access to what the customer has been trying to do. For example, if asked "When can I expect my delivery?", the context and the required answer will be different depending on whether the customer has placed an order and is enquiring about its status, or has only a hypothetical interest in turnaround times in case they decide to place an order.

When the virtual agent application has low confidence that it has returned the correct result, it is able to escalate the customers query seamlessly to a live chat agent, who then has access to the self-service session history, enabling a greater chance of a successful resolution without repetition. (It is generally considered best practice that escalations to real agents are not hidden from customers). The eventual correct response can be fed back to the automated virtual agent (and the knowledge base underlying it), which will make it more likely that future similar requests can be handled successfully through automated agents.

Proactive and reactive chat: originally, web chat was reactive, relying upon the browser to initiate a conversation. Businesses then decided to go on the offensive, popping up chat boxes and encouraging customers to start conversations. Some more sophisticated customers are unfazed by this, but overly-insistent use of web chat can put some customers off entirely.

There are various levels of intelligence that can be used to support proactive chat more effectively. If the customer has logged in, it is possible to identify them, and take into account past channel preferences, purchase history and other relevant information in order to personalise the experience, (for example including details of relevant offers to that customer).

As an aside, some contact centres report that those experienced in playing online games - are particularly suited to the fast-paced, text-oriented nature of web chat, and some businesses are actively recruiting such people to work as web chat agents. It is also worth commenting that although offshore customer contact has received a mixed press, many of the negative issues surrounding offshore are not applicable to the multimedia channel, such as the possible mutual incomprehensibility of accents.

Web chat is experiencing strong growth in its availability in the UK, although volumes on average are still only 3-4% of all customer/business interactions. There is no reason why the user uptake of web chat will not continue: it works well for customers as providing an immediate response, and with multiple concurrent chat sessions per agent, it can be a lower cost channel than voice for the business to support, although cost differential between phone and web chat are not dramatically different, as so much of the web chat work carried out is still non-automated. Solution providers report that web chat is currently being trialled by numerous businesses, often at a limited, or departmental level so they can assess the suitability of the channel for a company-wide rollout, and understand what needs to be done to ensure full implementation is a success.

The cost of a web chat is stated to be a little lower than a phone call (£4.00) and a little higher than an email (£3.37), but the differential is not as significant as might be expected from a channel that can be at least partially-automated, and which offers the opportunity for multiple concurrent sessions.

Figure 121: Estimated cost per web chat

	Web chat cost
Mean	£3.82
1st quartile	£5.50
Median	£3.00
3rd quartile	£1.98

43% of respondents using web chat offer the option immediately to all website visitors, with 57% only doing so at some specifically-triggered point in the interaction.

Of these 57%, the most frequently used trigger for web chat was when a visitor went to a specific page, with other triggers being when a customer was on a page for a certain amount of time, and at the point of sale, although these are much lower.

Figure 122: Stage in the website visit where web chat is offered

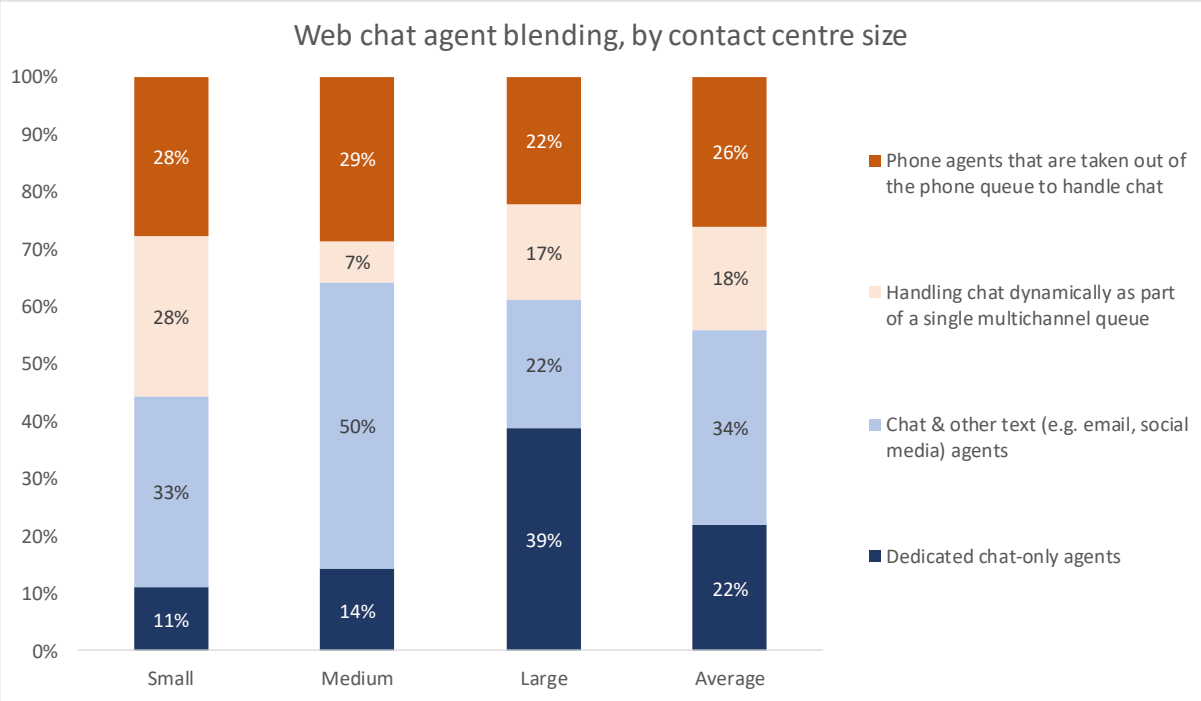
Point at which web chat is offered to the website visitor	% of respondents
If the visitor has visited a specific page	69%
If the visitor has been on a specific page for a certain amount of time	31%
At the point-of-sale / checkout screen	21%
If they had been identified as a specific type of customer (e.g. high value, prone to defection, etc.)	14%
If the visitor has visited a certain number of pages	3%

Respondents from larger contact centres are more likely have dedicated chat-only agents, rather than taking phone agents out of the queue to handle web chats on an ad-hoc basis, probably because chat volumes are more predictable in high-volume businesses.

Multi-channel text agents (e.g. handling social media or email too) are popular in small and medium respondents' contact centres.

Small operations are more likely to be using a single multichannel queue that also includes handling calls.

Figure 123: Web chat agent blending, by contact centre size



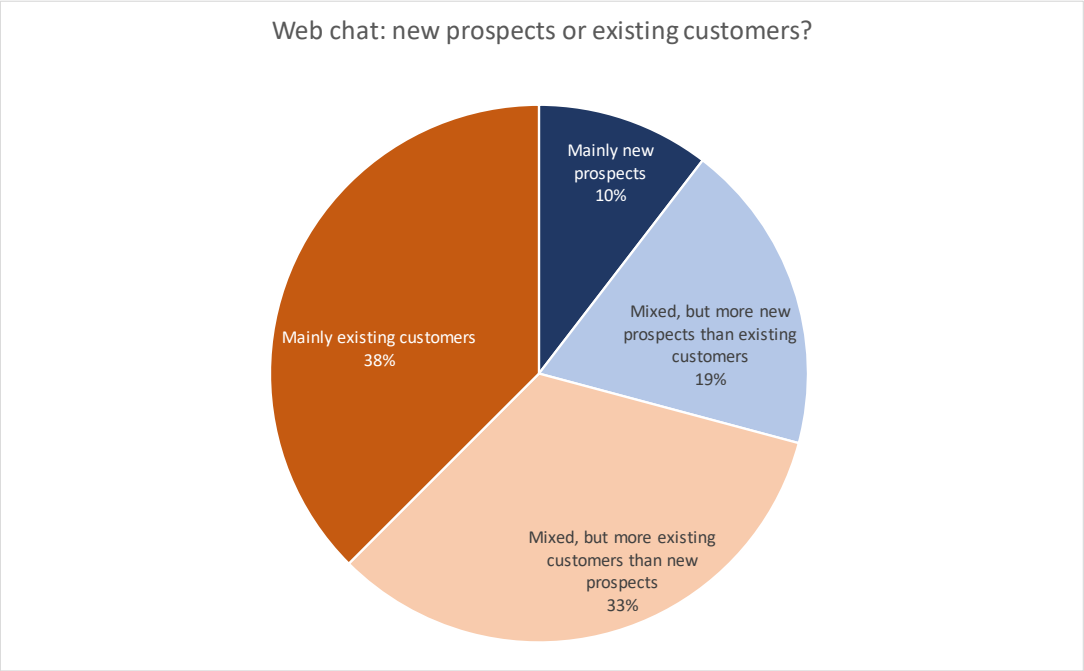
One of web chat's traditional strengths is seen as the ability to have agents handle multiple chats concurrently (of course, it only seems this way to a customer, as the web chat agent uses the time that the customer is typing their response to handle other chats). Some vendors have stated in the past that agents could run five or six concurrent chat sessions: the reality seems to be that two sessions is a reasonably consistent average, with a peak of three or even four if required, but which is not possible on a long-term basis.

Figure 124: Concurrent web chats per agent

	Average number of concurrent web chats	Maximum number of concurrent web chats
Mean	2.0	3.6
1st quartile	2.8	4.5
Median	1.9	3.2
3rd quartile	1.0	2.0

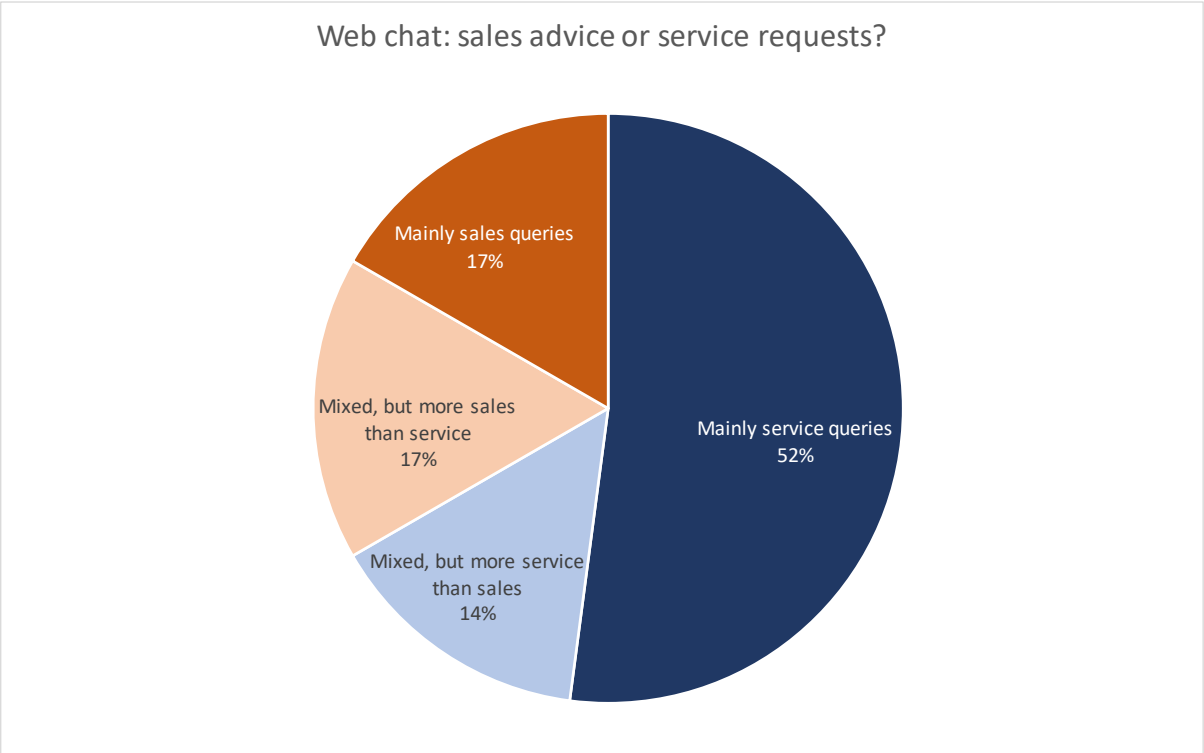
Most respondents indicated that web chats are mainly carried out with existing customers, which fits in with previous findings that sales operations are less likely to be using web chat.

Figure 125: Web chat: new prospects or existing customers?



This finding is further supported by the nature of most web chat: 52% of respondents state that their web chats are mainly about servicing existing products and services, with only 17% of respondents stating that they deal much more with sales queries than service requests.

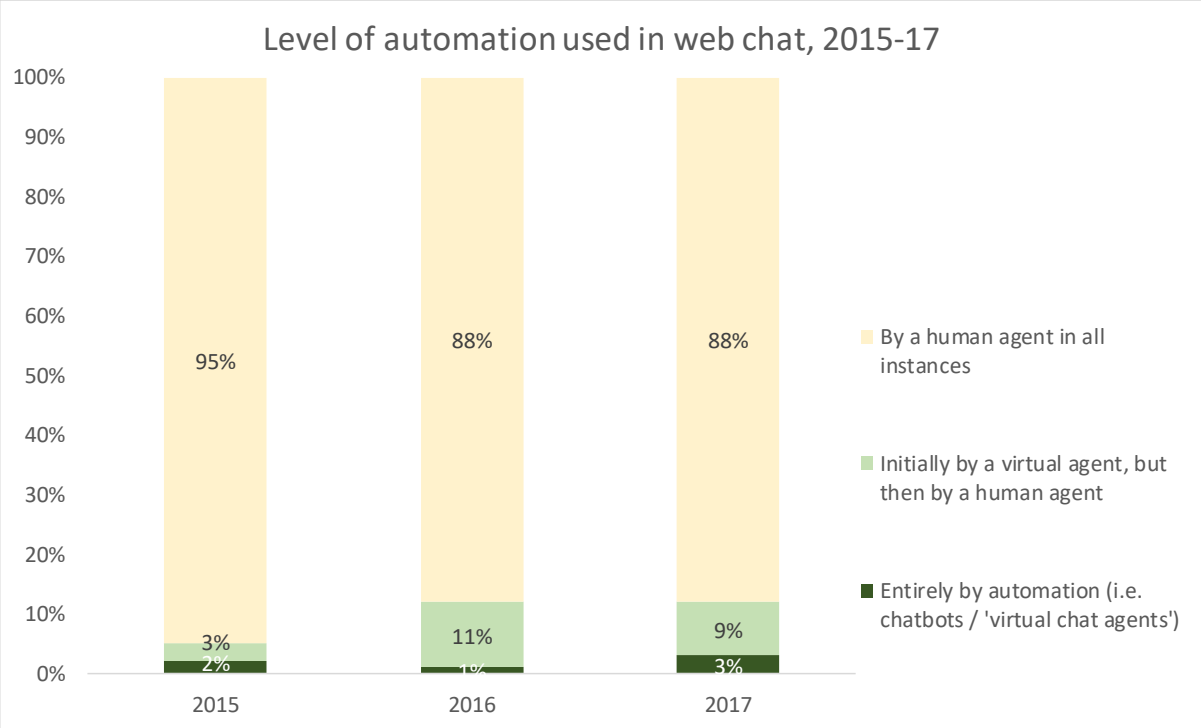
Figure 126: Web chat: sales advice or service requests?



As the cost of web chat is similar to other channels such as email, voice and social media, there is considerable room for increasing efficiencies and lowering costs.

Whereas only 5% of web chats had any automation involved in 2015, this has grown to 12% in 2017, mainly as a result of initial handling by automated chat bots which may then hand off to live agents where appropriate.

Figure 127: Level of automation used in web chat, 2015-17

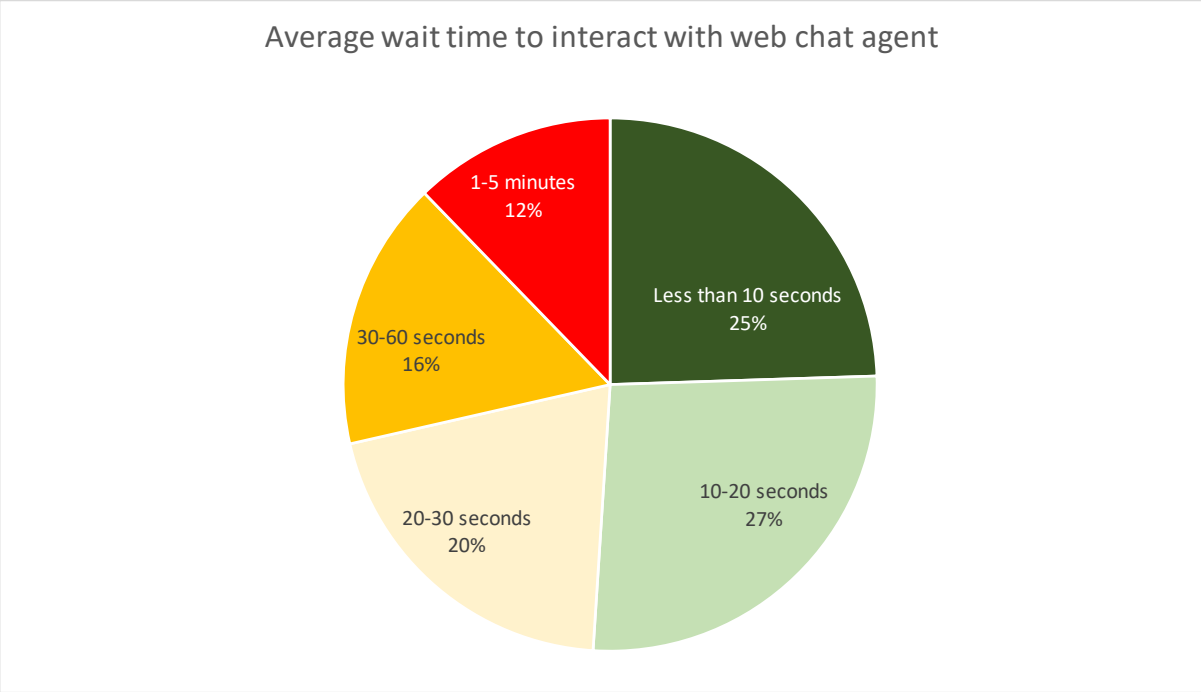


Respondents indicate that the typical wait for a web chat session is actually less than that of a phone call.

25% of respondents have an average wait time for web chat of lower than 10 seconds, with a further 27% stating that the average wait time is 10-20 seconds. Maintaining this level of accessibility for customers will reinforce their positive experiences of web chat, and will encourage customers to keep using the channel, not only when contacting a specific business, but also in general.

Little research has yet been carried out into the expectations of customers around web chat service levels, but it is reasonable to expect a channel being presented as an alternative to phone to have similar service level expectations and reality. If only 12% of web chats take longer than 1 minute to initiate, then we can expect customers to flock to this channel enthusiastically, as these service levels are generally superior to that of voice.

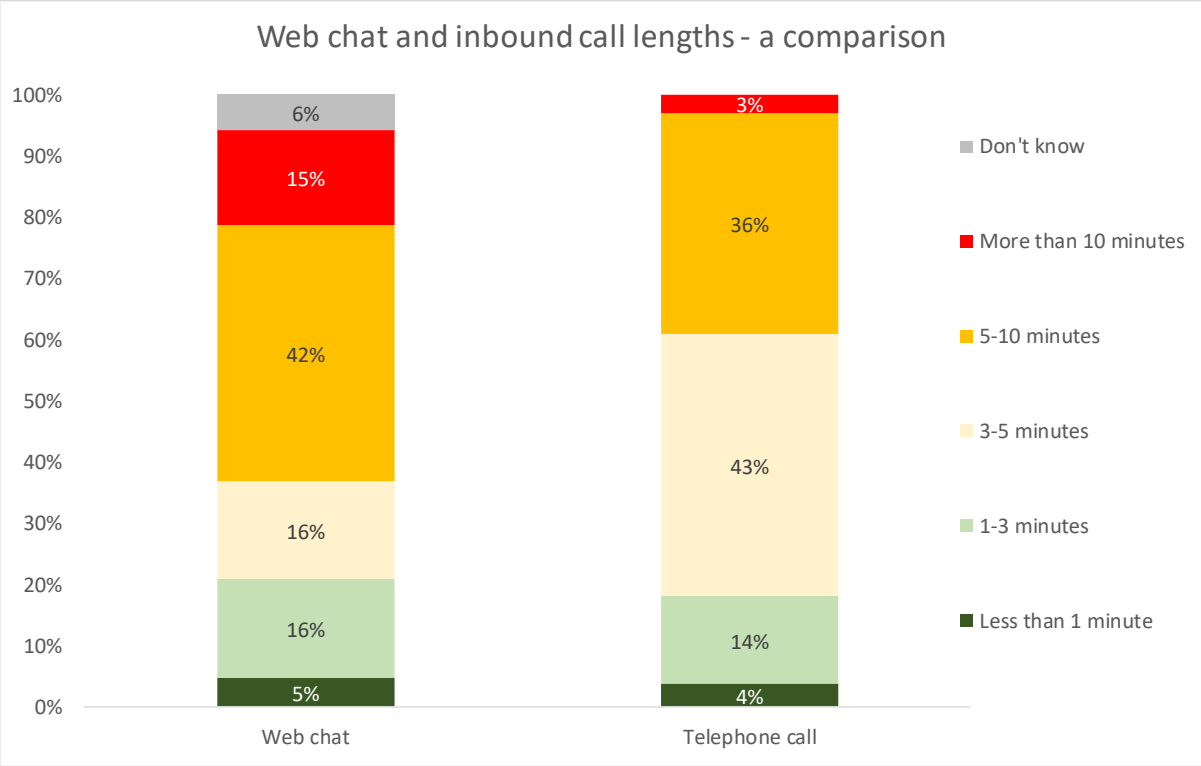
Figure 128: Average wait time to interact with web chat agent



Further comparing the experience of web chats with telephone calls, the survey finds that 57% of web chats take longer than 3 minutes to complete fully, as agent multi-tasking and the time taken to type differs from the experience of handling a phone call.

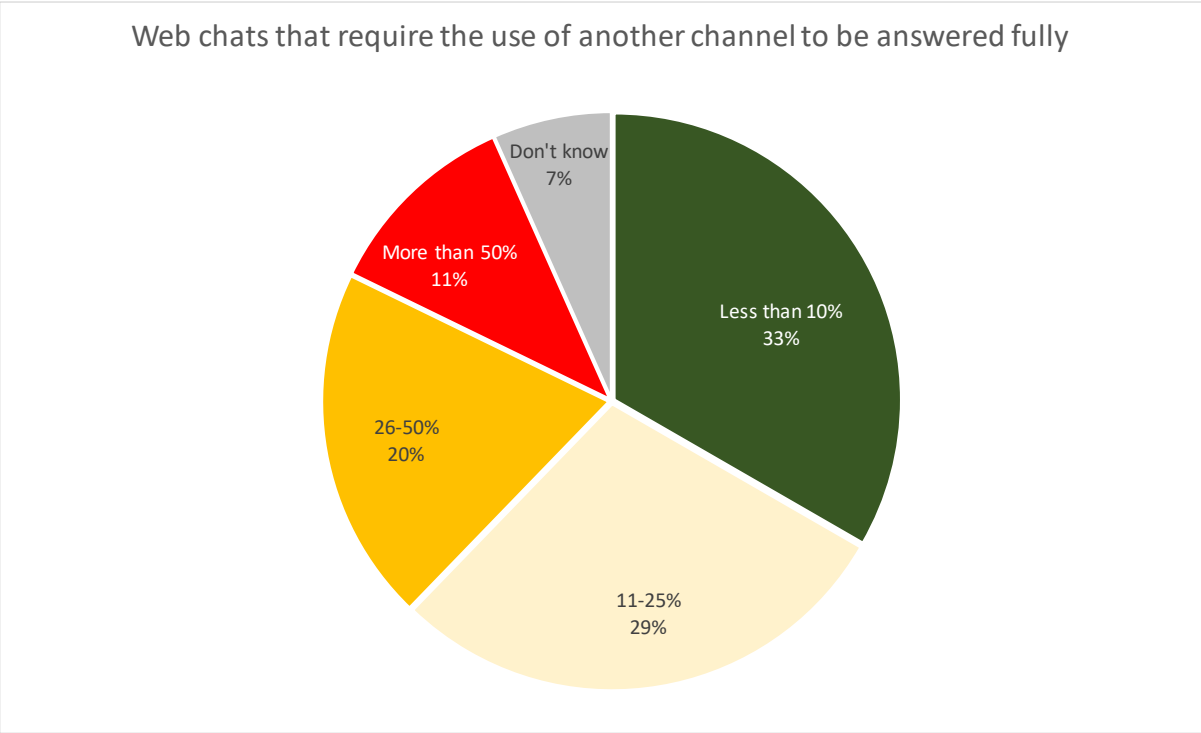
Comparing web chat and telephone side-by-side, the customer will usually experience a longer overall length of interaction over web chat: although similar proportions will take less than three minutes, 43% of calls take between 3-5 minutes, compared to only 16% of web chats.

Figure 129: Web chat and inbound call lengths – a comparison



One-third of respondents report that fewer than 10% of web chats require another channel to answer the query fully, with 11% stating that more than half of web chats require movement to another channel, which is likely to be negative for the customer experience.

Figure 130: Web chats that require the use of another channel to be answered fully



Tips for using chat and cobrowsing successfully

Understand the role that you want web chat to have within the customer contact mix. Do you see it as a replacement for email? Or is it more of a call avoidance strategy? Or is it perhaps a way to close the sale? Without understanding this, it'll be difficult to measure its success. Some businesses will offer web chat and cobrowsing only to their premium customers, or to those who are in the final stages of purchasing but who have stalled.

Choose the most suitable metrics for what you're trying to achieve. If web chat is about revenue, then perhaps focus on sales conversion rates, rather than average handle time, in order to encourage agents to make the most of cross-selling and up-selling opportunities.

Some customers may use web chat as an initial method to ask tentatively about products and services. The solution should provide the option to continue the conversation via a phone, or to send relevant documents and videos.

Work with the solution provider to determine what a reasonable and realistic number of concurrent web chat sessions might be. While it is theoretically possible for an agent to cope with four or more conversations at once, the reality is that this is unsustainable over long periods or with complex issues. It is far more realistic to expect a well-trained agent to deal with perhaps two or three conversations concurrently, and this should be fed into your workforce planning system. However, it may be that agents who deal with both telephony and web chat find it too difficult to deal with multiple chat sessions as well, and will deal with only one chat at a time.

As with any real-time interaction channel, monitoring traffic is vital to success. Plans need to be made to handle web chat spikes and providing estimated wait times to those in a web chat queue will allow them to choose a self-service, phone or email option instead.

Plan how web chat will integrate with existing customer service channels. It is possible to run web chat as an entirely separate, siloed channel, but customers expect to be able to move between channels seamlessly. Being able to treat web chat interactions in the same way as other communication channels means that resources can be spread across channels as and when needed.

Sophisticated web chat solutions allow for 3-way chat, so that an agent can bring subject experts into the conversation as required.

Consider using a trial, in a discrete department, product or service area. This will allow you to understand what works and what doesn't, in a relatively low-risk environment. Changing a small number of variables will also provide a more accurate understanding of how web chat affects customer service levels, customer satisfaction and revenue. It will also provide information about the types of customer and queries that web chat is likely to be used by and for.

Make customers aware that you're offering web chat, by promoting it through existing, higher-cost channels such as within the telephone queue's recorded announcement.

While web chat is an increasingly popular channel to offer to customers, the current reality is that it is being used as a direct replacement for live telephone calls, with very limited use of automation or value-added features. Although customers are increasingly comfortable with initiating chat sessions, the visual nature of this channel and the increasing use of smartphones means that opportunities exist for businesses to leverage customers' increasing acceptance of web-based communication to provide deep functionality, a richer customer experience and improve their own profitability.

Co-browsing (or web collaboration), which sometimes includes form-filling and page-pushing as a sub-set of functionality, is a very intensive, one-to-one channel, formerly used for high-value customers or in those cases where it is quicker and more effective for an agent to take over the reins than to talk the customer through the process. While it has been useful for certain businesses, processes and customers, it is difficult to make a case for it on a cost-saving basis alone, although it will encourage the completion rate of sales, and as such, improve profitability.

Co-browsing may be used to help customers fill out forms, or to complete online transactions, and may be done in conjunction with a concurrent telephone call or web chat. Unlike page-pushing - which is a one-way movement of information from agent to customer - and screen sharing - where the agent takes control of the customer's desktop - co-browsing is a true two-way collaboration tool. Either the agent or the customer can control the cursor or enter data into fields, and business rules can be set up so that the agent does not see or enter sensitive information.

While it is not a cheap option, cobrowsing, particularly in association with a telephone call or web chat, can be an effective way of closing a high-value sale. It is, however, currently used in few UK organisations.

WebRTC or Web Real Time Communications is an API definition that supports browser-to-browser applications for voice calling, video chat, and P2P file sharing without the need of either internal or external plugins[12].

It allows customers to start a video or voice call from the web browser (which may be via a desktop computer or smartphone, perhaps as an escalation from an existing web chat session), which means the organisation's website can then offer video or voice contact centre functionality in a seamless manner, with customers able to request live communication with the business without the need to download specific software or seek out the phone number and break off from what they are doing on the website. Two-way video communication is likely to be of more interest to mobile users, as their smartphone device already comes enabled with a camera and microphone, unlike many desktop computers which may not have this functionality or whose users have it disabled. One-way video, to protect users' privacy, is perhaps a more likely option in many instances.

[12] https://en.wikipedia.org/wiki/WebRTC

Natural Language Processing

While some knowledge base solution providers state that 80% of questions can be answered by 20% of content, it is each business's decision to decide how the remaining 20% of queries will be handled (but of course, even these 20% of documents will change over time as customers' requirements and the businesses' products will not stay static). Some will consider that this is a reasonable proportion to be handled by more traditional means, such as the contact centre, whereas others will leverage expert internal resource, as well as customer communities and forums to fill these knowledge gaps. It is not just the publishing of information that is vital: it is feedback on its accuracy and success from the wider user community and any automated systems which will help the business to fine-tune the knowledge base. Processes to gather this feedback should be put in place, and continually revisited to check their effectiveness, and it is possible to add successful answers to the knowledge base very quickly if a response from an agent (for example, via email or web chat) has been marked to be successful.

In all cases however, one of the keys to successful knowledge management is continually monitoring, updating and publishing the most accurate and in-demand information. Businesses should consider setting internal service levels for the knowledge base, for example only returning documents and suggested answers that have over a specific score for relevancy, and no more than a small number of answers per enquiry. If customers are trained to expect a self-service or virtual agent experience that returns pages and pages of documents that bear little relevance to their original query, they will very soon abandon self-service entirely. It is also vital that the information contained in the knowledge base is available consistently across all channels, whether through a virtual agent or human agent.

One of the keys to successful automated service, with a via telephony or website, is for the user to be able to describe their issue in their own words, rather than feeling that they have to use specific terms or a stilted, incomplete account of the issue. Natural language processing-based systems encourage users to describe their issue more fully, asking follow-up questions if there is any degree of ambiguity in the initial request. One of the obstacles to overcome for NLP-based systems (whether through speech recognition or text recognition) is that many Internet users have been trained to use keywords, believing that simplifying the description of their issue will lead to greater levels of accurate response. In fact, NLP works best with longer and more detailed requests, and it is a challenge for businesses and solution providers to encourage and support users of the system in using the solution in an optimal way.

Many current self-service systems are inflexible and structured rigidly in their information flow, so as to handle simple, unambiguous service requests by customers (such as account balances). Generally speaking, these are very successful at delivering this information, and customers will often choose a familiar and effective method of handling the simplest enquiries. However, historical interaction volume information shows that the number of live calls received by contact centre remains steady: although the contact centre is the primary channel choice for only 12% of customers, two-thirds of interactions with the business still come via live telephony. This suggests that the various methods of using self-service and the supporting knowledge base still have a very long way to go before customers rate them as highly for effectiveness and timeliness as they do the traditional contact centre.

New channels such as social media, email and web chat have grown rapidly in popularity, yet the vast majority of interactions involving all of these channels are still along same lines as the traditional contact centre telephony model: that is, a customer making a request to a live agent. Although web chats and emails tend to have slightly lower costs than telephone calls, the differential between these is far smaller than between a live phone call and a self-service phone call. Of course, not only are businesses missing out on huge potential cost savings, but one of the main customer experience problems still exist: that of having to wait until an agent is available to answer the query.

Expanding the boundaries of self-service outside the simplest and least ambiguous requests will be one of the main challenges over the next few years. Success in this will mean not only greatly reduced costs for businesses, but also improved customer experience through higher real first contact resolution rates through the customer's channel of choice.

THE SOCIAL CUSTOMER

The rise of social media as a customer service channel has often been de facto, in that customers have actively sought out the company's Facebook page or Twitter account to communicate with it, even if the company originally had a social media presence only to disseminate information. For foreseeable future, ContactBabel expects social media to remain a relatively minor channel in terms of overall number of interactions compared to telephony, but one with the potential to be strongly negative - to punch well above its weight - and many senior executives within most companies are treating the channel with a great deal of respect.

Despite the relatively low levels of customer interactions via social media, the high-profile nature of this channel and the possible magnifying effects of negative comments means that social media is viewed as being far more important than baseline interaction statistics would suggest. Some savvy customers, knowing that their public complaint or issue will be dealt with quickly, prefer to go straight to a social media channel rather than wait in a telephone queue. Others might choose the social channel after they've had a bad experience on another channel, such as waiting on hold for a phone agent.

Uniquely, social media has taken off as a customer service channel as a result of customer demand, rather than businesses' enthusiasm for promoting a cheaper service channel. The following chart shows how channels fit customers' needs, and we can see that social media for some customers can provide a very positive experience with a very low pain point, and at virtually no cost of time or money: the customer complains, loudly and in public, so the business reacts quickly and effectively. For the customer, this is great: it is the business for whom the popular methods of social media handling are not optimal: not only do they have to carry out their business in public, reacting quickly and without being able to authenticate the customer's identity, but they often cannot handle the query without resorting to another channel such as phone or email, which provide more privacy and functionality. In such cases, they are not even seen by the outside world to be reacting quickly and effectively, or to have solved the problem. Both customers and companies are finding out what works with social media and what does not. Crucially, as with any channel, success will only come when a channel delivers a successful experience for both sides of the equation.

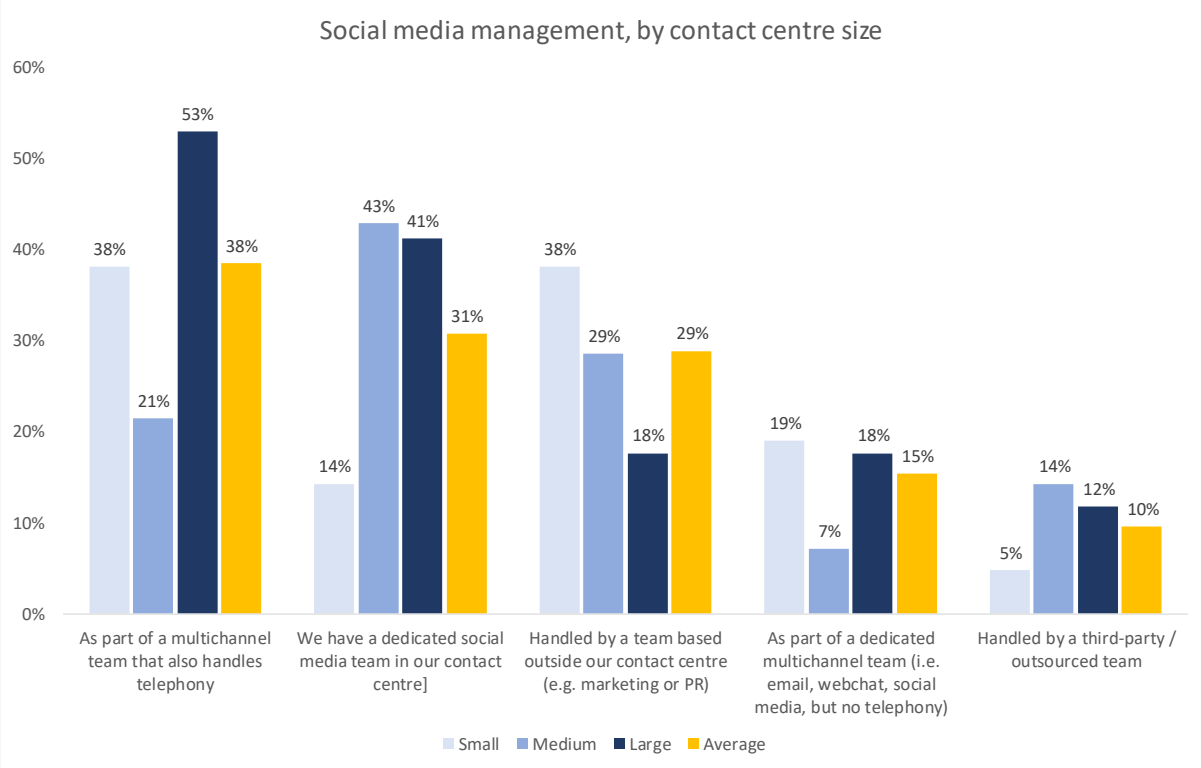
SOCIAL MEDIA MANAGEMENT AND OWNERSHIP

Most respondents report that social media is now handled by an in-house team based inside the contact centre. 29% report that it is handled by internal marketing, PR or corporate communications, with 10% letting an outsourcer or agency handle it. This change implies that social media is being viewed and treated as more as part of a wider omnichannel strategy, rather than as a standalone channel.

31% of respondents reported that they have a dedicated social media team working within the contact centre (much less so in smaller operations), and 15% have a dedicated multichannel team working within the contact centre location but which does not answer telephone calls. (NB multiple choices were allowed, so totals may add up to more than 100%).

When considering the management of social media by contact centre size, larger operations are far more likely to have a team within the contact centre – whether dedicated to this activity, or as part of a multichannel strategy. Small and medium operations are more likely rely upon a non-contact centre-based corporate team to handle their social media.

Figure 131: Social media management, by contact centre size

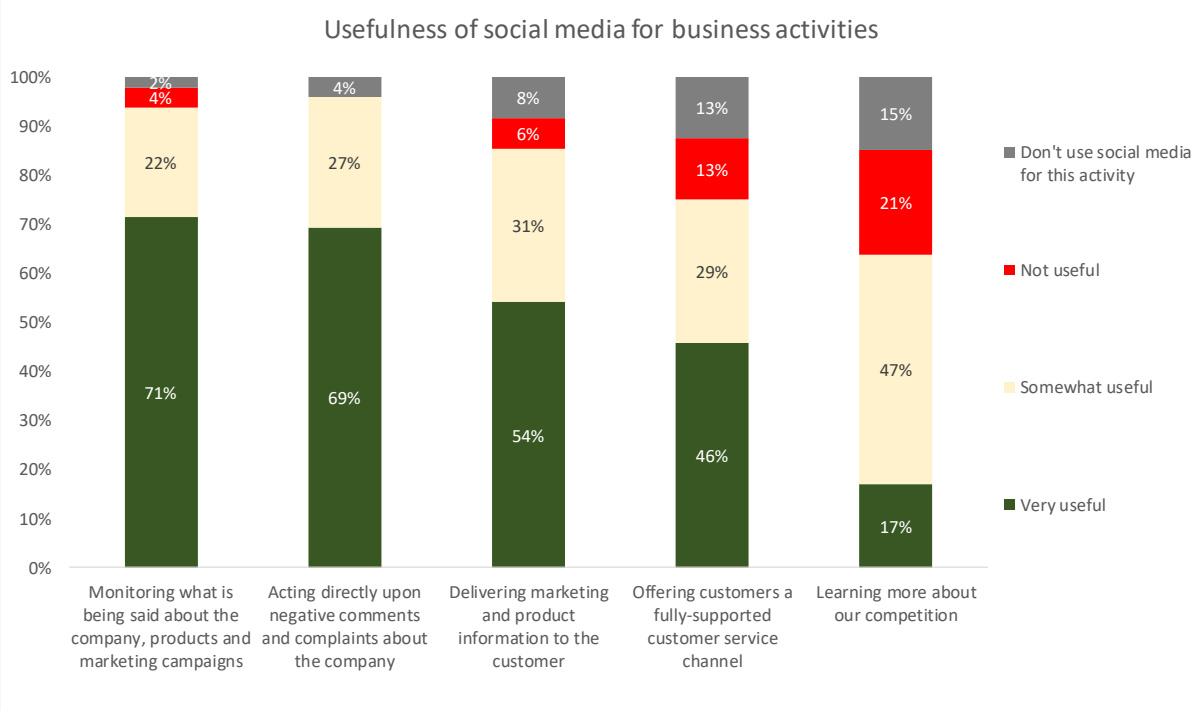


Despite respondents' opinions earlier in this report that social media was generally not the best channel for unhappy customers to use to make a complaint, the following table tells another story. 69% of respondents that offer social media as a customer service channel consider it to be extremely useful for acting directly on negative comments and complaints picked up from customers.

In previous years, there were very mixed opinions on whether social media is actually providing customers with a fully-supported customer service channel. However, 46% now feel strongly that they are doing so, whereas only 13% feel that they are not.

Earlier in the report, respondents stated that call recording and speech analytics were not felt to be supporting the business to learn more about its competitors, and there is little sense here that social media is providing this information either. It may be that businesses are focusing their efforts upon learning what their customers are saying about their own products and services, rather than worrying too much about the competition, but all of these solutions offer opportunities for competitive advantage.

Figure 132: Usefulness of social media for business activities

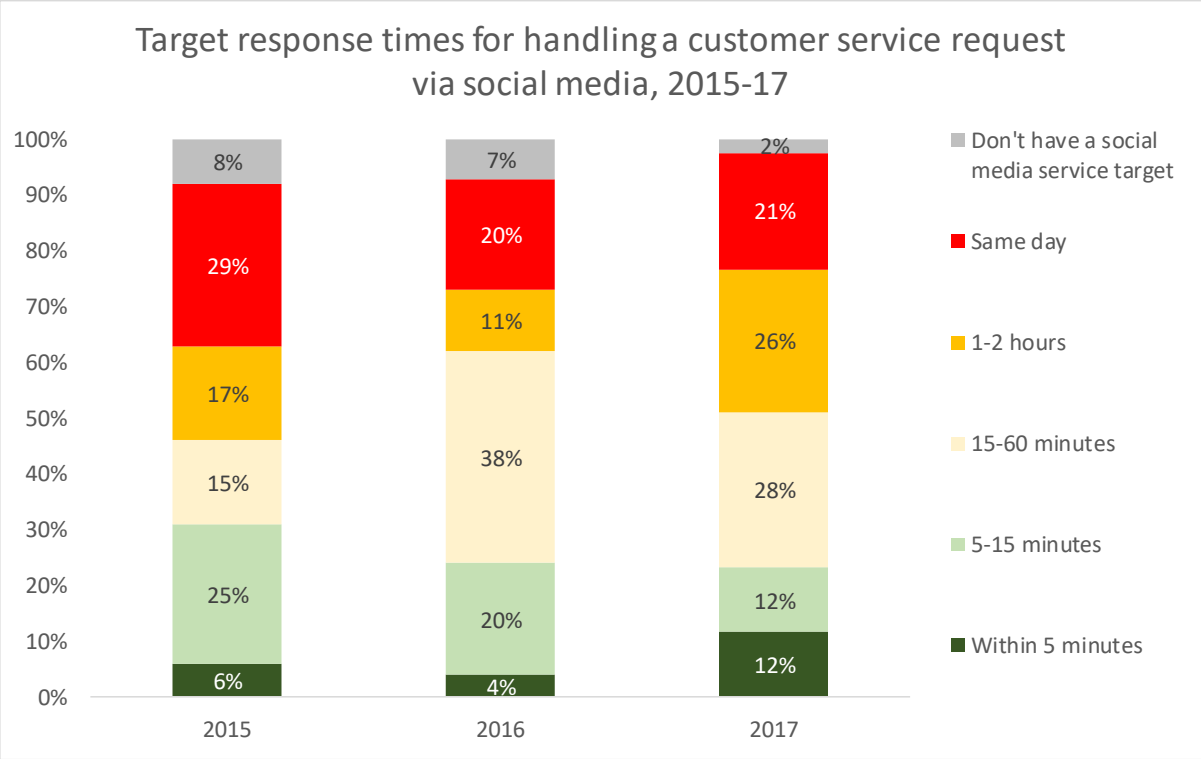


There is some debate about the best way to handle social media inquiries. While it is possible for requests via social media to be analysed (often by keyword spotting), prioritised and then routed to the agent team most capable of dealing with these specific inquiries, it is not just the same as a phone call or web chat. An almost instantaneous response is expected, with the attendant pressure that such a service level places upon the organisation, but social media does not exist within the same one-to-one paradigm as other customer service channels.

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

52% of respondents try to answer within the hour, but 47% state that they will probably take longer than an hour but less than a day. Only 2% do not have a service level target at all.

Figure 133: Target response times for handling a customer service request via social media, 2015-17



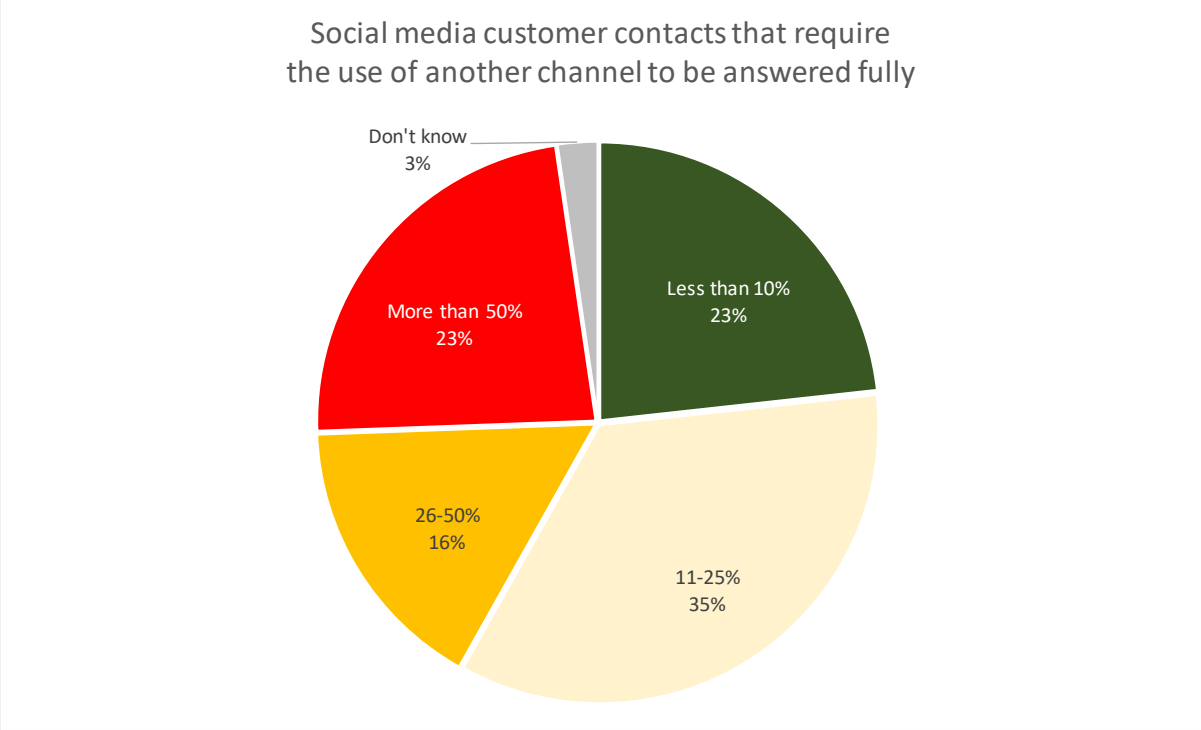
A social media interaction is a little less expensive than an email or web chat, although there is little to choose between them, perhaps as so many digital channel interactions are still handled with a high level of manual input.

Figure 134: Estimated cost per social media customer contact

	Social media customer contact cost
Mean	£3.07
1st quartile	£5.50
Median	£2.50
3rd quartile	£2.00

23% of respondents state that more than half of social media requests have to be completed via another channel, perhaps because of the public nature of the channel, and that customer identity verification is not as straightforward as with voice.

Figure 135: Social media customer contacts that require the use of another channel to be answered fully



Tips on providing customer service via social media

- Despite the pressure that social media puts onto a business, younger generations express a preference for communicating with businesses in this way. They are also more likely to complain about problems on social media, so supporting a social media customer care plan is vital to winning and keeping this section of your customer base.

- Social media does not have to refer only to the likes of Twitter and Facebook. Customers are growing increasingly more sophisticated at seeking out help themselves, with many preferring to attempt to find their own solution via customer communities before contacting a business, although this can be a very hit-or-miss approach.

- Be aware that age has a particularly strong role in the choice of customer communication channels. Generally speaking, older generations will choose the phone as their primary channel, whereas younger customers will look at online channels first. Men are also far more likely than women to look for a self-service solution initially.

- 80% of customers trust recommendations from other customers. The downside to this, of course, is that customers will also take a negative criticism of a product or company very seriously.

- By keeping a Twitter feed or Facebook page up-to-date, an 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.

FACEBOOK MESSENGER & WHATSAPP

With 900m active users of Facebook Messenger[13] and over 1bn WhatsApp users[14], organizations should at least have a watching brief over these tools where customer contact is concerned.

Messenger/WhatsApp have the benefit of familiarity with customers, and businesses may wish to investigate including these types of interaction within their agents' web chat screen. As many users live their lives permanently logged into these applications, there is an ease-of-use and ubiquity associated with them.

The applications allow historic records of interactions to be kept (which is not the case with all users of web chat), and there is a great advantage over social media such as Twitter and Facebook: messages are private, which not only allows customer identity verification, but also will reduce the damage to a business through public negative messages. Unlike most web chat, these applications allow the sharing of images.

The familiarity of these applications will work in favour of agents as well as customers, which will reduce training time and cost. Businesses will also need to consider what is an acceptable service level for these channels: as detailed elsewhere the report, web chat is perhaps closest to the telephony channel's service level target, whereas social media is more akin to email. Although Messenger/WhatsApp are types of social media, they will be used as web chat from the customer's perspective, and should be resourced according to similar expectations.

WhatsApp, especially, is often used as a closed, group-based application, and there may be pushback from segments of the customer community that do not currently associate the use of these applications with business communication. The challenge to businesses will be to persuade customers that letting them into their social circle is worth the effort.

The Forrester brief on Customer Service through Facebook Messenger[15] contains more information about these options.

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.

[13] http://www.statista.com/statistics/417295/facebook-messenger-monthly-active-users/
[14] http://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/
[15] http://blogs.forrester.com/ian_jacobs/16-05-11-facebook_messenger_the_future_of_customer_service

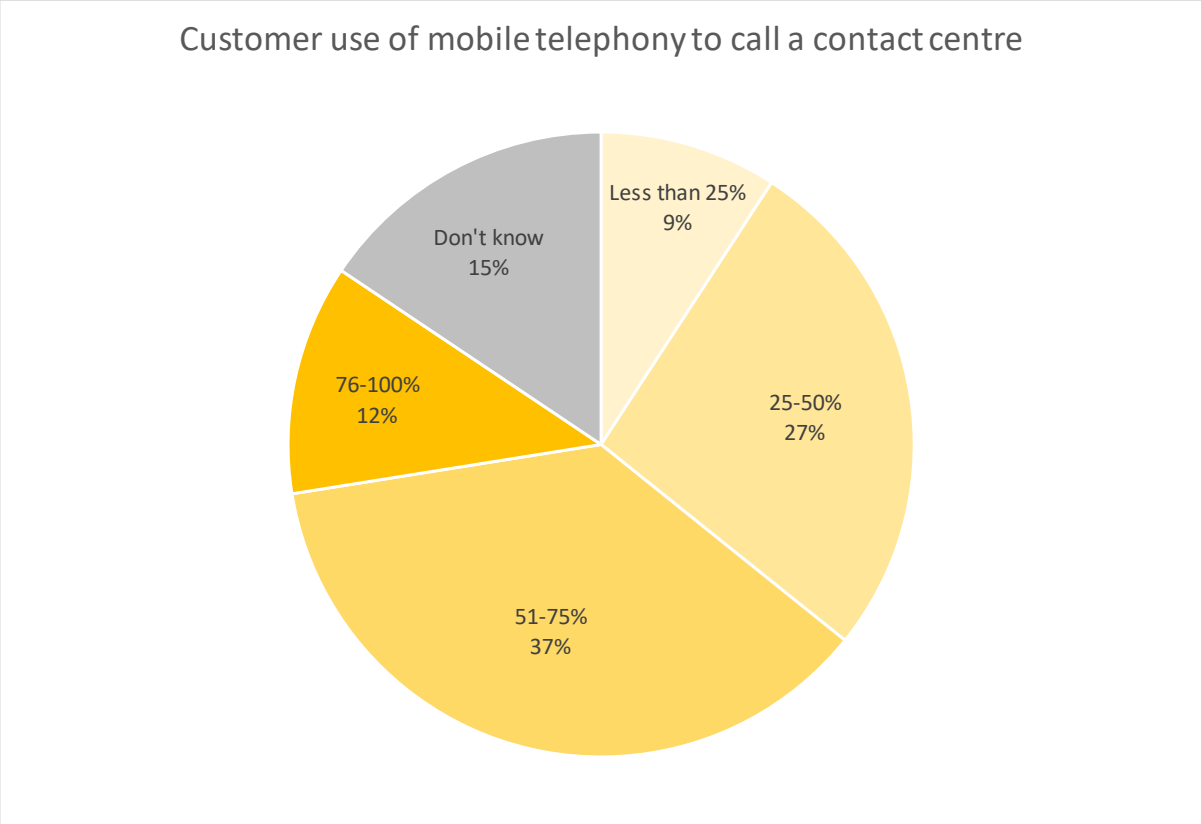
MOBILE CUSTOMER CONTACT

Statistics that show the number of smartphone users, volume of apps downloaded and the value of mobile transactions are rising so quickly that they would be out-of-date before this report is published. It is sufficient to note that with very few exceptions, the mobile customer is relevant to every organisation, in every vertical market, in every geography of the world.

The rapidly decreasing cost of mobile bandwidth, coupled with the huge improvements in mobile networks (e.g. 4G) means 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.

49% of respondents state that more than half of the calls made to their operation are done through mobile phones rather than landlines, offering huge potential for value-add services such as video, visual IVR and other mobile-related functionality.

Figure 136: Customer use of mobile telephony to call a contact centre



Research shows that 91% of customers who have a poor experience with shopping on a mobile site will abandon it: some may intend to return via a PC, but many others will search elsewhere: there is no differentiation or allowances made for sub-optimal mobile web experiences. Furthermore, most businesses are currently failing in this attempt, with the mobile channel lagging way behind online websites and bricks-and-mortar shops. Offering a mobile customer experience tends to mean offering a smartphone app and/or a mobile version of a website, and the next section of the report looks at what this means for businesses and customers.

MOBILE WEBSITES

A mobile website differs from simply accessing a full website via a mobile browser, rather offering a mobile-optimised alternative which is easier to use and overcomes some of the constraints around using a smartphone to access the web, such as tiny fonts, excessive scrolling and difficult-to-press buttons.

Mobile websites usually do not try to offer every single item available on the full website, but focus upon the information and processes that most users will want in order to act or make a decision. Ease of use is vital: text must be fully displayed on screen, buttons must be clickable and businesses have had to consider minimising the use of graphics to achieve quicker load times in areas with poor mobile data services, although this is becoming less of an issue as 4G and cheaper data becomes more widespread.

Bearing in mind that a mobile site generally cannot support every type of interaction that a customer may want, businesses may consider that allowing mobile users to access the main website is a good idea. Contact details should be clear, and offering a seamless route from self-service into supported service, via email, web chat or telephony is very desirable.

It is beneficial for businesses to understand why customers are using a mobile site rather than waiting until they are in front of a PC: 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 PC, 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.

Smartphone platform market shares show that Android and iOS shipments account for almost all of the market[16], so businesses could decide to produce only two flavours of app, which would actually support the vast majority of the smartphone market.

A native application developed for a mobile device can use some of the device's capabilities to enhance the customer experience. For example, a smartphone app can prompt drivers at the scene of a car accident to provide and capture the correct information, including photos. Such an app could also use GPS to give the exact location of the accident for use by the insurance company.

Industry estimates for building an app vary considerably depending on what they are trying to do, but many sources indicate that a cost of £20,000 upwards (per platform) is very feasible. The cost of developing a mobile website is less, and only needs to be done once. Whether an app is suitable for a company depends on their budget, and their customer base. It may be that the superior branding associated with apps is seen as being well worth the expense, even before factors like increased sales conversion rates are taken into account.

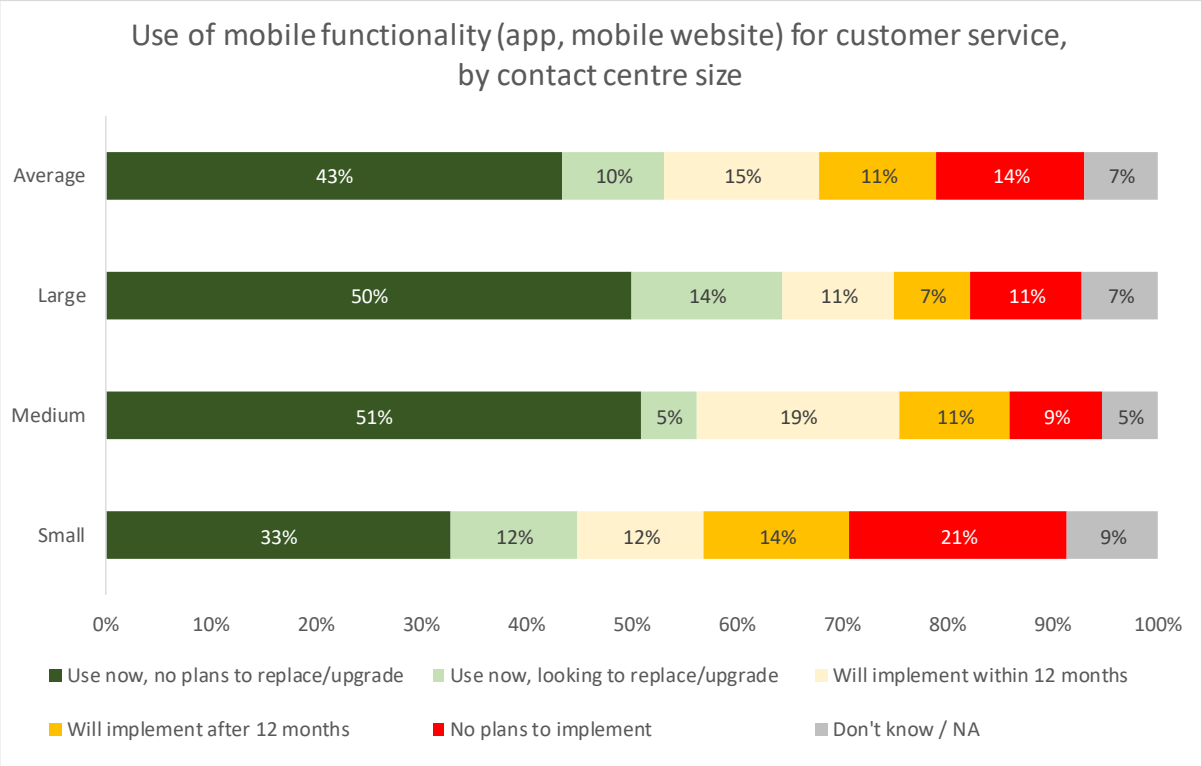
[16] https://www.idc.com/getdoc.jsp?containerId=prUS43010517

USE OF MOBILE SERVICE FUNCTIONALITY

53% of this year's survey respondents stated that they offer mobile functionality for customer service, with a further 26% having definite plans to doing so, figures which continue to grow each year.

Respondents from large operations are somewhat more likely than others to be looking to upgrade their functionality.

Figure 137: Use of mobile functionality (app, mobile website) for customer service, by contact centre size



Of the respondents which provide mobile customer service, over 80% offer a mobile version of their website, for example by having the most popular elements available, speedy load times, optimised graphics, improved readability and scrolling, etc.

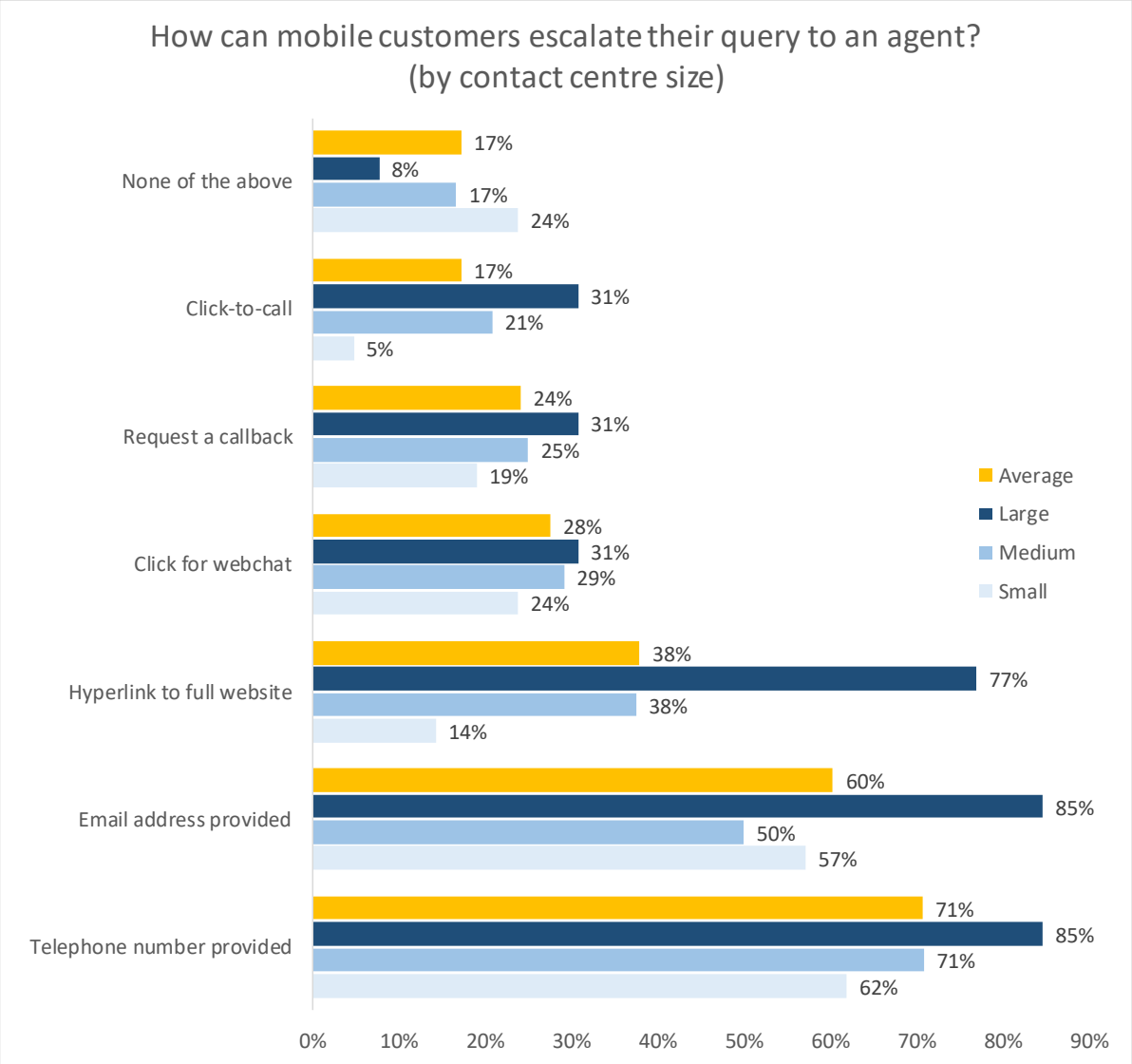
Around half of respondents offered a smartphone app for service, with larger respondents much more likely to be doing so. However, only 25% offer the same mobile support for sales, with larger operations again being more likely to try to win new business through investing in an app.

CROSS-CHANNEL ESCALATION

If the customer tries to use a mobile app or website but cannot successfully do what they want to, in many cases they will be forced to initiate a service request via another channel, such as email or phone, which will be treated by the business as a separate request without any understanding of the history, activity or effort that the customer has already undertaken. No business where this occurs can describe itself as being 'omnichannel'.

Gathering, understanding and using the contextual data that can surround the mobile consumer will be key to pushing the uptake and functionality of this channel forward. The plethora of channels immediately available to the mobile consumer - including voice, web browsing, SMS, social media, and web chat - encourages the customer to act immediately for all their service or information requirements, rather than waiting until they are in front of a desktop computer. In cases where the user needs to pass through security - and also where other reasons mean that the customer cannot complete their interaction solely through mobile browsing or using an app - businesses should consider how they will keep the customer or prospect engaged with the business.

Figure 138: How can mobile customers escalate their query to an agent? (by contact centre size)



The easiest way to support cross-channel contact is to offer a telephone number on the mobile website or inside the app, and 71% of respondents do so. 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.

24% of respondents using the mobile channel state that they offer scheduled 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.

28% of respondents offered a web chat option within the mobile site or app, this being the channel most closely resembling the activity the user is already undertaking (i.e. using the mobile device to look for information, and typing rather than speaking). Web chat is more immediate than email, and offers a chance to move between self-service and assisted service seamlessly, with the agent being able to push links and video to the user in real-time. The difficulty in typing on a smartphone screen means that this is still not a perfect solution.

A significant minority of respondents state that upon escalation, an agent is provided with some information about the customer, most often only the customer's name, rather than anything more closely linked and relevant to what the customer was trying to do, their account details, or where they are currently located. As such, this means an escalation from the mobile channel will rarely provide a quicker customer experience (for example, by jumping a call queue or by having details of the mobile session already undertaken screen-popped onto the agent's desktop).

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 centre.
- Geographical information: smartphones are GPS-enabled, allowing agents to see where customers are, and to direct them to the nearest store, for example.
- Historical activity: if the customer has been browsing a mobile website or app beforehand, the information that the customer browsed previously may be useful for the contact centre agent to have to hand, in order to see and understand what the customer has already tried to do.
- Stored data: the mobile device may have data stored that identifies the customer, such as account number, that can speed up the interaction and make it more effective.
- Collected information: the mobile device may also be used to capture and share information with the business such as photographs or videos. It may be possible to automate a two-way interaction: for example, a customer may use their mobile phone to scan a QR (quick response) code on a product. Using the information on the code, as well as the customer's input into the app about what they are trying to do, the customer may be directed to the correct place within business's self-service function in order to solve the issue that they have. This can take the contact centre out of the equation altogether, resulting in reduced costs for the business and a quicker and more effective customer experience.

ONGOING DEVELOPMENTS IN MOBILE

Solution providers are keen to offer technology that ties the mobile channel in more tightly with the existing voice and data customer support channels, providing a single integrated user experience regardless of initial channel choice and any cross-channel movement by the customer. One of the key ways to do this is to offer live agent support more easily (for example, through clicking an icon within an app), which provides a context-relevant, geographically-supported and personalised customer experience. The movement between self-service and live service is currently very difficult for many customers - it is certainly not seamless - and actually may involve abandoning the mobile channel entirely as a failure in order to start afresh with another channel. As the customer has chosen originally to use a mobile channel, even a successful outcome with another channel will risk leaving the customer dissatisfied with the company, and less likely to use the mobile channel in future. There is also the danger that because the organisation is unaware that a failed mobile session has been the root cause of a live contact, it will underestimate the reality of cross-channel interaction failures.

On moving from self-service to assisted service, mobile service applications should gather the browsing history, customer information and the context of the session in order to pass this to a live agent. Smartphones are enabled with GPS tracking, so businesses should look to leverage this capability to deliver better customer experiences where possible. In fact, the inherent capabilities of the mobile device offer businesses huge opportunities to impress their customers, including location-specific information, such as local broadband outages, or the ability to leverage photo-taking functionality on the phone to provide the agent with a clearer picture of the situation (which may be particularly useful for insurance claims, for example).

SMS and outbound calling also offer opportunities for businesses to deliver proactive customer service through the mobile channel, creating a positive attitude. Furthermore, location-specific device information also allows businesses to deliver timely service and relevant marketing messages which can be positives for the customer at that specific place and time.

It is not just the customer interaction points that will become more integrated. Brick-and-mortar stores are also becoming more integrated with their digital component, in order to provide correct inventory levels at store- and company-wide levels, thus matching the capabilities of their dot-com competitors while being able to take advantage of being able to provide in-store services to customers.

Like any technology, application or channel, mobile service has to be seen to pay its way. Quite apart from the importance of fulfilling a customer demand, there are numerous elements to consider when looking at return on investment:

- Call avoidance due to increased use of self-service, although the difference made to the number of IVR sessions should be taken into account: customers may simply be swapping one self-service method for another, rather than avoiding expensive live calls
- Increasing the accuracy of routing by leveraging mobile and customer data means that calls are more likely to go to an agent that can resolve them first-time, impacting positively upon first-contact resolution, call transfer rates, average handle time and customer satisfaction
- Decreased call handling time in cases where mobile browsing information and other contextual data is passed to an agent, enabling them to reduce effort duplication
- Improved customer satisfaction, and decreased customer effort is likely to lead to improved loyalty, revenue and customer advocacy
- Contextual information, such as geographical location, enables greater cross-selling and up-selling opportunities based on improved knowledge about the customer and their circumstances.

WEB RTC & VIDEO

While not a channel in itself, WebRTC (Web Real Time Communications) is an API definition that supports browser-to-browser applications for voice calling, video chat, and P2P file sharing without the need of either internal or external plugins[17].

The announcement[18] that Apple would support WebRTC within its WebKit engine that runs the Safari browser is a major step forward for next-generation customer support, enabling voice, video and collaborative communications directly from a website without the need for additional software. While mainstream use of click-to-video has been a very long time coming, WebRTC offers the opportunity to businesses to engage customers face-to-face where appropriate, offering the browsing customer a route straight into the contact centre without any breaking of channel or extra effort.

WebRTC allows customers to start a video or voice call from the web browser (which may be via a desktop computer or smartphone, perhaps as an escalation from an existing web chat session), which means the organization's website can then offer video or voice contact centre functionality in a seamless manner, with customers able to request live communication with the business without the need to download specific software or seek out the phone number and break off from what they are doing on the website. Two-way video communication is likely to be of more interest to mobile users, as their smartphone device already comes enabled with a camera and microphone, unlike many desktop computers which may not have this functionality or whose users have it disabled. One-way video, to protect users' privacy, is perhaps a more likely option in many instances, as is click-to-call.

Video agents as a step towards more personalized, high-quality customer contact. The customer will be able to see to whom they are talking, through a multimedia PC or mobile device, assuming the broadband requirements are met.

[17] https://en.wikipedia.org/wiki/WebRTC
[18] https://webrtc.ventures/2017/06/webrtc-support-in-safari-11/

There are a number of cultural and business issues to consider:

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

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.

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Artificial intelligence (AI) is a wide-ranging term for technology solutions which appears to emulate human cognitive capabilities through the 'understanding' of complex, natural language requirements, in order to reach its own conclusions and develop itself based on what works and what doesn't. Machine learning refers to the ability of software to evolve based on measuring its performance and success, without input from humans.

Within the customer contact space, there is a great deal of interest in how AI can work to deliver a superior customer experience at every hour of the day, across channels, leveraging the vast amounts of data that are available to many large organisations. Supported by the speed and availability of affordable processing power, and the enormous amount of structured and unstructured data available, the opportunity exists for AI to take customer contact far beyond what is feasible now.

Although we are at the beginning of the AI revolution, there are already numerous well-known examples widely used by the public, including Amazon's Alexa and Apple's Siri. These virtual assistants 'understand' unstructured natural language requests and deliver the solutions in a manner similar to a live personal assistant.

AI for customer contact is currently best known for chatbots, a computer programme that runs automated tasks and simulates conversation with the customers. It may be given a human avatar and personality characteristics, and includes natural language processing, dialogue control, access to knowledge bases and a visual appearance that can change depending on who it is talking to, and the subject of the conversation. Chatbots are often found in the web chat channel, but the functionality can be used in any other digital channel, such as social media, email or even voice self-service.

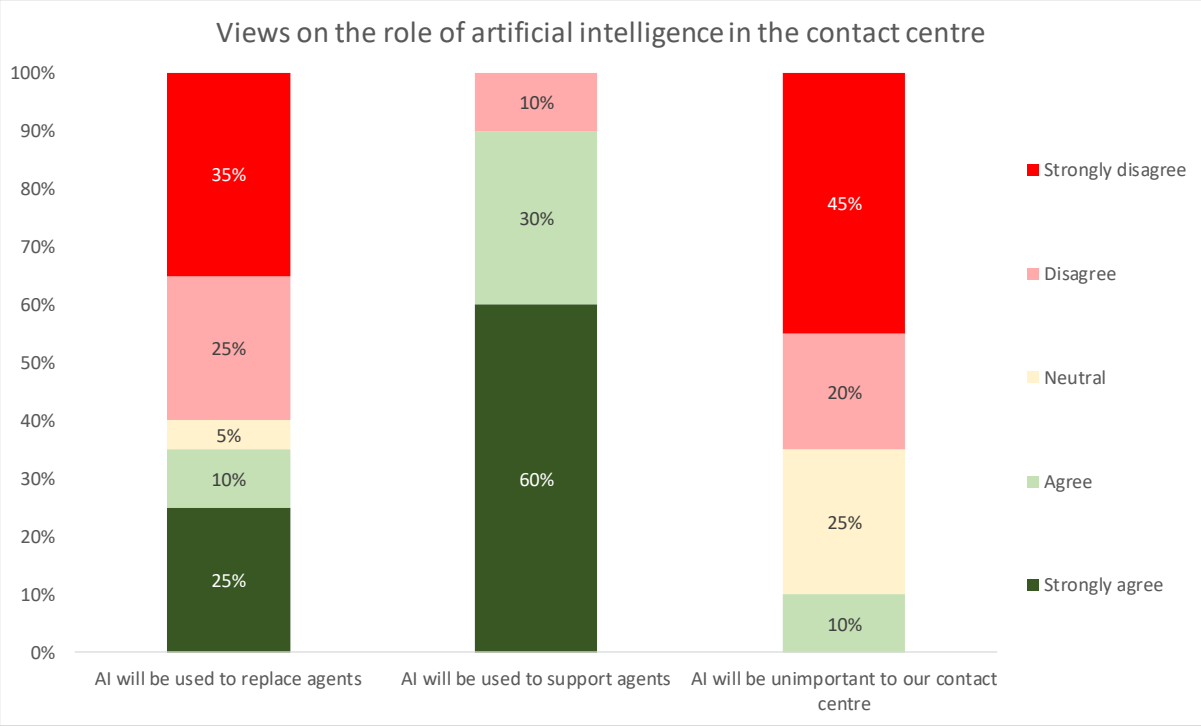
As AI can be given access to all of the relevant data a company holds on its customers, as well as unstructured data held elsewhere (for example, forums or social media channels), it has a far wider source of knowledge from which to draw compared to human agents. In theory, an AI with sufficient sophistication could make human agents all but unnecessary, but for the foreseeable future, AI looks mainly to be used to work alongside its human colleagues.

Survey respondents were very conflicted in the views as to whether AI would replace agents, with 25% strongly agreeing that this would be the case, with 35% strongly disagreeing. Half of the respondents from large 200+ seat contact centres felt that AI would replace human agents, with those in small and medium operations feeling that this would not be the case.

More unanimity was found when the question was asked as to whether AI would support human agents, with 90% agreeing or strongly agreeing. Large and medium operations were very likely to agree that this would be the case, and it seems the most likely outcome, reducing risk, speeding up responses and providing customers with higher quality resolutions.

65% disagreed or strongly disagreed that AI would be irrelevant to their contact centre, with those feeling that this would be the case exclusively came from small, sub-50 seat operations.

Figure 139: Views on the role of artificial intelligence in the contact centre

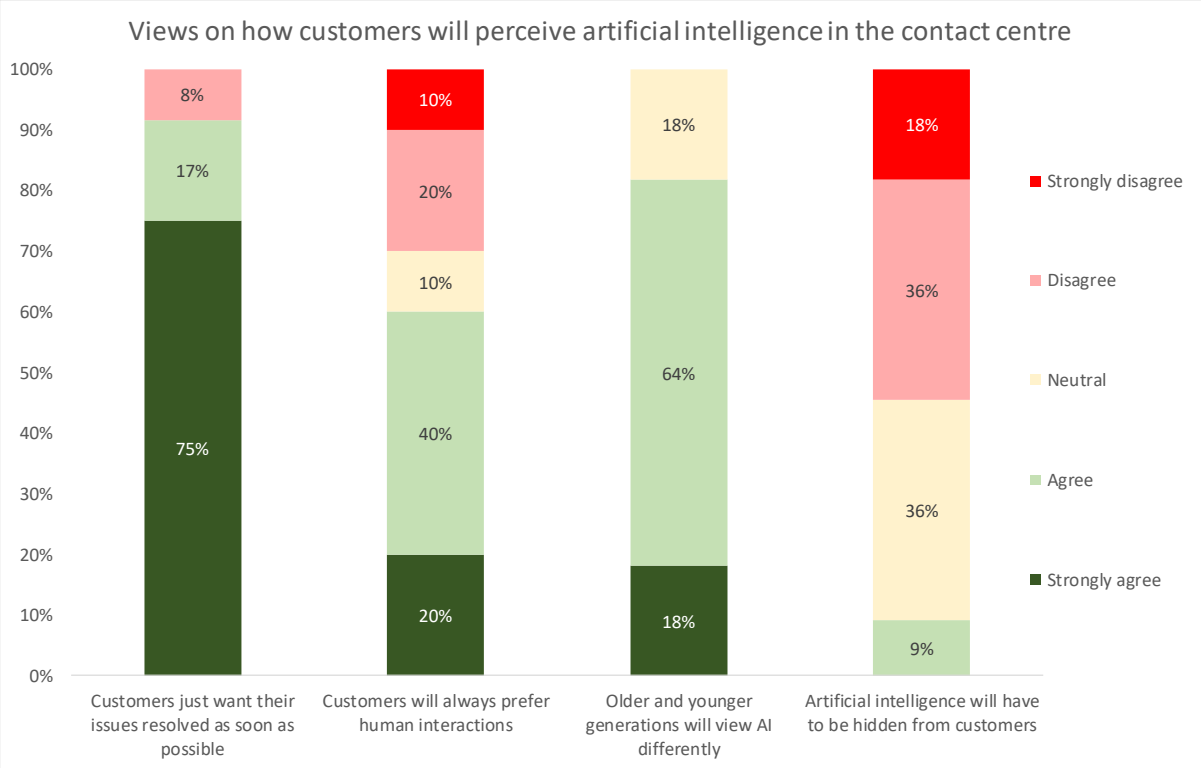


There was a widespread belief that customers would not have a problem with AI if it helped them to resolve their issue as quickly and easily as possible. The uptake in web self-service suggests that customers will accept non-human assistance if it is most convenient for them, although there was something of a disagreement between small and large operations: the former were more likely to think that customers would prefer human interactions, whereas those in large contact centres felt that customers would not be too concerned about being served by AI.

There was however a general agreement that older generations would take a lot more persuasion to be happy with AI compared to a younger generation that is already used to dealing with AI in their everyday life (e.g. through smartphones or other virtual assistants in the home).

There was also a widespread feeling that AI would not need to be hidden from customers.

Figure 140: Views on how customers will perceive artificial intelligence in the contact centre



AI FOR WEB CHAT AND EMAIL

Perhaps the most obvious potential use of AI in the customer contact environment is in handling digital enquiries, where the following charts show that web chats generally take far longer than phone calls (due to agent multitasking, and typing time) and that email response rates can still be measured in days.

Figure 141: Average length of a web chat

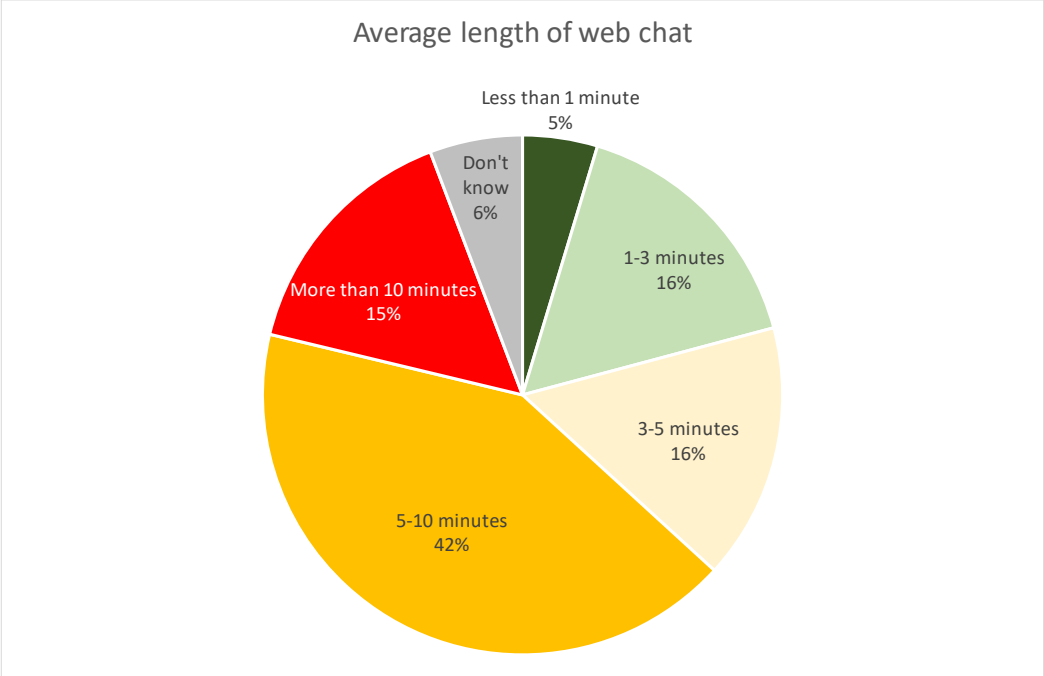
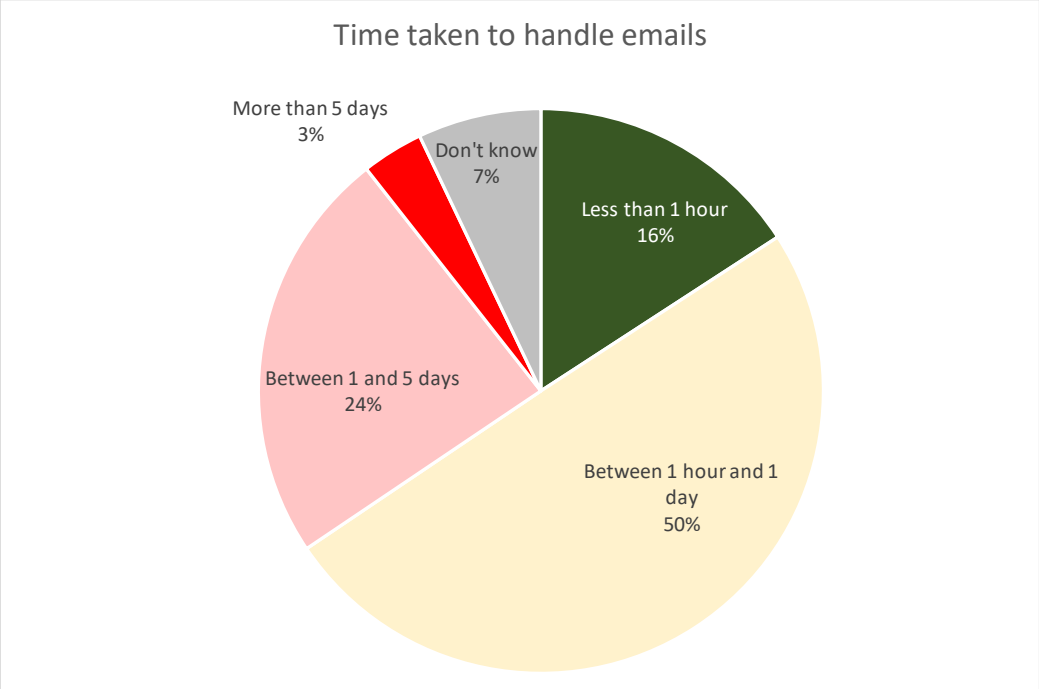
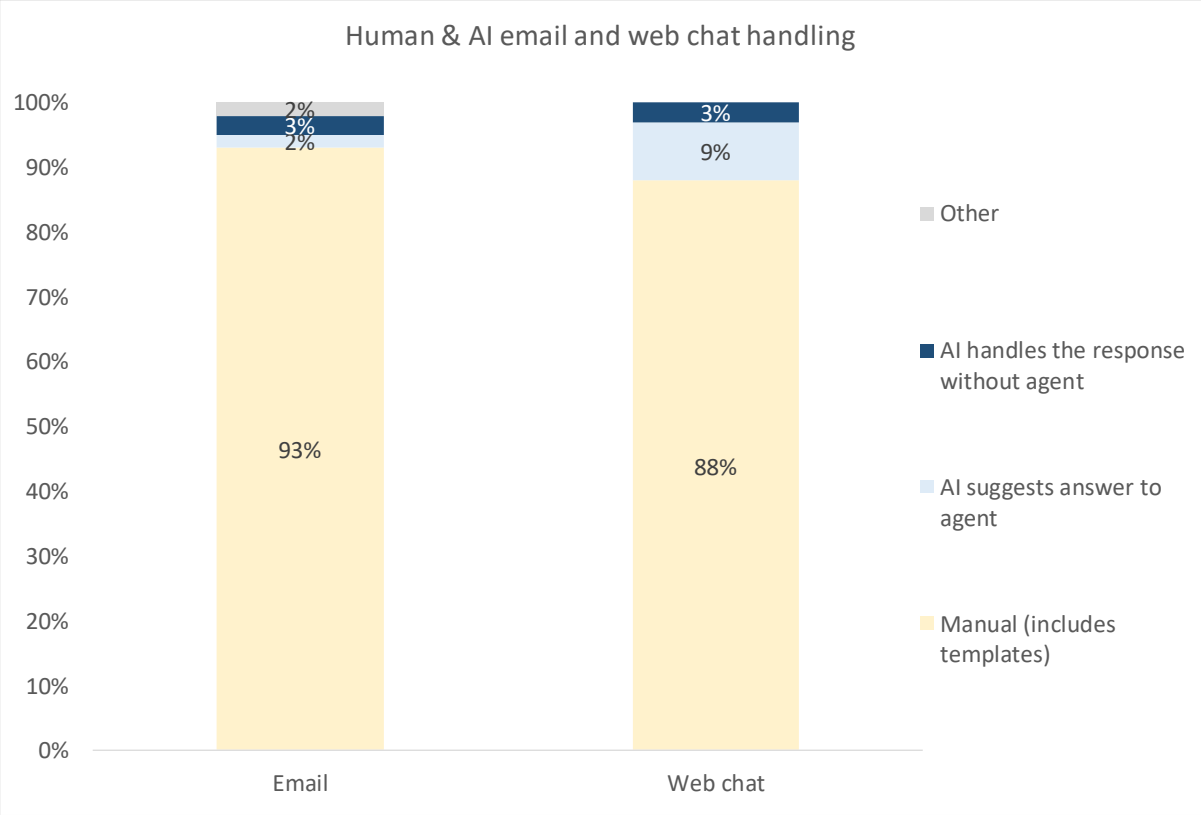


Figure 142: Time taken to handle emails



The main reason for this slow response rate and excessive length of web chats is that there is very little automation currently being used in the UK contact centre industry, which also means that the cost of an email or web chat is very similar to that of a phone call. Digital channels may work quite well for customers, but businesses are not generally seeing the cost savings that automation can bring. Very few emails or web chats are handled entirely by AI, although a growing proportion of web chats are dealt with by AIs working alongside agents, suggesting responses which agents can then accept or amend. This way of working is most likely to be the norm in the foreseeable future, with the speed of automation and the emotional intelligence of humans providing superior service at a lower cost.

Figure 143: Human and AI email and web chat handling



The Virtual Agent or chatbot may appear to a browsing website visitor to be a human agent, offering web chat. However, it is an automated piece of software which looks at keywords and attempts to answer the customer's request based on these, including sending relevant links, directing them to the correct part of the website or accessing the correct part of the knowledge base. If the virtual agent cannot answer the request successfully, it may then seamlessly route the interaction to a live web chat agent who will take over. It is possible that the browser will not even realise that any switch has been made between automated and live agent, particularly if the web chat application is sophisticated enough to pass the context and the history to the agent, although as seen previously, many businesses believe it is best practice to identify clearly between virtual and real agents.

Most virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyse and search for the answer which is deemed to be most suitable, returning this to the customer instantly. Many virtual agent applications will allow customers to give all sorts of information in any order, and either work with what it has been given, or ask the user for more detail about what they actually meant. Having been unconsciously trained over the years to provide their queries in a way which standard search functionality is more likely to be able to handle (for example, a couple of quite specific keywords), customers must be encouraged and educated to use natural language queries in order for virtual agents to be able to deliver to their full potential.

Sophisticated AI applications attempt to look for the actual intent behind the customer's question, trying to deliver a single correct answer (or at least a relatively small number of possible answers), rather than a list of dozens of potential answers contained in documents which may happen to contain some of the keywords that the customer has used. The virtual agent application may also try to exceed its brief by providing a list of related questions and answers to the original question, as it is well known that one question can lead to another. Solution providers and users train the system to pattern-match the right words or association of words with the correct result: the application, unlike older forms of web search techniques, does not simply guess what the customer wants, or how they will express themselves. Through 'listening' to what the customers actually say - perhaps through a mixture of large quantities of audio and text – the initial set-up configuration can achieve a good accuracy rate, which really benefits over time as a positive feedback loop is established. Solutions that gather and differentiate customer requests and results from multiple channels, noting the difference between them, have an even better success rate.

Virtual agent functionality 'understands' the context of what the customer is asking, with the result being more akin to that of an empathetic human who also has had access to what the customer has been trying to do. For example, if asked "When can I expect my delivery?", the context and the required answer will be different depending on whether the customer has placed an order and is enquiring about its status, or has only a hypothetical interest in turnaround times in case they decide to place an order.

When the virtual agent application has low confidence that it has returned the correct result, it is able to escalate the customers query seamlessly to a live chat agent, who then has access to the self-service session history, enabling a greater chance of a successful resolution without repetition. (It is generally considered best practice that escalations to real agents are not hidden from customers). The eventual correct response can be fed back to the automated virtual agent (and the knowledge base underlying it), which will make it more likely that future similar requests can be handled successfully through automated agents.

CURRENT AND FUTURE USE OF AI

Despite a low current use of AI across industries, there is widespread interest in implementing this solution, with 38% of respondents intending to use AI, especially in large operations and finance.

Figure 144: Use of AI / Machine Learning, by vertical market

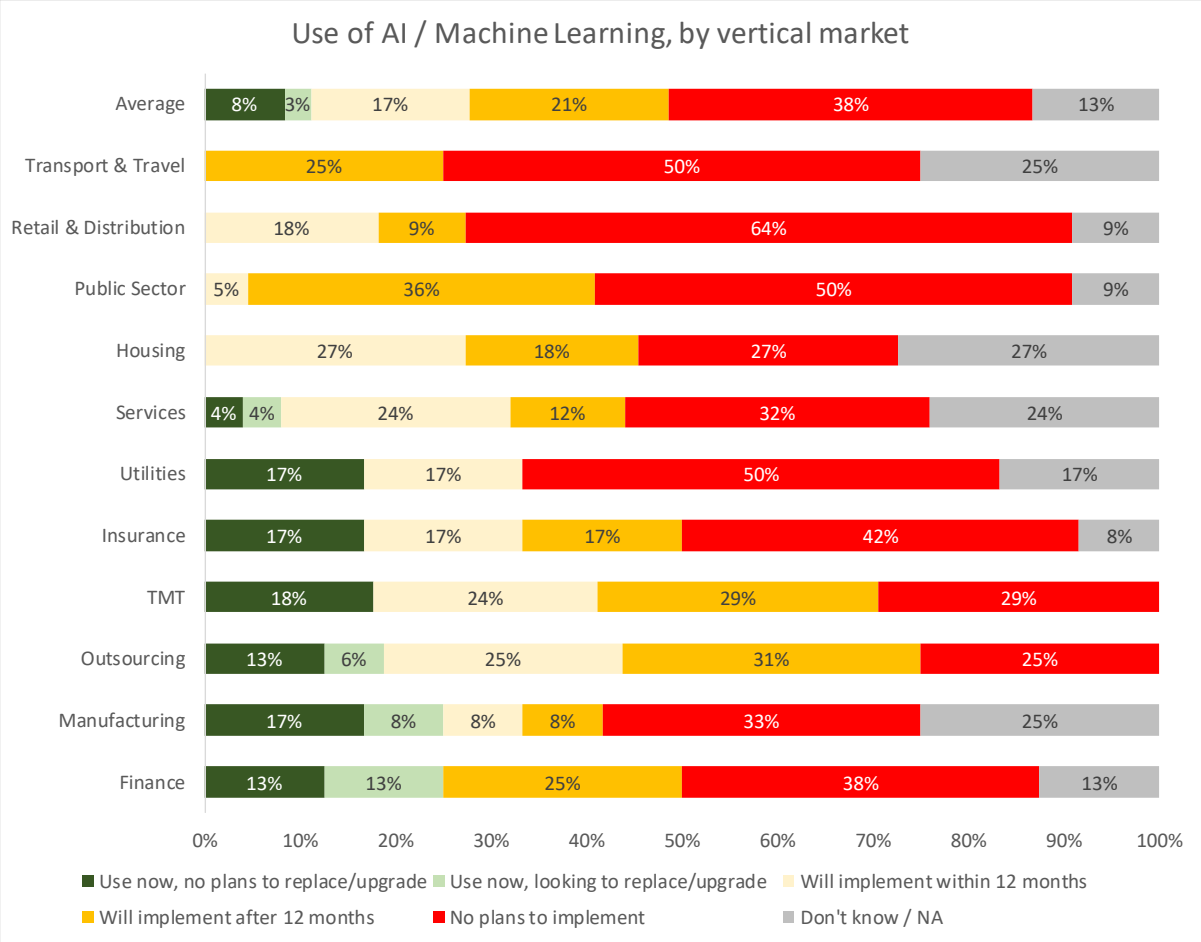
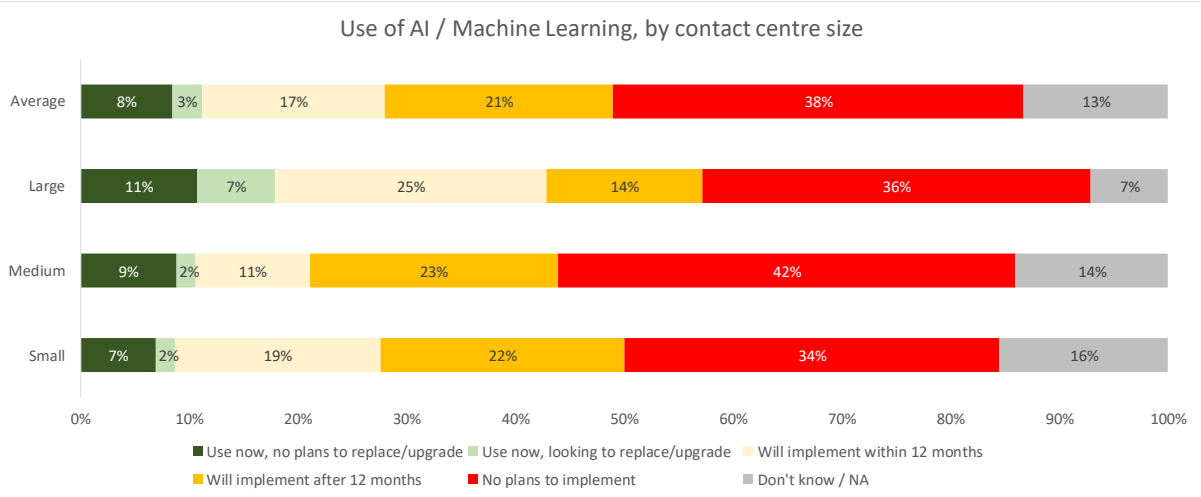


Figure 145: Use of AI / Machine Learning, by contact centre size



Potential uses of AI in the customer contact space include:

- Emails that look as though they have been written by a person rather than a machine, using natural language processing to write content, as well as understand it

- Tailor information based on the customer's history and behaviour for marketing as well as service, sending emails at a time when they have been calculated that they are most likely to be opened

- Increased opportunities for personalisation, as the full customer history can be checked in near real-time, with far more data practically available to the AI than would be for a human agent

- Machine learning will allow AI to go beyond simply what they have been programmed to do, seeking out new opportunities and delivering service beyond what has simply been asked of them

- Use of text analytics to assess not only data held within the company, but also in unstructured, third-party environments, such as social media, comments on websites and public forums, in order to learn and deliver proactive service before it is even requested

- Text analytics can also be used on inbound interactions such as emails, running an AI triage system to assess the priority and urgency of each request in order to handle these more effectively and in an appropriately timely manner

- Work alongside agents to provide relevant knowledge that may be otherwise take a long time to find, and update the knowledge bases available to humans and AI self-service systems using an automated feedback loop that is constantly improving based on actual outcomes

- Through understanding multiple customer journeys, AIs will be able to predict the next most-likely action of a customer in a particular situation, and proactively engage with them so as to avoid an unnecessary inbound interaction, providing a higher level of customer experience and reducing cost to serve.

Businesses' interactions with customers will become a highly-polarised mixture of the automated and the personalised. Moving a large proportion of interactions onto self-service works for businesses, and is increasingly popular with a customer base that is becoming more sophisticated and demanding in what it expects from self-service. AI takes this a step beyond, offering personalised service without the need for a human agent in some cases.

We can expect to see personal technology applications seeking out the best deals on offer, or interacting with a business on behalf of customers without involving the customer at all. This leads to the conclusion that many customer-agent interactions will be exceptional, such as a complaint, an urgent or complex issue or a technical query that an FAQ or customer community couldn't solve. It is also likely that whole segments of the customer base who don't want automation at all will be handled directly by live agents in many cases.

Many self-service scenarios suggest a world in which customers speak directly to 'intelligent' systems, but an e2e world is becoming more possible, in which systems talk to systems. The customer will delegate many of their business interactions to a pseudo-intelligent device, which will store information such as personal preferences, financial details and individuals' physical profiles. Customers will instruct the device to research the best deals for products and services, and to come back to the device's owner with the best selection. The personal AI would 'call' the relevant contact centre (which could in fact be either a AI or possibly a live agent in some cases) and even purchase the best deal without having to involve the owner in any way. The same principle applies to customer service: using the 'Internet of things' means that, for example, utilities meters would send their own readings to suppliers on request, and a manufacturer can detect when a part on an appliance is about to fail, and organise a replacement part and engineer visit with the customer's permission.

CLOUD-BASED CONTACT CENTRE SOLUTIONS

The modern contact centre has a multitude of applications supporting it, with hardware, middleware and networking equipment around and inside it. The traditional method of deploying these resources has been on a CPE (customer premise equipment) basis, with the business's IT resource implementing and maintaining it. Now, the vast majority of this equipment, functionality and supporting resource is available in a third-party hosted environment, through one of the various types of cloud-based delivery.

'Cloud' is the delivery of computing and storage capacity as a service to different business, organisations and individuals over a network. It can be said to consist of Infrastructure as a Service (IaaS) - servers and storage space, Platform as a Service (PaaS) - operating systems and web servers, and Software as a Service (SaaS) - the functionality of software available on demand without the need to own or maintain it. The cloud is characterized by huge scalability and flexibility, (often, but not always) shared resources, a utilities approach to billing (pay for what you use, for example) and an abstraction of obvious on-site infrastructure.

There are various deployment models:

- Public cloud: applications, storage, and other resources are made available by a service provider, often offered on a pay-per-use model. Public cloud service providers own and operate the infrastructure and offer access via the Internet

- Private cloud: infrastructure operated solely for a single organisation, whether managed internally or by a third-party and hosted internally or externally. They require management by the organisation or a third-party

- Virtual private cloud: a deployment model that pulls in public cloud infrastructure-as-a-service (IaaS) while running the application on premise or in a private cloud, in order to improve disaster recovery, flexibility and scalability and to benefit from Opex-based costing while avoiding expensive hardware purchases

- Community cloud shares infrastructure between several organisations from a specific community with common concerns (security, compliance, jurisdiction, etc.), whether managed internally or by a third-party. The costs are spread over fewer users than a public cloud (but more than a private cloud), so do not gain as much from cost reductions

- Hybrid cloud is a composition of two or more clouds (private, community, public or a linked cloud/CPE solution) that remain unique entities but are bound together, offering the benefits of multiple deployment models. By utilising "hybrid cloud" architecture, companies and individuals are able to obtain degrees of fault tolerance combined with locally immediate usability without dependency on internet connectivity. Hybrid Cloud architecture requires both on-premises resources and off-site (remote) server-based cloud infrastructure.

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 centre? Cloud offers contact centres a way forward without relying on capital investment:

- Businesses can scale down future customer premises equipment (CPE) investment, with a resulting decrease in capital expenditure
- Services are bought using a per-concurrent-user or even per-hour pricing model, which helps to keep operating expenses manageable and controllable
- Outright purchase of equipment isn't for everyone, perhaps for reasons of budget or the ability to maintain the systems
- There is the opportunity to scale up quickly as demand dictates, without purchasing lots of redundant licenses or the hardware to support them
- Low-risk ability to start up, move, expand or trial new functionality without changing existing business plans or budgets
- Business retain the freedom to downscale, change targets and react to meet demand, rather than commit themselves to long-term arrangements needed to justify CPE investments.

Flexibility & Agility: how can cloud-based solutions help businesses with changing interaction volumes and distributed operations?

- Reduced need for IT support and implementation: having hardware and software based in the cloud means that ongoing system maintenance is significantly reduced, as it is the cloud provider's job to do this
- Larger pool of agents to choose from: cloud enables advanced features to be deployed across sites without complex and possibly unreliable call flows, while offering disaster recovery and risk minimisation. For example, queueing interactions in the cloud allows for the searching and identification of relevant agents based on skill and requirements before the call is routed
- Short-term scalability: cloud offers great flexibility in adding or shedding agents and user licenses, of particular relevance to businesses which have substantial changes in call volumes over a year (such as the seasonality experienced by healthcare providers in the US, retailers and travel agents), or which have to react quickly to handle event-driven call spikes (e.g. an emergency weather situation affecting utilities companies).

Functionality: what is the effect of cloud-based solutions on the functionality available to the contact centre?

- Trial new applications quickly using a low-risk pilot: using a pay-per-use model allows businesses to start a contact centre or move at low risk or increase for a temporary campaign or try out new functionality without having to spend excessive amounts of time and money first
- Future-proof the contact centre: a competitive, open cloud environment should mean that vendors will be motivated to innovate and provide better service, enhancing and developing their services ahead of the mainstream market.

Security: does Cloud bring a greater risk to security, or the opposite? Organisations should expect that data should be at least as secure in a third-party environment that is dedicated solely to providing a high-quality cloud-based service, as this is one of the factors by which the solution provider will succeed or fail.

Potential cloud clients should look for:

- multiple levels of firewall protection
- continuous intruder detection systems
- a two-person rule for changes to code or hardware
- frequent scheduled password changes
- external testing and audit trails
- data encryption used both in storage and in transit, under the control of the user
- additional layers of user authentication and privilege
- vetting of employees with access to sensitive information or hardware
- internal traffic and server monitoring.

Control: can a cloud contact centre change how it operates quickly enough?

- Control, visibility and reporting: loss of control is of as much concern to some businesses as fears over integration. A service provider may not be as responsive as an in-house team, and it may take hours or even days to make changes to the system, so service level agreements should include agreed response times

- Cultural considerations: making the move to cloud is seen as a far bigger proposition than deciding whether to implement or replace a particular contact centre application such as call recording or workforce management. However, many vendors offer options for customers to keep what they feel that they need on-site - for example call recordings and sensitive data - while moving offsite the elements of the contact centre solution that businesses are most comfortable with outsourcing.

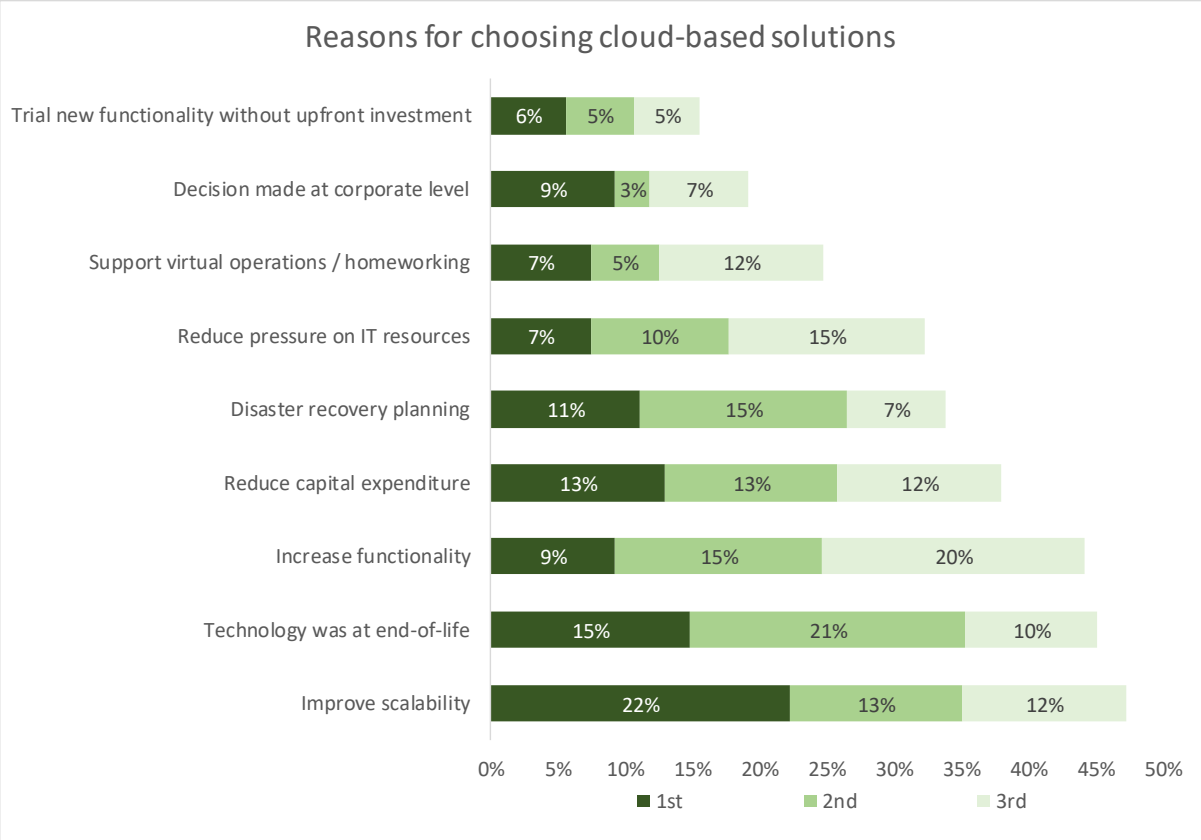
Integration & Customisation: while out-of-the-box functionality can be quick and cheap enough to get things moving, what if businesses need more a personalised approach? Being able to continue using relevant existing CPE systems, and access databases and back-office systems is a minimum requirement for all businesses considering cloud-based solutions. Some solution providers note that the private cloud option is becoming more popular, where a third party is responsible for the management of dedicated infrastructure, especially in environments which require complex integration and customisation.

Performance & Reliability: how does cloud affect the contact centre's ability to deliver its service? Service providers will test their systems on an ongoing basis, and a few will even guarantee their availability to 99.999% (the '5 9s target of carrier-grade availability), backed by penalties if they do not achieve this. This level of reliability is the standard for very large contact centres which have paid significantly for this in a CPE environment, but is likely to be an improvement on what SMEs are used to, with their much smaller budgets.

The following figure shows that there is no single overarching reason to move to cloud, as much depends on the nature of the business and contact centre environment.

The ability to reduce upfront investment has historically been seen by respondents as the most important primary reason to move to the cloud, but increasing functionality and scalability are placed as a top 3 reason by over 40% of respondents, with technology end-of-life also being viewed as a major factor.

Figure 146: Reasons for choosing cloud-based solutions



The real finding to take from the chart above is that there are not simply one or two reasons to move to cloud: there are considerable financial, operational and technical advantages for many organisations to do so.

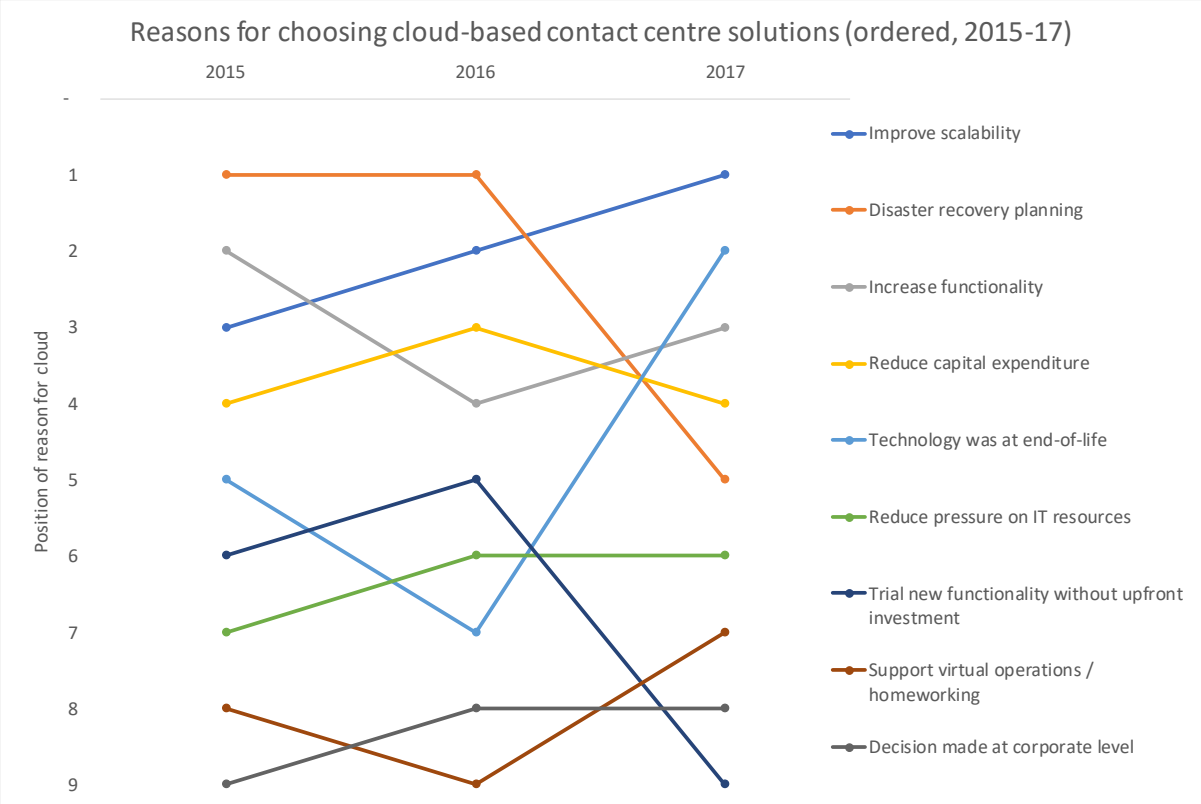
The next chart shows how the importance of these factors has changed.

Over the past three years, survey respondents were asked how important each of the nine reasons below was for choosing cloud-based contact centre solutions. In order to understand the changing view of the industry, these data were aggregated and ordered from 1 to 9 (where 1 is the most important and 9 is the least important), and are shown in the chart below.

Although we only have three years of data, some patterns are starting to emerge:

- the importance of scalability increases year on year, rising from 3rd place in 2015 to 1st place this year
- although disaster recovery was rated as the most important reason for choosing cloud in 2015 and 2016, it dropped to 5th place in 2017. Future years will determine whether this is a significant change in the importance of this factor, or simply a one-off
- a reduction in capital expenditure - often stated as one of the major reasons to move towards cloud - has been in either third or fourth place in each of the years studied. This implies that while it is important, it is perhaps not the most vital reason to move to cloud
- as time moves on, we may expect to see decisions on cloud being driven by the fact that existing technologies approaching end-of-life. The big jump in importance of this reason from 2016 to 2017 may signal obsolescent technology is driving people's decisions around cloud.

Figure 147: Reasons for choosing cloud-based solutions (ordered, 2015-17)



Most cloud contact centre solutions only require agents to have a standard telephone/USB headset and an Internet connection from their desktop. Some cloud-based solution providers require software to be downloaded upon the agent desktop, whereas others need only a standard Internet browser.

Security

There are various accreditations and certifications used by providers of cloud-based solutions, some aimed at demonstrating the security of the datacentre (whether physical or virtual security) including ISAE 3402 or SSAE 18 in North America. Others focus on the process of processing payment card data (PCI DSS), whereas others are around information security controls (ISO/IEC 27000 family). Other interested parties include the Cloud Security Alliance, a not-for-profit organisation with a mission to promote the use of best practices for providing security assurance within cloud computing as a whole. Potential customers should look for independent third-party accreditation, proof of investment above and beyond the minimum required by regulation and regular penetration testing.

The solution providers interviewed for this report were confident that the dedicated security procedures and architecture in place within their solutions were likely to exceed those found in their clients' previous contact centre operations, having full-time dedicated security resources and a vested interest in keeping client data safe. A security breach for in-house contact centre is damaging and embarrassing; for a cloud provider to suffer a similar failure would impact very severely on their credibility and the very future of the company. However, security should not be left simply to the solution provider.

Solution providers note that while security concerns are still very much to the forefront of the conversation, the questions that potential customers have are now far more sophisticated and realistically founded compared to a few years ago. There is a great desire across the entire business to ensure all security requirements are met, and much greater detail offered to the solution provider on what is actually needed.

Integration and customisation

Cloud vendors will keep APIs up-to-date, with screen-popping into a home-grown CRM system, look-up of call recordings in a CRM system, and sending reporting and recordings to a third-party application being mentioned as some of the more frequent integrations requested. Some providers have very close relationships with specific CRM vendors, and as a general maxim, cloud-based contact centre solutions can be seen to be following in the footsteps of cloud-based CRM.

Some customisation in existing operations may have come about as an ad-hoc 'work-around' that has over time become the way in which things are done. It is important to revisit the business processes that the technology is there to facilitate, to see if there are easier ways to achieve this rather than reproducing the same method in a cloud-based environment. Concerns over customisation are frequently cited as a major inhibitor to moving to cloud.

Functionality

Solution providers state that moving from a premise-based deployment to the cloud should not reduce the functionality available to users. Potential cloud users are responsible for carrying out an audit of all existing and required functionality, and how it relates to defined business processes, before asking solution providers to guarantee that any move to cloud will include the required depth of functionality. It is not enough simply to accept that solution providers have 'workforce management' or 'outbound' capabilities. There is a great deal of upgrading and increased sophistication happening in the cloud world, which in some cases is from quite basic functionality, so potential users should have a list of specific processes and functionality that any solution should be able to deliver, and make sure that the chosen solution can deliver that, as well as being able to view a product roadmap that is updated on a regular basis (e.g. quarterly), which will project expected functionality a least a year in advance, preferably more.

It is also important to understand the opportunities for scalability. Adding and shedding agents when required is one of the big advantages that cloud computing has over its premise-based equivalent, but potential users should put real-life scenarios in front of bidding suppliers to make sure that the required level of scalability is possible and that no hidden costs or nasty surprises are associated with it.

Reliability

Multi-location datacentres are ubiquitous amongst cloud providers, providing redundancy and disaster recovery as part of the deal. Stated levels of availability amongst cloud providers are typically 99.99% or higher, and most are backed with performance-related guarantees, with reimbursement of fees if targets are not met. While this is somewhat reassuring, it will do little to assuage the loss of revenue or customer goodwill if the cloud-based contact centre solution is unavailable for any amount of time. Potential clients should investigate the exact levels of redundancy built into solutions, including the use of alternative network providers and mirrored datacentres if the problem occurs outside the software providers' purview.

Solution providers note that quality of service testing is vital to ensure that contact centre network traffic and any associated data processing has sufficient guaranteed bandwidth. For operations using dynamic scripting, it is vital to ensure the fast and immediate reaction of input and response, and guaranteeing network quality of service should be high on the implementation priority list.

Cost

Most cloud solution providers operate a per-agent/per-month option to pricing, with a minimum number of logged-on agents per month being the baseline minimum cost. To this, the cost per minute of calls made or delivered should be added, although many providers will offer this as part of the package, to make fees more predictable. Additional costs for customisation and integration should also be investigated.

Suggested process for choosing a cloud-based provider

The selection of most IT solutions is normally carried out in a similar way, but some steps you may wish to consider for cloud-based solutions include:

- A selection team should be chosen with responsibility for all of the areas affected, including contact centre operations, IT, compliance, back-office, business operations and probably sales and marketing

- While bearing in mind the underlying business processes that the technology supports, select the specific technologies that are to be cloud-based, and also those bespoke applications that are to remain in-house, such as specific complex reports. Take the opportunity to consider 'ideal world' functionality as well

- Research the types of solution available in the market, and understand any actual differences between premise-based and cloud-based functionality. Provide vendors with specific instances of complex functionality and business processes required to meet your own particular requirements and challenge them to prove that they can be met. This should include all instances of existing back-office functionality that the solution needs to integrate with and where possible, a wish-list of functionality in the future

- Investigate publicly-available referenceable sites from cloud-based providers that are similar to your own requirements, and submit an RPF (request for proposal) to the long-list. Request a detailed product roadmap along with timescales in order to assess whether this solution will meet your demands along the line. You may wish to invite solution providers informally to demonstrate their product before offering an RFP. Potential clients should look closely at the vendor's financial position and backing to make sure that the quality of service and level of innovation can be maintained in the future, also that they have the technological expertise in-house to keep making these improvements

- Any response to an RFP should include service level agreements over availability, call delivery, voice quality, speed to make requested changes, support hours and availability, details of security and redundancy offered, prices for customisation, contract length options, implementation times, contract cancellation penalties and notice periods.

USE OF CLOUD SOLUTIONS

More than half of respondents from the retail & distribution, outsourcing and TMT vertical markets reported that they were currently using at least one cloud-based contact centre solution within their operations this year.

The housing and transport & travel respondents were least likely to be doing so.

Figure 148: Use of cloud-based contact centre solutions, by vertical market

Vertical market	Proportion of respondents using cloud-based contact centre solutions
Retail & Distribution	86%
Outsourcing	75%
TMT	58%
Manufacturing	44%
Finance	40%
Utilities	40%
Public Sector	36%
Services	33%
Insurance	30%
Transport & Travel	25%
Housing	13%
Average	44%

There is usually a slight positive correlation in the use of cloud-based contact centre solutions when looking at contact centre size, but this is getting less strong each year, showing that cloud is of interest to most operations.

Figure 149: Use of cloud-based contact centre solutions, by contact centre size

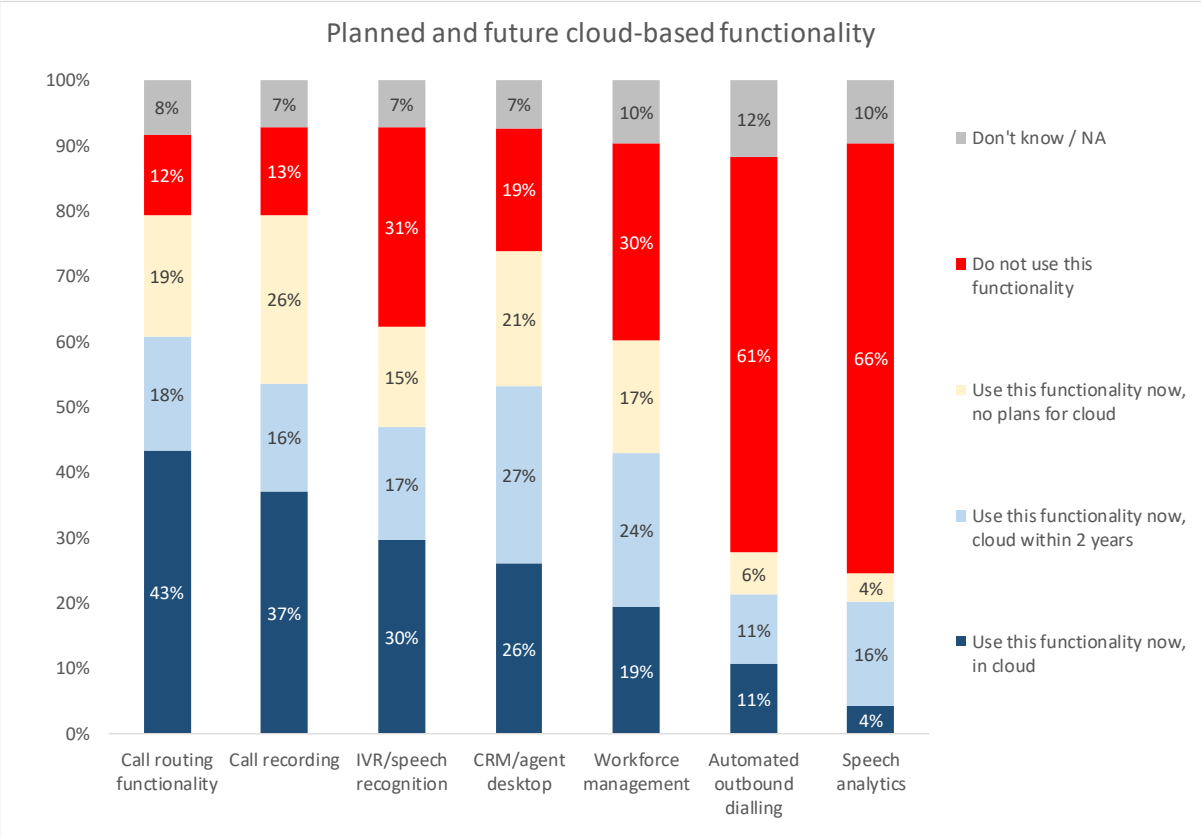
Contact centre size	Proportion of respondents using cloud-based contact centre solutions
Small	44%
Medium	43%
Large	47%
Average	44%

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

Call routing functionality is the most likely solution to be deployed through cloud-based solutions, with call recording, CRM/agent desktop, workforce management and IVR/speech recognition functionality also used in a significant minority of instances.

Respondents expect to see significant extra amounts of their functionality being delivered in the cloud by mid-2019. Respondents indicate that their cloud-based deployment of CRM, workforce management, speech analytics and outbound dialling will at least double within two years.

Figure 150: Planned and future cloud-based functionality

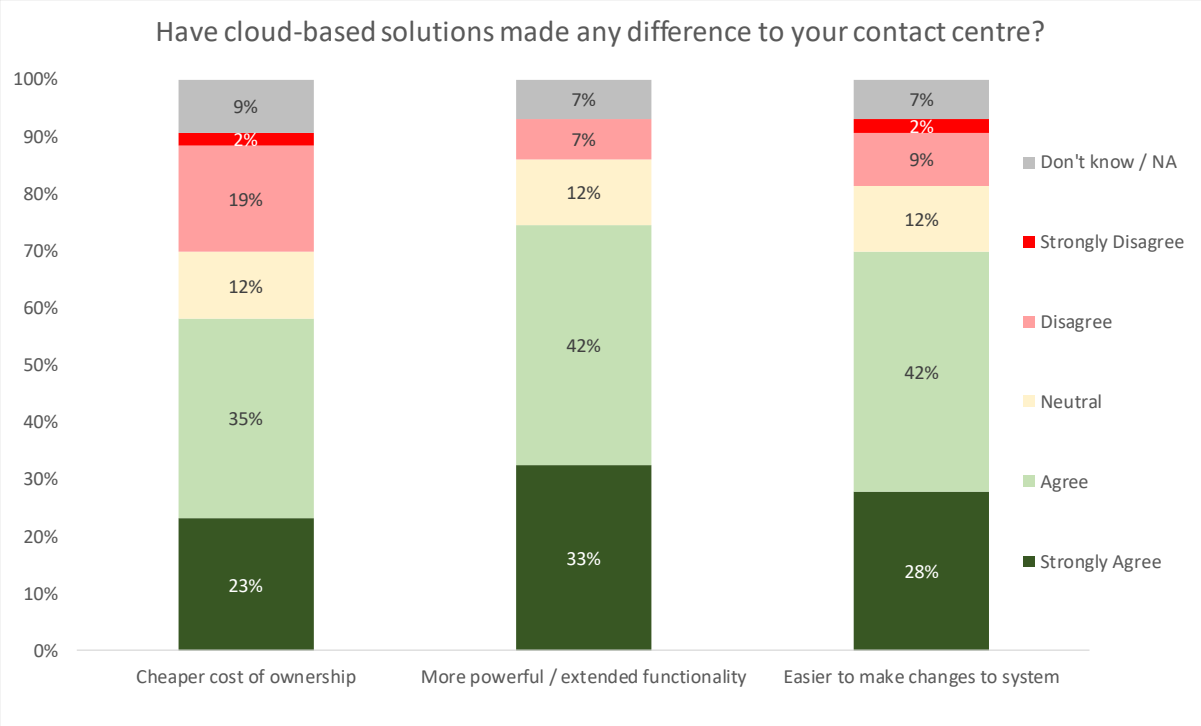


RESULTS OF USING CLOUD SOLUTIONS

Those contact centre respondents who have actually implemented a cloud or hosted solution have generally found that it has delivered significant advantages in most cases.

58% of respondents stated that cloud-based solutions had given a cheaper overall cost of ownership of their contact centre technology, although 21% disagreed, although usually not strongly. 75% experienced more powerful extended functionality in a cloud-based environment, with 7% disagreeing that this was the case. 70% of respondents stated that cloud made it easier to make changes to the system, with 11% disagreeing.

Figure 151: Have cloud-based solutions made any difference to your contact centre?

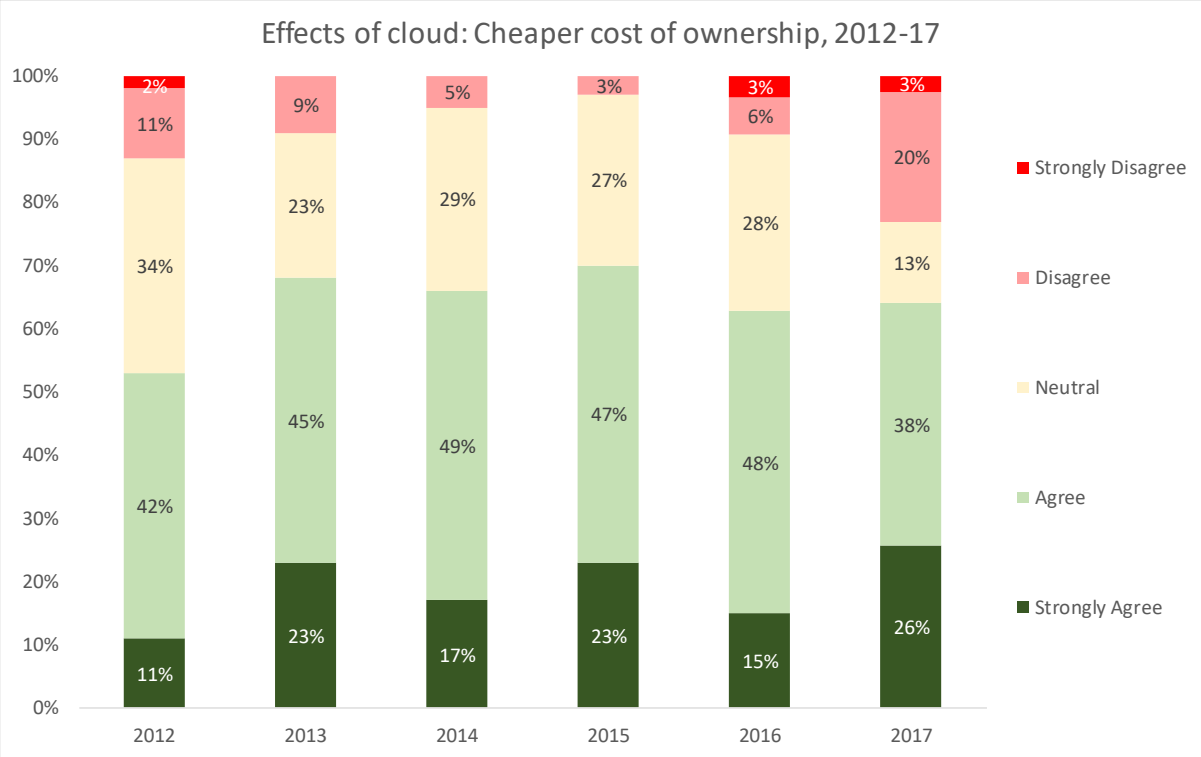


Despite different companies taking part in this research each year, the findings have been consistent for many years and readers can treat these with considerable confidence.

To show this, the following three charts show how each of these effects has been viewed by respondents over the past six years' surveys. (NB – As the option "Don't know" was not offered in all past surveys, these responses have been removed from the following three charts, and proportions recalculated).

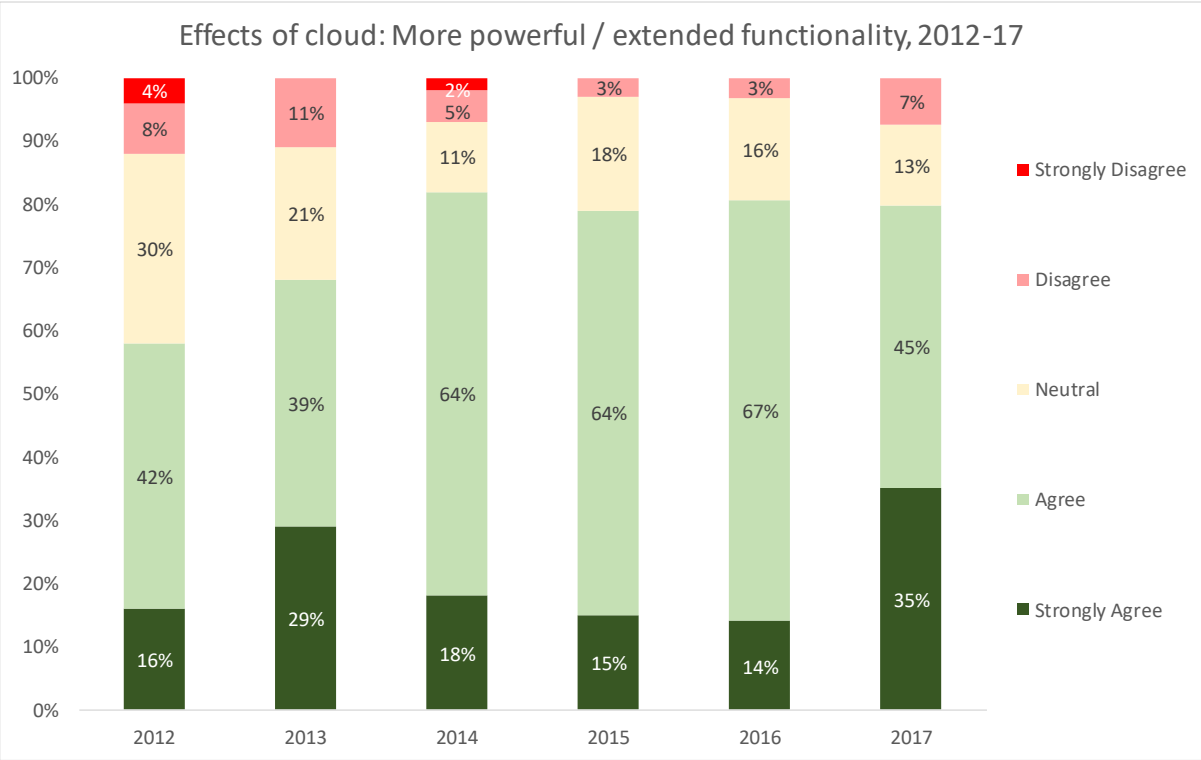
The belief that cloud offers a cheaper overall cost of ownership is fairly consistent, although the relatively high proportion of respondents in 2017 stating they disagree with this is something to track in the future. However, in all cases, there is a significant net feeling that cloud does decrease the cost of ownership.

Figure 152: Effects of cloud: Cheaper cost of ownership, 2012-17



Looking at the effects of cloud on functionality, there is a very strong feeling that this deployment model offers more powerful and extended functionality, which is especially shown to be the case in the past four years.

Figure 153: Effects of cloud: More powerful / extended functionality, 2012-17

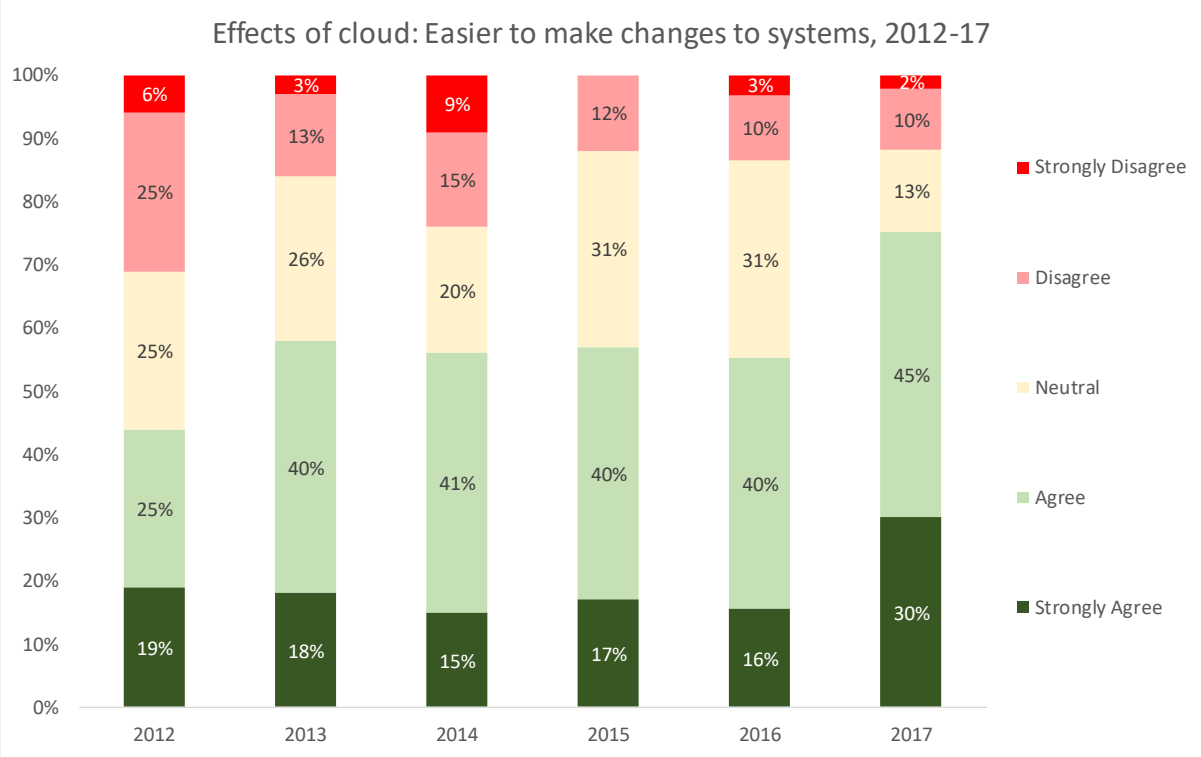


When the question about whether cloud made it easier to make changes to the system was originally asked in 2012, there was a significant difference in opinion, with 44% agreeing and 31% disagreeing.

Over the years there has been a steady feeling that cloud makes system changes somewhat easier, and 2017's finding is that this is now felt very much to be the case.

Future years will show whether this result is a one-off, or the result of cloud solution providers now offering a quicker and easier method for contact centres to make changes to their solutions, and that contact centre users are more familiar and comfortable with making changes in a cloud-based solution.

Figure 154: Effects of cloud: Easier to make changes to the system, 2012-17



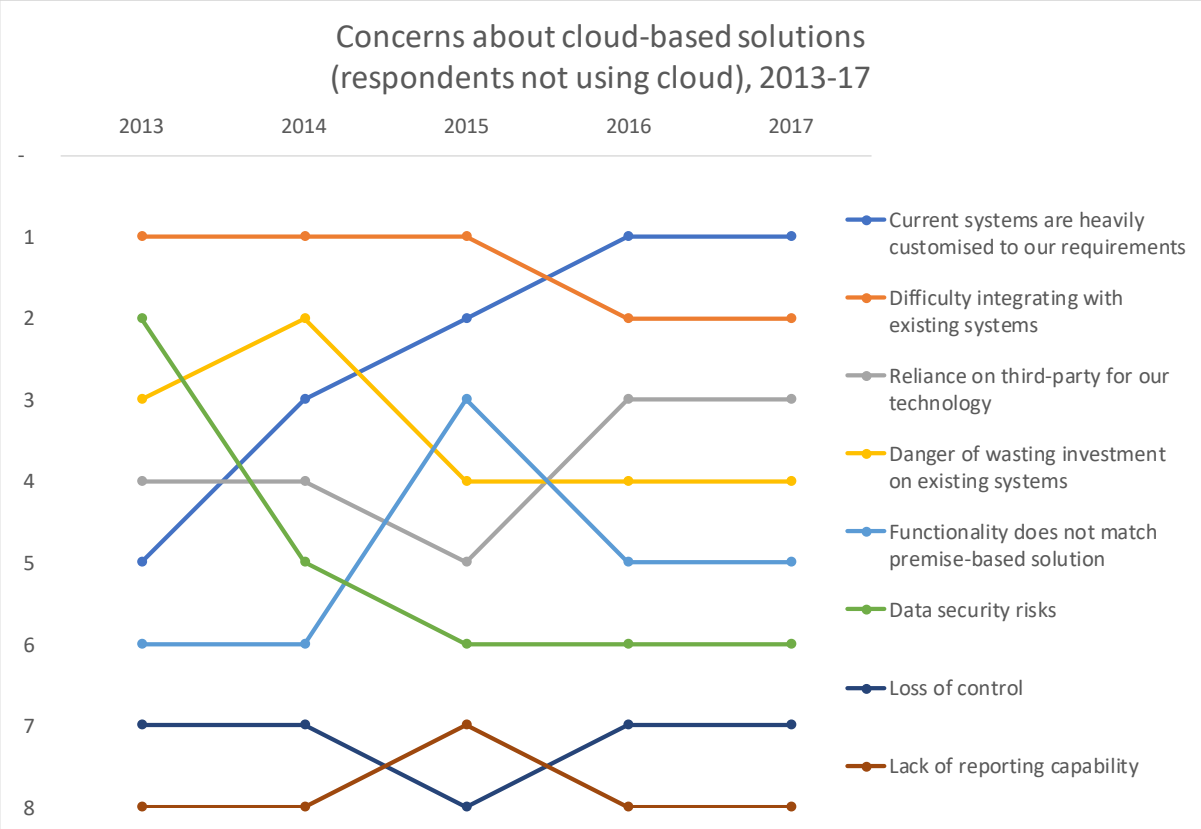
CONCERNS ABOUT CLOUD-BASED SOLUTIONS

Despite the generally positive experiences that most users of cloud solutions have reported, there have been considerable barriers to implementation that have held back some potential users, connected with the greatest concerns around customisation, integration and investment. The following charts show the concerns that non-cloud users are worried about, and the issues that those actually using cloud have seen.

For non-cloud users, the historically major concern that data security will be compromised by allowing a third-party to control customer details is well down the list, dropping from the 2nd greatest concern in 2013 to the 6th highest in 2017. Solution providers' efforts to provide greater education and understanding about risks and the reality of this - as well as striving to improve (and prove) the security and reliability of their own systems - seems to be paying off. Some cloud-based solutions allow clients to keep call recordings and sensitive customer information on their own site, whereas most others provide externally-audited and accredited dedicated security that can usually surpass most on-premise offerings.

Non-cloud users' growing concerns are around whether the levels of existing CPE system customisation and functionality could be replicated in the cloud environment, and whether any new system would integrate fully with their existing environment. Those respondents with concerns that existing investments would be wasted if they were to move to cloud should be aware that many vendors offer a solution that can work alongside existing CPE elements, and in many cases, cloud functionality closely mirrors that available through the CPE model from the same solution provider.

Figure 155: Concerns about cloud-based solutions (respondents not using cloud), 2013-17

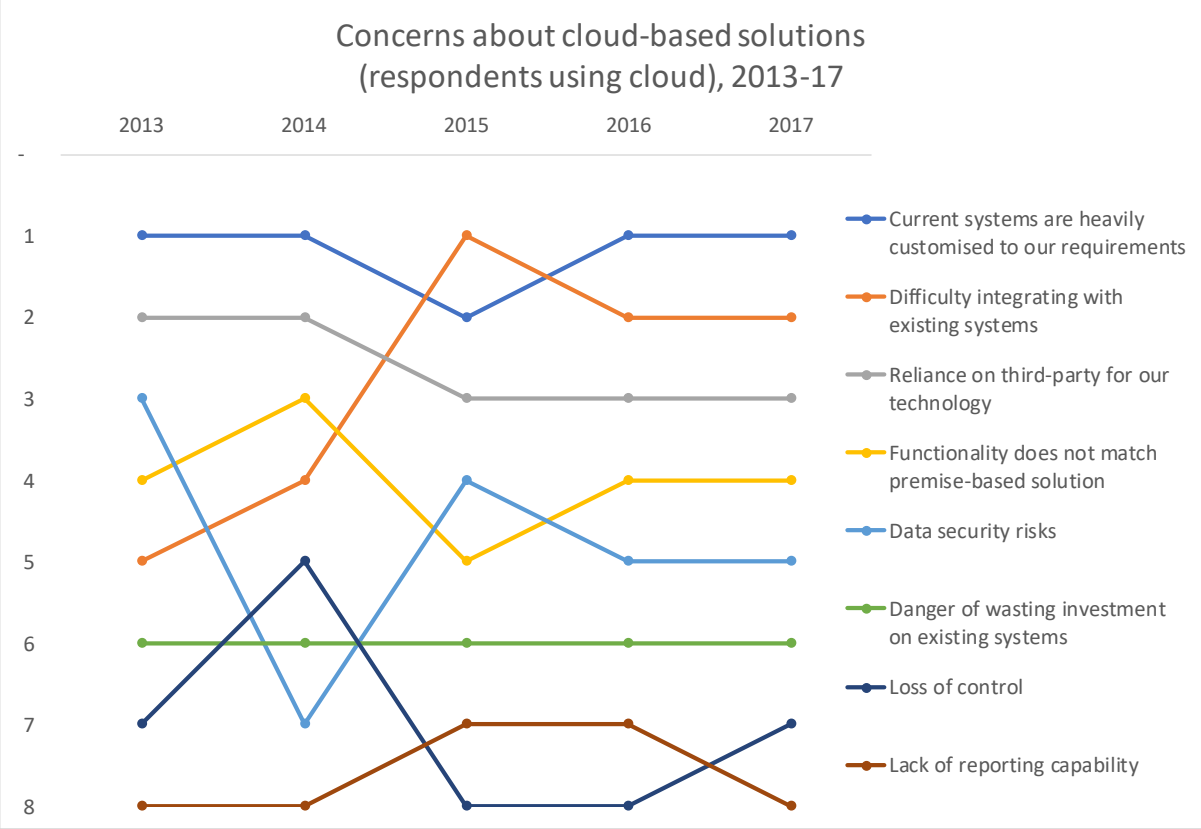


When considering only those respondents that actually use cloud, the difficulty in integrating with existing systems, and concerns over necessary customisation are of most concern. The need to rely on third parties also continues to be an issue for many, although concerns about a resulting loss of control is not a major problem for most.

The only major change seen for cloud users is their growing concern about integrating with existing systems, with this being one of the two major concerns for cloud users over the past three years.

In all, it seems that cloud-based solution providers need to focus on addressing customisation and integration issues to reassure both potential and actual cloud users, although the general positive experience of most cloud users lends an element of reassurance.

Figure 156: Concerns about cloud-based solutions (respondents using cloud), 2013-17



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

OUTBOUND, CALL BLENDING AND PROACTIVE CUSTOMER SERVICE

Not only are contact centres under pressure to reduce their costs, but many - either directly or indirectly - are also major revenue-generators for their businesses, and the recent drive to maximise profitability has made many businesses look at whether their contact centres can add more to the bottom-line. Although much responsibility for revenue generation lies with senior management, production and sales divisions, the contact centre also has an important part to play in maximising revenues through selling the right product to the right customer at the right time (aided by a CRM system or similar), and through proactive and efficient outbound service selling.

This chapter considers outbound automation in depth, both through live and automated means.

The traditional outbound call was simply about selling more products to new and existing customers. However, legislation and customer pressure impacted on cold calling, and the past years have seen an increasing proportion of outbound calling being made to existing customers, either to deliver customer care or to inform them proactively about events and circumstances which affect them.

Outbound calling is fundamentally different from inbound, and - facing significant and growing cultural and legislative issues - must be managed sensitively:

- the nature of outbound is intrusive and usually driven by the needs of the business rather than the customer (except in cases of call-back requests and for proactive outbound service)
- this means that customers are more likely to be defensive and wary of the purpose of the call. Trust needs to be built very quickly in order to overcome this negative start point: having the right information about the customer to hand will improve the experience for both agent and customer
- outbound work can be very hard on agents: few people actively welcome most outbound calls, and persistent refusal, lack of interest and rudeness can be very wearing for agents, especially if productivity-enhancing technology such as diallers are being used. Management should consider ways of alleviating agent stress, through sensible scheduling and call blending, judicious use of technology, focused training and improving working environments, amongst other ways
- especially where the technology exists to do so, it can be tempting to treat outbound calling campaigns as an exercise in maximising call volumes and (theoretically) revenues. However, this can result in brand damage and high staff attrition rates through over-pressured and exhausted agents delivering poorer quality interactions
- there has been a tendency to use offshore contact centres for low-value outbound sales campaigns which would otherwise be unprofitable to run. However, the same high standards of training and support are needed by offshore agents to do their job properly: too many businesses simply put the agents on a dialler with an inflexible script in front of them and then wonder why their customers and prospects become negative towards their brand

- tough legislation has emerged which is reducing the amount of cold calling which businesses can do. Cold calling is illegal in Germany, and the Do-Not-Call register in the US and the Telephone Preference Scheme (TPS) in the UK allow customers to opt out of receiving any sales calls at all in theory.

Call blending is an element of outbound calling which has had to fight against the conventional wisdom of the traditional contact centre industry, which implies that the more one can segregate the contact centre into a series of production lines, the better-run the operation will be.

Call blending gives the ability to deliver both inbound and outbound calls seamlessly to the agent, regulating outbound call volume based on inbound traffic. When inbound traffic is low, outbound calls are automatically generated for a specified campaign. When inbound traffic picks up, the dialler dynamically slows the number of outgoing calls to meet the inbound service level. Results can include increased agent productivity, streamlined staffing, and improved customer service. However, this process needs to be understood and managed carefully, as not all agents are adept at dealing with both inbound and outbound calls.

Sales to both new and existing customers are obviously still key reasons why companies carry out outbound calls, and the hybrid method - customer service leading to a cross-sell/up-sell opportunity - is seen a good way of circumventing the increasing numbers of people joining TPS. However, businesses must be careful not to pester customers or abuse the relationship they have built up with frequent calls about products and services that are not tailored to the customer. Increasingly, turning an inbound service call into a cross-sell or upselling opportunity has become a widely-used tactic.

OUTBOUND ACTIVITY

The single most popular outbound activity is where agents call customers back about an ongoing issue, with call-backs requested by the customer instead of waiting in an inbound queue also important.

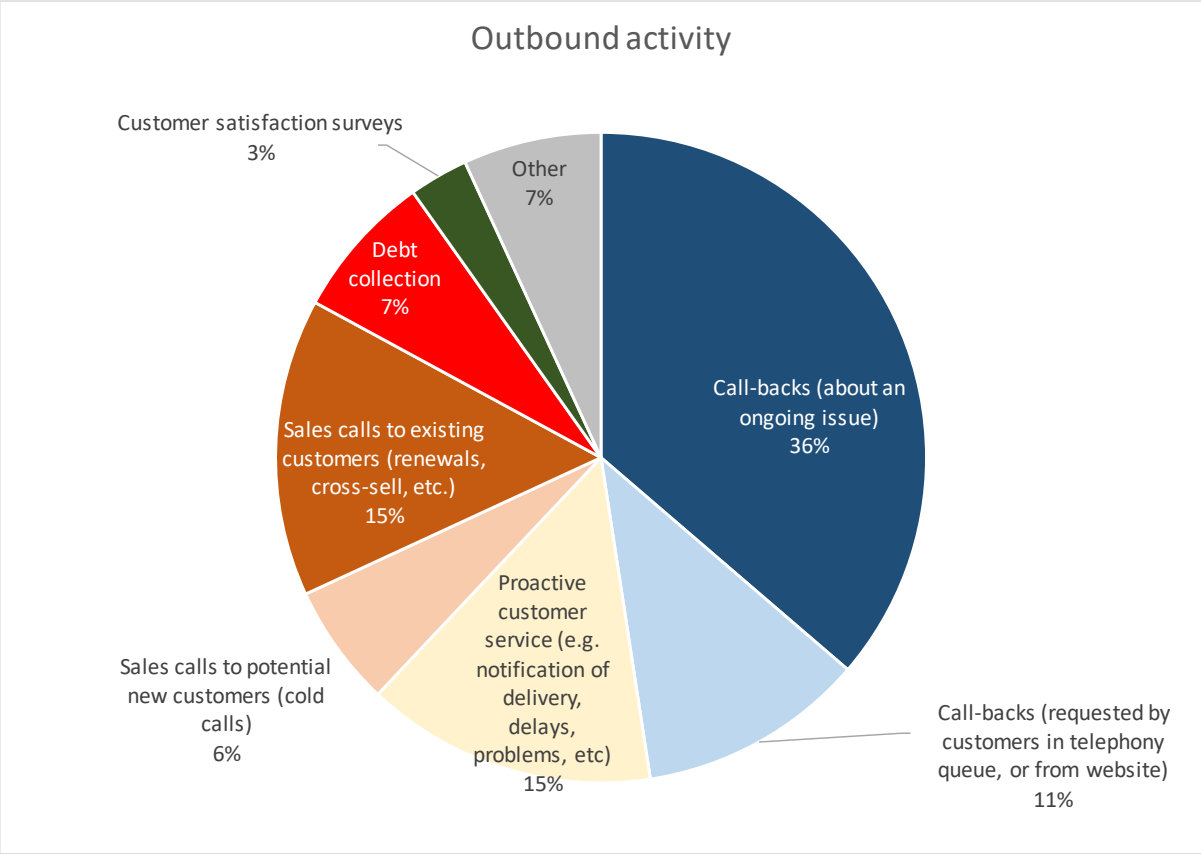
Proactive customer service – calling the customer about an issue without being asked to first – is a strong brand builder as well as an effective call avoidance tactic.

The overall proportion of sales calls declines once again to 21% this year, with cold calling especially low this year.

Cross-selling/upselling continues to be an important outbound activity (and bear in mind that this figure does not include those many inbound service calls that are turned into cross-selling opportunities), with 15% of outbound calls being made for this purpose.

Debt collection drops to 7% of respondents' calls. Customer satisfaction surveys remain very low, with automated processes increasingly preferred.

Figure 157: Outbound activity



86% of respondents carry out some form of outbound calling, with the TMT, transport & travel, services and outsourcing & telemarketing sectors leading the way.

As usual, the public sector lags quite some way behind the rest of the contact centre industry in terms of its outbound activity, although a majority of even these respondents carry out some outbound work.

Figure 158: Use of outbound calling, by vertical market

Vertical market	Proportion of respondents using outbound calling
Transport & Travel	100%
Services	97%
TMT	95%
Outsourcing	94%
Retail & Distribution	92%
Insurance	87%
Utilities	86%
Housing	83%
Manufacturing	81%
Finance	70%
Public Sector	65%
Average	86%

Vertical market patterns of outbound activity are very different from each other, and there is not even a great deal of homogeneity within sectors, so these figures should be treated with some caution. However, there are some interesting findings to bring out.

Retail & distribution, services and insurance carry out significant amounts of proactive customer service, advising of status, delays and deliveries, and providing information up and down the supply chain.

Transport & travel respondents report cross-selling and upselling being a very significant part of their outbound activity as do outsourcers.

The utilities, finance and especially housing respondents report very significant outbound activity connected to debt collection, as usual.

Figure 159: Outbound activity by vertical market

Outbound activity	FS	HS	INS	MN	OS	PS	RD	SVC	TMT	TT	UT	Avg
Call-backs (about an ongoing issue)	60%	53%	47%	64%	24%	43%	40%	27%	28%	18%	35%	36%
Sales calls to existing customers (renewals, cross-sell, etc.)	0%	4%	5%	14%	33%	0%	20%	15%	16%	55%	0%	15%
Proactive customer service (e.g. notification of delivery, delays, problems, etc)	10%	0%	27%	4%	9%	15%	22%	21%	10%	8%	14%	14%
Call-backs (requested by customers in telephony queue, or from website)	10%	8%	10%	3%	6%	15%	12%	18%	6%	18%	8%	11%
Debt collection	10%	35%	2%	0%	8%	2%	0%	8%	18%	0%	8%	7%
Sales calls to potential new customers (cold calls)	0%	0%	8%	0%	10%	0%	2%	6%	13%	0%	0%	6%
Customer satisfaction surveys	10%	1%	0%	0%	11%	2%	0%	3%	6%	0%	1%	3%
Other	0%	0%	1%	16%	0%	22%	4%	2%	3%	0%	33%	7%

NB: "0%" refers to a number lower than 0.5%, rather than necessarily a zero value.

Care should be taken when considering vertical market statistics, as the research sample size may be small. Use only as an indication of relative importance.

In 2015 and 2016, there was little real pattern between contact centre size and the propensity to make outbound calls: in the past, large contact centres were more likely to do so, and this pattern has reappeared in 2017.

Figure 160: Use of outbound calling, by contact centre size

Contact centre size	Proportion of respondents using outbound calling
Small	78%
Medium	90%
Large	93%
Average	86%

A case could be made that variations in outbound activity are more closely linked to the type of business (i.e. vertical market) than the contact centre size.

However, it is worth noting that sales calls and debt collection are somewhat more likely to be made by larger operations. Correspondingly, smaller operations spend a little more of their time on call-backs and proactively updating the customer.

Figure 161: Outbound activity by contact centre size

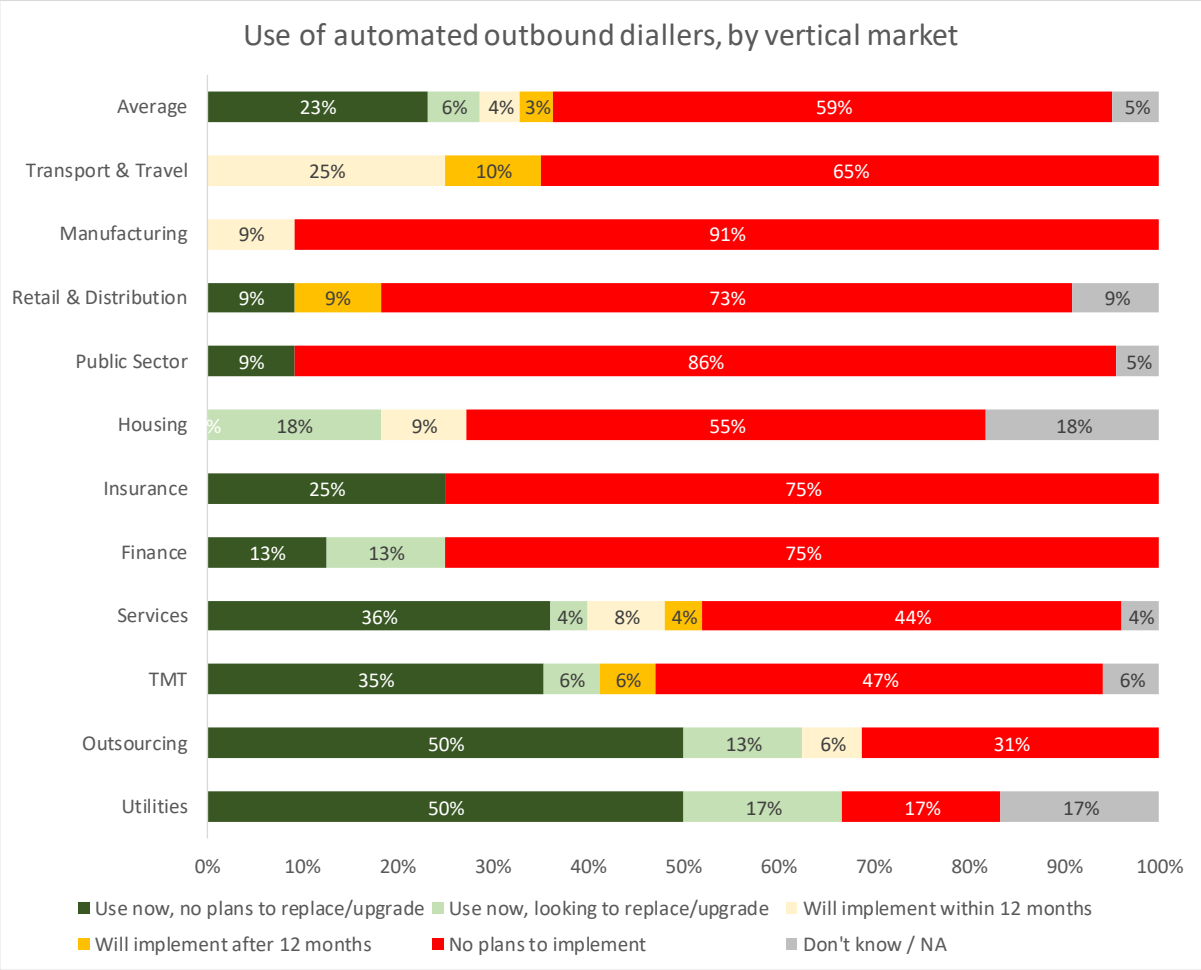
Outbound activity	Small	Medium	Large	Average
Call-backs (about an ongoing issue)	44%	33%	33%	36%
Sales calls to existing customers (renewals, cross-sell, etc.)	12%	18%	13%	15%
Proactive customer service (e.g. notification of delivery, delays, problems, etc)	9%	21%	8%	14%
Call-backs (requested by customers in telephony queue, or from website)	12%	11%	9%	11%
Debt collection	7%	6%	12%	7%
Sales calls to potential new customers (cold calls)	8%	3%	10%	6%
Customer satisfaction surveys	2%	1%	8%	3%
Other	6%	7%	8%	7%

THE USE OF OUTBOUND DIALERS

Automated outbound diallers are most often found in large operations which carry out reasonable amounts of outbound work, as the efficiencies over manual dialling are so considerable that it will often make commercial sense.

The outsourcing and utilities sectors tend to have some of the largest operations, and those in transport & travel and manufacturing the smallest.

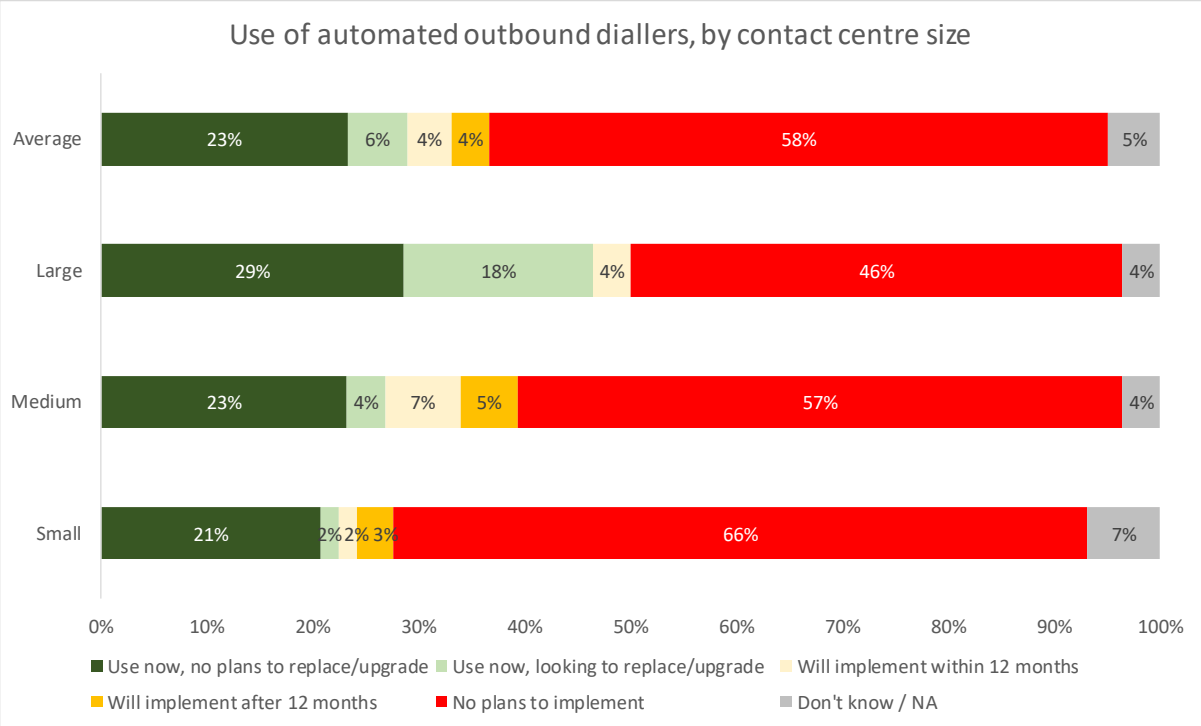
Figure 162: Use of automated outbound diallers, by vertical market



Outbound automation in the cloud is becoming increasingly widely-used, and this means the barriers to usage are even less, with smaller operations also showing increased interest.

Dialler usage in respondents from small contact centres is currently 23%, a jump on previous years' figures. Many suppliers of this technology are able to offer low-cost, scalable functionality in the cloud, and while we would expect this figure to increase in the next couple of years, it seems the mid-sized sector are proportionally most likely to look to increase their use of outbound automation.

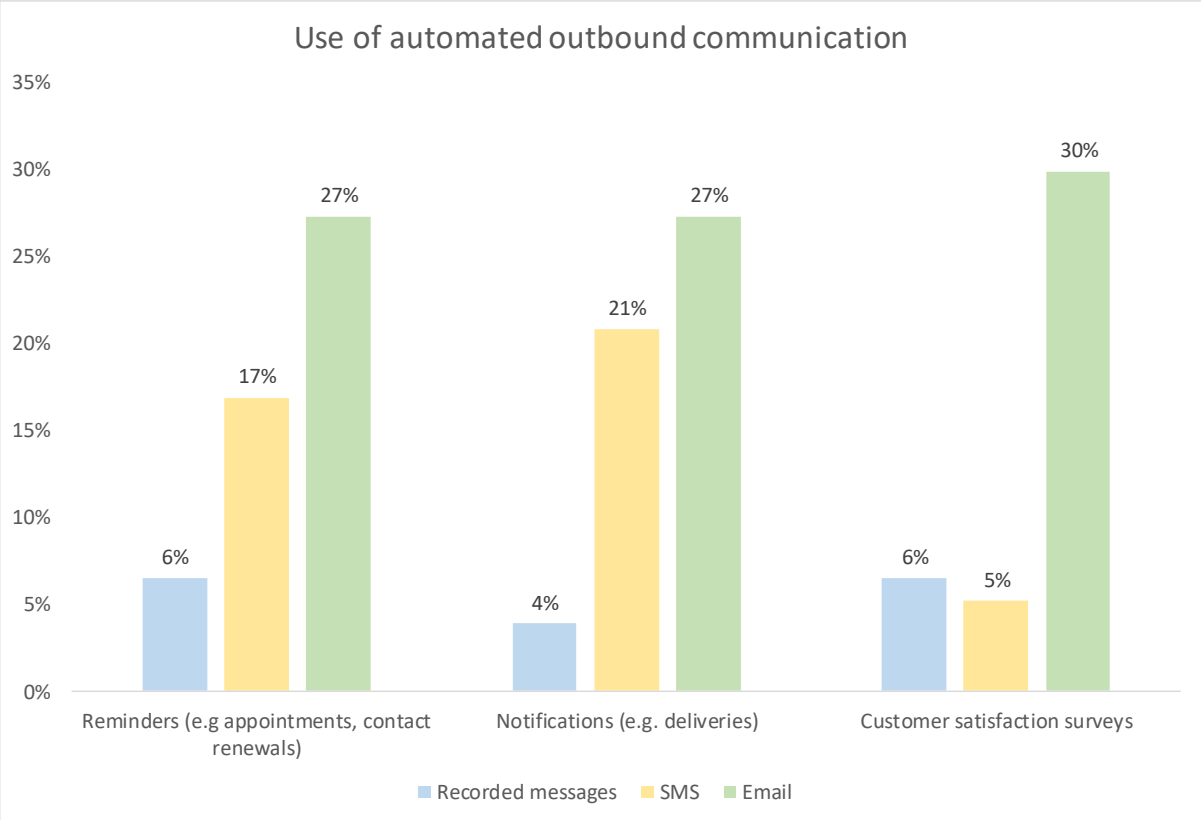
Figure 163: Use of automated outbound diallers, by contact centre size



While the vast majority of targeted outbound contact is carried out by agents, the opportunity exists for automated outbound service to expand - such as sending reminders and notifications to customers through an automated process - thus significantly reducing the cost to the business while improving the overall customer experience. Many customers will choose to seek clarification or a status update at some point in the buying process through making an inbound interaction. By sending a pre-emptive outbound message, the business is proactively assisting the customer to manage their interaction.

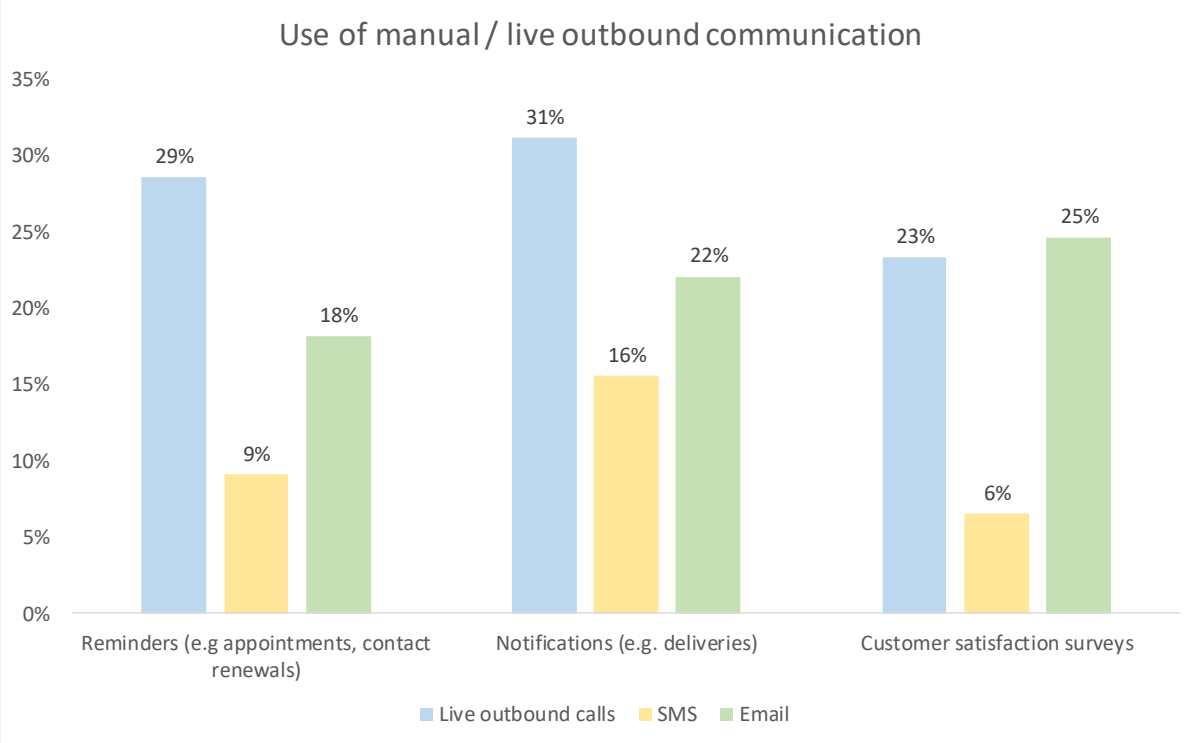
Automated SMS messages are used by around 20% of respondents this year, mainly for notifications and reminders. Email is used also for outbound customer satisfaction surveys, and a small minority of respondents use recorded messages (which will usually include an IVR session to capture customer input) for this purpose as well.

Figure 164: Use of automated outbound communication



Live outbound calls are much more widely used for reminders, notifications and customer surveys, with 16% of respondents allowing agents to notify customers manually about deliveries etc. via SMS. Manual email is used in around 20-25% of cases as well.

Figure 165: Use of manual / live outbound communication

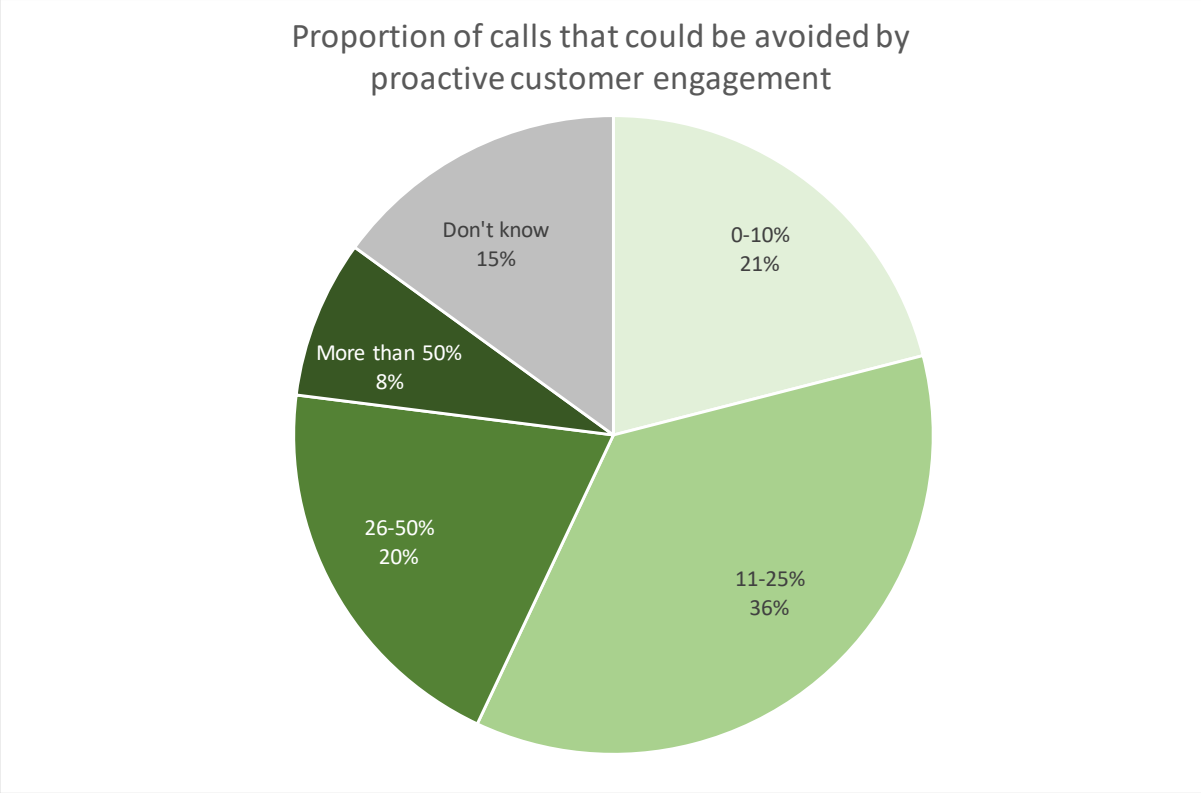


Respondents were asked what proportion of inbound calls could be avoided by engaging the customer before they felt the need to call the business.

28% of contact centres reported that more than a quarter of their inbound calls could be avoided if more proactivity was used, which would make a huge difference to costs (especially through automated outbound communication), as well as having a positive effect on customer experience.

Businesses should be encouraged to analyse the type of interactions that they receive into their contact centre, and to see if there is a cost-effective way of proactively handling these. The opportunity is certainly there for the industry as a whole to manage the inbound demand more effectively than is being done so at the moment.

Figure 166: Proportion of calls that could be avoided by proactive customer engagement

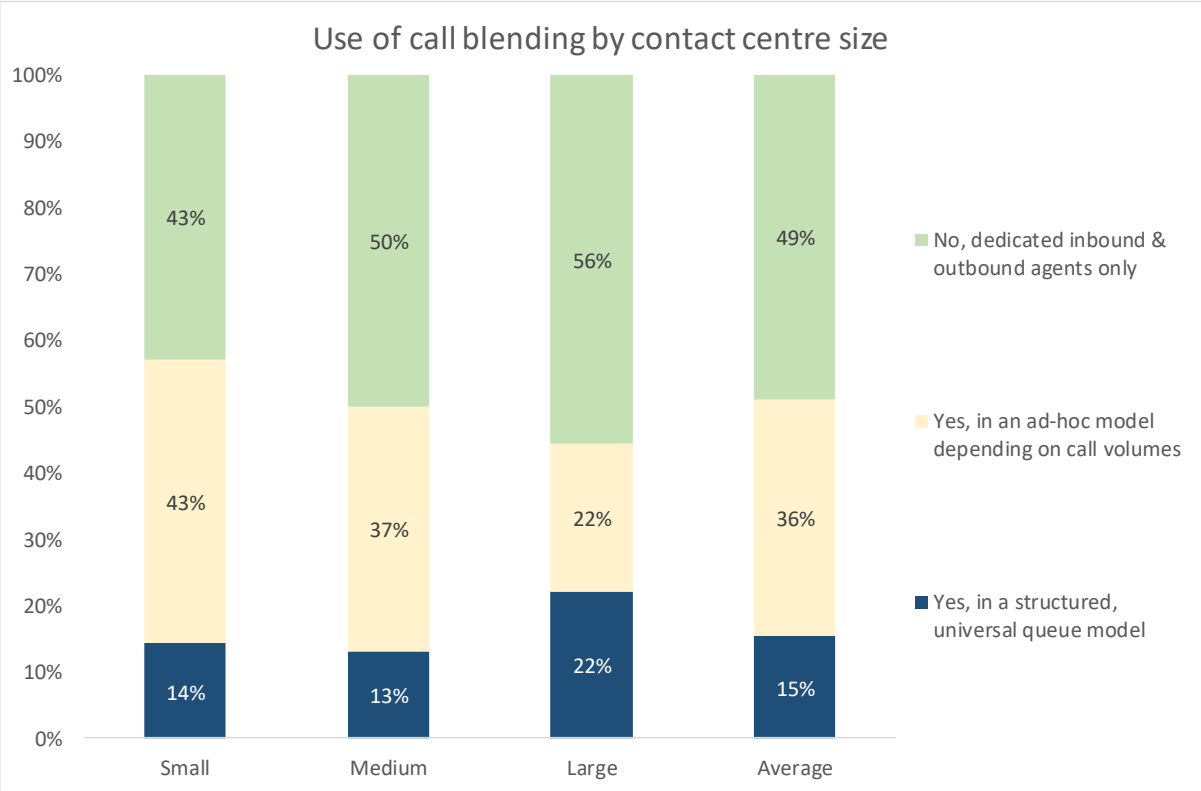


CALL BLENDING

A contact centre handling different processes involving customer service, sales orders, and outbound telemarketing will have different groups of agents with specific skills for these areas. Some agents are more capable and adaptable than others, and can be used as blended agents. For example, these agents may have a primary responsibility to handle inbound calls, but when the inbound call volume drops, the dialler will send a message to these agents indicating that they have been switched to outbound mode and start offering outbound calls to them. Where relevant, systems will prompt a script for the outbound calls to run on the agent desktop and depending on the call volume in the inbound queue, the agents will be switched automatically, improving productivity. However, if there is a constant switching from inbound to outbound and back again, the agent may lose concentration and the productivity may go down.

A structured blended environment, where agents are moved seamlessly and dynamically between inbound and outbound, is used in only 15% of this year's respondents' operations. Large contact centres are more likely than smaller operations to use this type of approach. A substantial proportion of respondents from medium and large operations use dedicated teams to handle only either outbound or inbound, with smaller operations moving agents between inbound and outbound on an ad-hoc basis.

Figure 167: Use of call blending by contact centre size



It is interesting to put the use and type of call blending against key contact centre performance and operational metrics, such as average speed to answer, which is - as usual - somewhat lower in formal, blended environments than in dedicated and more ad-hoc environments, as agents are moved between tasks quickly and seamlessly.

Figure 168: Average speed to answer, by call blending environment type

Call blending environment	Average speed to answer (seconds)
Blending used in a formal and structured way	24
Blending used in an informal, ad-hoc way	29
Dedicated and separate inbound and outbound agents	39

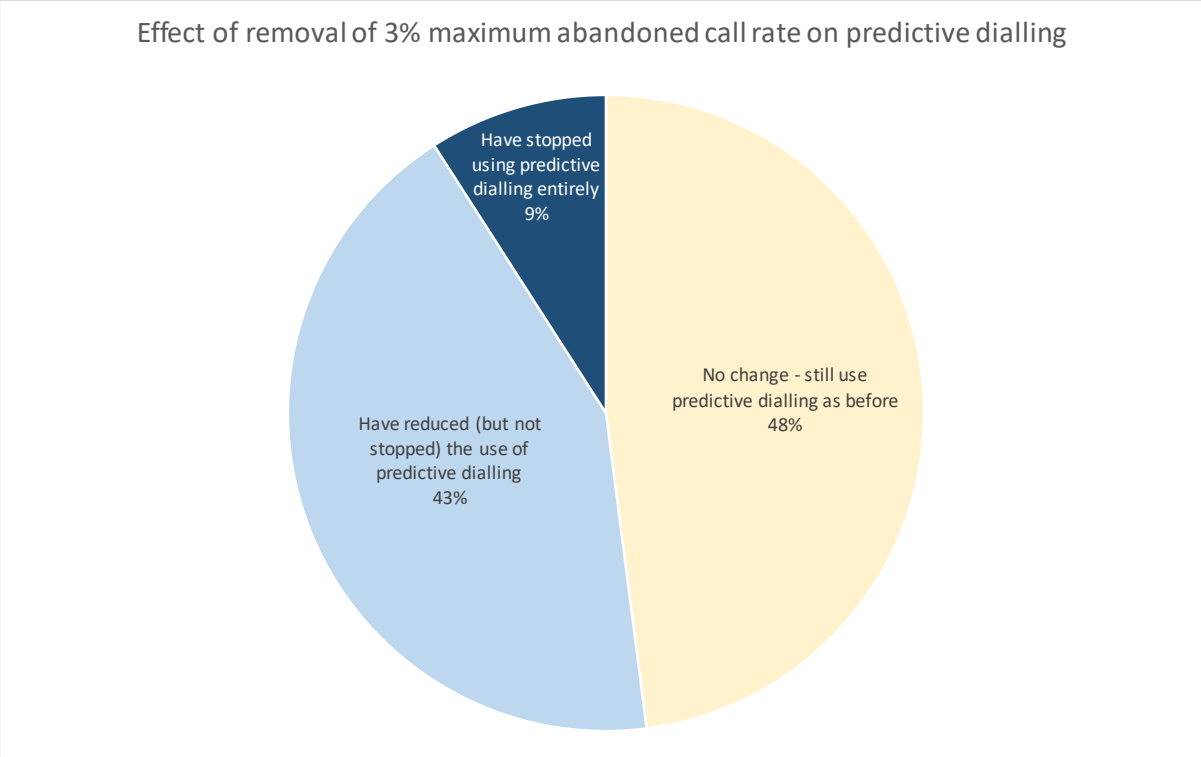
EFFECTS OF LEGISLATION

The Telephone Preference Service (and the EC Regulations on Electronic Communication which deals with email and SMS) are part of the general social and political drift towards allowing consumers and businesses the right not to be contacted by companies.

In the UK, Ofcom is getting progressively stricter in its outbound regulations, and has recently clarified[19] that the 3% 'safe harbour' of abandoned calls, which the industry had considered to be the maximum permitted, was in fact merely a guide to prioritise enforcement action, and that in fact no abandoned calls are permitted.

Almost half of respondents using outbound dialling stated that this had not made any difference to how they used diallers, 43% said that they had reduced the amount of predictive dialling they did, while 9% had switched off their predictive dialler altogether.

Figure 169: Effect of removal of 3% maximum abandoned call rate on predictive dialling



[19] https://dma.org.uk/article/ofcom-removes-3-safe-harbour-for-abandoned-calls

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
- First Contact Resolution
- Customer Personalisation.

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 centres? Quite simply, they would like to be answered quickly by a person who is able to help them without passing them around, and have the correct answer given to them quickly by someone with whom they feel comfortable talking. Additionally, the business has to deliver on the reason the customer is calling in the first place - by sending out the purchased item promptly, changing the database details or refunding money, for example. So the contact centre does not stand alone: it orchestrates the rest of the business.

Various pieces of research show that the benefits to a business that are made from increasing customer satisfaction are non-linear: if a customer is very happy, they are likely to be worth a great deal in additional direct purchases and possibly more importantly, will act as a brand advocate for your company. A customer who is merely 'satisfied' will not have anywhere near the same positive impact on revenues or profits, and is likely to be a good deal less loyal. There is also advice from business consultancies that says customer satisfaction is overrated as a metric, and that organisations should be focusing upon reducing the amount of effort that a customer has to expend to carry out the interaction successfully.

A contact centre can achieve all the operational performance measurements which it sets for itself, without actually being successful. If the customer does not hang up the phone feeling that she has been treated appropriately and that her query has been resolved to her satisfaction, then that counts as a failure, regardless of how good the internal metrics may be. Elsewhere in this report, contact centres state that adherence to internal metrics is of more importance to them than first contact resolution rate - which is consistently seen as the key to customer satisfaction - so the argument that businesses have moved to a customer centric model is still very much up for debate.

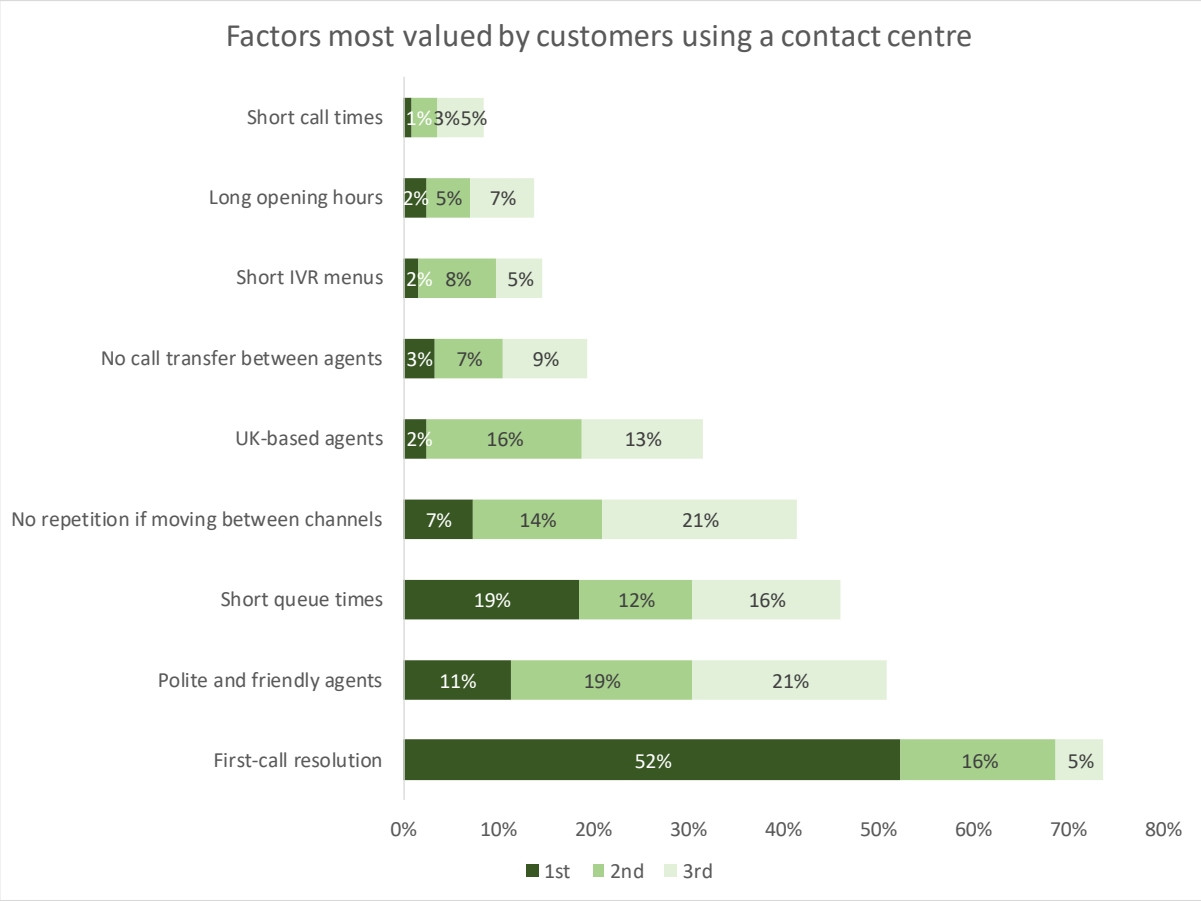
As customers become more demanding and their expectations of what constitutes good service increase, then contact centres are forced to develop greater external focus. This is in part due to the growth of outsourcing, which has introduced a new competitive edge to the business of handling calls. In addition, the greater choice available to customers in terms of suppliers means that customer retention is now as important as customer acquisition. Without knowing what your customer thinks of your service, you cannot legislate for their requirements. A continuous tracking survey hosted by a third party is a useful piece of corporate intelligence. Surveys hosted on a SaaS platform have the advantage of being contact centre provider- and equipment-agnostic. Businesses can continue using surveys non-stop as they outsource, switch suppliers or take their contact centre service back inhouse, hence tracking the impact of these changes.

FACTORS IN ACHIEVING CUSTOMER SATISFACTION

Respondents were asked to choose the three most important factors impacting upon customer satisfaction from a list of eight, with the chart below showing the most popular choices.

As with last year, the top choice was “first-call resolution”, with “polite and friendly agents”, and “short queue times” once again in second and third place, the latter acknowledging that the customer experience starts well before the agent's greeting.

Figure 170: Factors most valued by customers using a contact centre



When considering how the factors involved in keeping customers happy differ depending on whether it is a service or sales call, some conclusions can be drawn:

- First-contact resolution is still seen as the most important factor by both service and sales respondents, with 56% and 60% of respective respondents stating its primacy

- As a service call is perhaps more likely to require multiple agents to resolve it, 42% of service respondents place not having to repeat issues in the top 3, compared to 25% of sales contact centres

- Both sales and service contact centres are believe that polite and friendly agents are key: more than half of both types of respondent place this in their top 3

- Sales operations are far more likely than service agents to believe that UK-based agents are key to a positive customer experience (66% place this in their top 3, against only 29% of service operations). It may be that these types of contact centre are aware that there are usually easy alternatives for prospects to call, and do not wish to put off callers who do not like speaking with offshore agents

- No sales respondents put short IVR menus in their top 3, compared with 18% of service respondents. This is likely to be because labyrinthine IVR menus are usually restricted to large service operations, whereas sales operations are more likely to have representatives who can sell any of the products, whereas service agents many be more specialised and work in specific departments

- Sales respondents (30%) put short queue times as their no.1 factor, compared to 16% of service contact centres, as an abandoned sales call may well end up being a permanently abandoned sale.

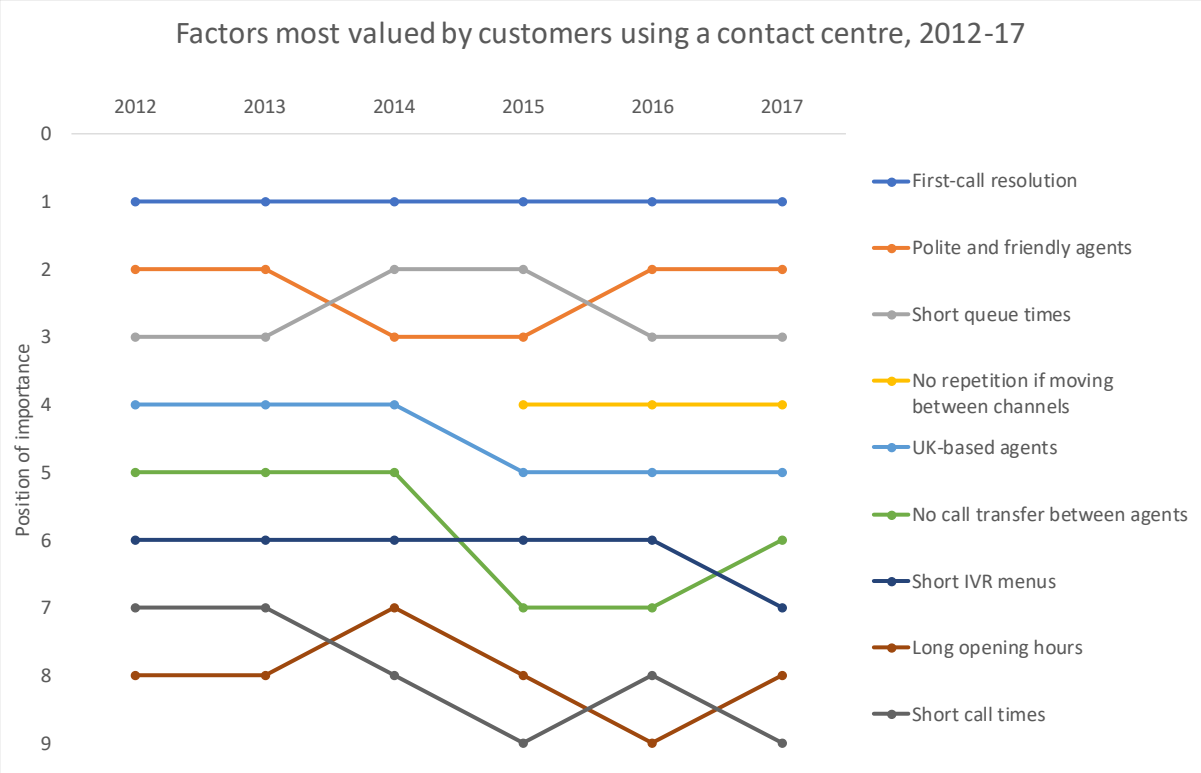
In order to identify any changes in how the industry views the drivers for customer satisfaction, the past five years' results were compared against 2017's survey, as the chart below shows.

It is clear that over the years there has been very little change in the factors seen as most valued by customers: first contact resolution is by far the most important - and links strongly with the idea of reduced customer effort - while short queue times and the politeness and friendliness of agents are also seen as vitally important.

The rising importance of omnichannel engagement led to a new option being offered in 2015, that of no repetition of the customer's issue if moving between channels. This factor has consistently been rated as 4th most important by survey respondents since then.

As shown elsewhere in this report, call duration has been creeping up slowly year-on-year. It seems that the industry as a whole accepts the trade-off between first contact resolution (which may require more time to handle a customer's enquiry to their full satisfaction) and the historic desire to reduce call times as much as possible. As these statistics are the views of contact centre decision-makers, it would be interesting to compare these to what customers themselves actually value the most. Future ContactBabel research will address this.

Figure 171: Factors most valued by customers using a contact centre, 2012-17



CUSTOMER SATISFACTION MEASUREMENT TECHNIQUES

Customer surveys have been an integral part of most businesses since time immemorial. Recently, there has been a great increase in the number of organisations implementing "Voice of the Customer" programs, often based around large-scale analysis of call recordings, but the more traditional, direct methods of understanding customer experience and requirements are still very much present.

The numerous methods of directly surveying customers include the following:

IVR: at the end of the call, and after agreeing to do so, the customer may be passed through to an automated IVR system, which typically asks a mixture of open and closed questions which can be answered with a combination of touchtone and speech. This has the benefit of immediacy, in that the caller will be able to give an accurate assessment of the call and the agent, and also the business may be alerted in near-real-time to any major problems through pre-programmed automated SMS or email alerts.

The speed and ease with which an agent-invited IVR survey can be implemented gives it a distinct advantage over a survey conducted via outbound calls. The resources and staff time required to make outbound calls often mean that they are conducted erratically and rarely during peak times which undermines the quality and usefulness of the data collated. As agent-invited IVR surveys are automated, they require little staff input and can monitor customer satisfaction whenever the contact centre is open.

Outbound automated surveys are becoming more prevalent, with more than 10m outbound IVR survey calls estimated to be made each year in the UK. After the call has been concluded, the caller's number may be put into an outbound dialler's queue, which calls them and offers an IVR survey. The speed with which this call-back is made is crucial to the take-up rate of the survey, with up to 70% acceptance rate if the call-back is in minutes, but perhaps only 10% if the call is made over 48 hours later.

Written: some businesses ensure that a system-generated letter is posted to the customer soon after an interaction takes place, requesting feedback. Typically, more customers who have had a poor experience will bother to return the questionnaire, skewing the figures, and although some good and detailed learning points can emerge, it's an expensive way to survey customers, and perhaps only appropriate if the customer has engaged very deeply with the business on a number of recent occasions (e.g. completing a mortgage application) or with a demographic that has more time available to them, especially older people. There can be a lack of immediacy, and many people might feel that sending out a written questionnaire to ask about how well a single call was handled is overkill.

A more popular written alternative is to send an email to the customer, which allows immediacy and offers a customer a chance to express themselves more fully, rather than simply with numerical scores. This method also has the advantage that it can be fully automated.

Written surveys or detailed person-to-person interviews have an important role to play, particularly where the feedback generated can be compared side-to-side with feedback by other methods. Having quantitative and qualitative data provides valuable feedback that can't be achieved by adopting a single surveying method.

Web forms are becoming increasingly widely-used as an increasing number of customers visit a website initially to see if they can find the information or resolve the issue themselves. Online survey invitations that pop up within a couple of seconds of entering a website are widely used, although many customers find them intrusive as they have not yet found the information that they require. Using a little more intelligence around when to offer the survey to the customer would provide far higher take-up rates.

Outbound: frequently, the contact details of a proportion of incoming callers will be passed to a dedicated outbound team, who will call the customer back, often within 24 hours, to ascertain the customer's level of satisfaction with the original call. Sometimes customers will find this intrusive, while others will welcome the chance to provide feedback. Additionally, certain companies employ outside agencies to survey customers regularly, which may be useful in benchmarking exercises, since they will apply a more formalised and structured approach to data gathering and presentation. The automated option as mentioned in the IVR section above should also be considered as an option.

SMS: Text messaging has the advantage of immediacy of sending and also of reporting on the results. It is a cheap way of carrying out surveys, and can be linked to a specific agent, allowing the contact centre to use this information for agent performance as well as satisfaction with the business. SMS does not allow detailed or multiple questions though, and businesses will have to collect mobile numbers if they do not already have them. However, take-up rates are better than many other forms of feedback (at around 25-35% on average), and younger and more time-poor customers are more likely to respond, providing a wider universe of responses across demographics. This form of survey can allow the contact centre to identify very unhappy customers and schedule an outbound call to deal with the problem.

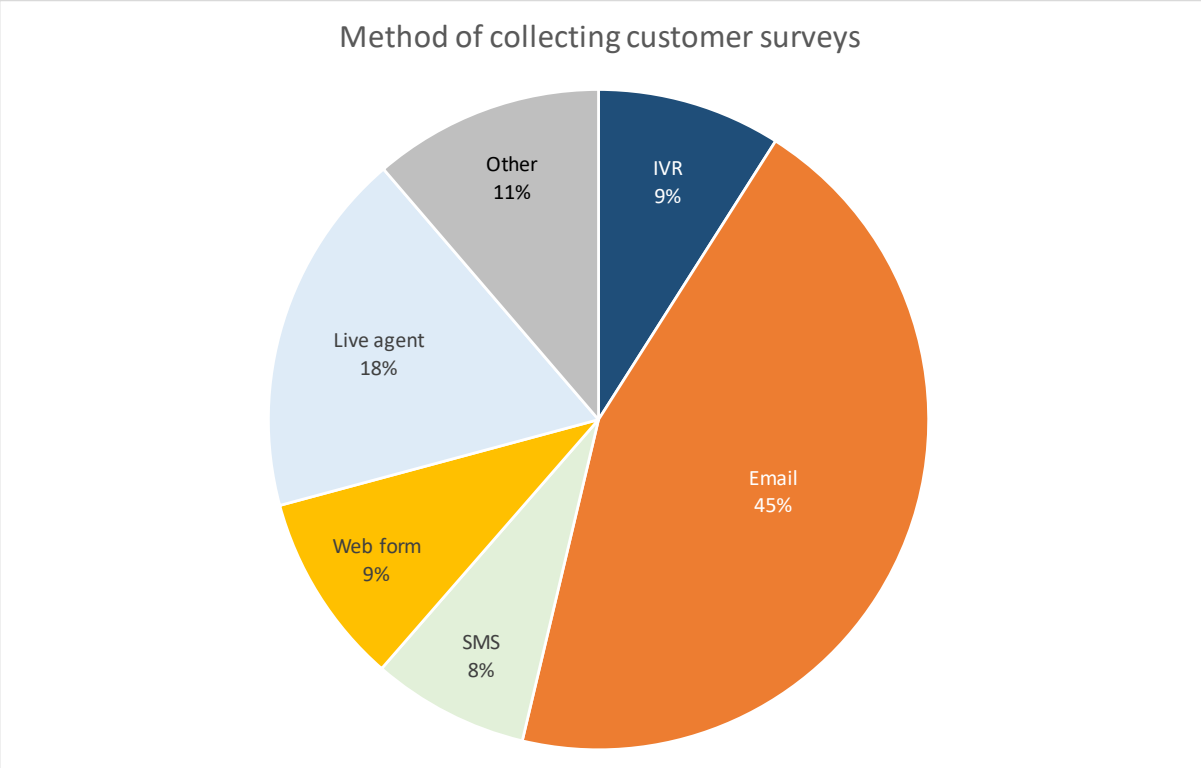
Different customers will prefer to be surveyed in different ways and a survey platform should have the flexibility to support IVR, web, text and written surveys and collate the results in a unified reporting system. Not only will this mean that businesses are increasing the number of customers accessed, but a different quality of feedback will be received from each approach.

By far the most popular way of collecting customer surveys is via email, with almost half of surveys being collected in this way. Email allows a mixture of quantitative numerical data to be collected, along with qualitative comments which may highlight issues that would otherwise be unknown. It also has the advantage of immediacy and can be fully automated, requiring little or no additional input from the business. Web forms also allow this mix of numerical and written data to be collected, but the timing of offering the surveys during a web browsing session can be difficult to get right.

Despite the cost, outbound survey calls carried out by live agents are used in 18% of cases, which allow a depth of qualitative information to be collected from which insights can be drawn.

Both SMS and IVR are more positioned towards gathering quantitative information, often aligned to NPS.

Figure 172: Method of collecting customer surveys



Many companies pay lip service to listening to their customers, but do they actually hear what their customers say? And more importantly do they act upon it to change or improve their processes? There is no point in generating an expectation which the business has no intention of fulfilling. Don't ask the customers for feedback if there is no intention of using it to make the service provided substantially better. The following section on customer feedback examines this in more detail.

Formal surveys of customer satisfaction offer the customer a chance to feed-back, and the business to learn. Setting up surveys involved various elements which should not be overlooked, including:

Defining the purpose and objectives of the survey

- Deciding the approach
- Developing the questionnaire
- Carrying out the survey
- Collating the data
- Analysing the results
- Presenting the findings - and acting upon them.

The point of a customer satisfaction survey is to discover what the company is doing wrong, where improvements can take place, how the company is perceived against its competition and how it can improve. It is important to view the survey from the customers' perspective, rather than checking boxes that just relate to internal company metrics, which is self-serving. Surveys should also be ongoing, to check whether real improvements are being made after the issues have been identified.

Survey forms should be simple and quick to complete, but if possible should carry enough weight to allow the company to change its processes and behaviours if that is what is required, using a mixture of objective questions that can be segmented and scored, as well as free text, especially in telephony questionnaires, where customers can be encouraged to add real value.

For surveying customers' experience of the contact centre, the key to success is to keep the survey fairly short, with a maximum of around 5 questions, which can be range-based (e.g. "strongly disagree", "disagree", "neutral", "agree", "strongly agree", etc.), a simpler 'Yes/No' option and a free-text, 'any comments' question. These questions may include:

- Was the call answered quickly?
- Was the agent polite?
- Were you satisfied with the response?
- Was this the first time you had called about this matter?
- Do you have any comments you would like to make?

Opinion is split on whether surveys should identify specific agents, as although major outlying training and behavioural problems can be identified, many operations are keen to avoid the 'Big Brother' feeling of spying on agents, and prefer to emphasise that surveys are done to identify broken processes, not to criticise individuals.

Regardless of whether surveys identify specific agents or not, a key to success is whether the survey implemented is considered by agents as just yet another form of monitoring, or a genuine attempt to help them provide better service in the long run. Agents tend to respond well to successful customer satisfaction improvement initiatives as they usually make their job easier and more rewarding. Keep the survey process simple, focus on agent engagement and act quickly to provide positive feedback to the team. It's more important to get the survey adopted as a positive part of the company's customer service strategy, than it is to design the academically-perfect survey that has a negative impact on the morale of the team.

It is vitally important before beginning to survey customers, that a business:

- Clearly determines the purpose and aims of the survey
- Considers adopting a variety of question types. Scored questions enable a business to produce statistically significant and representative data. Free comments allow the gain of real insight into customers' perception of service
- Selects an experienced company to set up and host the survey. Businesses will benefit from their expertise and knowledge and avoid potentially costly errors
- Ensures that the survey can be carried out throughout the day, including peak times, to gain a true picture of the customer experience
- Makes sure that the results of the survey can be collated and analysed in a wide variety of ways. It is pointless to amass information if it cannot be evaluated and the results disseminated usefully
- Has procedures in place to act upon the information that it finds. The survey may have uncovered some broken processes in the service which need attention. It will also inevitably throw up disgruntled customers whose specific concerns need addressing. In this instance, the survey platform should provide some mechanism for alerting and following-up to ensure that dissatisfied customers are escalated to the appropriate staff
- Adopts a unified approach across the business to assessing and monitoring customer satisfaction. If a business continues to reward agents based on traditional call performance metrics, it is merely paying lip service to good service. If agents are rewarded based on customer satisfaction ratings, it will increase agent engagement and retention at the same time as improving the service it offers to customers.

USING CUSTOMER FEEDBACK

Many companies hear their customers, but do they actually listen to what their customers say? And more importantly do they act upon it to change or improve their processes? There is no point in generating an expectation which you have no intention of fulfilling. Don't ask the customers for feedback if you have no intention of using it to make the service you provide them with substantially better.

The most popular way respondents gather customer insight is through the informal channel of team meetings, where team leaders pass agent insight up the management chain. This relies upon goodwill and effort from agent, team leader, contact centre manager and the relevant business unit to get things achieved, and should not be relied upon solely. A more formal process of gathering agent comments is used by 86% of respondents.

83% carry out customer experience research via phone calls & emails, and 52% use IVR or SMS to get near-real time feedback.

77% state that they have a customer journey project taking place and 41% use call analytics (automated speech analytics as well as supervisors listening in to recorded calls) to gain customer insight.

43% use call recordings – either through automated speech analytics, or manual analysis – to understand what their customers are saying.

Figure 173: Methods used for gathering customer insight (where used)

Method	% of respondents using this method
Team meetings with supervisors who pass on agent/customer insights	94%
Formal process for gathering agent comments	86%
Customer experience research calls & emails	83%
Projects studying the customer journey	77%
IVR or SMS (i.e. automated, near-real-time surveys)	52%
Speech analytics and/or manual analysis of recorded calls	43%

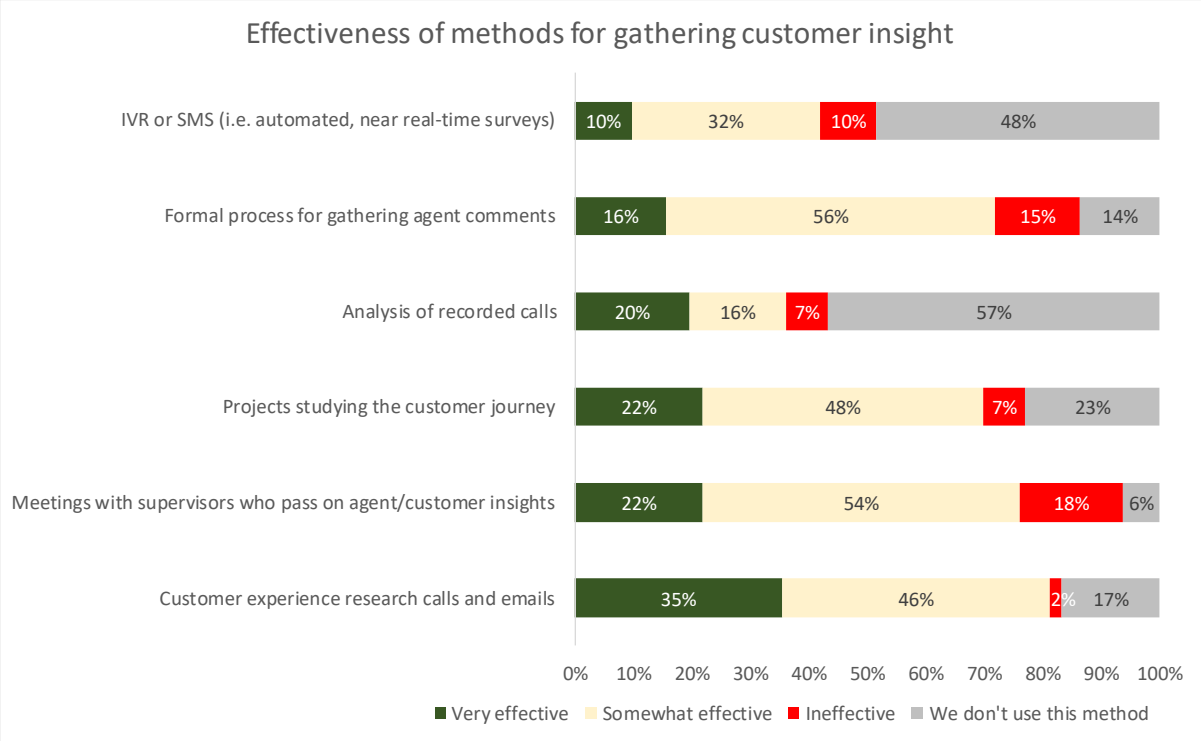
The chart below takes into account the respondents' opinions of the effectiveness of each method of gathering customer insight.

Respondents tend to rate customer experience research calls and emails most highly, with 35% finding these very effective and only 2% ineffective.

Call analytics - which in this case also includes supervisors analysing call recordings as well as the use of automated speech analytics solutions – also gets considerable approval (with 47% of those using this method stating it to be very effective). IVR/SMS surveys are seen as somewhat less useful.

Despite the higher incidence of their use, neither the informal nor formal gathering of insight directly from agents are judged as especially useful, with similar proportions stating that they are ineffective as do that they are very effective.

Figure 174: Effectiveness of methods for gathering customer insight



Businesses were asked which of four methods that they use in order to measure customer experience and satisfaction.

CSAT (customer satisfaction) scores do not have a fixed and accepted scoring system, but is more generic and wide-ranging. Businesses may decide that they want to track the proportion of customers who report being "very satisfied", score them at 5 out of 5, etc.

Net Promoter Score® [20] , otherwise known as NPS, is an index ranging from -100 to 100 that measures how likely customers are to recommend a company's products or services to others. The question asked to customers is:

"On a scale of 0 to 10, how likely are you to recommend this company's product or service to a friend or a colleague?"

Based on their rating, customers can then be grouped into in 3 categories: detractors, passives and promoters. 'Detractors' score lower or equal to 6, 'Passives' score of 7 or 8 and 'Promoters' answered 9 or 10.

NPS is determined by subtracting the percentage of customers who are detractors from the percentage who are promoters. For example, if 50% were promoters and 10% detractors, the NPS would be 40. This allows businesses not only to focus upon increasing the proportion of people that actively like and evangelise about the company, but also to bear in mind those at the opposite end of the spectrum who are lukewarm or negative.

Customer effort scores look to understand the ease or otherwise with which the customer has interacted with the company on a particular occasion. Often, there will be a five-point scale running from "very easy" to "very difficult", which can be converted into a quantitative metric. Various methods of calculating customer effort scores and pitfalls to avoid can be found within this referenced article[21].

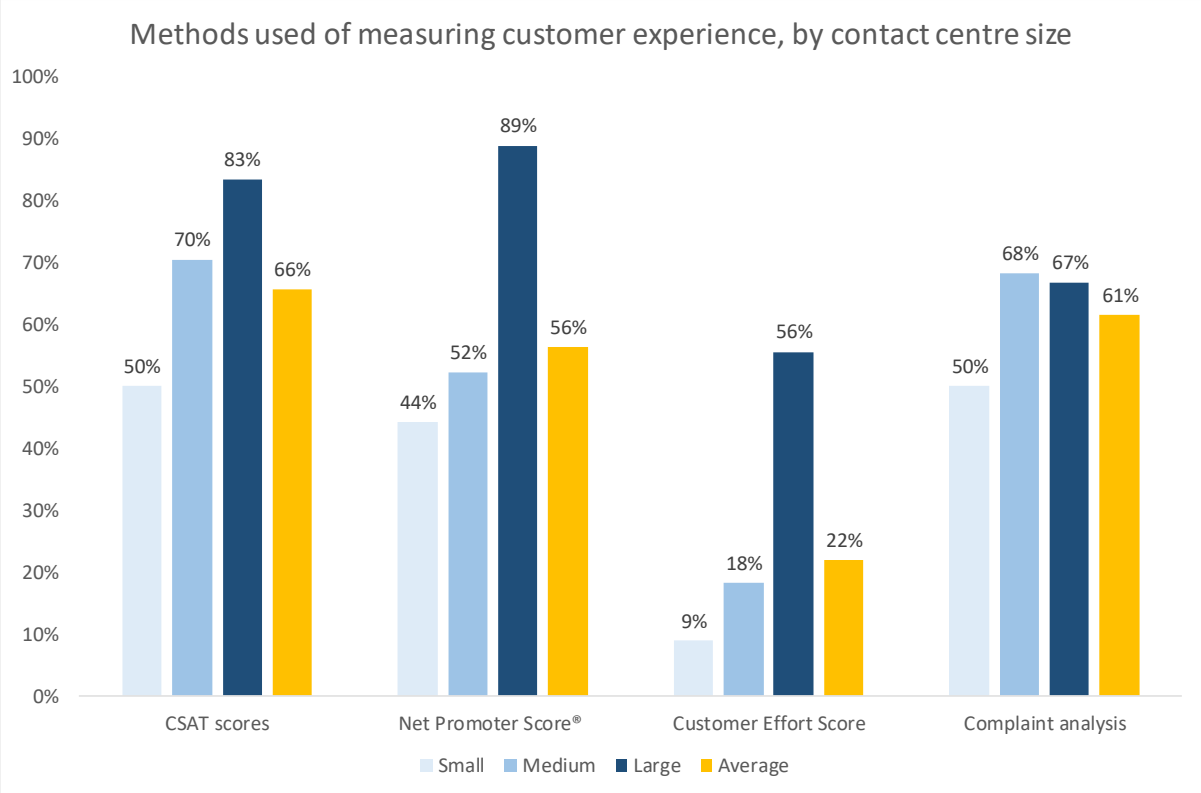
Complaint analysis is somewhat different from the other metrics considered here, in that it focuses strongly upon understanding negative customer reactions, with a focus upon improving the processes and situations that caused these in the first place.

[20] Net Promoter, Net Promoter System, Net Promoter Score, NPS and the NPS-related emoticons are registered trademarks of Bain & Company, Inc., Fred Reichheld and Satmetrix Systems, Inc.
[21] https://www.callcentrehelper.com/how-to-calculate-customer-effort-94671.htm

It is noticeable that large contact centres are far more likely than small and medium-sized operations to be using customer satisfaction scores, Net Promoter Score, and Customer Effort Score.

Very few small contact centres look at customer effort, although complaint analysis and CSAT scoring is used by half of small contact centre respondents.

Figure 175: Methods used of measuring customer experience, by contact centre size



John Seddon uses the term "failure demand" to describe calls that are created by the inability of the business's systems to do something right for the customer:

> "A failure to do something - turn up, call back, send something…causes the customer to make a further demand on the system. A failure to do something right - not solve a problem, send out forms that customers have difficulty with and so on - similarly create demand and creates extra work. Failure demand is under the organisation's control, and it is a major form of sub-optimisation."[22]

Seddon cites the instance of the bank where failure demand created almost half of the calls which they had to deal with. Another classic example of failure demand is where emails go unanswered, leading to calls being made (first-stage failure demand). Later, the email will be answered, unnecessarily, as the customer already has their answer or has gone elsewhere (second-stage failure demand). This redundant work will then impact on other (still live) messages in the email queue, creating a vicious circle of failure demand. Redesigning and restructuring the way in which work flows around the organisation, putting the contact centre at the heart of it, rather than treating it as a separate silo, will go much of the way to reducing unnecessary contacts. The customer ends up getting a better service from the whole company, not just the contact centre.

One way in which this can be achieved is to unify and automate the agent desktop, bringing in the relevant data automatically, depending on who the caller is and what they want. At the end of the call, the correct data is written back to the relevant places, and the correct processes kicked off automatically, meaning that the right departments will be provided with the right information, thus reducing the risk of failure demand, unnecessary calls and irate customers. This also takes the pressure off the agents to remember which systems to update and how to navigate through them within the call (which causes long delays, negatively impacting customer satisfaction), or in the wrap-up, which risks agent forgetting to do things, and also decreases agent availability, increasing the queue length, and decreasing customer satisfaction. In cases where multiple processes have to happen in order for the customer's requirement to be met, automated outbound messaging to the customer, whether by email, SMS or IVR is likely to reduce the number of follow-up contacts that the customer feels that they have to make.

Information on failure demand can be gleaned from the contact centre, which can also hold huge amounts of knowledge about what customers' views of the products, services, competitors and company are. Feedback loops will be established in leading contact centres to push information and insights upwards to those who can make a difference in product development, process improvements and customer strategies. Interaction analytics offers businesses the chance to mine huge amounts of data and find patterns and reasons in a timely fashion, and it is vital then to act upon this knowledge, proving to both customers and agents that the business takes them seriously.

[22] *Freedom from Command and Control: A better way to make the work, work*, John Seddon, 2005

Customers who take the time to complain are also taking the time to state what went wrong with your process, product or communication, and this effort should be acknowledged and treated as being important. Businesses have found that fixing the problem for one customer can help many other customers, including the ones who never contacted you. Most customers are not complaining to cause trouble - they want you to know what went wrong, and believe that you can fix it. If one customer makes a complaint, the chances are that there are many more who are experiencing the same thing. A customer that has given up on your company will probably not complain, but go elsewhere and tell everyone who will listen that they are doing so, an issue that is particularly important in today's world of omnipresent social media.

The following charts show the change in the proportion of calls that are complaints, and whether the complaint is about the contact centre (e.g. an impolite agent) or the wider business (e.g. a late delivery, incorrect product etc). In all years, the target of the complaint was usually the failing of the wider business, although 2012-2015 saw 20% or more of complaints being about the contact centre.

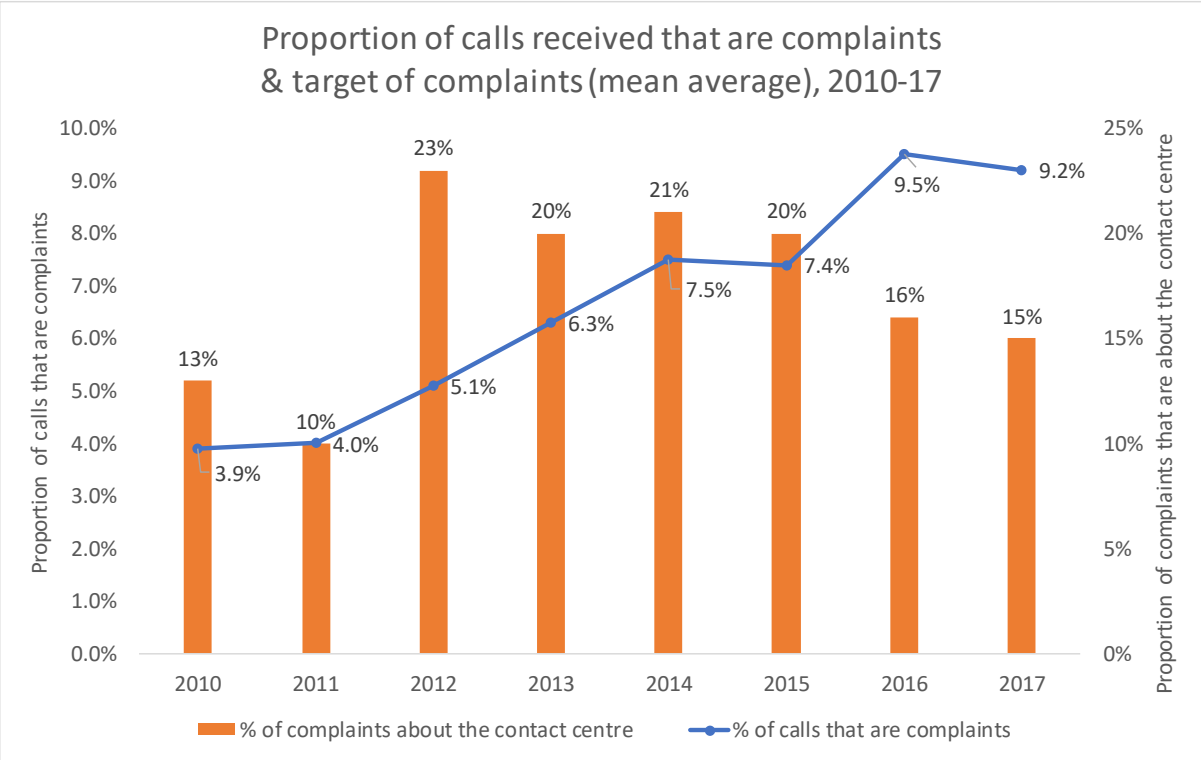
For every vertical market, the majority of complaints received are not about the contact centre itself (or its staff), but rather 'failure demand', caused by a breakdown of process elsewhere in the organisation. However, the contact centre has to deal with the dirty work, and further failures within the complaints procedure (or lack of it) can see customers calling into the contact centre again and again, becoming more irate each time, despite the real problem lying outside the contact centre. This is further exacerbated by the multitude of channels available to customers, who may choose to complain initially via letter or email, and follow up with multiple phone calls if these initial channels are not able to provide them with an acceptable response.

There is also the case that there is a blurring of responsibility between the contact centre and the rest of the business so that lines of demarcation over where the fault lies can be difficult to find. For example, a telecoms provider that has taken an order for a new line has to rely on the rest of the organisation to provision and deliver this correctly. If the agent takes the contact email down incorrectly, the customer will not receive any information about their order, which may have a query on it. When the irate customer rings in to complain, the problem may appear to be with the back-office processes where the order has halted, but the fault actually lay with the agent. Whether this is tracked or reported on correctly is not a certainty, so the split above between contact centre / back-office complaints should be treated with caution.

There is also a real risk, especially within large contact centres, that a single agent does not have the capability or responsibility to deal with the customer's issue, which may reach across various internal departments (e.g. finance, billing, provisioning and technical support), none of which will (or can) take responsibility for sorting out the problem.

A clearer upward trend can be seen when looking at the proportion of calls that are complaints in general, from less than 4% in 2010 to over 9% in 2017. There may be multiple reasons for this: businesses may be failing the customers more often; customers may have become more demanding; or customers may have moved away from the traditional form of complaint – the letter – and prefer to use the phone to complain instead. Certainly, many contact centre decision-makers state that the most effective channel to use for complaints is the telephone, and it may be that customers have found this out for themselves over the past few years.

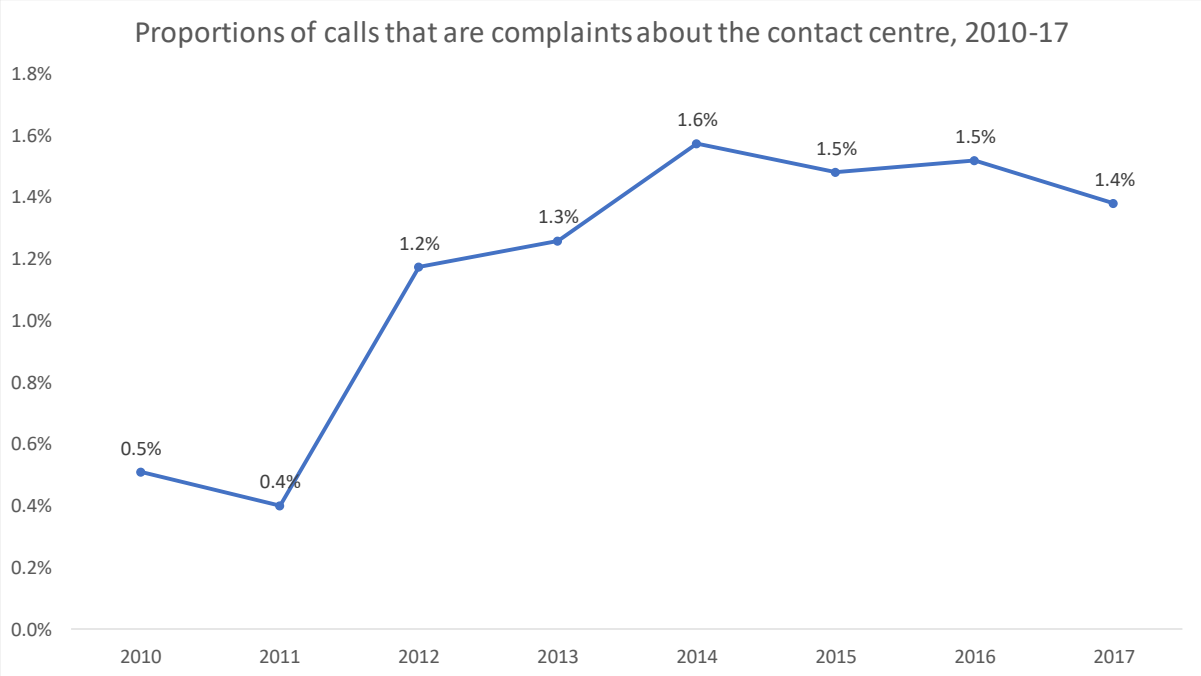
Figure 176: Proportion of calls received that are complaints / target of complaints (mean average), 2010-17



Taking the two sets of data on the previous chart – proportion of calls that are complaints, and proportion of complaints that are about the contact centre – and combining them gives the following chart: proportion of calls that are complaints about the contact centre. This is a figure that contact centre decision-makers should be interested in, as these complaints not only cost money to handle, but are in large part avoidable in the first place.

Since 2012, the figure of contact centre complaints is relatively steady at around 1.5% of inbound calls. This may not seem particularly high, but with 7.6bn inbound calls per year and an average cost per call of £4.00, handling complaints about the contact centre costs the industry over £450m per year.

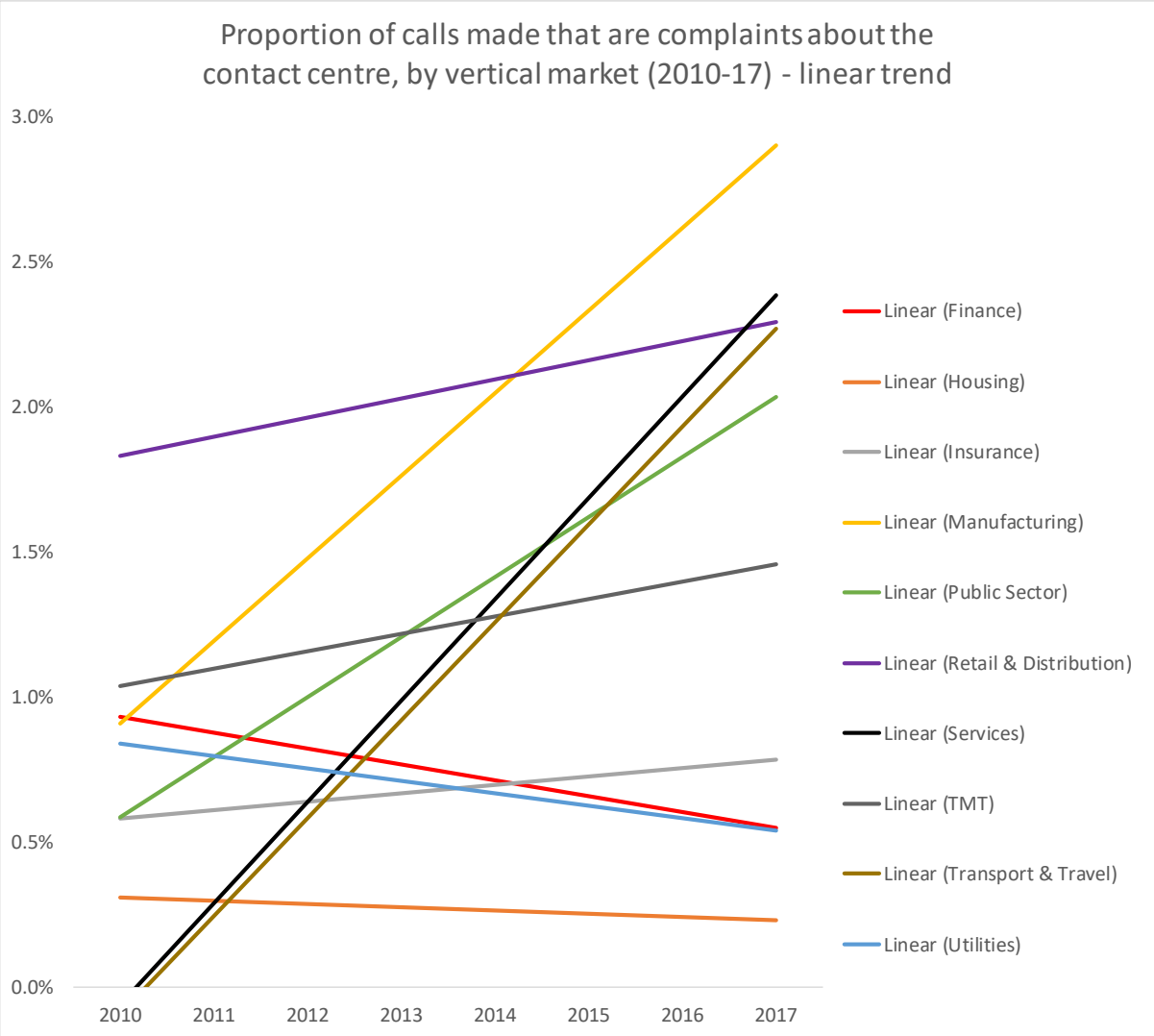
Figure 177: Proportion of calls that are complaints about the contact centre, 2010-17



Looking at the pattern of complaints by vertical market, it was very difficult to get a real sense of the pattern, as each vertical market could change dramatically year on year, as different survey respondents took part each year. In order to bring some sense, a linear trend was used for each vertical market, which smoothed the year to year spikes and drops, while retaining an overall sense of movement.

The chart below should not be used to establish an actual figure, but rather whether each vertical market has a particular problem with complaints about its contact centres, and whether this trend is growing, steady or falling. The manufacturing, services and transport & travel industries report a growing level of contact centre complaints, as does the public sector to a lesser extent. Finance and utilities complaints about the contact centre are dropping, and housing shows very low levels of contact centre complaints at any time.

Figure 178: Proportion of calls made that are complaints about the contact centre, by vertical market, 2010-17 – linear trend



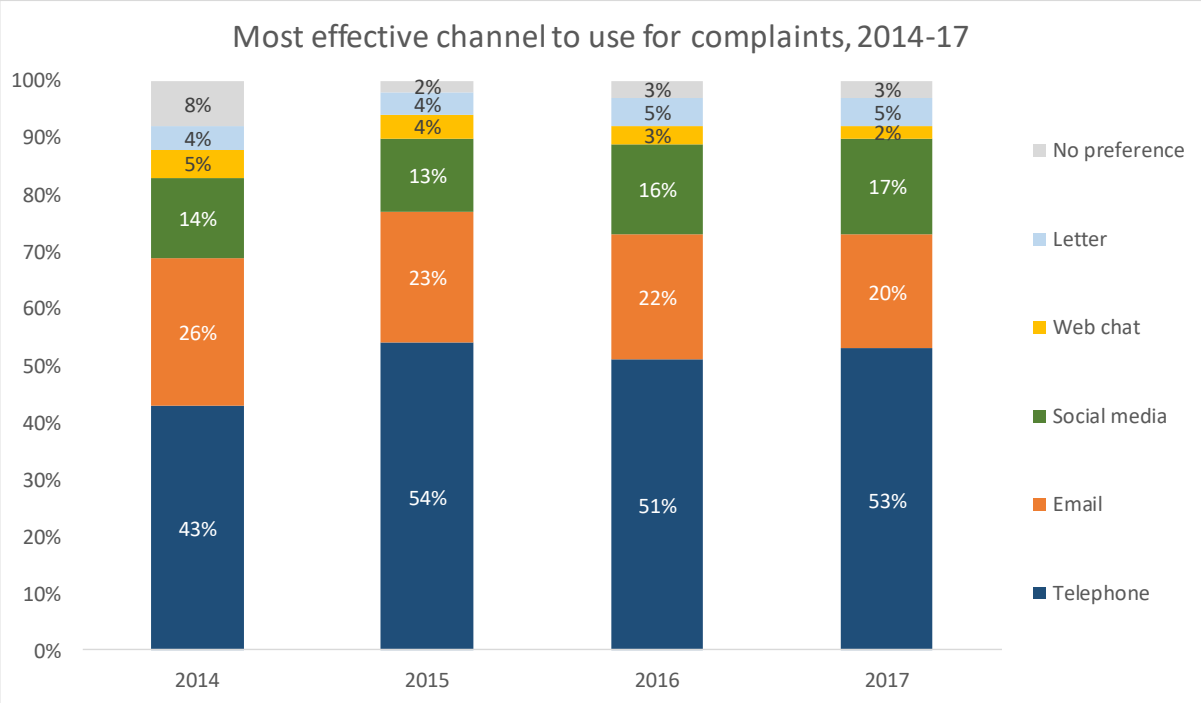
MOST EFFECTIVE CHANNELS FOR HANDLING CUSTOMER COMPLAINTS

Respondents were asked to assess which channel they personally would use if they had a complaint as a customer of their own organisation, and how this has changed since 2014.

Since 2015, a slight majority consistently say that the telephone would be the best channel, with email also having considerable support, although this has declined from 26% in 2014 to 20% in 2017. There is little support for writing a letter - which has been the traditional channel of complaint - with web chat being given very little support as a channel for complaints. Social media has grown slightly from 14% to 17%, and businesses are very aware of what can happen to a brand if social media complaints are not dealt with professionally.

Very few give the diplomatic answer that there would be no advantage to choosing one channel over another within their own organisation.

Figure 179: Most effective channel to use for complaints, 2014-17



FIRST CONTACT RESOLUTION

For most businesses, there is no fixed agreement on what a successful contact centre looks like: even in similar industries, around half of businesses state that a contact centre is a strategic asset, with the other half seeing it as an operational cost centre. Contact centre managers are tasked to balance factors such as cost, efficiency, staff morale and attrition, call quality, customer satisfaction and revenue - some of which may be mutually antagonistic - in a constantly-changing environment where there is limited opportunity for reflection. Often these contact centres exist on a virtual island away from the rest of the business, not just geographically, but logically as well. Although they belong to the business, and constantly receive insights about other parts of the operation, they may not have the ability to provide actionable insight either for their own benefit or for other departments.

Having said that, most of the contact centre world has moved on from the ruthless focus on call throughput and call duration that characterized many operations a decade ago. A major question being asked today is, "How do contact centres attempt to measure the most important metric of all - first-contact resolution?" ('First-contact' resolution differs slightly from 'first-call' resolution, in that it includes emails, web chat and other non-voice channels as well. In reality though, non-voice resolution rates are much less commonly measured).

It can be stated with some confidence that first-contact resolution is seen as the key to a successful contact centre: while previous ContactBabel research shows that customer satisfaction rating is the most important metric, the vast majority of survey respondents place first-contact resolution as being one of the top 3 metrics that are most **influential** on customer satisfaction, far more important than any other metric. So, logically it seems that to improve customer satisfaction, a business has to improve first contact resolution rates.

The ability to understand a query and deal with it in a reasonable timeframe at the first time of asking is the key to a contact centre's success, reducing the overall number of contacts while providing the customer with a good experience which will impact on the company's overall performance. It also has a positive effect on the agent's morale (and thus, staff attrition rates), and increases the chances of a successful cross-sell and up-sell being made. Little wonder that the first-contact resolution metric has grown hugely in importance, but it can be problematic to quantify accurately. This risks the metric being downplayed, especially as it is not simply a matter of producing a monthly report from ACD statistics.

First-contact resolution rates are not simple to understand, but have to be viewed in context. An improving business may well see its FCR rate actually decline after it implements process improvements, which is counter-intuitive, but if the business had been handling live calls that were more suited to self-service or avoidable through better marketing communications, getting rid of these 'easy' calls entirely will make the FCR rate decline. If many calls are about the same issue, and are answered quickly and accurately, it improves FCR rates, but of course piles up cost and impacts negatively upon other performance metrics, such as queue length and call abandonment rate.

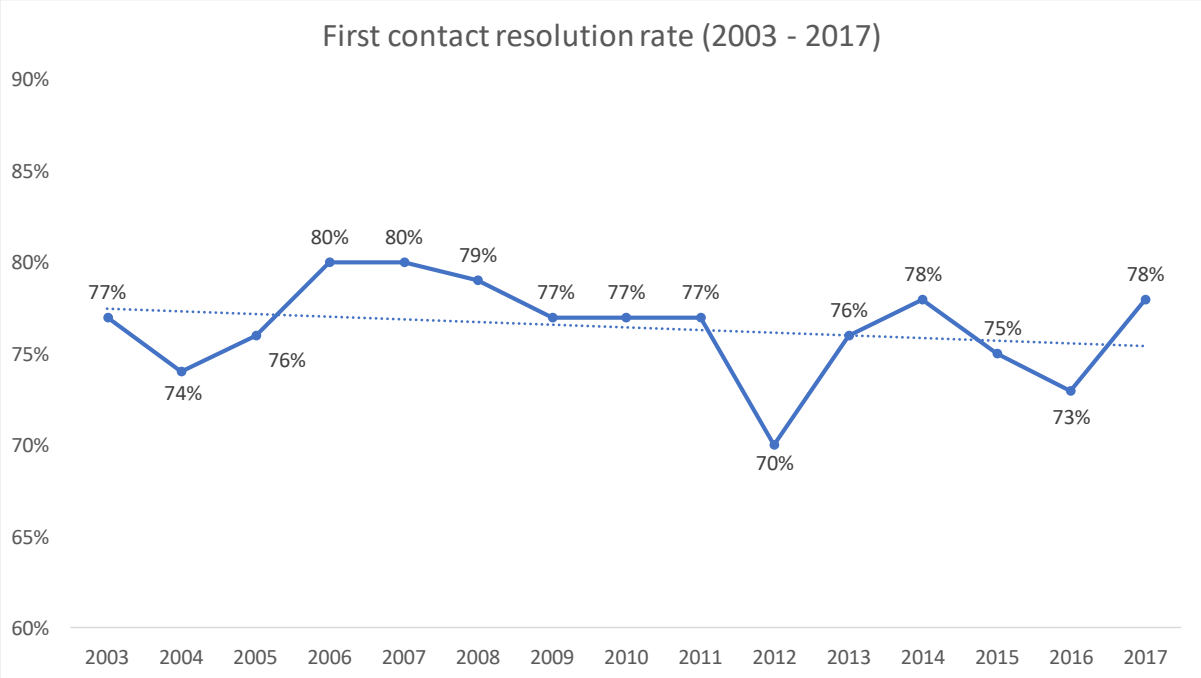
Businesses should consider the reasons for these unnecessary calls, rather than just focusing upon a single metric, as high first-contact resolution rates may actually be masking underlying problems:

- The contact centre is handling simple and repetitive calls that could be moved to self-service, or which could be addressed on a website and through better marketing communications
- Callers are dropping out of self-service to speak with agents because the self-service application is failing in its task and should be re-engineered
- Unclear marketing communications are causing customers to call
- Calls are being received that are actually driven by mistakes from elsewhere in the enterprise.

When businesses begin stopping unnecessary calls at the source, those left are usually of a more complex nature. This will lower first-call resolution rates initially, allowing a clearer picture of what is really happening in the contact centre to emerge, which can then be addressed more fully.

The dramatic drop in first-call resolution rate (FCR) in 2012 seems to have been more of a statistical blip than a fundamental change, with the mean average over time being 75-76%. The overall trend line for FCR is declining very slightly: as the easier interactions go to self-service (especially online), the contact centre is left with more difficult and varied tasks – through email as well as phone - which can also be very complicated to categorise effectively using the current tools available to most. As the contact centre adapts and invests in better ways of handling customer requests, first call resolution rate increases and parity resumes. The exodus of 'easy' work to self-service channels may not be quite balanced by immediate balancing improvements in knowledge sharing and other agent support processes that would mean stable first call resolution rates.

Figure 180: First contact resolution rate (2003 - 2017)

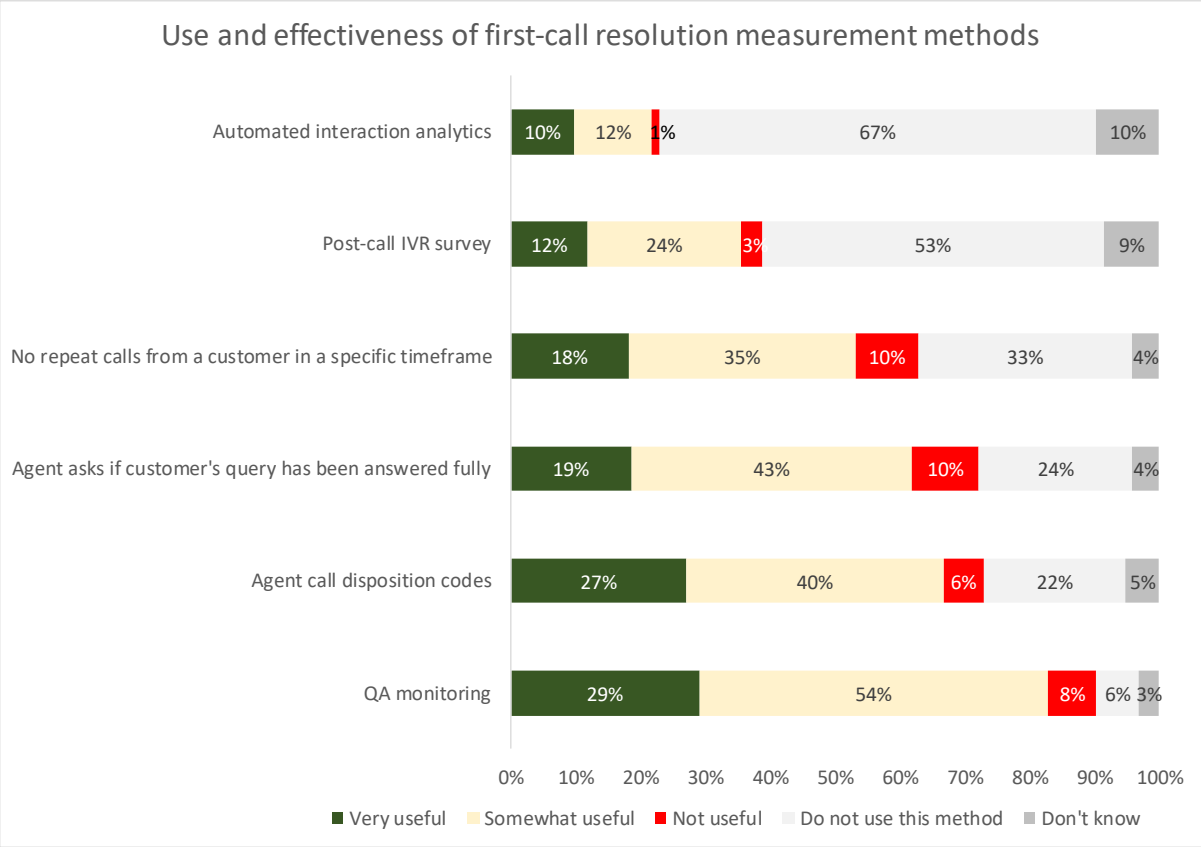


The first-contact resolution rate is an important metric to study, being concerned both with the customers' experience as well as avoiding unnecessary calls. However, it is very difficult to measure effectively, with no single best practice method of getting definitive statistics that are directly comparable to the rest of the industry. This difficulty is shown by the fact that five or six years ago, perhaps half of contact centres responding to this survey did not collect FCR performance at all (over 80% of contact centre respondents do now report this figure).

Of those that do, there are various ways to measure, or at least closely estimate, first-call resolution rates:

- Agents ask customers whether the call was resolved completely (used in 76% of cases)
- Agents use their own initiative and assign a call disposition code (78%)
- Supervisors monitor calls and score based on their opinion (94%)
- Tracking of whether the customer calls back in a specific timescale (67%)
- Customers provide feedback in end-of-call IVR sessions (47%)
- Interaction analytics of call recordings determine call status automatically (33%).

Figure 181: Use and effectiveness of first-call resolution measurement methods



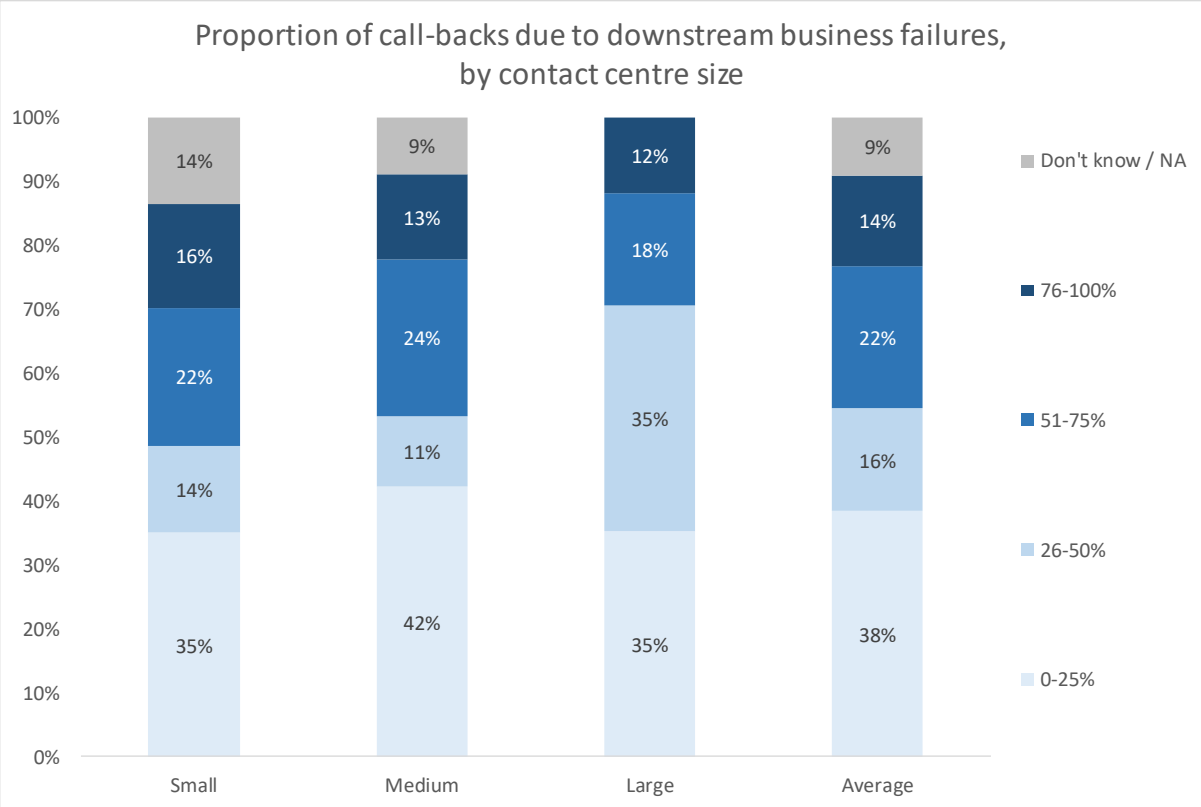
QA monitoring has the highest proportion of respondents reporting it as 'very useful', although as this is very widely used, it amounts to only 31% of contact centres using this method considering it very useful. Around the same proportion of users of automated interaction analytics, which allows 100% of calls to be assessed, consider this to be 'very useful'.

Agent call disposition codes are said to be very useful by 35% of respondents using this, and all of the methods have their proponents, although the agent asking if the customer has had their query resolved, and a lack of repeat calls in a timeframe have a significant number of negative responses.

However, even if FCR can be measured successfully and accurately, this figure is still not necessarily actionable: we do not always know why some calls are not resolved first-time. Without a greater level of insight, contact centre managers may not be addressing the real issues that are impacting on customer satisfaction and the effectiveness of the operation. In the near future, we expect to see a growth in the use of speech analytics being directed at understanding why customers contact a business multiple times: respondents to this year's report do this very rarely as yet.

It is worth noting that the majority of contact centres who track first-call resolution do so **only** based on the initial telephone call itself: that is, they do not check whether the action or business process initiated by the call has been followed through successfully. Most complaints received by a contact centre are about the failings of the wider business (around 80%), so focusing entirely upon the work done within the contact centre is missing the point of measuring first-call resolution. The following chart shows that 36% of respondents report that more than half of their call-backs are due to failures in downstream processes and actions (or lack of them), showing that there is a real need for joined-up processes between the front and back-office as well as between channels.

Figure 182: Proportion of call-backs due to downstream business failures, by contact centre size



CUSTOMER PERSONALISATION

This chapter looks at the ways in which the business can tailor the interaction to the customer's requirements, from identifying who they are and how they prefer to be treated, to dynamic changes within the conversation itself to enable a better outcome.

The chapter includes discussions upon:

- The growing importance of customer personalisation to the contact centre's strategy
- Context- and location-specific service
- Understanding the channel of choice
- Optimising and personalising the IVR experience
- Call routing decisions
- Supporting the agent to help the customer through dynamic scripting, real-time analytics and emotion detection.

CUSTOMER PERSONALISATION AND CONTACT CENTRE STRATEGY

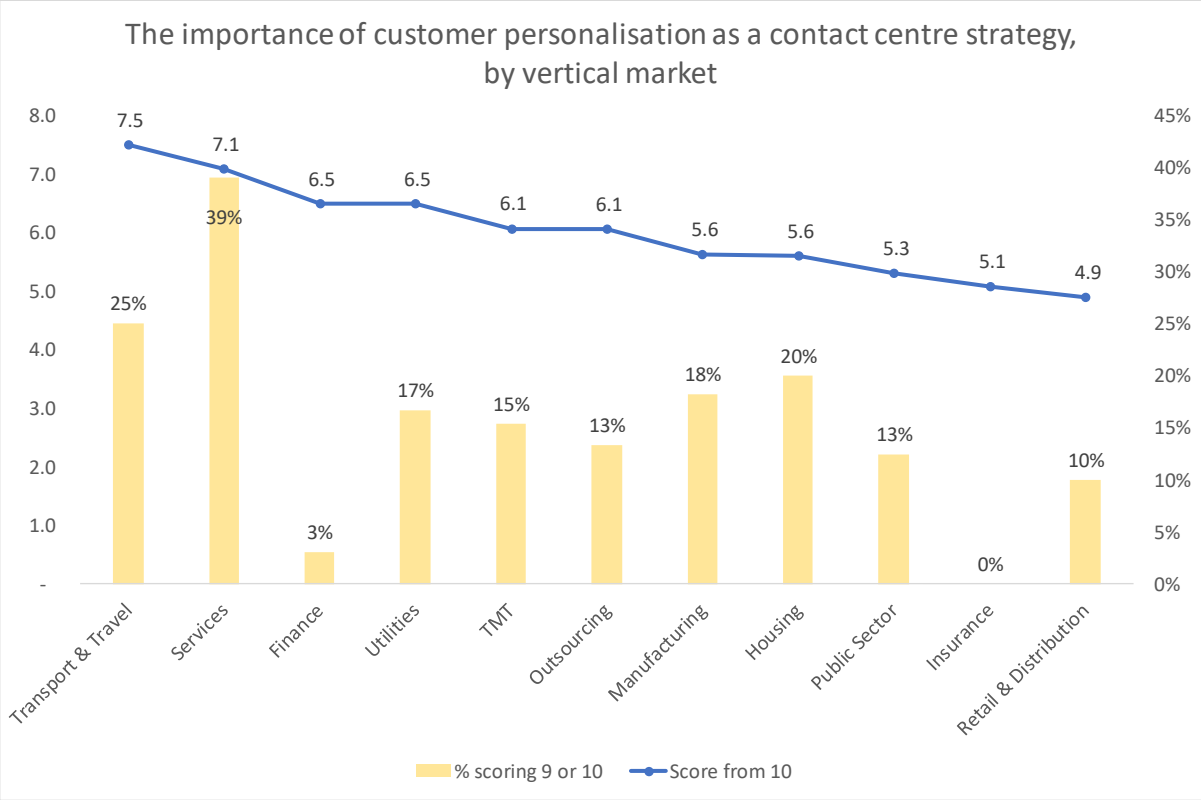
Survey respondents were asked to score the importance of customer personalisation on a scale of 1 to 10, where 10 was 'extremely important'. The proportion of respondents scoring at 9 or 10 – showing a major focus – was also noted.

Many sectors, in particular transport & travel, services, finance and utilities, state that customer personalisation is an important part of their contact centre's strategy, and will directly affect the decisions made about the investments made in future.

Personalisation was seen to be equally important across all size bands. 21% of service-focused contact centres rate personalisation at 9 or 10, compared to only 11% of sales respondents. Inbound operations are more likely than outbound to consider it important.

Customer personalisation was ranked as 4th most important factor driving contact centre strategy, ahead of factors including sales growth, agent attrition and new technologies. More on this can be found in the Strategic Directions section later in this report.

Figure 183: The importance of customer personalisation as a contact centre strategy, by vertical market

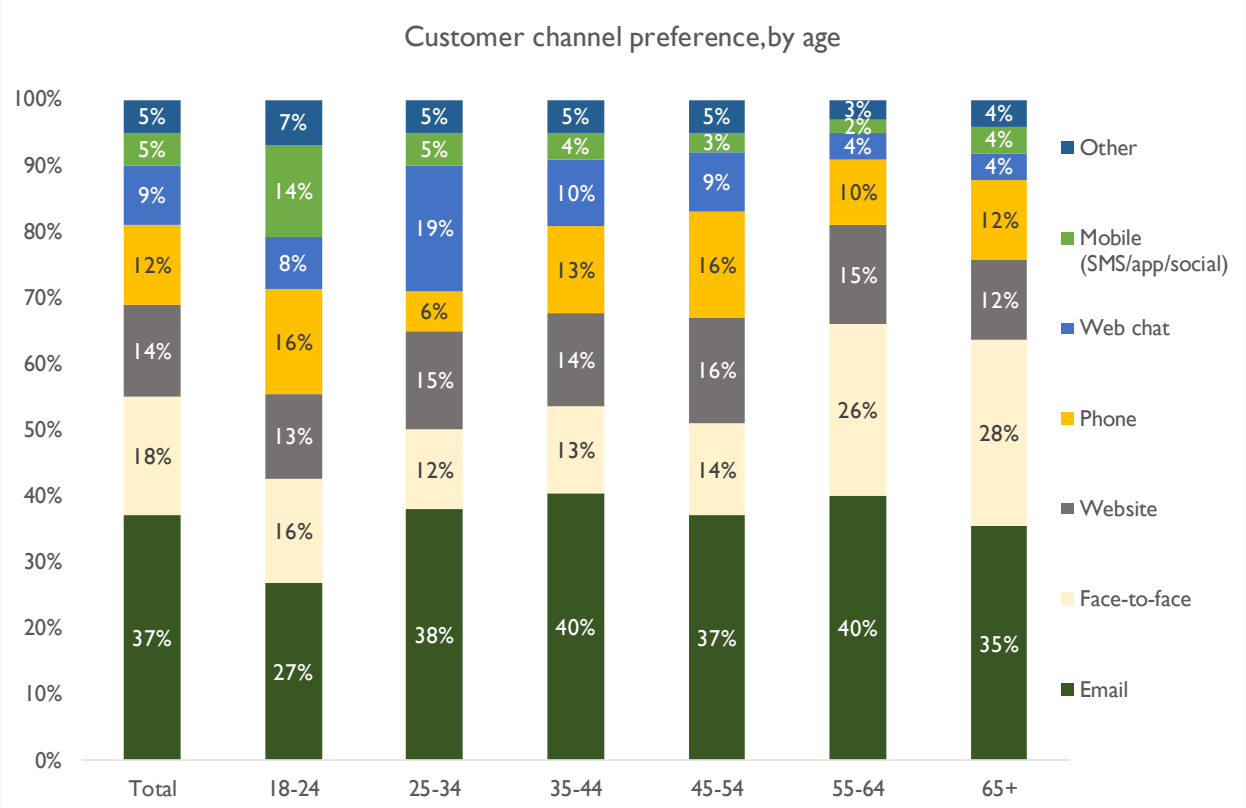


THE CHANNEL OF CHOICE

The single largest finding from a ContactBabel survey of over 2,000 UK customers was that fewer than 1 in 8 actually want to pick up a phone to deal with a business. This, despite live telephony accounting for around two-thirds of customer-initiated contact.

While the findings below show many interesting things - older people are happy to use email (perhaps as they come from a generation that was used to expressing itself in writing) and also value the face-to-face interactions that they are used to from their younger days; the youngest generation are by far the happiest to use a mobile-based app to communicate with the company – the general fact remains that customers don't want to pick up the phone. And yet they do.

Figure 184: Customer channel preference, by age



For most customers, being made to pick up the phone puts the customer experience into negative territory, giving the agent an uphill task before a word has even been spoken. For many customers, a truly personalised business experience will not involve them picking up the phone at all.

So, what makes customers do something they don't want to?

The answer is the huge importance that customers place on first-contact resolution. Their experience – not just with a specific business, but in all of their dealings with companies – has shown them that the telephony channel, despite its attendant irritations, is most likely to get the job done first time.

Yet if first-contact resolution is of the utmost importance, we might expect that all other channels would be spurned in favour of telephony. Clearly, with one-third of inbound interactions coming into other channels, this is not the case. Some interactions are simpler than others; some less important or urgent.

It's worth reiterating that, as a rule, customers choose the most painless channel that also gets the right result first-time.

This is where things get more complicated: the customer's experience of each interaction is driven not just by what they want to achieve, but also multiple factors such as emotional state, urgency of request, time of day, the device being used and the past experiences of the customer, amongst others.

Businesses can reach a better understanding of their customers' requirements by analysing the type of interactions that they receive, and trying to offer the right channels and match necessary resources accordingly. If customers decide that they have to pick up the phone, then the business has ways of making sure that the interaction is effective, painless and customised to the needs of that specific customer, starting from the time that they connect with the IVR menu.

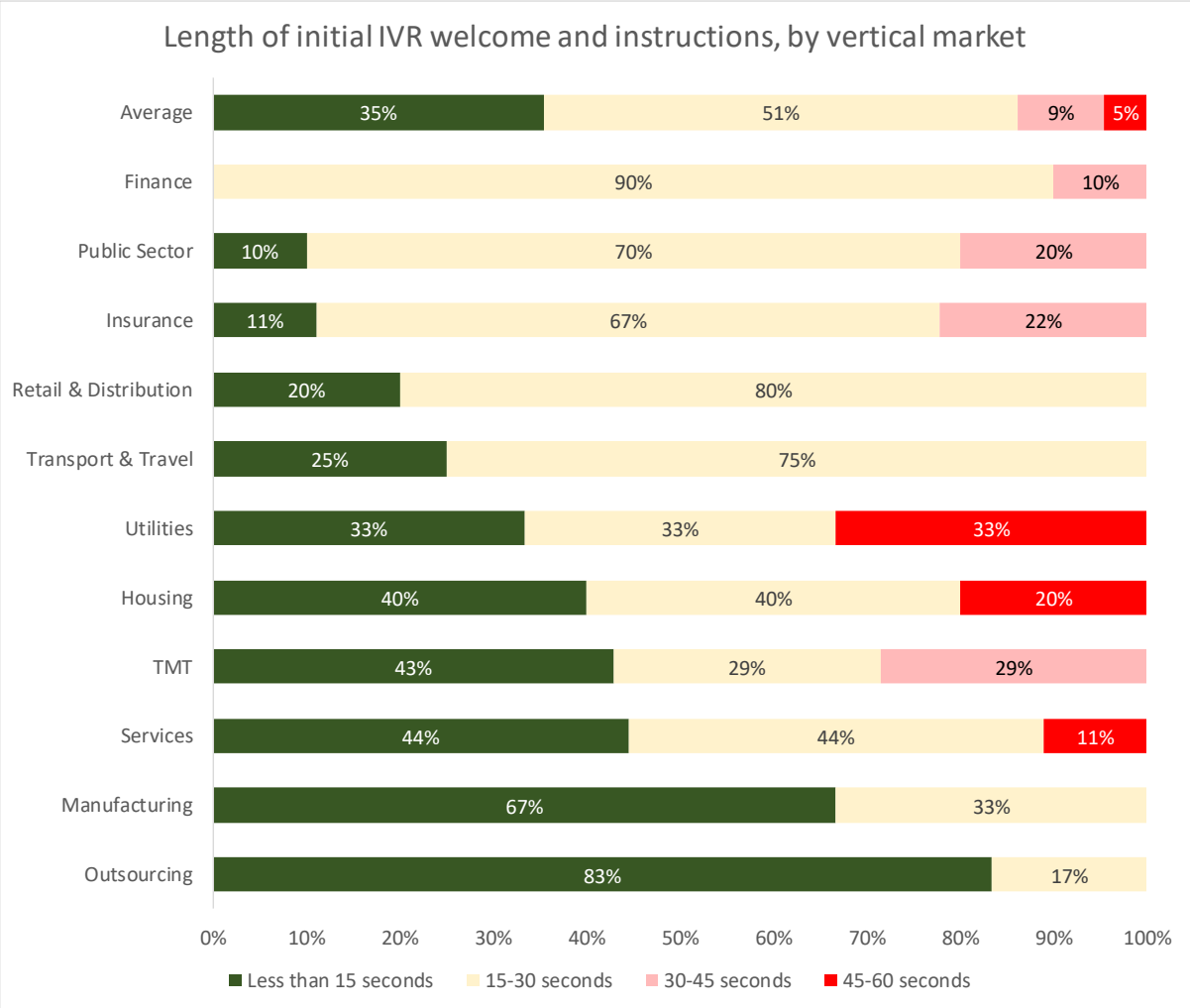
THE IVR EXPERIENCE

Many customer interactions begin with an IVR session. For many customers, IVR is seen as a way for the business to put up a barrier between them, involving a long and tortuous path before actually getting to speak with someone. Yet an IVR session should capture information about the customer's identity and requirements that allows a business to provide an answer or route the call to someone who can actually help, rather than taking pot luck by dropping the call on the next agent available.

The IVR experience will often begin with a generic welcome announcement before offering various options for the customer to choose with a DTMF keypad (the vast majority of IVR is carried out with DMTF rather than speech recognition).

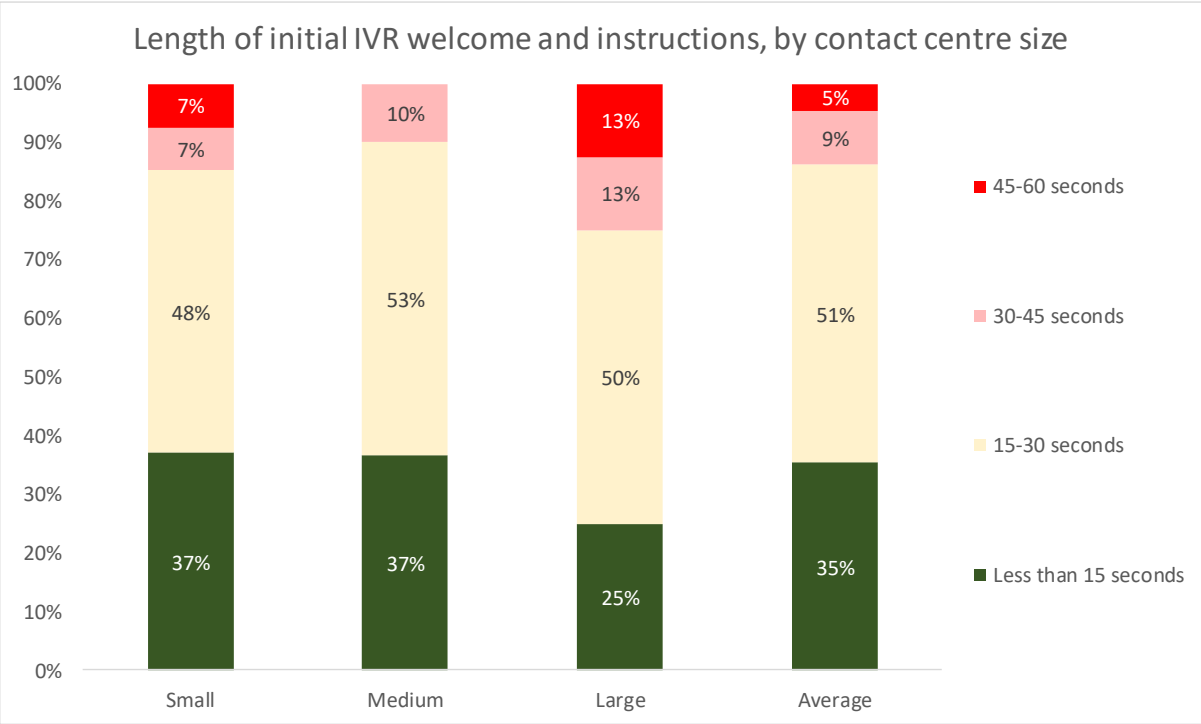
83% of outsourcers state that their IVR announcement is shorter than 15 seconds (the times stated include the welcome, along with the first set of IVR options). One-third of respondents from utilities contact centres state that their initial announcement is longer than 45 seconds.

Figure 185: Length of initial IVR welcome and instructions, by vertical market



Larger contact centres (usually with more departments, skill-sets and products/services) will tend to have the longest initial IVR announcement, with 26% reporting announcements longer than 30 seconds.

Figure 186: Length of initial IVR welcome and instructions, by contact centre size



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

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

Many businesses that use DTMF IVR have made long-term investments in this technology, and retiring the system entirely is not desirable. Giving existing IVR functionality a visual interface simply means that the IVR's path can be shown as a picture on a website or smartphone, with callers touching the selection that they require without having to listen to all of the options or to go up and down levels or branches. This has the dual benefit for the customer of being far quicker than

listening to IVR menu options, and of being significantly more likely to get them the correct information or to be routed to the department most appropriate to their needs. Visual IVR menu systems integrate with existing DTMF structures and reuse the same VoiceXML scripts, meaning that any changes made to the existing DTMF IVR system will be automatically replicated regardless of channel or device.

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

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

Another option is to speech-enable IVR, to increase the features available to the caller. Standards-based languages such as CCXML and VoiceXML support speech recognition and improved access to relevant corporate data, the integration of which into the IVR experience supports text-to-speech and the use of caller profiling to enable personalised IVR sessions based on who the caller is, their history, their contact preferences and any other relevant information that would further assist the self-service session. Smartphone applications and IVR options could be tailored to the preferences and history of a customer. In turn, the business could ensure that customers are only offered options that both make sense to them personally and also optimise business potential. This is analogous to the targeted advertising approach delivered by the likes of Google and Facebook.

By identifying a customer within a self-service process, and by personalising and contextualising offers that they may be interested in based upon their profile, history and what they are searching for now, businesses stand a very good chance of improving their cross-selling and up-selling rate accordingly. There are also wider and longer-term benefits to be had by understanding more about the customer's mindset and personal circumstances.

A key aim of omnichannel is to provide a consistency of customer experience, and this requires access not only to the same master dataset, but also that the same knowledge bases and business logic must be applied equally. There must be real-time data flow and updates between channels and databases, as without this, consistency is impossible. Putting such systems and processes in place will not only allow the seamless escalation of service requests within channels, but also gives the business a chance to use their automated systems to react to an escalation before it reaches a live agent, deflecting the cost while fulfilling the service request more quickly. For example, analysis of past interactions may indicate that if a particular customer has placed an online order, they are likely to ring the contact centre within 2 days to check on its progress. Making the IVR aware of the customer's history means that this call can be intercepted before it reaches an agent, and a personalised IVR experience (with the option to "Check your order status") will reduce customer effort and the time and cost of the agent who would otherwise handle this. Analysing and predicting customer intent will become a competitive service differentiator within the next few years.

ANALYSING CUSTOMER INTENT

Customer interaction analytics can provide a solid understanding of why customers are calling. Categorising types of calls, and then analysing them for the occurrence of similar types of words and phrases can give an insight into the reasons for customers' calls. For example, a category such as 'sales' might be analysed for patterns, and it is discovered that the words 'delivery' and 'website' are mentioned in a disproportionate number of them. Listening to some of these conversations, it may be found that the website does not highlight delivery times effectively enough, leading to unnecessary calls to the contact centre, rather than the customer purchasing on the website.

The automatic categorisation of calls, based on the types of words and phrases that typically get used within these types of calls, is a starting point. Analytics solutions can then add non-audio data, such as desktop activity or account status, and the tracking of word usage compared with its historical use (e.g. a 300% rise in the use of the phrase "can't log-on" after a software upgrade) can quickly indicate and identify issues that can be handed to the relevant department much more quickly than typical inter-department channels could usually manage. Regular references to competitors and their products can be captured, analysed and passed to the marketing or pricing teams to provide them with real-life, rapid and accurate information upon which to base decisions. This categorisation gives a starting point for analysis, meaning that businesses can listen to the right calls rather than getting them randomly or employing large numbers of people to get insight from customers' calls.

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

PERSONALISING THE MOBILE CUSTOMER

This personalised approach is also leveraging the information that mobile and especially smartphone devices can provide. On moving from self-service to assisted service, mobile service applications should gather the browsing history, customer information and the context of the session in order to pass this to a live agent. Smartphones are enabled with GPS tracking, so businesses should look to leverage this capability to deliver better customer experiences where possible. In fact, the inherent capabilities of the mobile device offer businesses huge opportunities to impress their customers, including location-specific information, such as local broadband outages, or the ability to leverage photo-taking functionality on the phone to provide the agent with a clearer picture of the situation (which may be particularly useful for insurance claims, for example).

SMS and outbound calling also offer opportunities for businesses to deliver proactive customer service through the mobile channel, creating a positive attitude. Furthermore, location-specific device information also allows businesses to deliver timely service and relevant marketing messages which can be positives for the customer at that specific place and time.

Contextual data provide a great opportunity for businesses to deliver timely personalised service in a cost-effective and profitable manner. The nature of mobile devices means that businesses potentially have the opportunity to know more about their customers and their specific requirements and preferences than ever before.

This includes:

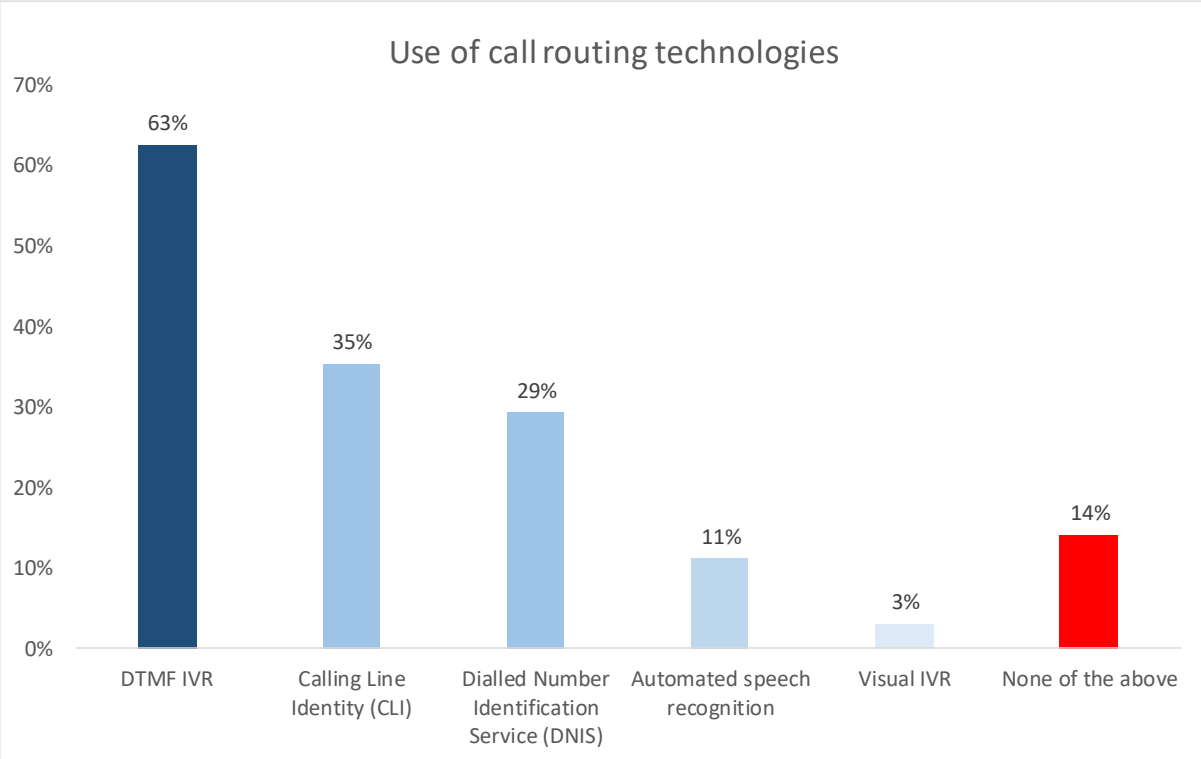
- Customer identity: once the customer has identified themselves, such as by logging on, or through the mobile phone number, this allows the agent to access their existing customer history in the same way that would be done so on a phone call into the contact centre.
- Geographical information: smartphones are GPS-enabled, allowing agents to see where customers are, and to direct them to the nearest shop, for example.
- Historical activity: if the customer has been browsing a mobile website or app beforehand, the information that the customer browsed previously may be useful for the contact centre agent to have to hand, in order to see and understand what the customer has already tried to do.
- Stored data: the mobile device may have data stored that identifies the customer, such as account number, that can speed up the interaction and make it more effective.
- Collected information: the mobile device may also be used to capture and share information with the business such as photographs or videos. It may be possible to automate a two-way interaction: for example, a customer may use their mobile phone to scan a QR (quick response) code on a product. Using the information on the code, as well as the customer's input into the app about what they are trying to do, the customer may be directed to the correct place within business's self-service function in order to solve the issue that they have. This can take the contact centre out of the equation altogether, resulting in reduced costs for the business and a quicker and more effective customer experience.

ROUTING AND CUSTOMER PERSONALISATION

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 187: Use of call routing technologies, by vertical market



Half of respondents who use IVR for routing purposes identify the actual caller through one or more techniques, for example using DTMF tones to input account number, through an automated security process or through calling line identity (CLI) which displays the number that the customer is calling from, allowing a database lookup. This may be the used for a screen pop, or to automatically route the customer to a specific department or office. (Some businesses may use CLI to identify a region or country and route appropriately without looking up who the customer is, and these are not included in this figure).

35% 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.

31% 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 25% actually identify the customer with a similar proportion then accessing the records within the CRM system in order to deliver this to the agent desktop.

Only 8% identify whether the agent who last spoke to this customer is available, an option which could be used to personalise the call and develop the relationship and understanding between the customer and business.

42% of contact centres do none of these things, and the caller is faced with explaining who they are and want they want. At the opposite end of the spectrum, some contact centres attempt to match the customer with an agent based on personality types and communication preferences, and this is discussed in the next section on predictive behavioural analytics and routing.

Figure 188: Pre-call personalisation actions

Method	% of respondents using this method
Identify the skills and capabilities that the agent answering the call is likely to need	35%
The subject that the customer wants to discuss	31%
Identify the customer	25%
Access the customer's records and history in the CRM system	22%
Identify whether the agent that last talked with this customer is available to take the call	8%
None of the above	42%

PREDICTIVE ANALYTICS

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

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

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

Predictive behavioural routing uses millions of algorithms to decode the language used by agents and customers, in order to understand their state of mind, personality, communication style, engagement levels, empathy and transactional attributes (such as ability to overcome objections, willingness to sell, success rates, the number of times supervisor assistance is required, etc.). Through analysing historical interactions, each customer can be matched against a specific personality style. When this customer calls again, they are identified through the IVR or the dialling number, and the call is then routed through to an agent whose performance when interacting with this specific personality type has been seen to be positive. This increase in empathy and the matching of communication styles has seen these matched agent-customer pairings get significantly higher sales closure rates and better customer satisfaction scores.

Predictive behavioural routing has its roots in communication-based psychological models for assessing personality type and identifying behavioural characteristics. One vendor’s solution, for instance, is based upon a personality model developed in the 1970’s to assist NASA with astronaut selection; the premise of this model is that individual personality type can be derived from a person’s use of language. By understanding the type of customer, calls can be routed to agents who are best at handling the caller. Agents who are skilled at handling many types of callers' personality styles can be saved for callers whose character type is unknown, perhaps as this is the first time that they have called.

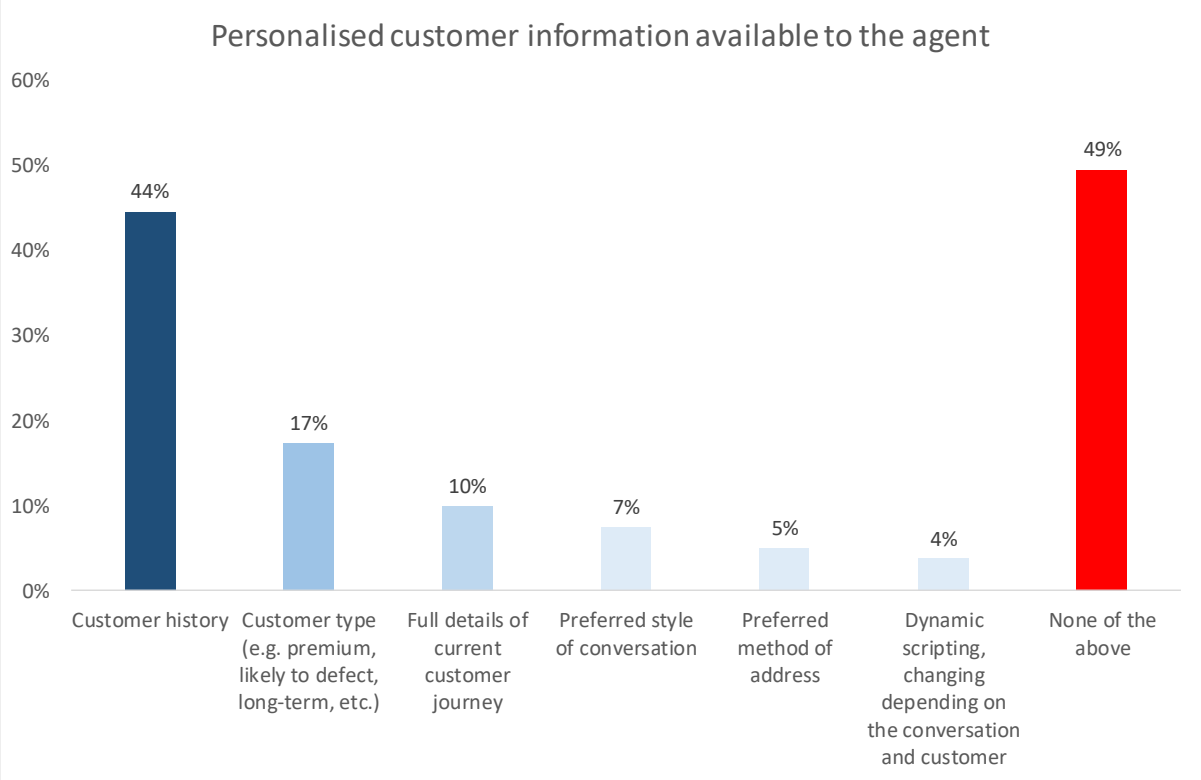
By tracking agent performance across various personality types, information can be fed into the performance management process to help that agent improve, and agent capabilities are regularly reassessed to promote optimal routing.

HELPING THE AGENT TO HELP THE CUSTOMER

Once the customer has been identified and the call has been routed to the agent, greater personalisation of the interaction becomes possible. Agents need relevant information about the customer and the issue they wish resolving to be available at a glance, without having to search manually for it, or keep the customer waiting while they try to understand the situation.

Integrated desktop solutions can remove the need for agents to log into multiple applications, assist them with the navigation between applications within the call, and make sure that customer data is gathered from the correct places and written consistently back to any relevant databases without the need to navigate through multiple systems. This not only increases speed and accuracy, but allows the agent to concentrate on the customer, and on any alerts or suggestions that the desktop application is making about where to take the conversation next.

Figure 189: Personalised customer information available to the agent



Surprisingly, only 44% of contact centres report that the agent even has a full view of the customer history, including any non-voice interactions.

Very few respondents state that their agents are provided with hints and tips on how the customer prefers to be addressed or their style of conversation (relaxed, formal, chatty, etc.), meaning at best that callers receive the same neutral, generic form of address as everyone else.

Only 4% of this year's survey respondents use dynamic scripting, which helps the agent to provide the right information at the right time, seamlessly linking with multiple back-office applications and databases, providing only what is relevant onto the agent's screen. Depending on the experience or profile of the agent, what the customer is trying to do and any regulatory inhibitors, on-screen buttons can be enabled or disabled, or access to fields limited according to business rules. Furthermore, adherence to business processes can be assured by making the agent complete all of the required steps in the transaction (for example, adding call notes, reading disclaimers, etc.).

Dynamic scripting can be supported by the use of real time analytics, which should perhaps be more accurately referred to as 'real-time monitoring and action'. Analysis ("a detailed examination of the elements or structure of something[23]"), refers to the discovery and understanding of patterns in data, and is currently something that by definition only happens post-call when all data are fully present. Real-time monitoring on the other hand, looks for and recognises predefined words, phrases and sometimes context, within a handful of seconds, giving the business the opportunity to act.

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

Real-time can be used in many ways:

- monitoring calls for key words and phrases, which can either be acted upon within the conversation, or passed to another department (e.g. Marketing, if the customer indicates something relevant to other products or services sold by the company)
- alerting the agent or supervisor if pre-specified words or phrases occur
- offering guidance to the agent on the next best action for them to take, bringing in CRM data and knowledge bases to suggest answers to the question being asked, or advice on whether to change the tone or speed of the conversation
- escalating calls to a supervisor as appropriate
- detecting negative sentiment through instances of talk-over, negative language, obscenities, increased speaking volume etc., that can be escalated to a supervisor
- triggering back-office processes and opening agent desktop screens depending on call events. For example, the statement of a product name or serial number within the conversation can open an agent assistant screen that is relevant to that product
- making sure that all required words and phrases have been used, e.g. in the case of compliance or forming a phone-based contract
- suggesting cross-selling or upselling opportunities.

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

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

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

The concept of 'emotion detection' is becoming more frequently mentioned in relation to real-time analytics. Emotion or sentiment displayed on calls can be extremely difficult to track accurately and meaningfully, as everyone has their own way of expressing themselves, words and feelings may not match up, or external irritations not related to the topic of conversation may intrude. Some vendors argue strongly that detecting emotion on each call is a useful tool - for example, by passing irate customers to a supervisor - and further developing their ability to detect voice-stress on a call in order to flag these to a supervisor, with some real time monitoring solutions measuring indicators such as speed of speech, volume, use of key word triggers, instances of talk-over or silence, etc.

There is another viewpoint, taken by those that offer solutions based on the analysis of masses of recordings, that says that the real value comes from looking at very large samples of data to identify those agents, processes and circumstances where emotion (often negative) runs highest, and taking into account the outcome of the call as well. While emotion detection has had a relatively low profile for many solution providers, recently there has been a great deal talked about the benefit of sentiment detection in both real time and historical analytics solutions.

Against this however, is the feeling that this is one thing that humans can do far better than machines: do agents really need to be advised on a call when somebody is being sarcastic, or is upset? It may be that sentiment detection is more suitable for large-scale historical analysis of calls, where emotional content can be correlated with the outcome of the call, and the spoken use of a word can be ambiguous when seen as text (for example, in the use of sarcasm).

Another viewpoint is that real-time sentiment analysis may be useful for offshore agents who have a different cultural and first-language background to that of the caller.

Some solution providers have recently noted that it is not only what we might consider the keywords within the conversation that indicate sentiment (e.g. "upset", "disappointed", "recommend"), but also the filler words (for example, if the inclusive "we" changes to "you", which may indicate estrangement from the brand.

Away from live phone calls, using artificial intelligence (AI) for analytics will allow the business to provide customers with personalised service before they even require it. AI will be able to predict what the customer is likely to meet next, based upon analysis of other customers with similar circumstances in the past. This move to proactive customer service is a step further than what is currently widely-used - automated emails or SMS providing an update about delivery times, for example - anticipating sources of frustration or the need for assistance before the customer has even realised it, on a personalised basis. Machine learning - which will be able to identify patterns within data automatically, without requiring an analyst to direct it - will give analytics even greater scope and power.

HR MANAGEMENT

With staffing accounting for up to 75% of a contact centre's operational cost, issues such as attrition, recruitment and training are always towards the front of any contact centre manager's mind.

This section looks at how time and money are spent on the human element to contact centres, how contact centre decision-makers view their agents' performance and morale, and what they are doing to support their agents' performance.

This section contains information around contact centre HR benchmarks such as attrition and absence.

"The 2017-18 UK Contact Centre HR and Operational Benchmarking Report" also gives detailed analysis of salaries, bonuses, training methods and costs, segmented by vertical market, contact centre size and contact centre activity type where relevant. Historical trends are observed with a view to predicting what future standards will look like.

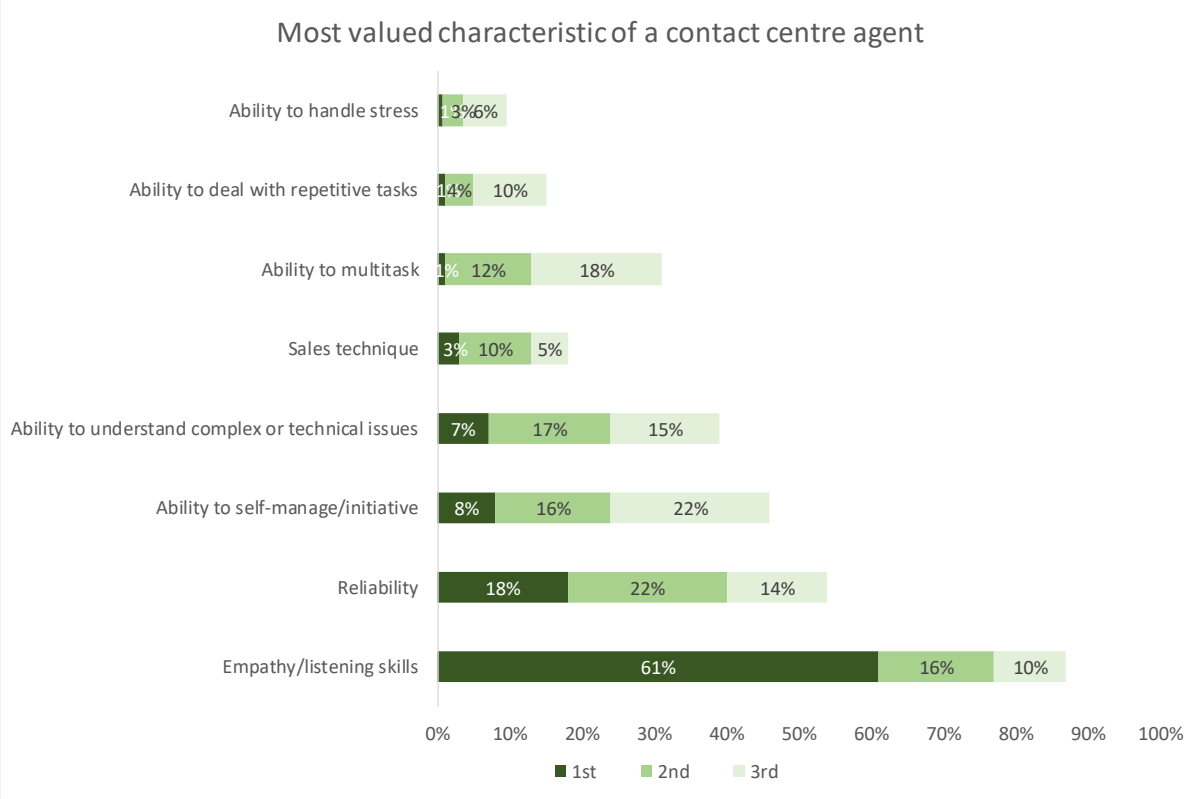
The report also contains operational benchmarks such as speed to answer, call abandonment rates, call duration, call transfer rate, cost per call, agent occupancy, target service levels and first-call resolution rates.

ATTRITION, ABSENCE AND RECRUITMENT

61% of respondents this year's survey state that the most valued characteristic of a contact centre agent is their ability to listen and empathise with the caller. This ability is seen as far more important than being able to handle stress, multitask, sell effectively or understand complex or technical issues.

While some people naturally have this skill, experience and directed training can maximise it in others. As self-service and other text-based channels handle increasing amounts of straightforward customer interactions, those that are left to be handled by a telephony agent will be of a more complex nature and/or of a type where the customer needs reassurance and empathy.

Figure 190: Most valued characteristic of a contact centre agent



While many operations' attrition and absence rates are not dramatically high, it should be noted that more than half of survey respondents agreed or strongly agreed with the statement "HR issues – attrition, absence, skills and recruitment – are preventing our contact centre from achieving its aims and potential."

As such, the contact centre requires different people than has traditionally been the case, with skills and behaviours aligned to the modern customer, and the business's desire to improve the customer experience. With contact centre salaries creeping upward at a glacial rate, finding and keeping people of the right calibre is more difficult than ever.

ATTRITION

Throughout the studies that ContactBabel has carried out over the years, whether in the US or Europe, staff attrition has consistently been quoted as one of the major worries of contact centre management. Along with staff absences, high levels of unexpected attrition can cripple a contact centre's ability to provide even an acceptable level of service, raising costs and creating a negative customer experience, as well as placing massive stress on those agents who remain at work.

For many years, attrition has been one of the greatest challenges facing the industry, and one which has rarely been addressed with much in the way of a truly radical approach. The recession reduced attrition greatly, but recent years' data shows that this was a temporary respite, with attrition stubbornly remaining above 20% on average, and more than 1 in 5 operations experiencing annual attrition of over 30%.

Staff attrition in small doses can be good for a contact centre, bringing in fresh blood and enthusiasm. However, high levels of staff attrition have some serious side-effects:

- Increased recruitment and training costs
- Decreases the average agent competency as there are so many 'learners'
- Can decrease the quality of the customer experience, as the agent may not know how to answer the query correctly first-time
- Adverse affect on contact centre performance indicators, including first-time resolution, call transfer rates, queue time and call length
- Bad for the morale of the remaining staff
- Inexperienced staff are more likely to miss cross-selling and up-selling opportunities
- Increased pressure put on team leaders and experienced agents
- Difficult to bring on-board new systems and ideas, as the agents are struggling with what is already in place.

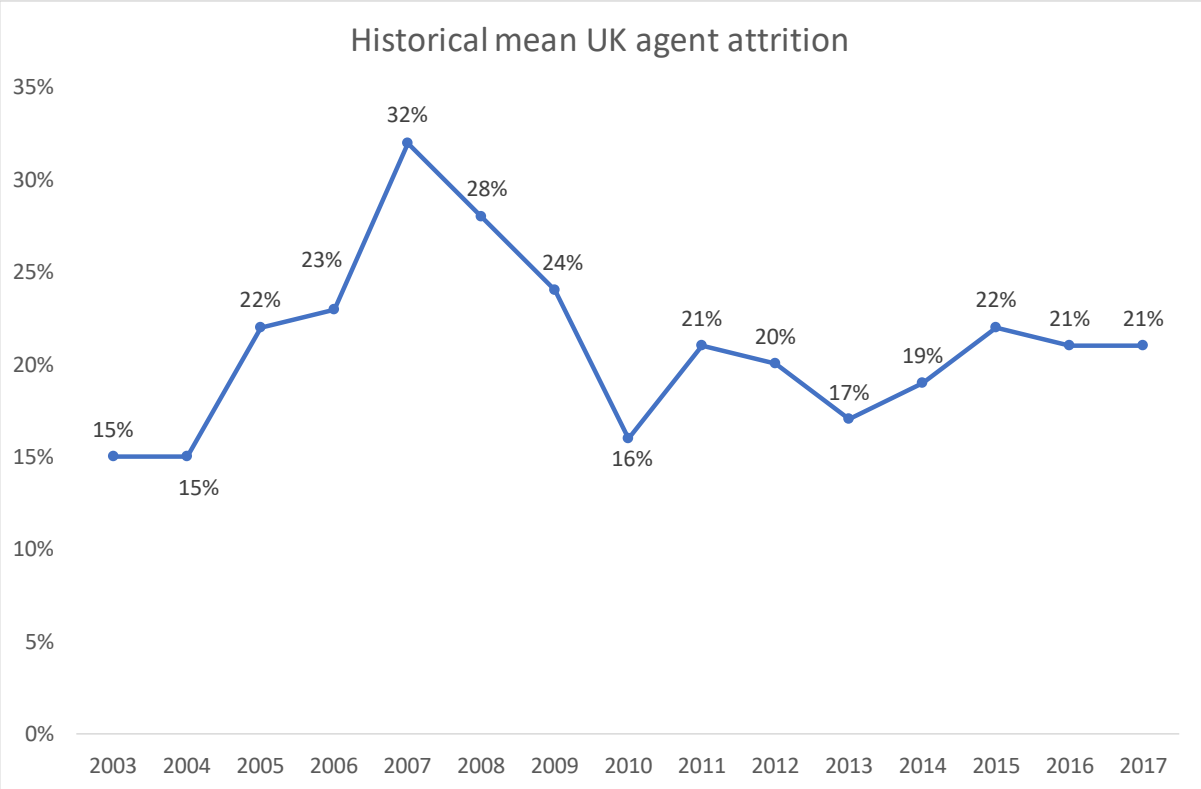
Attrition rate: the total number of agents leaving the contact centre in a 12-month period, divided by the average number of occupants during the same 12-month period, expressed as a percentage.

In the mid-2000s, staff attrition rates crept up from the mid-teens to well over 30%. Driven in large part by the drop in alternative employment driven by the widespread economic downturn and banking crisis, attrition dropped sharply for a number of years, slackening to a mean average of 16%.

In 2011, respondents reported attrition rising, to a mean of 21% and median of 15%. In 2012, figures dropped very slightly, to 20% and 12% respectively. In 2013, attrition fell further, to a mean of 17% with the median dropping to only 10%. However, 2014's figures showed a slight rise in mean attrition, up to 19%, with the median rising to 12%. 2015 showed another increase, to a mean of 22%, with the median rising to 16%, which is around the historical average.

2016 saw a slight drop in the mean, to 21%, with the median also dropping slightly to 15%. 2017 figures show the same mean of 21%, with a median of 16%.

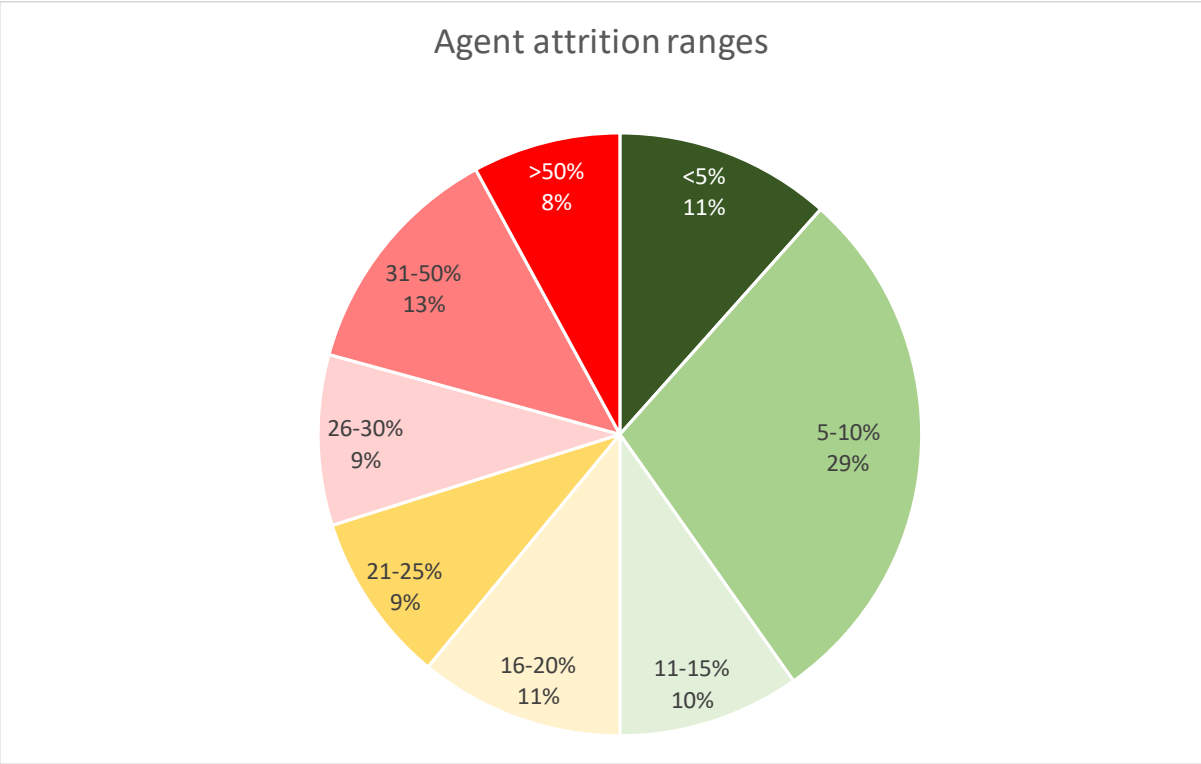
Figure 191: Historical mean UK agent attrition



There is a very wide spread of attrition rates across the industry, with 21% of respondents having to deal with attrition rates of over 30%.

11% of contact centres report exceptionally low levels of attrition, at less than 5%.

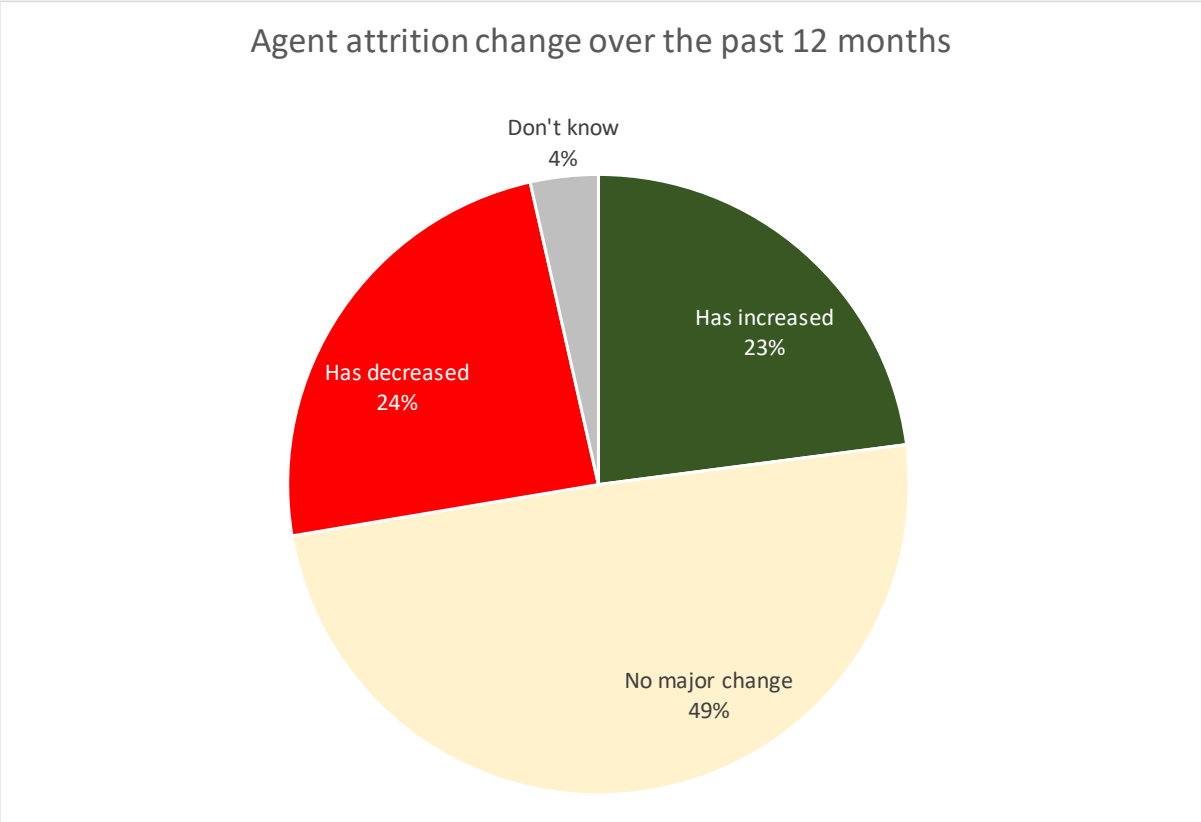
Figure 192: Agent attrition rate ranges



One of the difficulties with tracking metrics such as attrition over time is that the companies responding to the research programme may be different year-on-year, meaning comparing like-for-like is difficult. As such, the question was asked, "How does your current attrition rate compare with 12 months ago?", giving a consistent view of changes at a company level.

49% of respondents say that there has been little real change, 23% say that attrition has increased, with 24% saying it has decreased. This suggests that there is little real change in attrition across the industry, supporting the previous finding that the overall attrition rate is the same as 2016.

Figure 193: Agent attrition change over the past 12 months

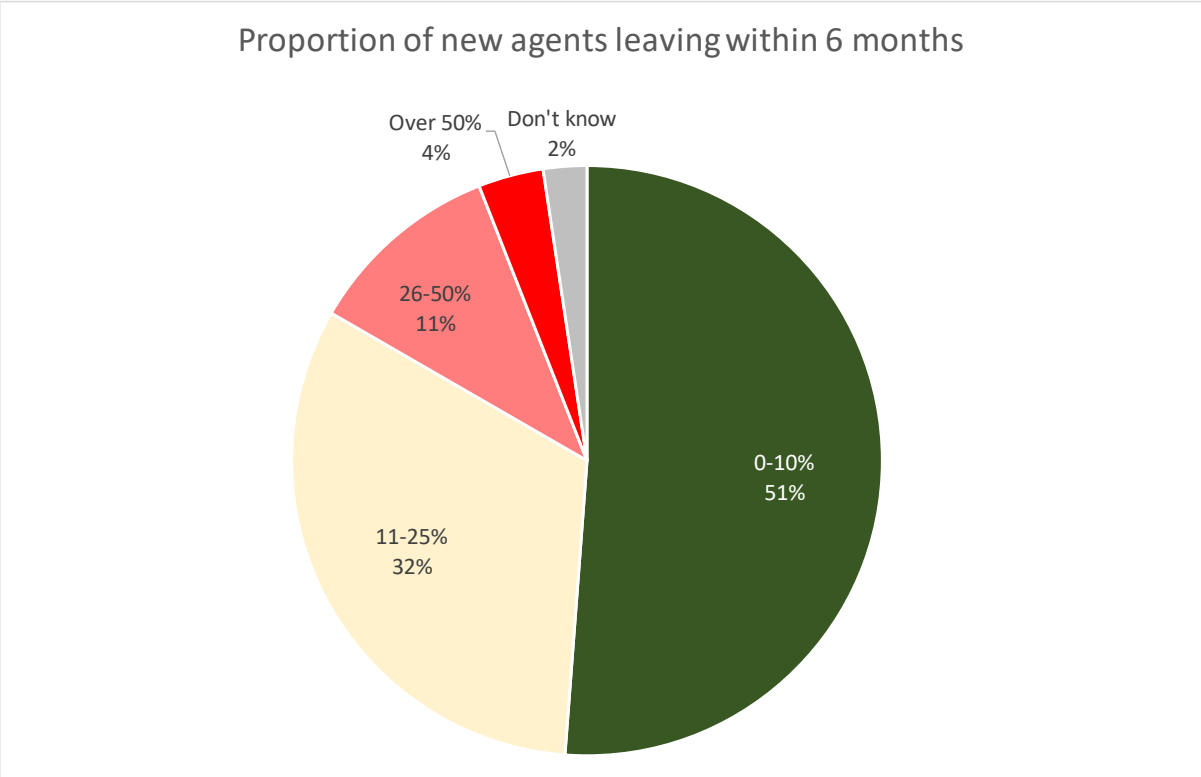


The reduction of attrition has two main factors - that the successful candidates are suited to, and competent for the work which they will undertake, and that the work and conditions in which they find themselves will be conducive to a long-term stay.

Solution providers experienced in analysing attrition state that that understanding the 0-to-90-day attrition data is critical to being able to reduce attrition. Most organisations believe that a very significant proportion of their annualised attrition occurs in the first 90 days after recruitment. This strongly suggests that there are often errors made in the type of people employed, who are all but doomed to failure by their unsuitability for the task. Businesses should collect information on the sorts of behaviour and characteristics of people likely to do well in each role - preferably analysing the people who are successful in the roles already - and pre-screen applicants against those criteria.

Getting a high proportion of the right sort of people through the doors and onto the induction course can greatly reduce early attrition: attrition is something that should be focused upon at the recruitment stage, rather than leaving it until the candidates are already in the business before noticing the problems.

Figure 194: Proportion of new agents leaving within the first 6 months



Looking at the causes for attrition, the stress of the work and the repetitive nature of some contact centre activity were cited as key by a significant proportion of respondents in survey carried out ten or more years ago. While they remain important, contact centres seem to be giving a collective shrug by consistently putting 'just the wrong type of person for the job' into no.1 position, as if there's nothing they can do about it.

Psychometric and competency testing at the recruitment stage – whether in-house or through a recruitment agency - and the assessment of behaviour and character will go a long way to stopping the wrong type of person for the job at source, with consistent support especially within the early stages of the role being vital to reducing short-term attrition.

Figure 195: Reasons for agent attrition (ranked in order) – aggregated data

Rank	Reason for staff attrition
1st	Just the wrong type of person for the job
2nd	Lack of promotion or development opportunity
3rd	Repetitive work
4th	Low pay
5th	Excessive pressure or stress
6th	High numbers of temporary / seasonal staff
7th	Competition from other contact centres
8th	Abusive or unpleasant calls
9th	Poor working environment and conditions

Interestingly, in an industry which outsiders often deem as a dead-end job, the lack of opportunity to move up the career ladder is marked on average as being the second-greatest cause of staff attrition.

As for other causes, much of the repetitive work is increasingly being alleviated by using self-service (whether voice-driven or web-based), and the blending of tasks (especially inbound digital and voice, rather than inbound / outbound voice) has been shown in many previous reports to show a positive correlation with lower levels of attrition.

ABSENCE

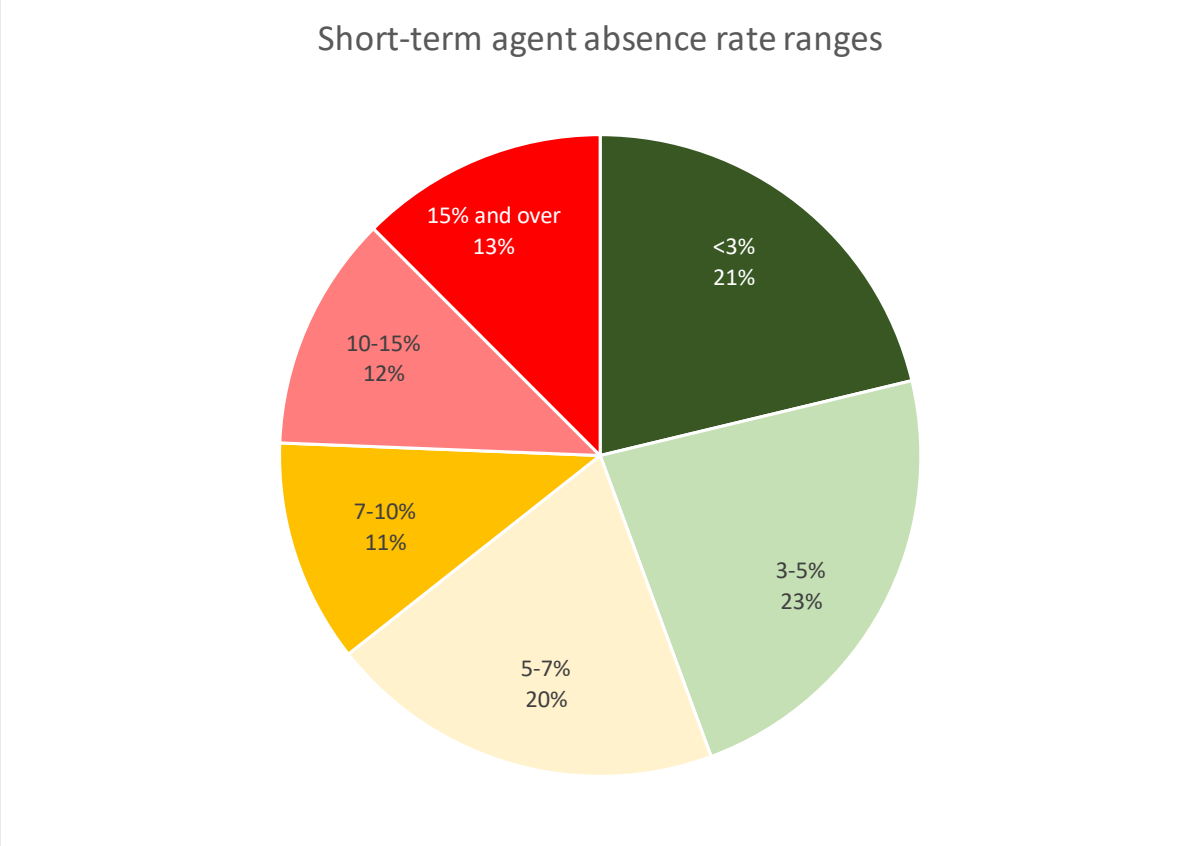
In a tightly-run operation like a contact centre, where costs and performance are closely managed, significant levels of staff absence can cause major problems with contact centre performance and the customer experience. Even just a slight increase in absence rates can mean a major difference to how well the contact centre performs on that day. Staff end up overworked and stressed, and more likely to take time off as a result. Morale suffers, which increases staff attrition, overwork and thus, further absence.

Short-term (no-show) absence - this is the average number of agent days lost through short-term sickness and unauthorised absence as a percentage of contracted days annually. This is included in this report.

Long-term absence - this includes long-term sickness, maternity leave, sabbaticals and other long-term absences where the business is able to expect and plan for the absence. This is not included in this report.

The mean average for staff absence is 6.8%, with a median of 4.9%, similar to 2016's figures.

Figure 196: 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.

RECRUITMENT

Contact centre managers were asked for their experience of how effective a number of recruitment methods were. There is a definite pattern: the closer you get to the candidate (through competency based assessments, personality tests and face-to-face/telephone interviews), the more likely the recruitment team is to make the right decision. The average contact centre role is changing into something requiring higher skills – a high level of IT, business and communication abilities are needed in many contact centres now and this trend will certainly continue – yet agent salaries are not taking this into account. Coupled with this is the popular view of contact centres as career dead-ends, not helped by the biased and erroneous media view of contact centres (and by extension, their employees) as an unpopular and unloved part of modern life. Improving the contact centre "brand" is a vital part of the industry's future success, which will feed directly into the recruitment process.

While most contact centres do not admit to having problems with staff recruitment, many of the same operations have problems with staff attrition, although this is temporarily less of an issue. The case could be made that high-attrition operations do have a problem with recruitment, but they just don't realise it. Having filled their job roles, the recruitment process is deemed to have been a success, but how many of these new recruits turn out to be no-shows, leave before the induction course is complete, or shortly into the job? These recruits are gauged to be part of the attrition problem, when in fact, they are indicative of a recruitment problem. As such, businesses should try harder to understand what skills and attributes successful agents are already demonstrating in this role - empathy, resilience, reliability, sales technique, technical capability, etc. - and seek to recruit more people with this specific factors and behaviours.

Recruitment has traditionally been about asking the question "Can the applicant do the job?". Having the skills to carry out the task is obviously important, but most skills can be learned, and in an environment such as a contact centre - where both tasks and environment are not suited to everyone - other factors are perhaps more important. This is borne out by consistent research findings, which indicate that the main reason for staff attrition was that they were just the wrong type of person for the job.

Firstly, the business must understand the competencies, characteristics and behaviours that are most suitable for the contact centre positions that they are trying to fill, for example:

- empathy
- dependability
- customer focus
- problem-solving
- the ability to understand and follow instructions
- a focus on a goal.

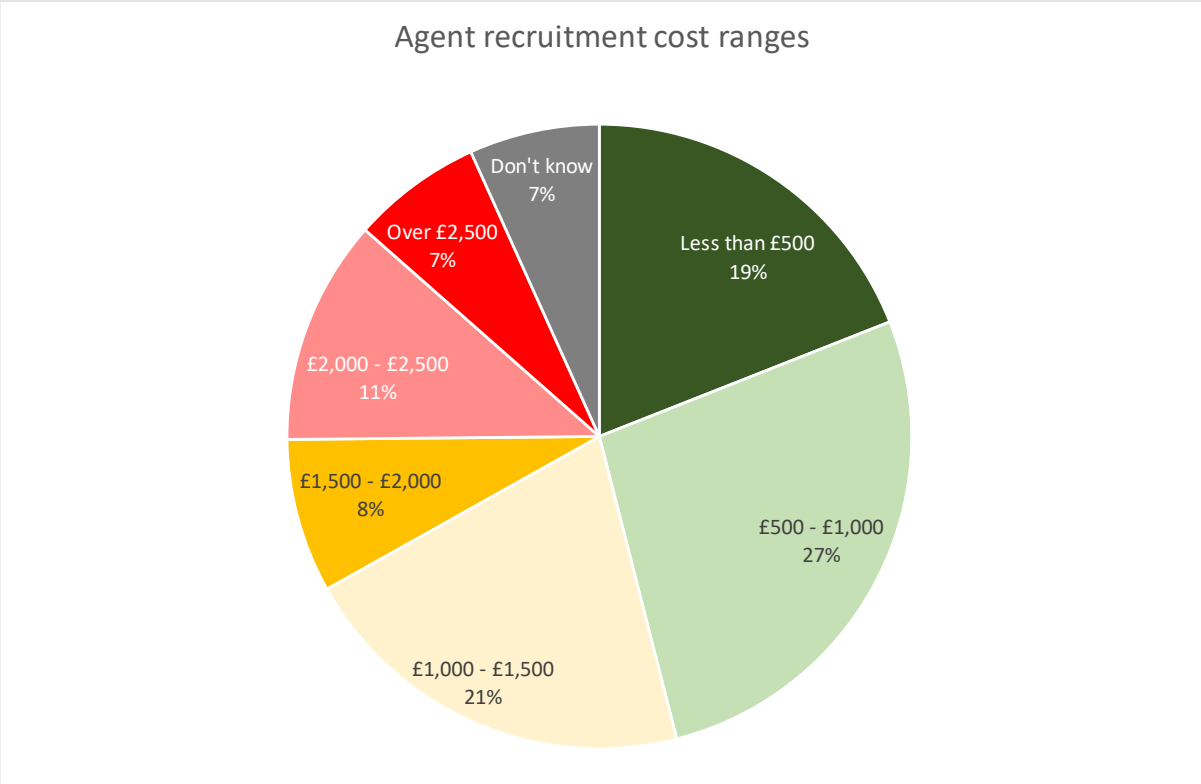
Successful agents will also require some hard skills, although many of these are more easily-learnt. Through judging competencies objectively, and using a combination of processes (for example, telephone and face-to-face interviews, with upfront psychometric analysis to determine the likelihood of the prospect being a long-term success in the contact centre), the business reduces the risk of high attrition and growing costs, and can focus upon its strategic goals.

The most effective form of recruitment method is consistently said to be a face-to-face interview, with assessment centres, contact centre simulations and skills-testing also effective. There is a definite split between how directly the company interacts with the candidate and how successful the recruitment method is. Those that keep the candidate at arm's length – through standard application forms and CVs – have a lower success score, with studies having shown that half of applicants admit to stretching the truth on their CVs, and 10% lie outright.

The relatively few contact centres using personality testing tend to report high levels of success through this method, reflecting the awareness that it is the type of person at least as much as what they can do that is crucial to being a successful agent. Many contact centres employ large numbers of recent university graduates, whose biodata and work experience may not show much of the applicants' abilities. In such cases, getting a better scientific idea of what makes the candidate tick, and being quite sure about their personality traits will reduce the high risk associated with recruiting straight from higher education.

By tracking the in-job performance of applicants who scored either well or poorly in pre-job assessments, businesses can improve their ongoing recruitment techniques. For example, agents who have high assessment test scores often have higher revenue-per-call ratios, lower average call lengths and lower attrition rates than those who scored lower in pre-job character and personality assessments. The behaviours, personality traits and characteristics that a top agent is most likely to have can then be identified, and the results fed back into the top of the recruitment process. This allows the recruitment process to seek out the types of people who have already been proven to succeed in that role.

Figure 197: Agent recruitment cost ranges



LANGUAGE SKILLS

55% of respondents stated that they had the ability to serve customers in a language other than English.

The public sector and housing respondents were most likely to be able to do so, with the manufacturing and insurance sectors the least.

Two-thirds of large contact centres had multilingual capabilities, compared to 57% of mid-sized operations and 46% of small contact centres. Service-focused operations were much more likely to have multilingual skills than sales contact centres (62% vs 25%).

The main European languages were best served, with French, German and Spanish spoken in over one-quarter of operations.

11% of respondents used an on-demand translation service from a third-party where required.

Figure 198: Apart from English, in which languages can your contact centre serve your customers?

Language	Proportion of respondents
German	31%
French	29%
Spanish	27%
Dutch	18%
Italian	18%
Portuguese	18%
Punjabi	16%
Gujarati	16%
Hindi	15%
Urdu	15%
Welsh	13%
Swedish	13%
Polish	13%
Bengali	11%
Arabic	9%
Gaelic	7%
Tamil	7%
Mandarin	5%
Latvian	2%
Korean	2%
Use a third-party translating service	11%

SALARIES

New agent salaries are reported to have increased by a little under 2% (similar to last year's rise), and there was close to a 4% increase reported in the salaries of experienced agents (against 3% last year).

At a team leader level, the salary increase was substantial at nearly 5%, and respondents' average contact centre manager salaries showed an increase of 2.6% after last year's fractional decline of 0.1%.

Against a 12-month UK wage rate increase of 2.1%[24], the contact centre sector seems to be generally holding its ground.

Figure 199: Contact centre salaries and changes

Role	2017 mean average salary	Change 2016-2017
New agent	£17,438	+1.7%
Experienced agent	£20,370	+3.9%
Team leader / supervisor	£26,142	+4.8%
Contact centre manager	£40,348	+2.6%

Detailed analysis of salaries, including historical patterns and segmentation by vertical market, contact centre size, region and activity type is included in "The UK Contact Centre HR and Operational Benchmarking Report (2017-18)".

[24] https://www.theguardian.com/business/live/2017/aug/16/uk-wages-and-jobs-data-set-to-show-cost-of-living-squeeze-continuing-business-live

THE DECISION-MAKERS' VIEW OF THE AGENT

Contact centre decision-makers were asked six questions about their agents, strategy and technology:

- Who is responsible for contact centre strategy?
- What do decision-makers believe to be the principal drivers for contact centre change?
- What do decision-makers believe the overall advisor morale and performance is within their contact centre?
- What do decision-makers believe are the key factors that would improve advisor performance?
- As a contact centre leader, how are they helping their frontline staff adapt to the changing customer service roles in their organisation?
- What technologies do decision-makers believe would help their agents, and are they implementing them?

The general picture is that contact centre strategies are driven far more by the desire to improve customer satisfaction and experience than by the traditional focus on cost savings.

At the heart of this strategy is first contact resolution, a metric closely tied to positive customer experience, good agent morale and high levels of performance.

Yet contact centres state that technology is holding them back, meaning many agents are not yet entirely empowered to handle customers' needs fully, at the first time of asking.

The rise of digital channels makes this even more difficult, and with customer expectations rising, there is a pressing need to implement unified omnichannel agent desktops, supported by sophisticated knowledge bases, in order to improve customer experience, performance, morale, and first contact resolution.

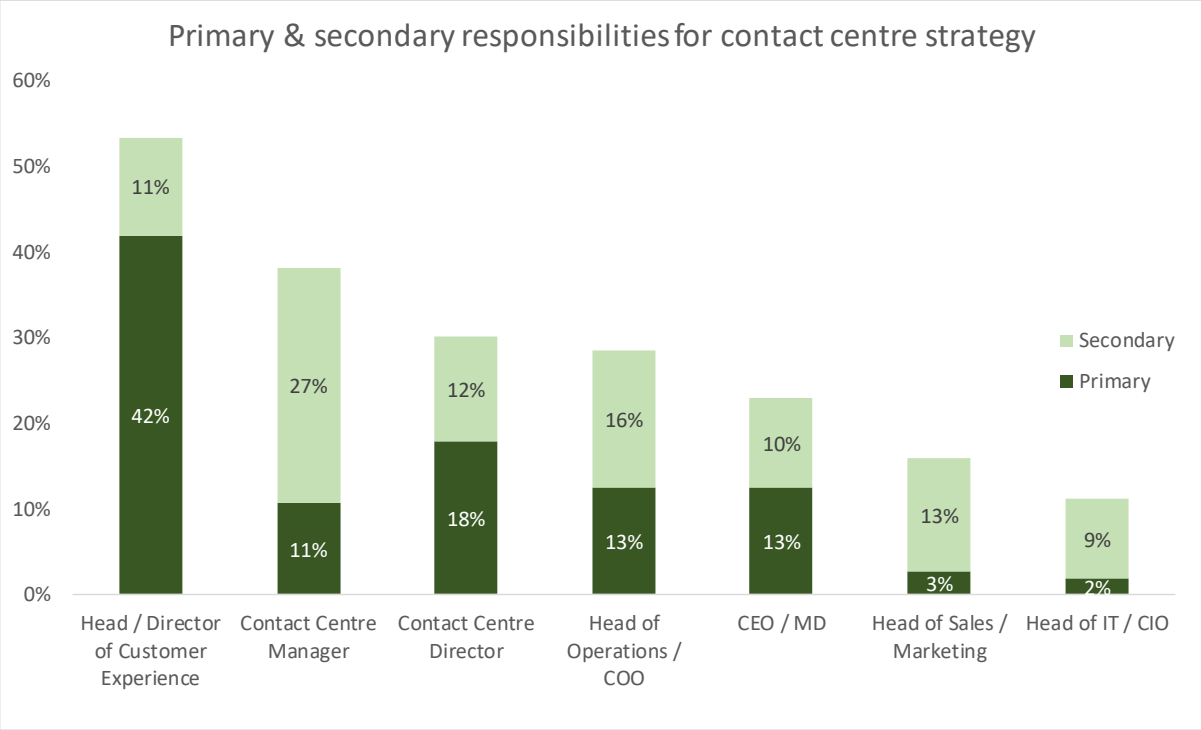
RESPONSIBILITY FOR CONTACT CENTRE STRATEGY

For many businesses, the main responsibilities for contact centre strategy are shared between operational contact centre management (i.e. contact centre directors and managers), and the relatively new job role of customer experience director. The rapid rise in senior customer experience professionals comes as a result of businesses finally understanding that their customer contact is key to their business's overall success, rather than simply viewing the contact centre as an unwelcome cost.

When considering the size of the contact centre, small operations are very likely to be using the CX/contact centre combination to decide contact centre strategy, whereas many larger contact centres use the COO or CEO-level. For large (200+) seat contact centres, 38% of respondents state that their COO / CEO has primary responsibility for contact centre strategy, being a large part of the overall customer experience. The equivalent figure for sub-50 seat contact centres is only 16%.

Contact centre managers are far less likely to have much responsibility for strategy in larger operations. Only 28% of contact centres managers are stated to hold either primary or secondary responsibilities, yet these are the people with direct day-to-day responsibility for the contact centre's performance. It seems questionable that so many businesses with large contact centre operations have divorced operational and strategic responsibilities: as a general rule, the larger the contact centre, the more senior the primary strategic decision-maker will tend to be. While this will help to make change actually happen, it would make sense for businesses to understand more fully how strategy will actually translate into action.

Figure 200: Primary & secondary responsibilities for contact centre strategy



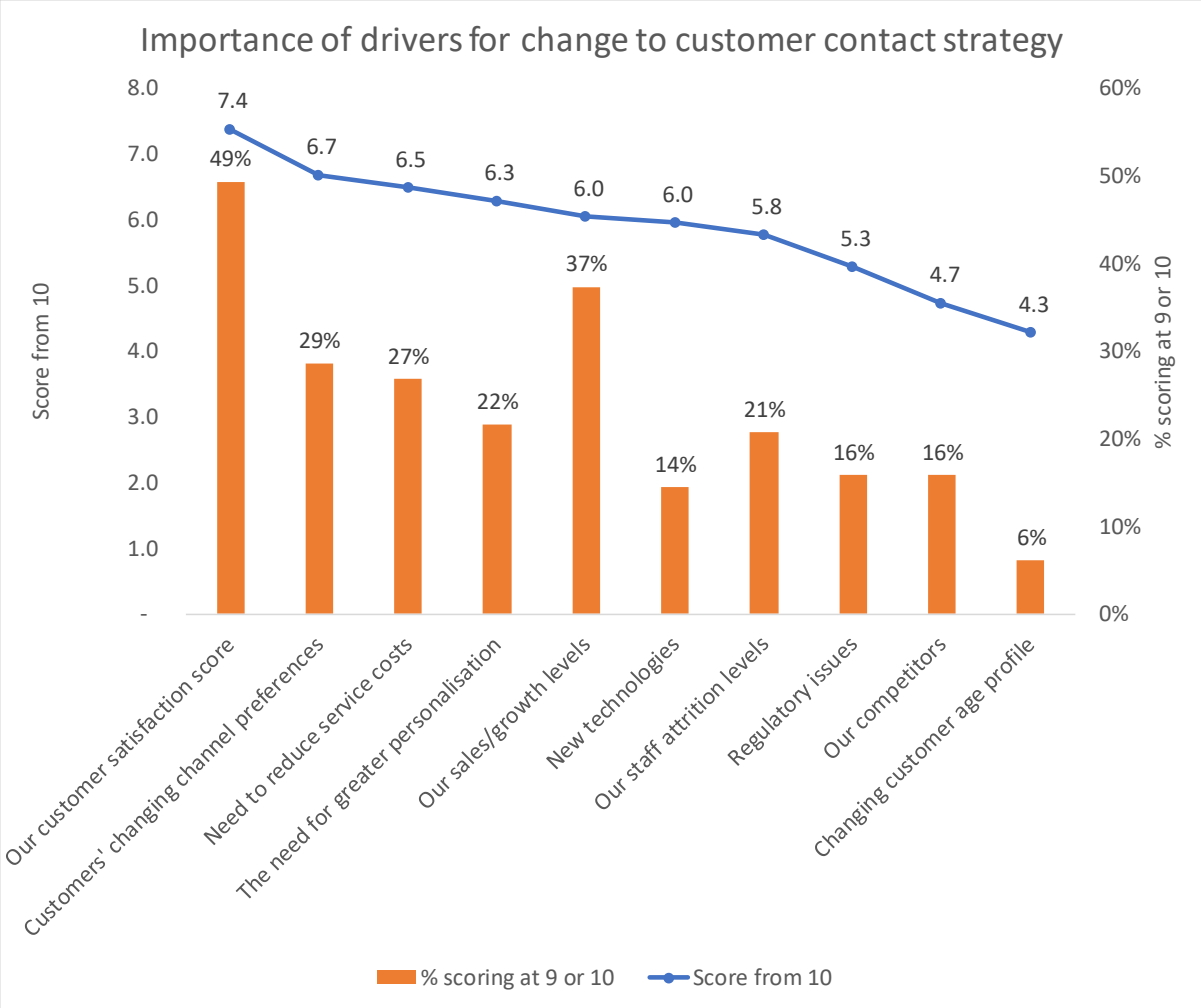
CONTACT CENTRE STRATEGY - DRIVERS FOR CHANGE

Respondents were asked to score a range of customer contact strategy drivers from 1 to 10, where '1' was very unimportant and '10' was very important.

Customer satisfaction scores are said to be by far the most important driver, with 49% of respondents scoring this at either 9 or 10, with only the effect of customer contact strategy on sales / revenue growth levels coming close to achieving these high scores.

The chart below shows the average score, as well as which factors are seen to be the most important. New technologies has quite a high average score of 6.0 out of 10, but is rarely seen as a major driver of the contact centre strategy: it is implied that business issues come first, with technology put in place to support these.

Figure 201: Importance of drivers for change to contact centre strategy



Customers' changing channel preference is widely seen as an important driver for change to customer contact strategy, achieving the second highest average score of 6.7, and although only 29% score it very highly, few deny its importance, placing it above the traditional contact centre strategy of cost-cutting.

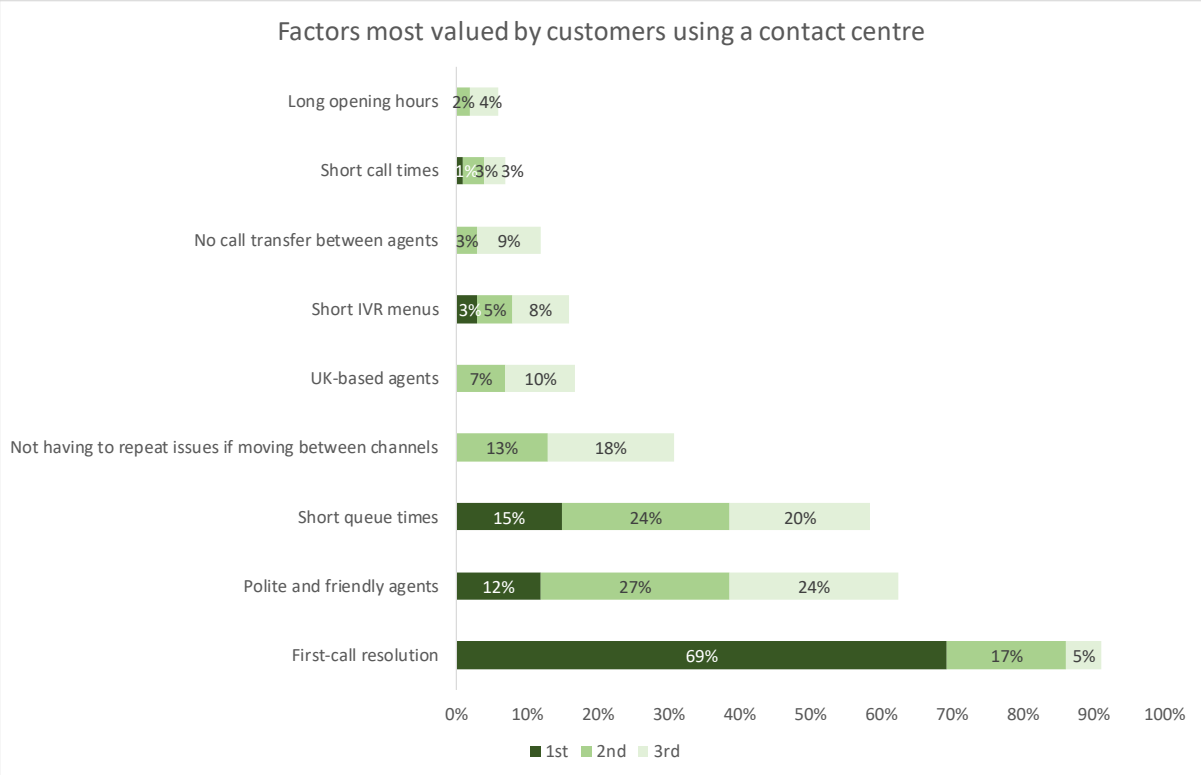
There is little concern that the changing age profiles of customers are driving contact centre strategy: many older people are increasingly proficient with IT, and for those that are not, the voice-centric call centre model is still available for these.

Customer personalisation rates highly, and is linked to supporting improved customer satisfaction scores, rather than being seen as a cost saving exercise.

This primary focus upon improving the customer experience leads to the question: how can contact centres most improve customer satisfaction? ContactBabel surveys of hundreds of US and UK contact centres consistently point to first contact resolution as being the key.

The following chart shows that 69% of UK contact centres view first contact resolution as being the no.1 factor in improving customer experience within the contact centre.

Figure 202: Factors most valued by customers using a contact centre



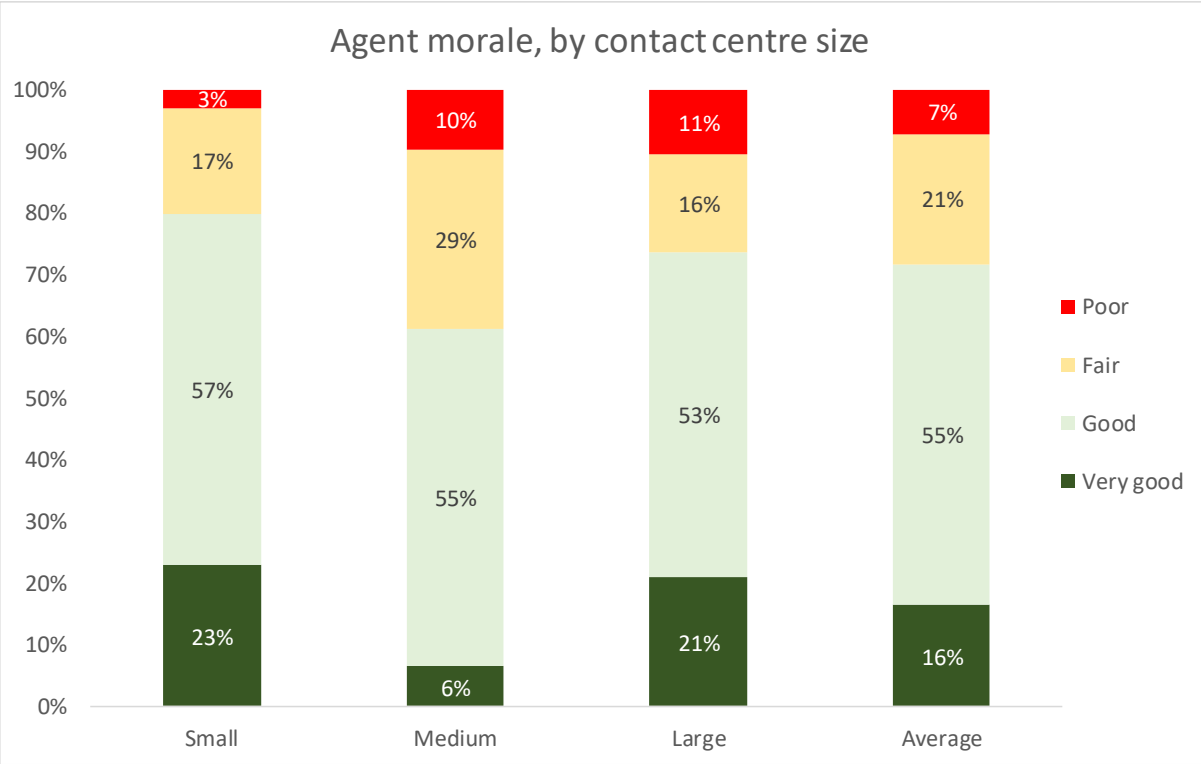
Supporting this, the first contact resolution rate is ranked by 86% of UK contact centres as one of the top three performance metrics that they focus upon - higher than any other metric, even including CSAT/NPS rating.

AGENT MORALE

First contact resolution rate directly impacts upon morale: if agents are unable to help customers, they become discouraged which leads to higher levels of agent attrition and absence, as well as a greater number of callbacks and call transfers, which impact negatively upon contact centre cost, performance, quality and customer satisfaction[25].

The chart below shows how contact centre decision-makers see their agents' morale. The next White Paper in this series explores how the agents themselves see things, and it will be interesting to note any differences of opinion.

Figure 203: Agent morale, by contact centre size



Looking at the chart above, it seems that contact centre morale is generally seen to be positive, with 71% of respondents stating that their contact centre enjoys "Good" or "Very Good" morale, although this is less the case for mid-sized (51-200 seat) operations, where more respondents report morale being "Poor" than "Very Good".

However, is "Fair" morale actually something to be happy with? Additionally, at least one in 10 medium and large contact centres report "Poor" morale.

So what can be done to improve this?

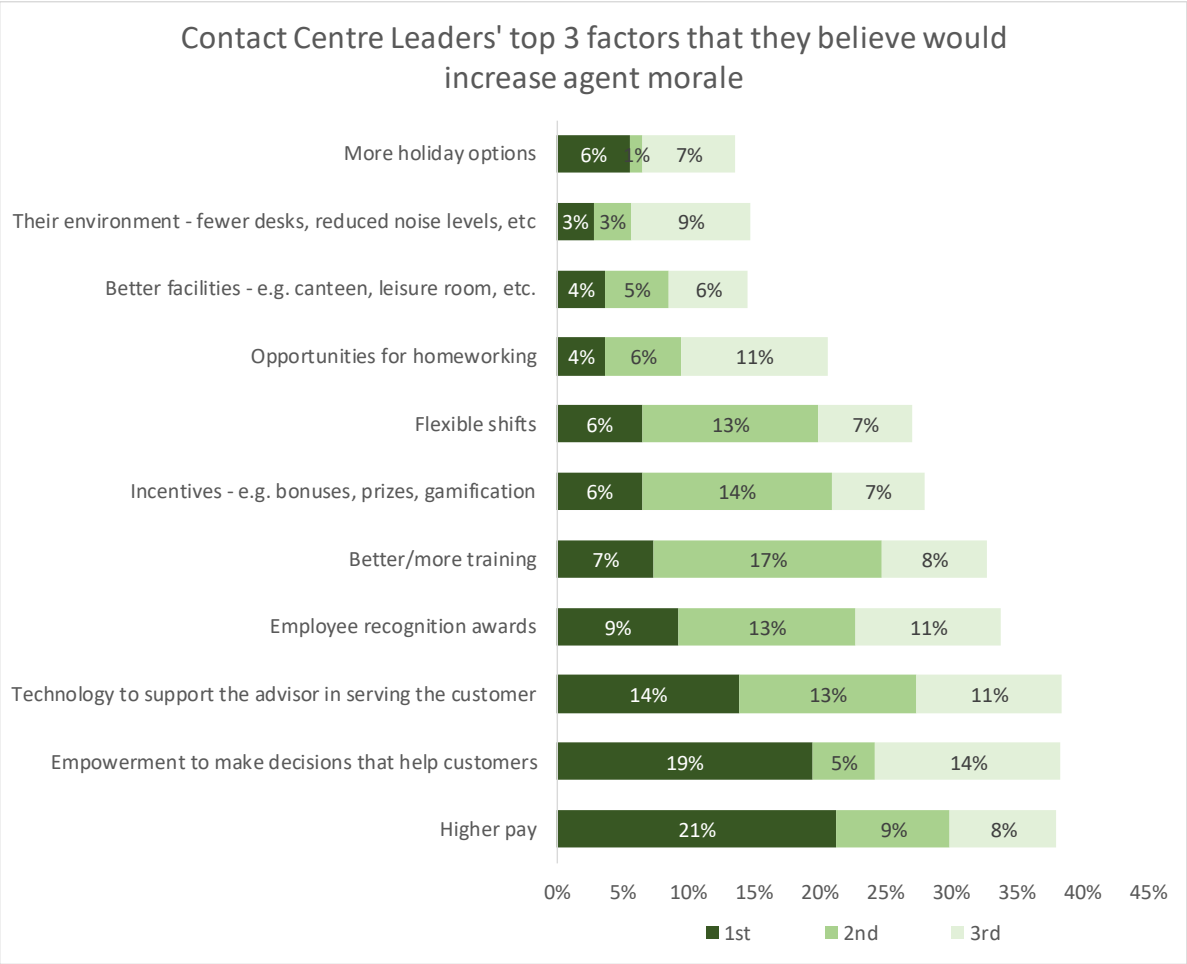
[25] https://www.isixsigma.com/operations/call-centers/done-one-importance-first-call-resolution/

11 options to improve morale were set before respondents, who were asked to pick the top three that they thought were most likely to improve morale (although this question does not ask the agents what they themselves think of this). Although the most popular no.1 choice - increased salaries - may not be a realistic choice for most contact centres, there is a correlation between salaries and attrition (and by extension, morale). Contact centres with less than 10% short-term attrition (i.e. within the first six months) pay new agents an average of £17,971, compared to only £14,891 in contact centres with a short-term attrition rate of over 50%, a pattern that is consistent over the years.

Giving agents the empowerment to make decisions that help customers runs a very close 2nd to increasing salaries, with 19% of respondents choosing this as the number one option, and 38% putting it in their top three overall. Empowerment – the support provided by the systems, processes and organisational culture required to help an agent solve the customer's query - is closely linked first contact resolution, which as we have seen is key to customer satisfaction.

Respondents were also very much of the opinion that improving the technology available to support agents would make a positive impact upon agent morale. Solutions such as knowledge bases, dynamic scripting, a 360° view of the customer and a single unified desktop also empower the agent to deliver a successful resolution first time.

Figure 204: Contact Centre Leaders' top 3 factors that they believe would increase agent morale



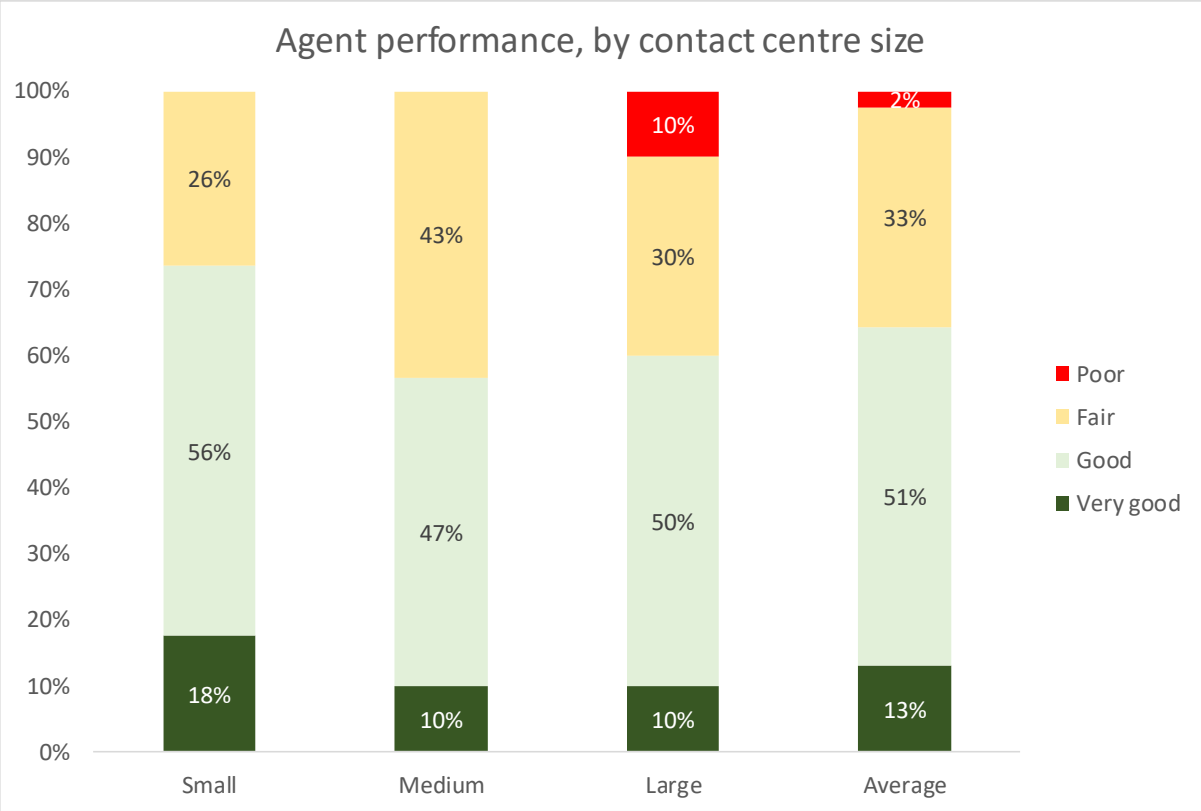
AGENT PERFORMANCE

Respondents in medium and large contact centres tend to be more likely than those in smaller operations to feel that agent performance could be improved.

Although 13% of those surveyed felt that their agent performance was "Very Good", 35% stated that theirs was either only "Fair" or "Poor".

Generally, survey respondents were more likely to believe that their agent morale was somewhat better than their agent performance.

Figure 205: Agent performance, by contact centre size



As with agent morale, respondents were presented with a list of factors that could improve agent performance and were asked to give their top three.

Giving agents more training was ranked in the top 3 by 48% of respondents: interestingly, increasing the amount of training was seen to be far more important than increasing its quality, suggesting that time pressures were the greater issue around training.

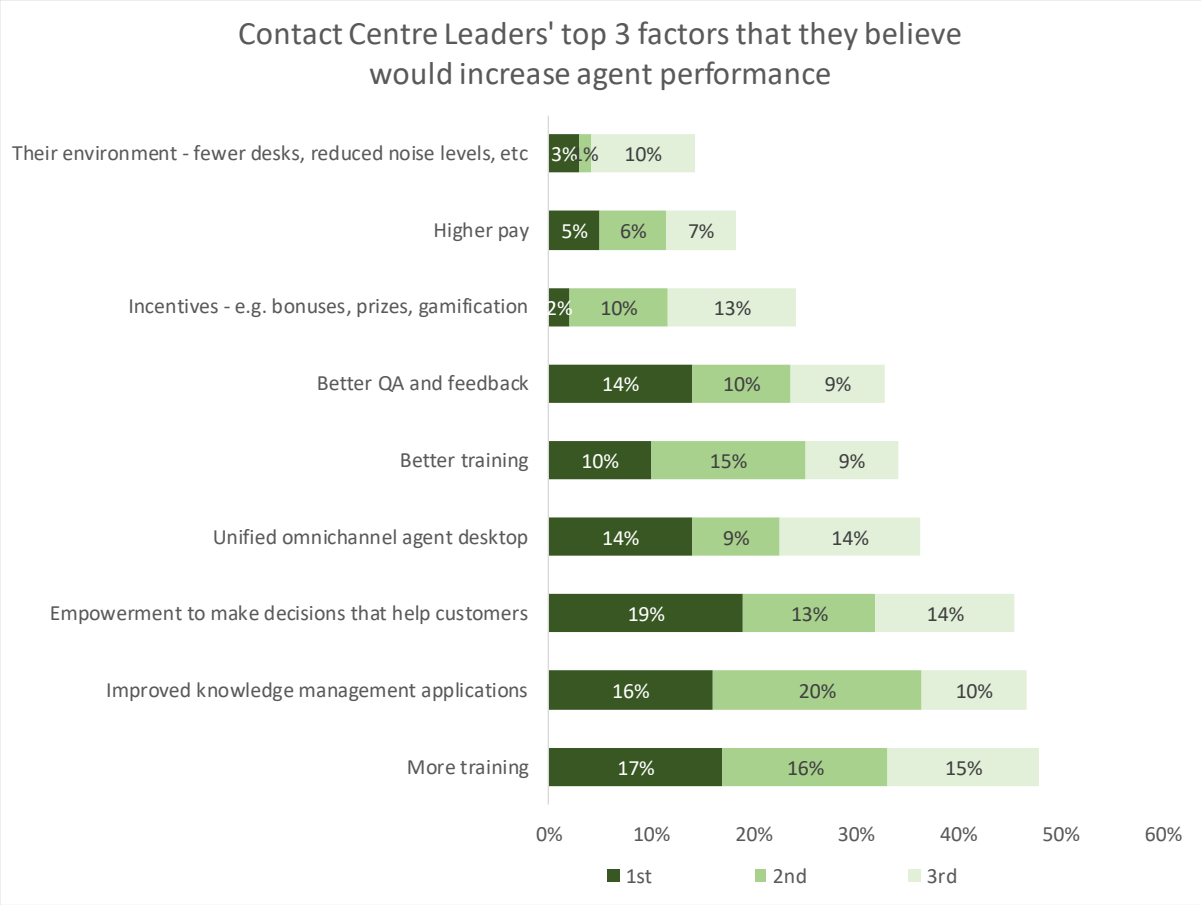
Empowering agents to make decisions that help customers - which increases first contact resolution rates - was placed as the most important factor in increasing agent performance by 19%, the highest of any. As respondents also stated that this would improve agent morale, contact centres should focus upon the tools, processes and culture that supports agent empowerment.

Improved knowledge management applications - the second most popular top 3 factor - help with this, as they attempt to provide the agent with the information required to solve the customer's request while on the call, rather than requiring call transfers or callbacks.

A unified omnichannel agent desktop, providing agents with all of the information that they require on a single screen, regardless of the channel chosen by the customer, is also a solution that will empower agents and make them more confident of solving the customer's issue first-time.

Higher pay, despite being viewed as a major boost to morale, was not seen as an effective way to increase performance: keeping the same staff, technology and processes while paying agents more won't make any major difference to performance. Incentives were also viewed as improving morale rather than performance, although they are useful in particularly high attrition environments such as many of the largest contact centres and those running outsourcing operations.

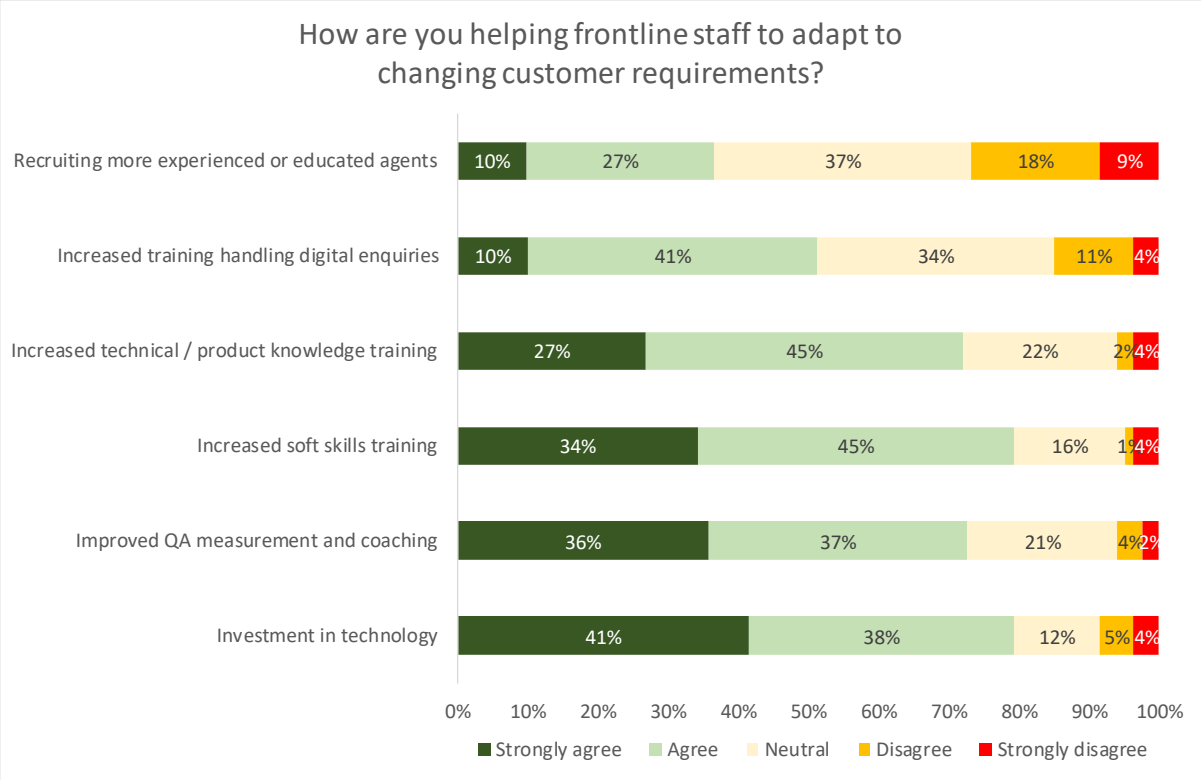
Figure 206: Contact Centre Leaders' top 3 factors that they believe would increase agent performance



SUPPORTING FRONTLINE STAFF

Contact centre decision-makers were asked how they are helping their agents adapt to changing customer requirements, whether through recruitment, training or technology.

Figure 207: How are you helping frontline staff to adapt to changing customer requirements?



Only 37% of respondents are actively recruiting more experienced and educated agents to handle changing customer requirements, which implies that the typical contact centre strategy focuses upon improving the skills of existing agents, as well as any supporting technology and processes.

An increase in training is generally seen as one of the keys to increasing agent performance, and the majority of contact centres state that they are doing this, especially for soft skills and to a slightly lesser extent, technical and product knowledge. There seems to be much less focus on training agents to handle digital enquiries, despite the general acceptance that the growth in digital channels is driving contact centre strategy.

The majority of contact centres acknowledge the need to improve quality measurement, which then leads to more targeted and effective coaching.

There was a general feeling from the contact centre decision-makers interviewed for this survey that suboptimal contact centre performance can usually be attributed to processes and technology, rather than the calibre of their agents.

While this shows an admirable confidence in their agents' current capability, contact centre leaders themselves say that increasing training is the most important method 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, not for its own sake, but as a way to inform and empower agents to carry out their work more effectively. Unlike the traditional call centre, where cost and efficiency were priorities, most technology solutions now being implemented aim to help the agent deliver a higher level of customer experience. Technology in itself can't do this: it must be aligned with a culture of agent empowerment and learning in order to raise and maintain the overall quality of customer interactions.

Contact centre leaders view this investment in technology to be an important but not the only method of helping frontline staff adapt to changing customer requirements, with the unified omnichannel desktop being seen as one of the most important solutions enabling and empowering agents to deliver high quality customer service.

ENGAGING THE NEW AGENT

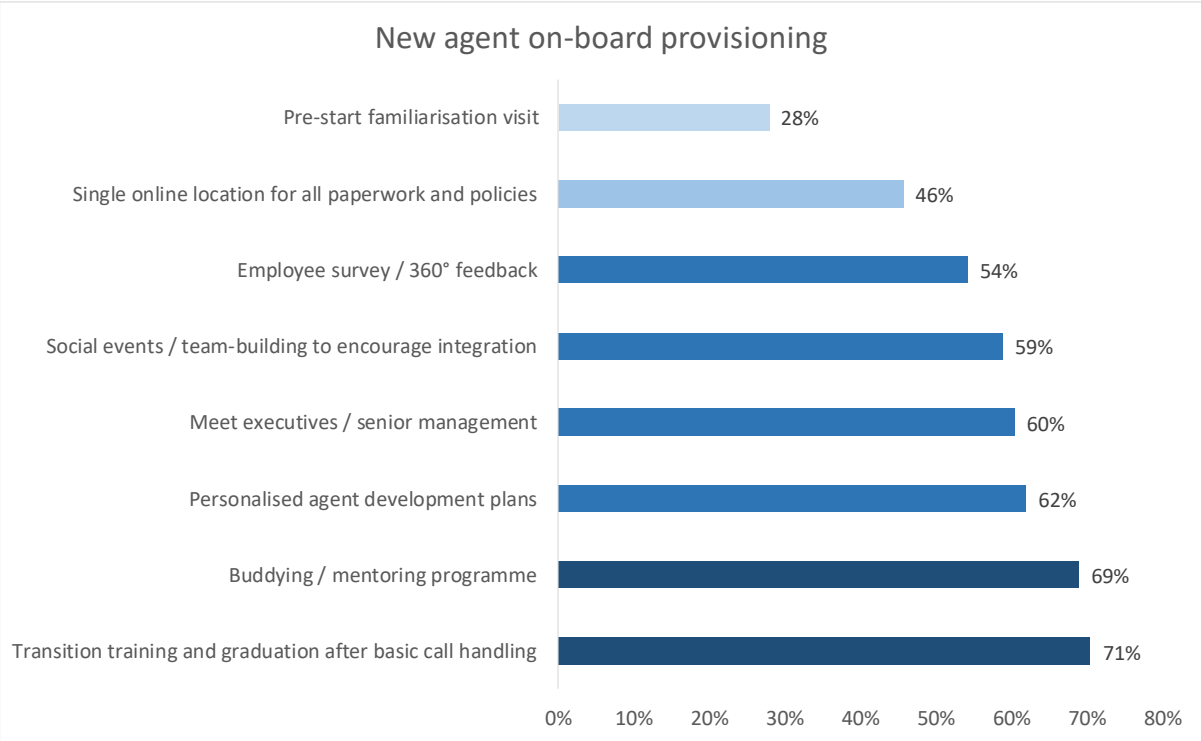
An agent joining a new organisation has a lot to take on board – culture, systems, expectations, new products and services – and this becomes even more difficult if this is the first time that the agent has worked in a contact centre environment.

Businesses have numerous ways of introducing (or 'onboarding') new agents to their work, shown in the following chart.

Most respondents will have a buddying / mentoring programme, and some form of official 'graduation', easing new agents into the real work after basic call handling training. Social events and senior management introductions also feature quite highly, although a figure of 62% providing individual agent training plans seems lower than would be ideal.

Just over half of respondents seek 360 degree feedback from new agents (which would provide vital information about the reality of the agent onboarding process that could be used for improvement), and 46% offer a single portal containing all of the paperwork and internal administrative tasks that a new employee requires. Only 28% have pre-start familiarisation visits, the other 72% dropping the agent in at the deep-end on their first day.

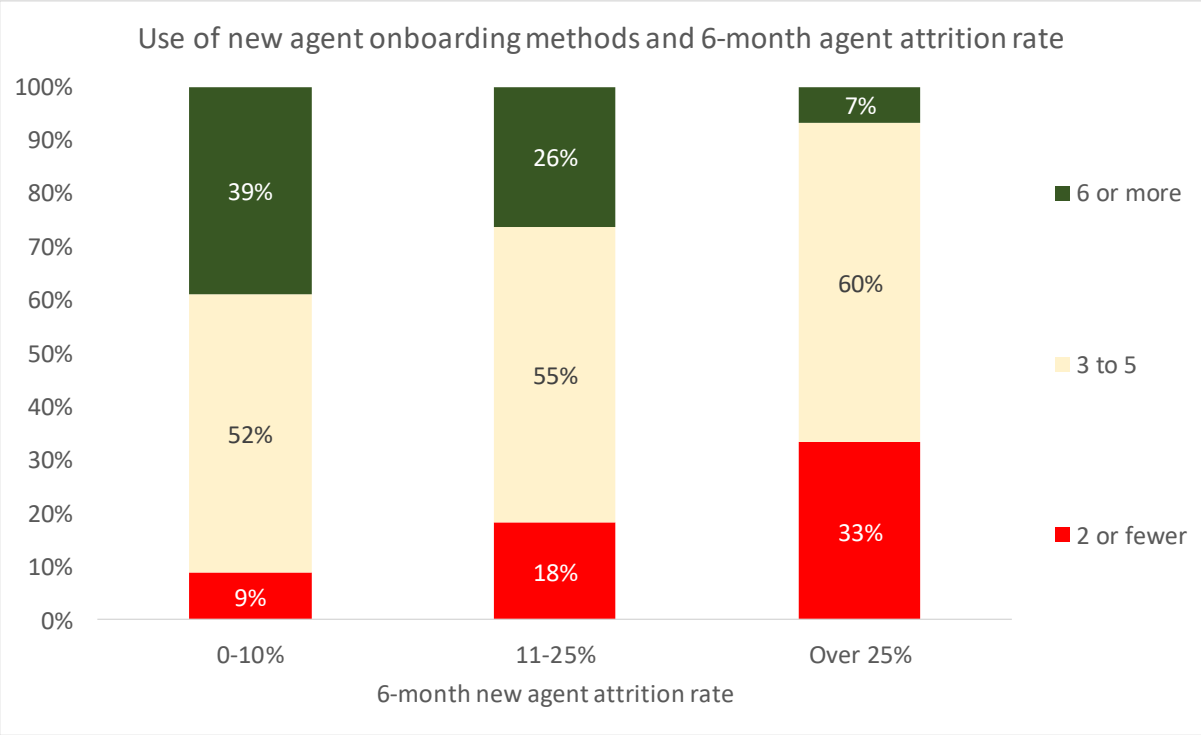
Figure 208: New agent on-board provisioning



It was hypothesised that high levels of agent onboarding and support would reap benefits through lower new agent attrition levels. The chart below shows three ranges of new agent attrition – 0-10%, 11-25% and 25%+ - and investigates how many types of onboarding methods were used by respondents within each group.

While correlation does not prove causation, it is clear that a higher proportion of those with very high new agent attrition rates used fewer onboarding methods: 33% of high attrition respondents used 2 or fewer of the methods described above, compared with only 9% of low attrition contact centres. On a positive note, 39% of low attrition operations offered 6 or more methods, compared with only 7% of high attrition respondents. It may well be that agents receiving more onboarding support in their first few weeks adapt to the work and culture more quickly, become more confident and feel more empowered.

Figure 209: Use of new agent onboarding methods and 6-month attrition rate



ENGAGING THE EXPERIENCED AGENT

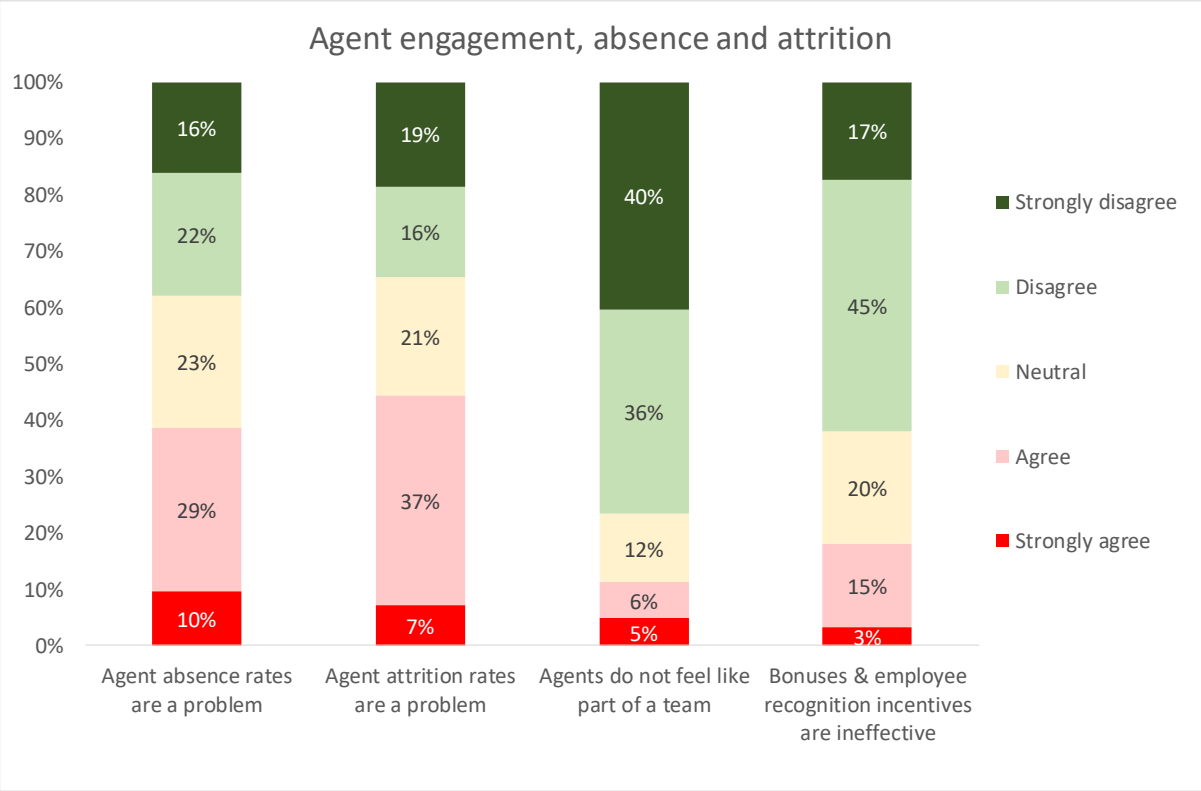
Motivating and keeping good agents in a working environment that is often stressful, sometimes repetitive and usually not well-paid is a challenge the contact centres have had to face since their inception.

As the nature of contact centre work becomes increasingly complex, and customers' expectations of what constitutes good quality service becomes ever higher, the agent's job is now rarely just reading something off the screen: they have to be empathetic to the customer, use their initiative to solve the issue and remain focused on answering the next call just as effectively.

The following chart shows how contact centre decision-makers view their major potential HR issues, including attrition, absence and morale. The positive news is that the majority of respondents believe that their agents feel part of a wider team, with only 11% concerned that they do not. Similarly, bonuses and incentives are felt to have a broadly positive effect, although only 62% actively believed this to be the case.

There are greater concerns around the effect that absence and attrition are having on the contact centre, with 39% agreeing or strongly agreeing that absence affected the operation, and 44% feeling that attrition was having a negative effect on performance. Clearly for many contact centres, work remains to be done on addressing HR issues.

Figure 210: Agent engagement, absence and attrition



Agents with low morale engage with customers less, provide lower quality work, take more unauthorised absences and end up leaving the company. Improving morale is good for business, and also good for other agents and the entire working environment: no-one wants to go to work in a miserable place.

The tables below show what contact centre leaders believe would be the single most effective factor that would improve agent morale and agent performance. For morale, 21% chose higher pay, and while this would certainly put a smile on agents' faces for a while until they got used to it, it's not a strategy that would tend to pass unnoticed amongst senior management.

The second most important factor in morale is said to be agent empowerment – the ability to make the decisions and carry out the actions that would actually help customers – effectively, trust the agent to do the job to the best of their ability, and support them through culture, process and technology as needed. This is also said to be the single most important factor that would positively affect agent performance as well, so could be said to be key to the health of the contact centre.

Figure 211: Top factor impacting agent morale

Factor affecting agent morale	Proportion of respondents choosing this as no.1 factor
Higher pay	21%
Empowerment to make decisions that help customers	19%
Technology to support the advisor in serving the customer	14%
Employee recognition awards	9%
Better/more training	7%
Incentives - e.g. bonuses, prizes, gamification	6%
Flexible shifts	6%
More holiday options	6%
Opportunities for homeworking	4%
Better facilities - e.g. canteen, leisure room, etc.	4%
Their environment - fewer desks, reduced noise levels, etc	3%

Figure 212: Top factor impacting agent performance

Factor affecting agent performance	Proportion of respondents choosing this as no.1 factor
Empowerment to make decisions that help customers	19%
More training	17%
Improved knowledge management applications	16%
Unified omnichannel agent desktop	14%
Better QA and feedback	14%
Better training	10%
Higher pay	5%
Their environment - fewer desks, reduced noise levels, etc	3%
Incentives - e.g. bonuses, prizes, gamification	2%

Empowerment – the support provided by the systems, processes and organisational culture required to help an agent solve the customer's query – is closely linked with first contact resolution, which as we have seen elsewhere in this report is key to customer satisfaction.

So how can agents become empowered? A few elements are:

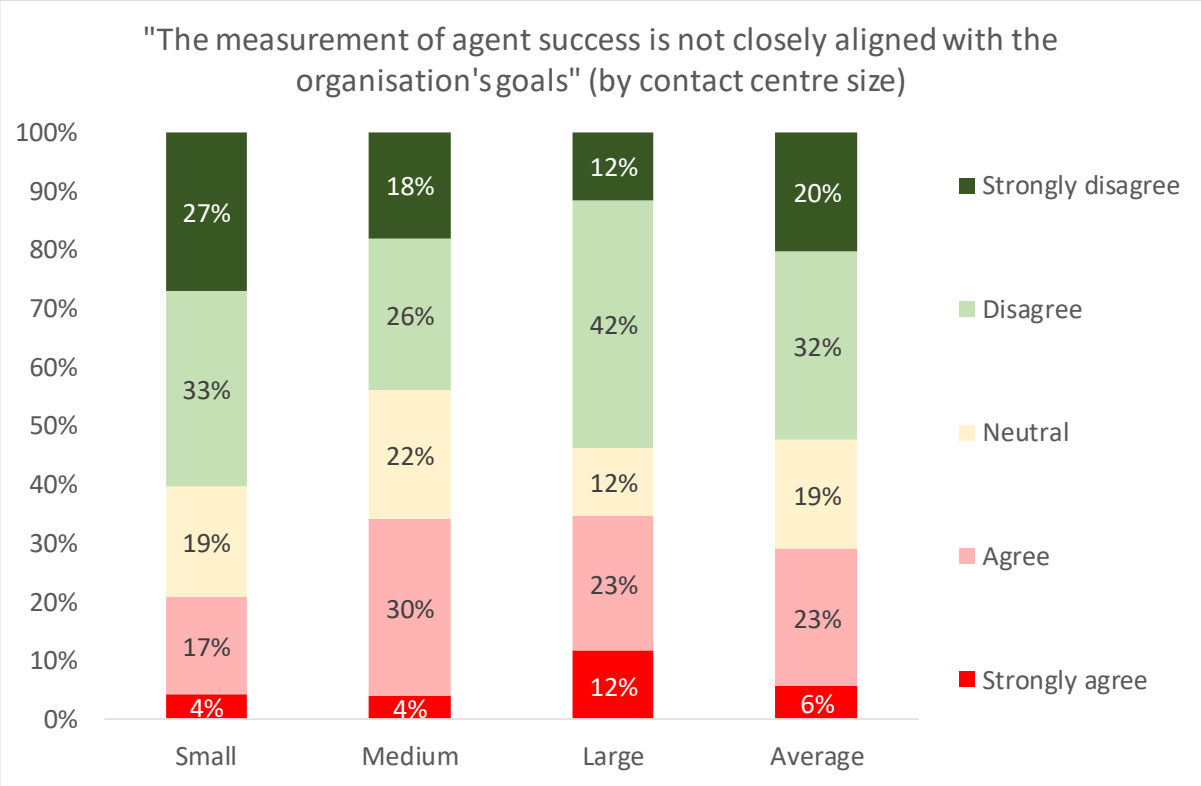
- System support to answer any query, with access to the customer's history across every channel
- Desktop applications that provide all of the relevant information in one place, without requiring agents to hunt it down
- Intelligent support to suggest answers to agents, and make sure that they comply with regulations and achieve the quality controls set by the business
- Recurrent queries are identified and answers disseminated via knowledge base / alerts
- Skills and capabilities, via ongoing training
- Trust and culture from senior management, including giving agents the time they need to handle the query without excessive pressure to meet internal metrics at the expense of solving the customer's issue.

It should be noted that most agents are already running close to capacity – time spent idle is usually under 10% for most operations – and that call lengths are increasing as work becomes more complex. Getting agents to work 'harder' (i.e. a greater interaction throughput per hour) is counter-productive to quality and customer outcome: agents need to be supported to work smarter and become more aligned with the contact centre's and wider business's strategy.

ALIGNING THE AGENT WITH THE BUSINESS

Only 52% of survey respondents believe that agent work is actively aligned with the strategy of the wider business, with more than one-third in medium and large operations actively believing that there is a misalignment: that agents are measured on metrics and outcomes that are not in line with what the organisation actually wants to achieve with its contact centre.

Figure 213: "The measurement of agent success is not closely aligned with the organisation's goals" (by contact centre size)



It might reasonably be expected that the agent engagement/reward programme will directly support those characteristics and achievements that are most highly valued by contact centres and businesses: specifically, customer satisfaction, attendance and punctuality, and customer service-focused metrics such as first contact resolution rates.

The following table compares the agent characteristics and achievements that are **encouraged and required**, and are shown, in order of importance, on the left. The characteristics and achievements on which rewards are **actually based**, are placed on the right.

It would be expected that the most encouraged and desired characteristic would be that which was also the most important when considering how to reward agents: in this way agents would be rewarded closely based upon how much they aligned with the needs of the contact centre and the business.

High customer satisfaction scores are stated to be the most important, and are said to be rewarded the most often, which is as it should be. Other characteristics that are encouraged and rewarded do not quite match exactly, and there are two elements that particularly stand out.

The greatest discrepancy, and one that is cause for worry, is that key customer-focused service metrics such as first contact resolution rates are seen as being the 2nd most important characteristic to be encouraged, but only rated as the 5th most important characteristic to be actually rewarded, putting this out of alignment with what the contact centre and business itself deem necessary for success. On the other side, traditional contact centre metrics such as average handle time are rewarded more than they are said to be valued, despite an excessive focus on such metrics being potentially detrimental to the customer outcome.

Figure 214: Comparison between characteristics encouraged, and characteristics rewarded

Rank	Agent characteristic encouraged	Agent characteristic rewarded
1st	High CSAT / customer feedback scores	High CSAT/customer feedback scores
2nd	Other service metrics (e.g. first contact resolution rate)	Good attendance and punctuality record
3rd	Good attendance and punctuality record	Other performance metrics (e.g. short average handle time)
4th	High adherence to schedule / availability	High adherence to schedule / availability
5th	Sales / conversion rates	Other service metrics (e.g. first contact resolution rate)
6th	Other performance metrics (e.g. short average handle time)	Sales / conversion rates
7th	Other financial metrics (e.g. high % of promise to pay)	Other financial metrics (e.g. high % of promise to pay)

The difficulty in keeping agents engaged, understanding and focusing upon the behaviours, actions and characteristics that are most helpful for the contact centre and the business, and the limited budget which most contact centres have for incentive programs create a situation whereby an alternative approach may need to be considered.

Gamification is an approach taken to improving agent engagement, aligning behaviours and characteristics with those of the contact centre and wider enterprise: at the most basic level, it involves making work tasks into games. The contact centre is a particularly rich potential environment for this approach, as it contains many of the factors that can make gamification successful:

- opportunity for achievement, reward and recognition at an individual level
- the possibility of team-based and goal-based quantified success
- a large pool of competitors and team members, that can be segmented appropriately to make competition and teamwork more manageable
- clearly defined tasks and metrics that can enable direct comparison between individuals and teams, over time, with measurable improvements possible.

The next section considers gamification in more depth.

CURRENT AND FUTURE USE OF GAMIFICATION

Generally speaking, contact centre agents tend to work in stressful environments for relatively low pay, doing work which may sometimes be repetitive. Depending on the nature of the calls, they may be dealing mainly with customers who have negative experiences of the company, which is unlikely to make the agent happier about representing the enterprise, especially over time.

The new agent, while often feeling uncertain about their competence to do tasks, is usually willing to learn and is engaged in their work. As time goes on, their competence will increase but they are more likely to become bored and cynical, which may in the longer term lead to high levels of agent attrition and correspondingly lower levels of operation-wide competence. As such, there is a twofold problem: lack of engagement at agent level leading to lower quality and productivity, and the corresponding costs associated with unnecessary agent attrition.

Gamification looks to meet these twin challenges with two solutions of its own: making work a more fun place to be, while encouraging the behaviours, competencies and characteristics that most closely aligned with the enterprise's own requirements, through giving agents real-time feedback about their performance, the opportunities to improve themselves and to be seen positively by peers and managers with the attendant social and material rewards.

Through the process of awarding badges, points and achievement levels, gamification gives agents an opportunity to show their achievements and compete as individuals and part of the team. The goals in mind are set by the business, and these require a great deal of thought, as any agent behaviours and actions must be closely aligned with where the business wants to go. This is an area of particular potential risk for businesses: taking a simple example, rewarding agents based upon average call handling time so as to reduce cost could obviously lead to them dropping difficult calls or not answering customers fully in order to meet these targets. There is also a risk that the novelty of games will wear off, with rewards having to have a higher and higher tangible monetary value in order to keep people's motivation, so ongoing efforts must be made by management to keep games fresh and goals relevant.

It is also important to note that gamification - while providing feedback and rewards to agents on an individual level - should be used as part of a team or community experience, encouraging high performing agents to share their best practice and for all agents to be continually challenged and pushed to learn new skills and improve their own performance.

Contact centres that use gamification frequently report that most agents go beyond the required training schedule, completing extra units and developing skills further in order to accumulate more points and badges. In a heavily incentivised sales environment, encouraging agents to take time off revenue generating activity to take training can be difficult, and this is a potential solution.

Gamification looks to increase agent engagement through:

- providing immediate feedback to the agent, who does not have to wait until the scheduled supervisory review to see how they are doing
- improving esprit de corps through the pooling of knowledge and collaboration within a group in order to achieve specific goals for which all will be rewarded
- cut down on the amount of time required for new agents to become competent, providing real-time feedback in order to encourage positive behaviours
- reduce the amount of management time required to run incentives programs, and deliver them more fairly and objectively
- focus upon and reward those characteristics and behaviours that are most closely aligned with the contact centre's and enterprise's own requirements.

This final point - encouraging agents to do what benefits the business - is a key purpose for gamification. As seen earlier in this chapter, many organisations are rewarding agents for behaviours which are not closely aligned with where the business needs to go, while ignoring those attitudes and characteristics that would actually support them in their journey, often because these latter are more difficult to measure.

Gamification can help businesses to support their objectives, and to achieve specific results. For example, steps to make gamification assist with achieving a company's business priorities could include:

- clarifying the enterprise's objectives
- identifying contact centre metrics that directly impact upon these objectives
- identifying the agent characteristics, behaviour and actions that impact these metrics the most
- developing a gamification strategy that can measure and improve these metrics, through motivating the agents to act in ways that support this goal.

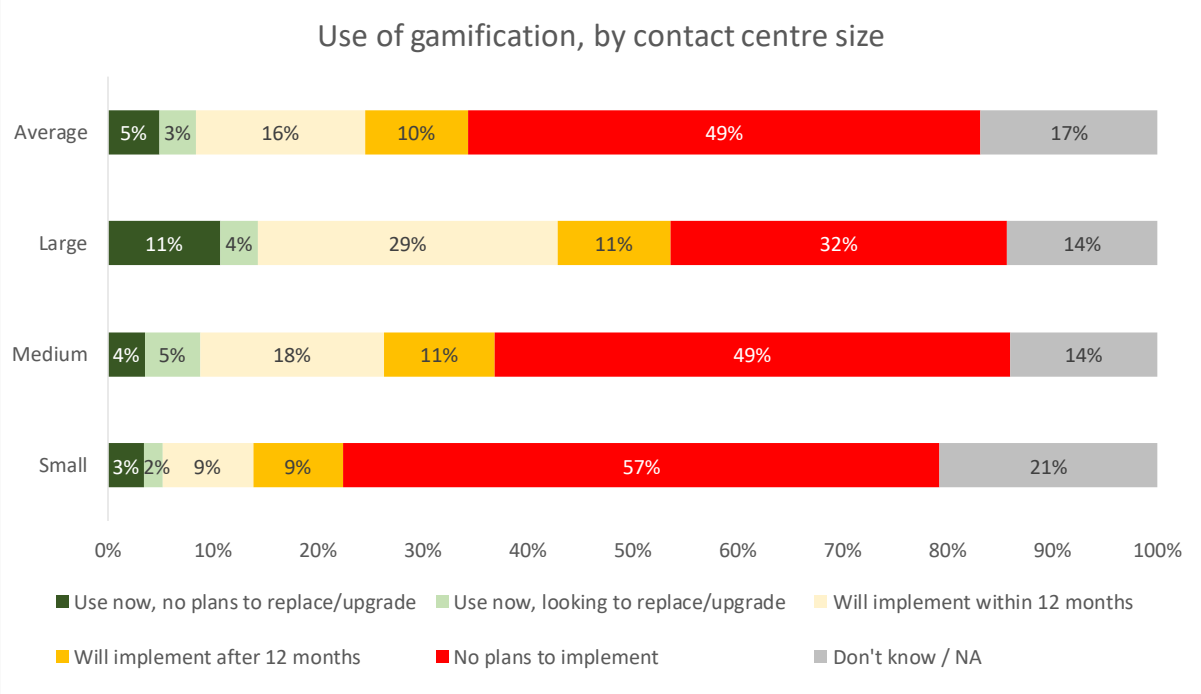
For businesses which want to achieve specific results, gamification can assist through:

- increasing the skills and competencies of new agents more rapidly, decreasing time to productivity by switching from formal, classroom lecture-based training into structured real-life work tasks
- further developing the skills of agents through encouraging and rewarding the completion of extra training courses and activities beyond what is required
- cutting agent retention through increasing agent engagement, and recognising and rewarding positive behaviours and characteristics.

Only 8% of respondents currently use gamification within their contact centre operations, but a further 16% believe that they will implement this within 12 months.

The use of gamification is considerably higher within large contact centres, where 15% respondents currently use it, and 29% intend to implement it within a year.

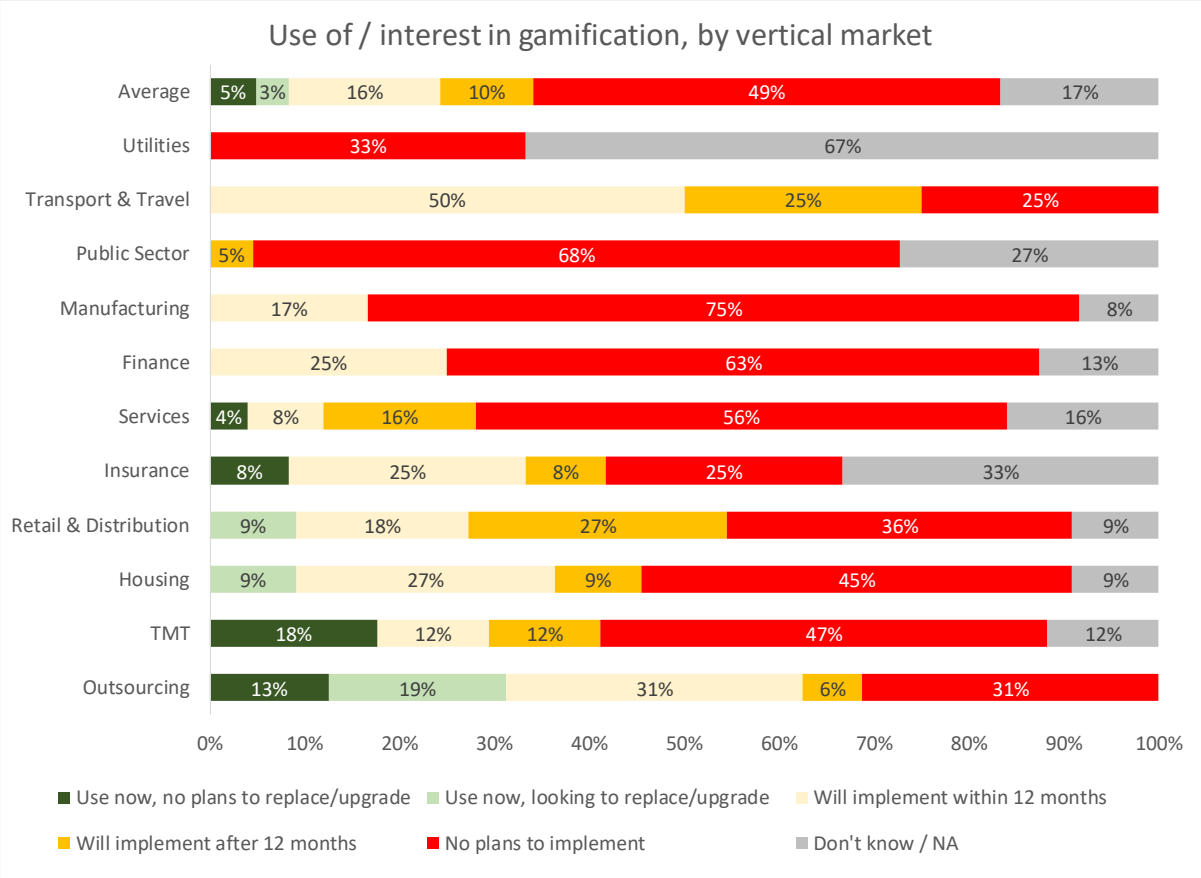
Figure 215: Use of gamification, by contact centre size



There is a danger in over-analysing data where the segments are too small, and this can be the case when considering vertical market implementations of a nascent solution.

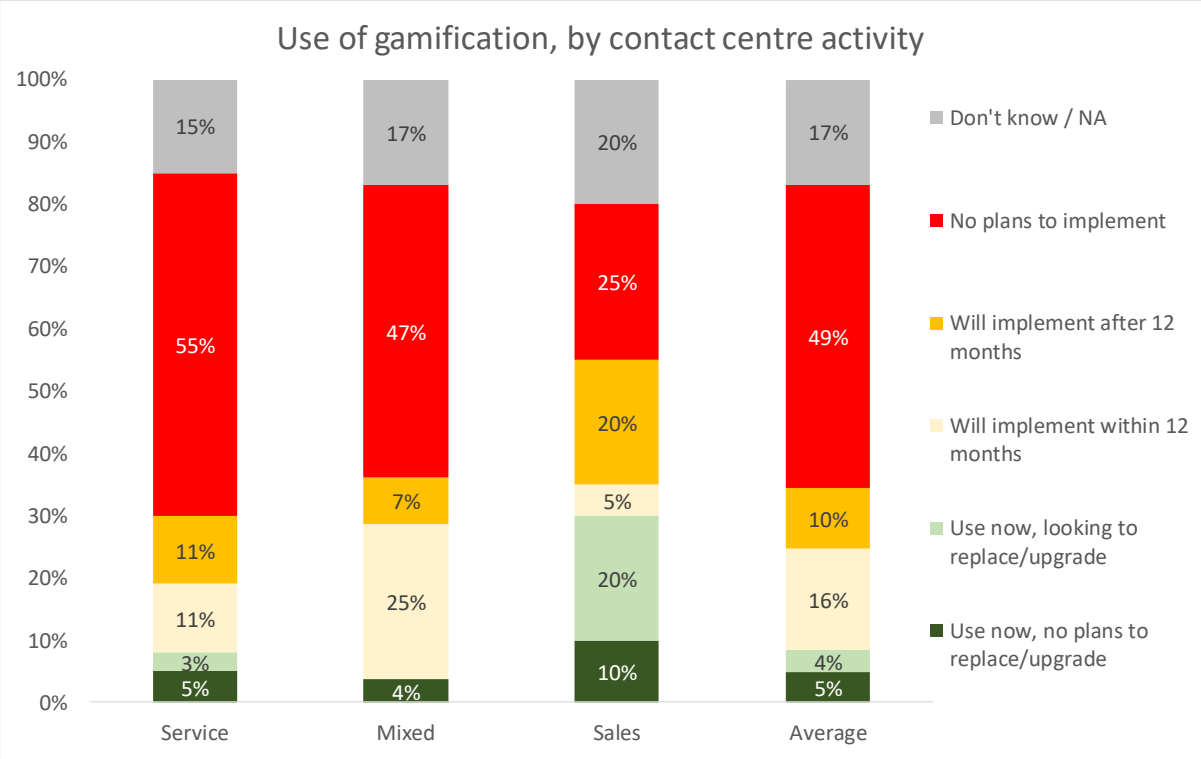
However, it is interesting to note that the TMT and outsourcing respondents from this year's survey are the highest current users of this solution, and the finance, insurance, housing, outsourcing and transport & travel sectors report a strong interest in implementing gamification.

Figure 216: Use of / interest in gamification, by vertical market



Looking at the activity type of respondents, those working in the sales environment, which are already culturally used to the public, competitive practice of sharing sales targets and achievements, are more likely to be using gamification today, although the relatively small sample size of pure sales operations involved in this survey should be considered. However, as this pattern is also found in US contact centres, it may well be the case.

Figure 217: Use of gamification, by contact centre activity

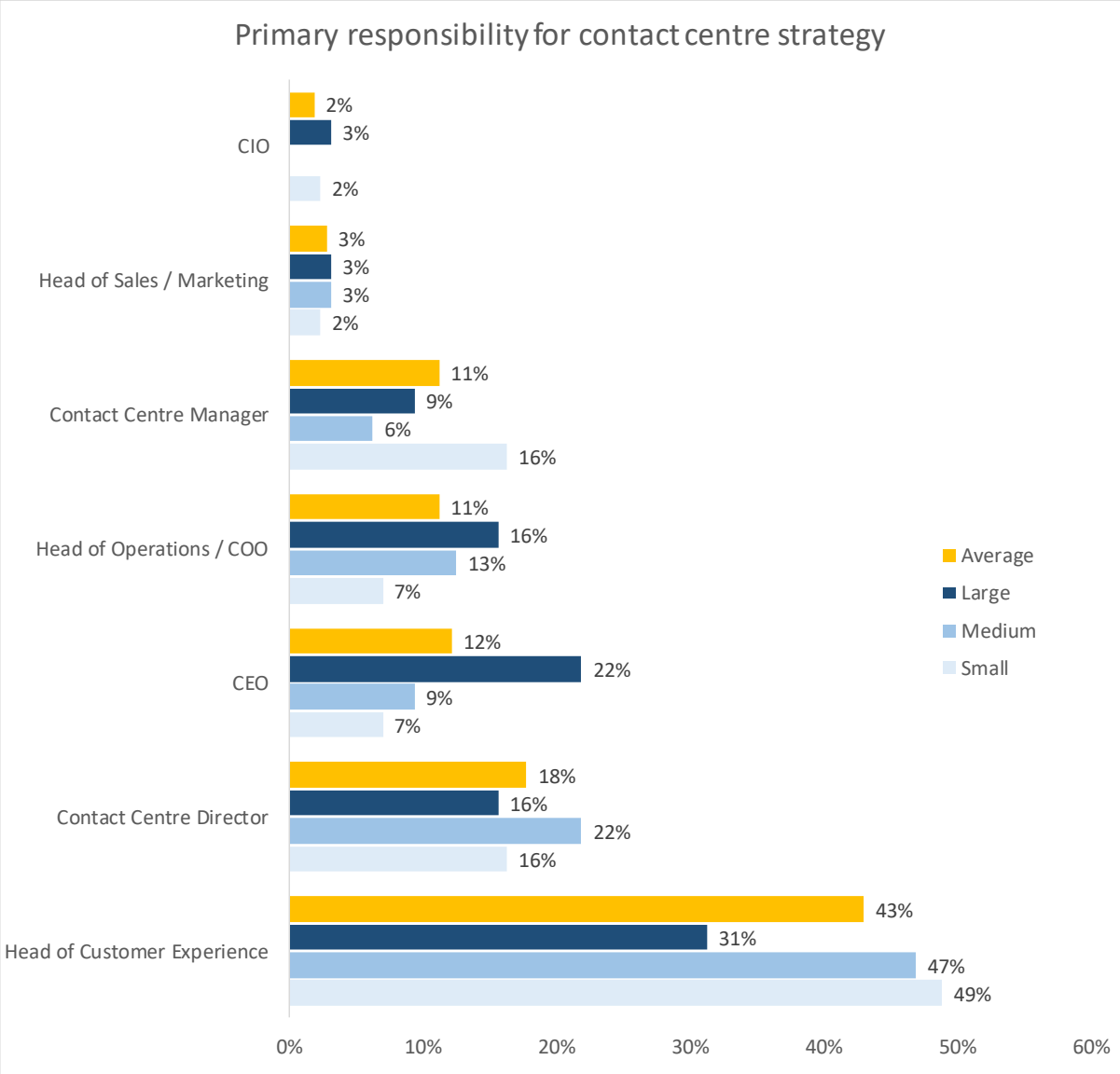


STRATEGIC DIRECTIONS

STRATEGIC RESPONSIBILITIES

For many businesses, especially those with sub-200 seat contact centres, the main responsibility for contact centre strategy belongs to the relatively new job role of customer experience director. The rapid rise in senior customer experience professionals comes as a result of businesses finally understanding that their customer contact is key to their business's overall success, rather than simply viewing the contact centre as an unwelcome cost.

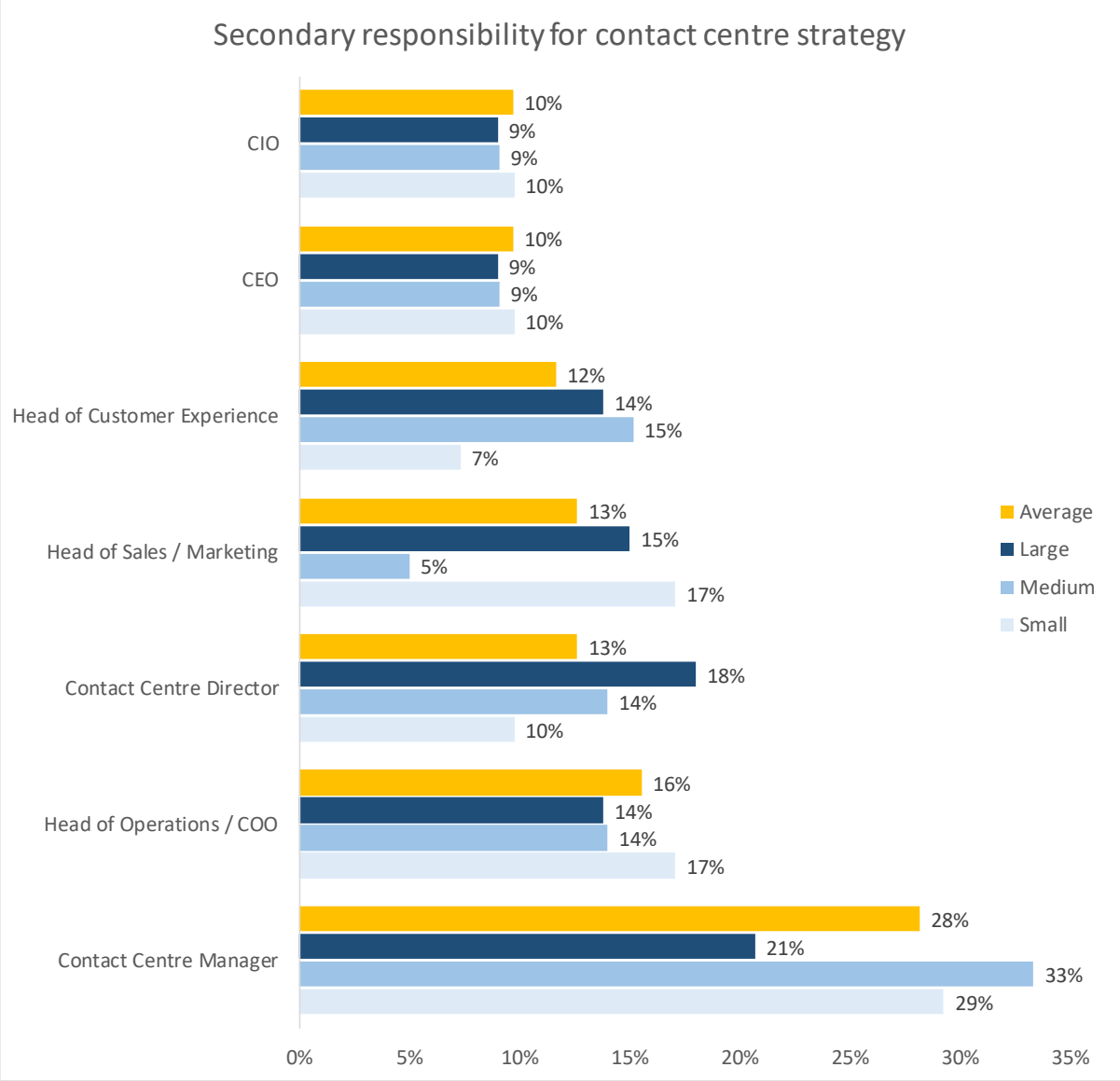
Figure 218: Primary responsibility for contact centre strategy



For large (200+) seat contact centres, 22% of respondents state that their CEO has primary responsibility for contact centre strategy, it being a large part of the overall customer experience. The equivalent figure for sub-50 seat contact centres is only 7%. The COO is also more likely to have primary responsibility in larger contact centres than smaller ones.

Contact centre managers are far less likely to have primary responsibility for strategy in 50+ seat operations. Few contact centre managers are stated to hold primary responsibility, yet these are the people with direct day-to-day responsibility for the contact centre's performance. Even when looking at secondary responsibility, only 21% of large contact centres entrust the contact centre manager with this role. It seems questionable that so many businesses with large contact centre operations have divorced operational and strategic responsibilities: as a general rule, the larger the contact centre, the more senior the primary strategic decision-maker will tend to be. While this will help to make change actually happen, it would make sense for businesses to understand more fully how strategy will actually translate into action.

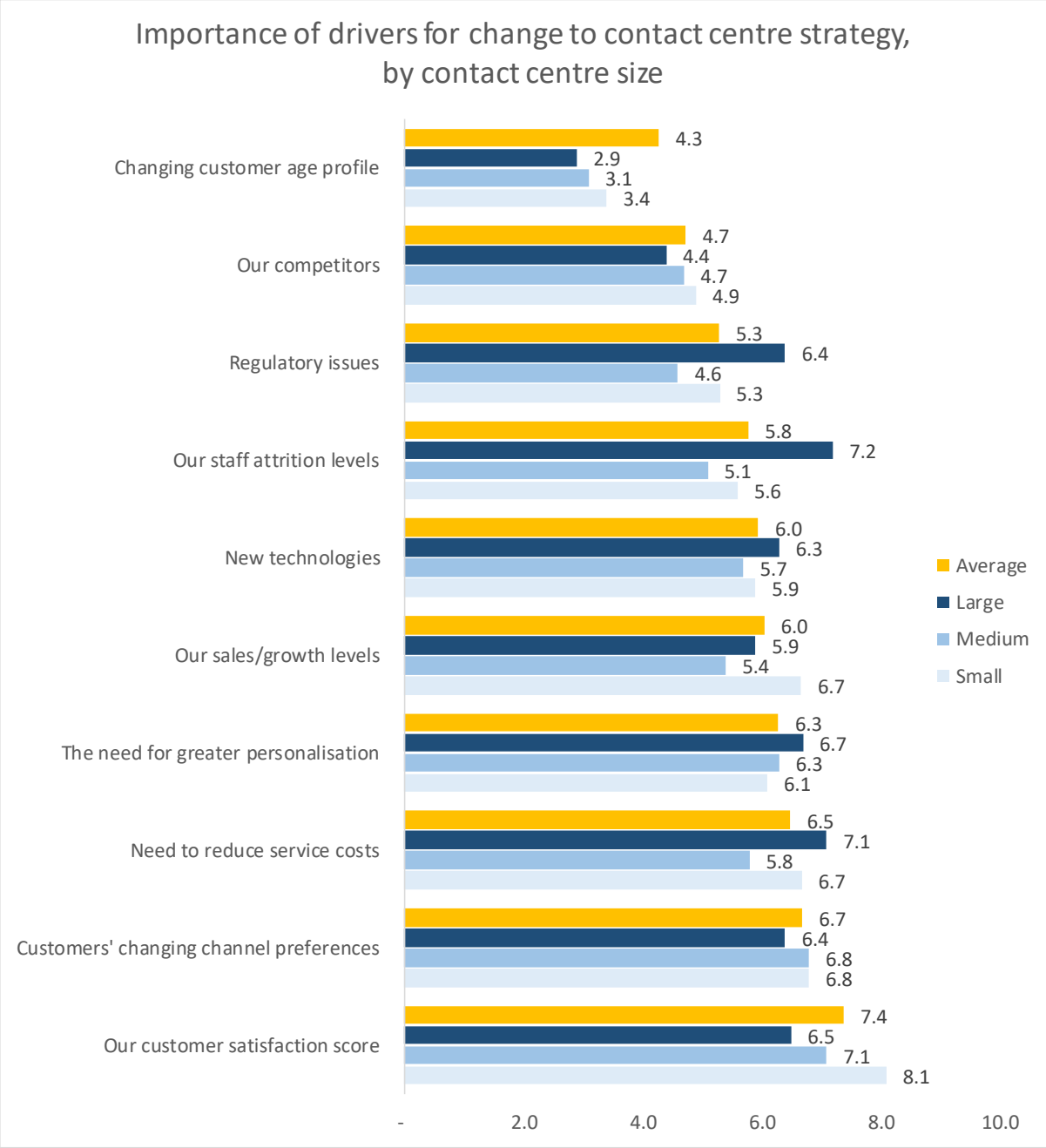
Figure 219: Secondary responsibility for contact centre strategy



CONTACT CENTRE 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 centre change, where 1 is very unimportant, and 10 is vitally important?".

Figure 220: Importance of drivers for change to contact centre strategy, by contact centre size



Although unanimity occurs across size bands with in some areas – changing customer channel preferences is important, although age profile is much less so, some differences emerge: smaller contact centres place far more emphasis on customer satisfaction scores than larger operations, and regulatory issues are a more important driver to many large contact centres.

Perhaps the greatest stand-out is that staff attrition levels are a far greater strategy driver in 200+ seat operations than in either of the other size bands, which would lead us to expect very high attrition rates in that sector. In fact, while they are higher (a mean average of 27%, against c.20% in small and medium operations), this is not such a dramatic difference. Clearly, in operations with so many people, the importance of HR issues is proportionately far greater than in smaller contact centres.

The raw scores previously shown are ranked below in importance to give a clearer picture of what each size band states is most important to their strategic decisions. It can be seen that not only do larger operations place more importance on attrition, but they also state that the need to reduce service costs is more important than customer satisfaction.

Customer personalisation is seen as 3rd most important to medium and large operations.

While customers' changing channel preference scores highly as a raw score for large contact centres (6.4 out of 10), this score is only high enough for 5th place, whereas this is seen as 2nd most important to small and medium operations. It seems that larger operations consider a larger number of factors to be important when planning their contact centre strategy.

Figure 221: Importance of drivers for change to contact centre strategy, by contact centre size (ranked)

Driver for change	Small	Medium	Large	Average
Our customer satisfaction score	1st	1st	4th	1st
Customers' changing channel preferences	2nd	2nd	5th	2nd
Need to reduce service costs	3rd	4th	2nd	3rd
The need for greater personalisation	5th	3rd	3rd	4th
Our sales/growth levels	4th	6th	8th	5th
New technologies	6th	5th	7th	6th
Our staff attrition levels	7th	7th	1st	7th
Regulatory issues	8th	9th	6th	8th
Our competitors	9th	8th	9th	9th
Changing customer age profile	10th	10th	10th	10th

STRATEGIC ACTIONS

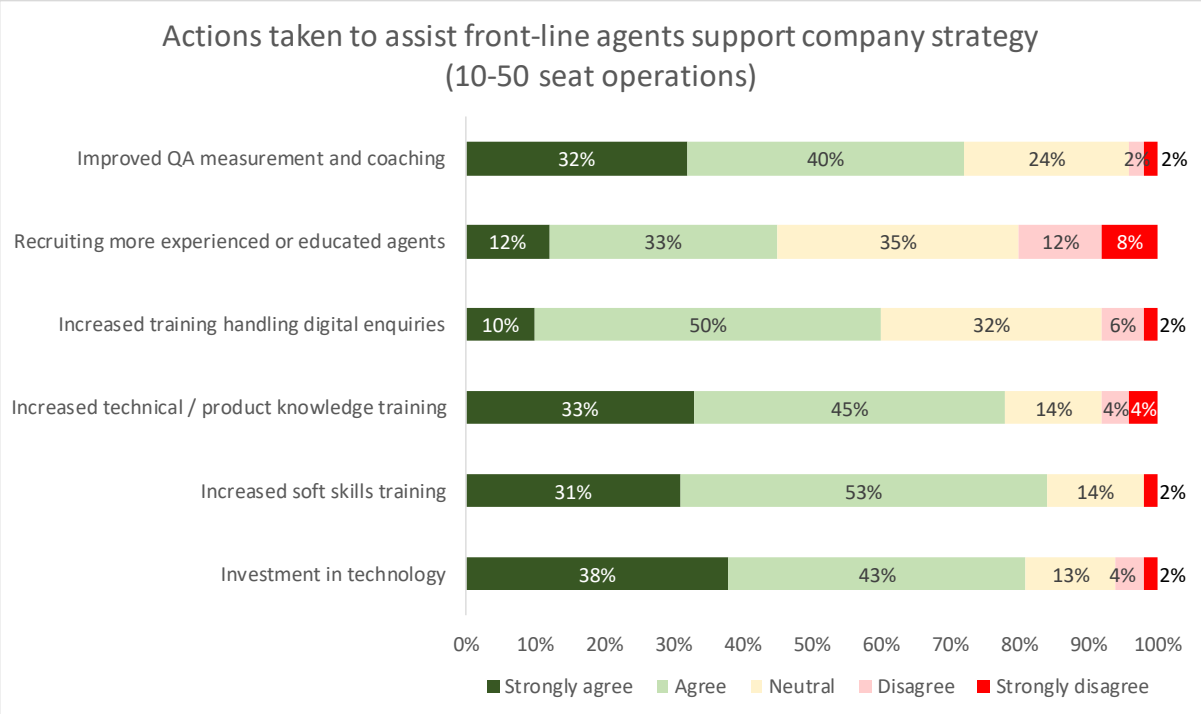
The following three charts show the actions being taken to assist front-line agent support a company strategy, regardless of what it is. This demonstrates where the efforts and investments are being made in agents' ability to do their job.

For the smallest operations in the survey, the greatest proportion of respondents strongly agree that investment in technology is happening, with 81% of respondents feeling that this is the case to some extent.

There also seems to be widespread activity to improve both the technical and soft skills of agents, with more than three quarters of respondents stating that they are actively doing this.

On a more negative note, 28% of respondents in small operations are not actively looking to improve quality assurance measurement and coaching, a figure that is far higher than in medium and large contact centres.

Figure 222: Actions taken to assist front-line agents support company strategy (10-50 seat operations)

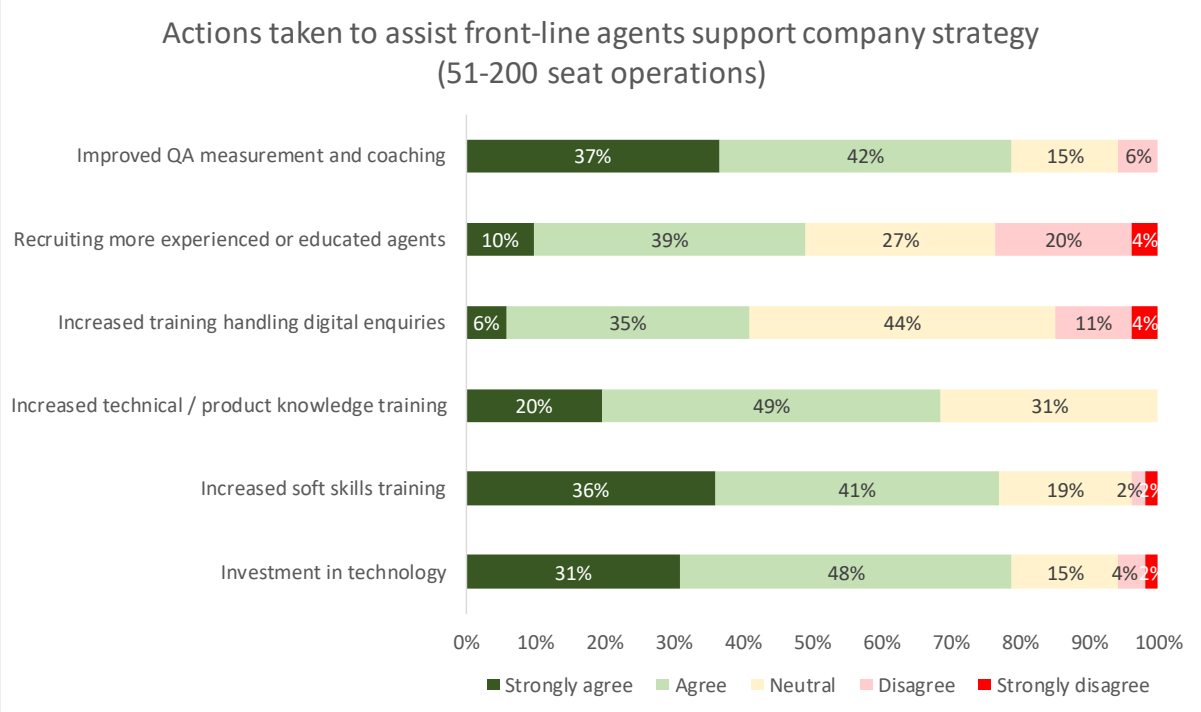


Considering mid-size contact centres, close to 80% of respondents state that they are improving QA measurement and coaching, investing in technology and also improving their agents' soft skill training in order to support the company strategy.

Mid-size contact centres are much less likely to be increasing the amount of training that their agents receive to handle digital enquiries, despite a widespread agreement that changing customer channel preferences is driving strategy.

51-to-200 seat contact centres are somewhat more likely than large operations to be looking to recruit more experienced and educated agents (49% versus 37%).

Figure 223: Actions taken to assist front-line agents support company strategy (51-200 seat operations)

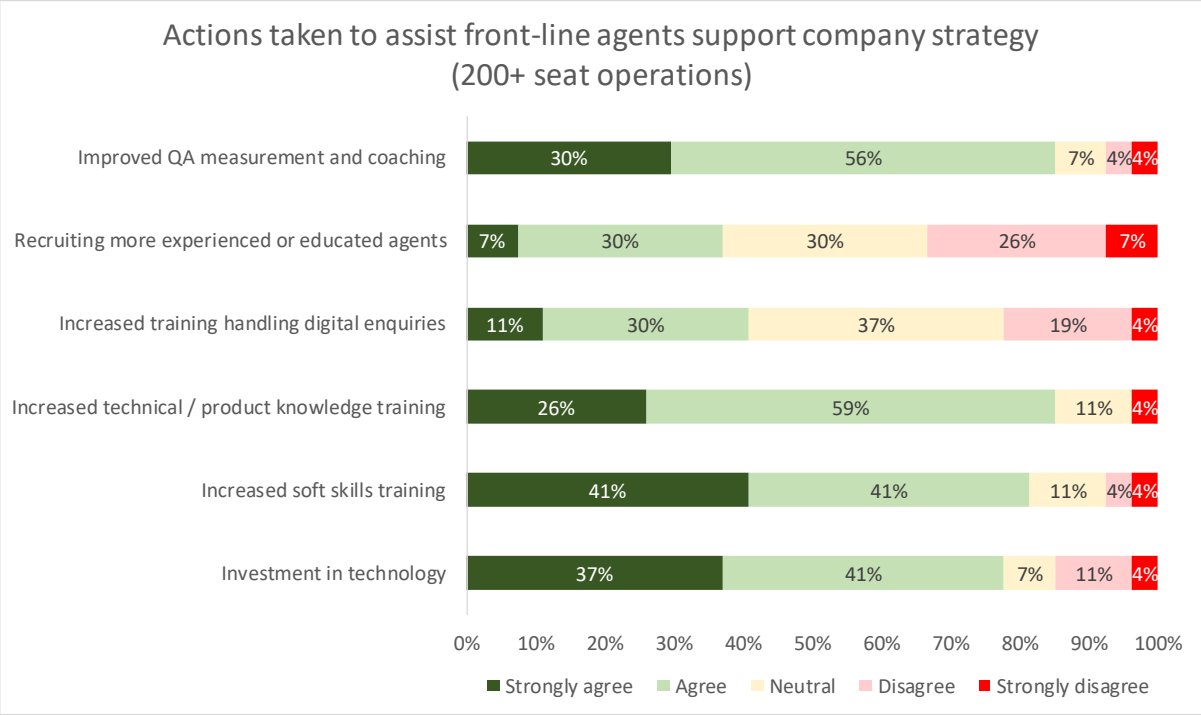


Within the large contact centre sector, the vast majority are looking to improve quality assurance measurement and coaching, as well as increasing both the technical and soft skills capabilities of their agents in order to support company strategy.

Here again, only a minority are training their agents to handle a growth in digital enquiries, and there is no great enthusiasm to recruit more experienced and educated agents into their operation, preferring to improve the skills and capabilities of the agents that are already there, through training investments. Perhaps due to the problems with staff attrition that many large contact centres have reported, the focus is upon improving the ability of their agents rather than simply accepting a higher-than-desired attrition rate.

Almost 80% of respondents from large contact centres state that they are actively investing in technology in order to support their agents in line with the company strategy.

Figure 224: Actions taken to assist front-line agents support company strategy (200+ seat operations)



Traditionally, HR issues such as attrition have been what make contact centre managers most concerned, but the past years have seen a growing feeling that the technology in place is letting the operation down, or at least, preventing it moving forward to the extent that it needs. Many solution providers note that as part of their sales engagements, they will typically carry out a business process review. They often find that staff are typically committed and capable, but are hamstrung by legacy applications, data systems and inefficient processes. Contact centres are also aware that they have to modernise their processes as well as the technology, but - as ever - cost, time and the need to keep the operation running smoothly make this sort of strategic thinking very difficult, especially in a situation where some contact centres still do not have much in the way of a champion at the higher levels of the business.

The need to measure and improve customer experience and satisfaction, and its impact upon profitability, has become an obsession throughout the industry, which is positive for customers and businesses. A recent phenomenon has been the explosive growth in multichannel communications, and the dawning realisation that customer contact should not exist in a siloed environment, but as part of an omnichannel contact strategy.

The industry is still growing in terms of increased volumes of interactions and even headcount to a lesser extent, and more needs to be done to increase the effectiveness of agents, particularly as the move from live voice to text-based 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. Far more is also being done via the web and especially mobile channels (and new technologies such as visual IVR offer a boost to existing technology), 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 email. Sales discovery projects will typically highlight several opportunities for self-service and call deflection, but the customer satisfaction element of a poorly implemented self-service application also needs to be considered. Businesses have to ensure that they choose the right areas to self-serve, and then do it well.

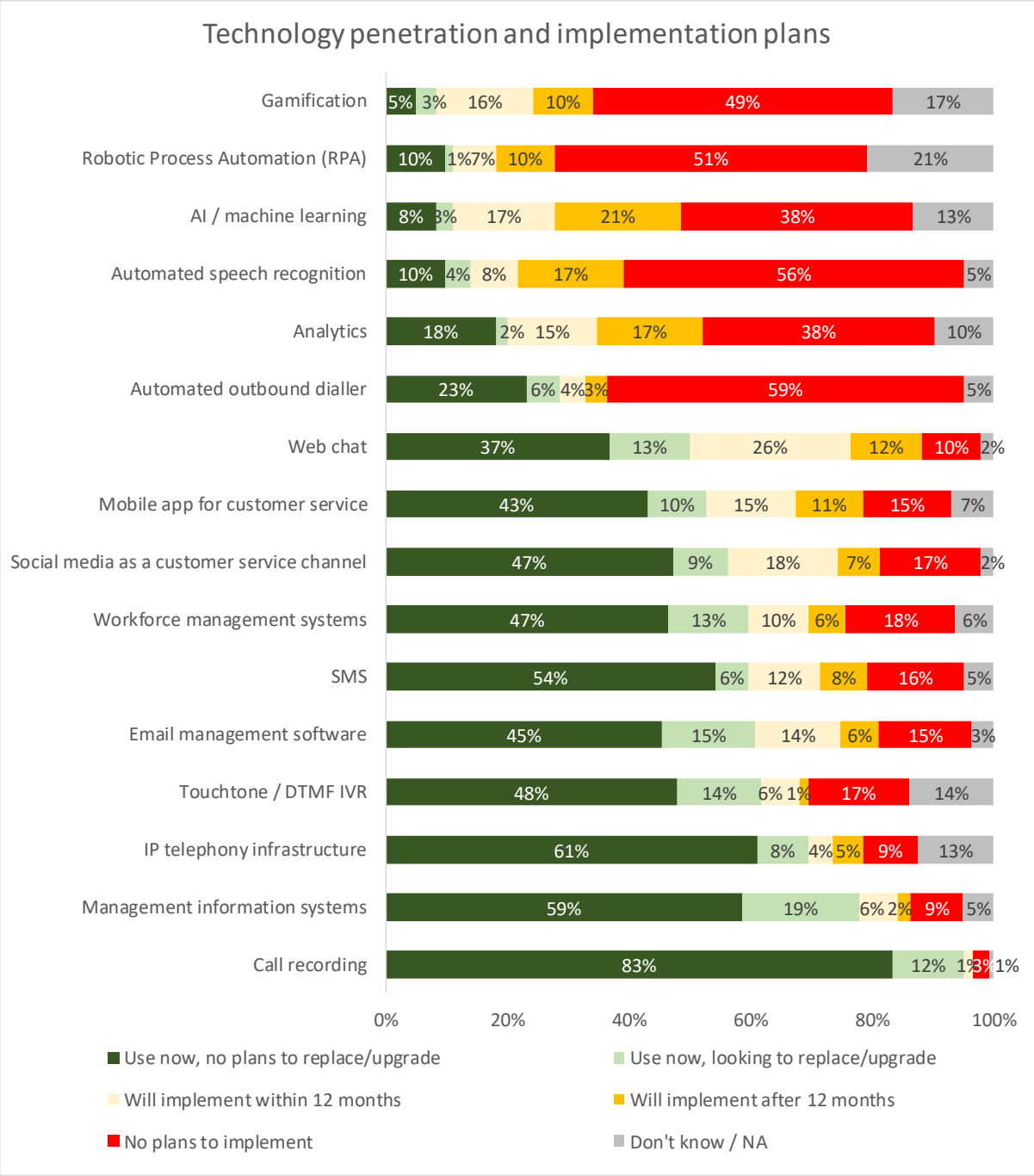
For businesses where self-service is not seen as a viable option, many opportunities still exist to trim unnecessary elements of the calls, from identity verification through system navigation to post-call wrap-up: consistently high levels of wrap-up time and non-call time is worrying: often 40% or more of an agent's time is spent doing something other than communicating with customers. Agent desktop optimisation - putting the right things on the desktop at the right time in the conversation, without disrupting the underlying system functionality – has gained in popularity, especially in very large contact centres with multiple, complex processes and legacy systems. 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.

Open systems and infrastructure now make the implementation of automated identity verification and CTI-like processes far more cost-effective and simpler to deploy. Linking with cloud-based CRM applications, the agent desktop can unify all of the legacy applications within a single customer view, significantly reducing agents' post-call wrap-up activities and overall call handling time.

Customer satisfaction and improved customer experience is the common ground where senior executives and contact centre operations can now meet and discuss how to head in the right direction together. Much of what respondents to this survey have talked about is coloured by improving customer satisfaction and reducing customer effort, the drivers of where the contact centre industry is headed long-term.

The following chart shows respondents' current and future use of specific contact centre solutions.

Figure 225: Technology penetration and implementation plans



DTMF IVR, workforce management, email management and MIS are amongst the most likely to be upgraded or replaced in the next year, with a significant proportion of respondents using web chat also looking do so. 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.

In terms of new implementations, web chat, social media, mobile service and analytics are singled-out in the short term, with AI/machine learning and gamification also receiving a very high level of attention considering their low current usage. In the longer-term, AI, speech recognition and analytics were seen by respondents as likely investments. This may show that businesses are serious about these solutions, or alternatively it may be viewed as something that businesses would like to do, but find it difficult to get around to as they have more pressing tasks in the meantime.

Recognising that the reality of contact centre investment does not always match the intention shown in the previous chart, the following table gives closer analysis of IT investment priorities.

Figure 226: Top 5 most important areas of contact centre IT expenditure in the next two years (proportion of contact centres placing solution in their top 5, 2015-17)

Technology solution	2015	2016	2017
Omnichannel (i.e. getting channels to work together)	42%	50%	55%
CRM / Agent Desktop Software	48%	56%	53%
Back-Office Integration	39%	45%	48%
Self-Service (DTMF IVR, Speech Recognition & Web Self-Service)	20%	30%	33%
Email Management	41%	37%	31%
Web Chat	38%	31%	29%
Desktop Automation & Analytics	19%	25%	27%
Performance & Quality Management	26%	25%	25%
Workforce Management	19%	29%	24%
Management Information Systems	30%	25%	22%
Mobile Service	15%	13%	19%
Social Media	21%	20%	18%
Cloud	18%	17%	16%
Interaction Routing (including ACD/CTI-like functionality)	17%	14%	14%
Speech Analytics	9%	8%	13%
Hardware (including PCs & servers)	19%	13%	12%
Call Recording	19%	6%	12%
Gamification	8%	9%	11%
Homeworking	14%	9%	11%
Virtual Contact Centres	7%	10%	8%
Telephony Infrastructure (including IP)	10%	12%	7%
Outbound Automation	6%	5%	5%
Voice Biometrics	4%	3%	3%
Video/Web RTC	0%	4%	2%
Headsets	7%	3%	2%

The percentages in the previous table based on the proportion of respondents over the past three years placing the specific solution within their top 5. By starting to show this historical data, patterns will start to emerge, showing the solutions that are gaining the most interest over the years, and those which are losing their appeal.

CRM (including improvement to the contact centre agent desktop and contact management system, as well as company-wide CRM) has been in no.1 position for a number of years, and although CRM loses its number one spot in 2017 to omnichannel, it runs it a very close second.

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 55% of respondents (an increase on last year's figure of 50%), which is higher than any other solution. The various supporting applications, such as web chat, email management systems and social media have significant proportions of respondents placing them within the top 5, especially the former two solutions, although it is noticeable that these numbers are falling year-on-year as implementations actually happen.

It is interesting to note that respondents place back-office integration as the third most-likely investment priority over the past three years, with the proportion of respondents placing it in their top 5 growing significantly even since 2015. This suggests that respondents are 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 throughout their entire experience in an omnichannel environment. While back-office integration may not be the most glamorous technology solution available, this significant level of interest and planned investment shows the contact centre's remit is widening to cover the entire customer journey, not just the voice element.

After some years of relative stagnation, self-service continues to grow in interest to the contact centre sector, driven in part by the promise of artificial intelligence and chat bots being able to provide a far superior self-service experience than had previously been the case. The same can be said for desktop automation and analytics, which also links with the back-office and robotic process automation, areas which are of growing interest for many of the largest organisations.

One interesting point to note is that telephony infrastructure upgrades (usually involving IP) is no longer one of the main planned expenditures on contact centre technology, as so many have moved to this already, although upgrades are planned for a significant proportion of respondents.

TECHNOLOGY, PEOPLE, PROCESS & PERCEPTION

Respondents were asked a series of four questions around how well or poorly they felt their contact centre was doing around four key areas: technology, people, process and perception. They were asked to score their operation on a scale of 1 to 100, where a low score represented a poor outcome, and a high score a positive one. Scores above 50 are reflect a positive feeling, and those below 50 negative.

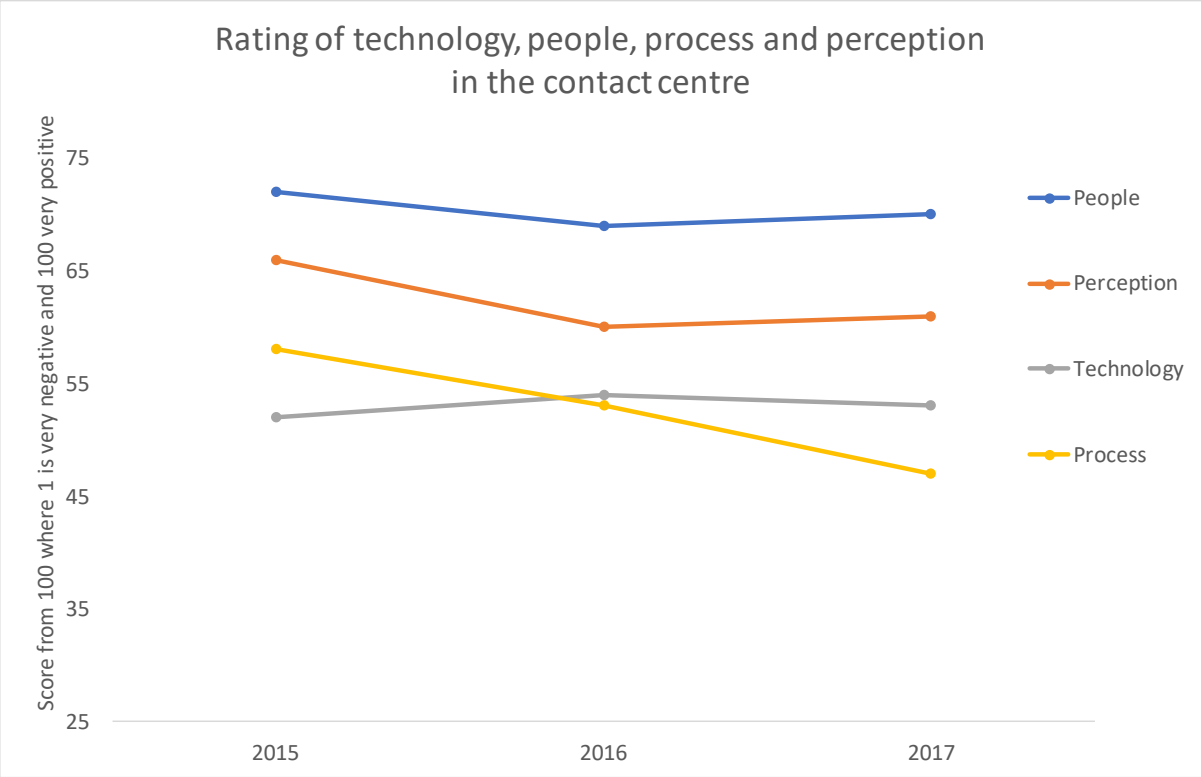
As this question was first asked in 2015's survey, a small amount of historical information is available which will allow readers to draw conclusions about the consistency of results and any patterns emerging.

NB: "perception" refers to whether the contact centre is viewed as a strategic asset (high score) or an operational cost centre (low score).

The 'people' rating has remained consistently high, at or above 70/100, showing a widespread satisfaction with the quality of the agents. The perception of the contact centre as a strategic asset is somewhat more widespread than that of it as an operational cost.

There is a consistent feeling that technology is not as good as it could be, and satisfaction with the processes supporting the contact centre (and its digital channels and back office) has declines considerably since 2015, moving into negative territory in 2017.

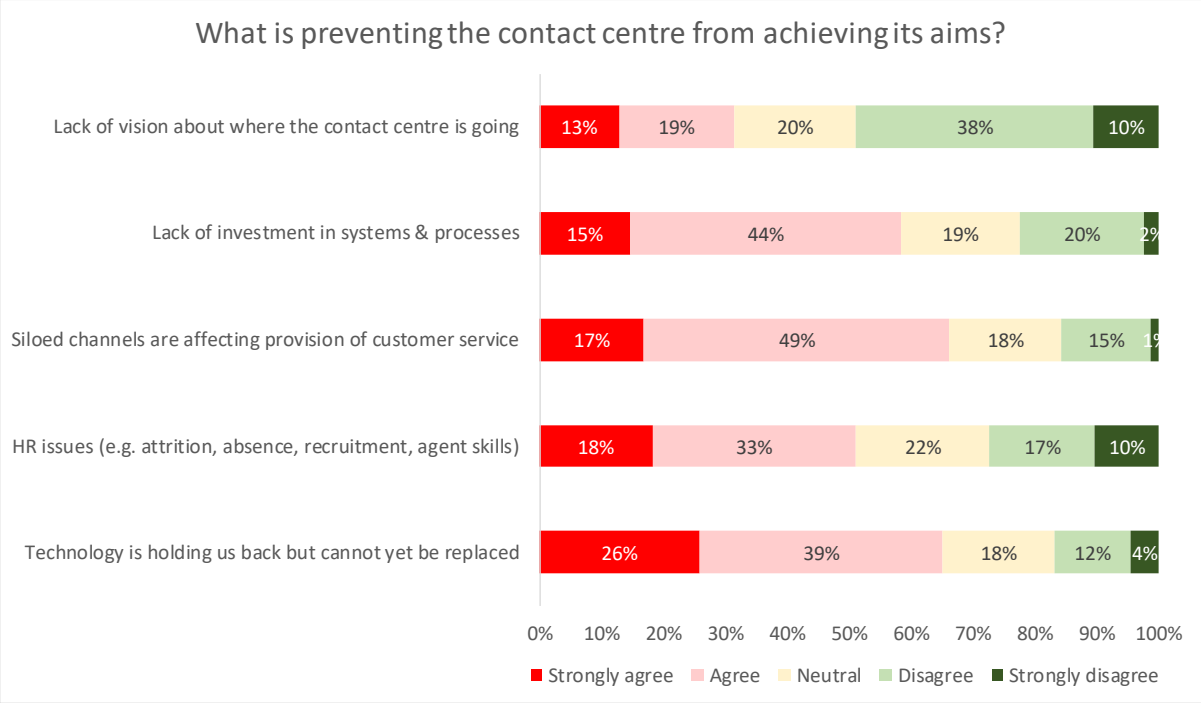
Figure 227: Rating of technology, people, process and perception in the contact centre



HELPING THE CONTACT CENTRE ACHIEVE ITS AIMS

Respondents were asked to give their views on what was preventing the contact centre from achieving its aims, assuming that there was a gap between what was being achieved and what would be ideal.

Figure 228: What is preventing the contact centre from achieving its aims?



It should be noted that 65% agreed or strongly agreed that irreplaceable technology was a problem. This lack of ability to change or upgrade its systems may be around a lack of investment, or maybe more to do with the highly-customised and bespoke legacy environment that the business feels it requires to operate.

It is also of interest to note that 66% 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.

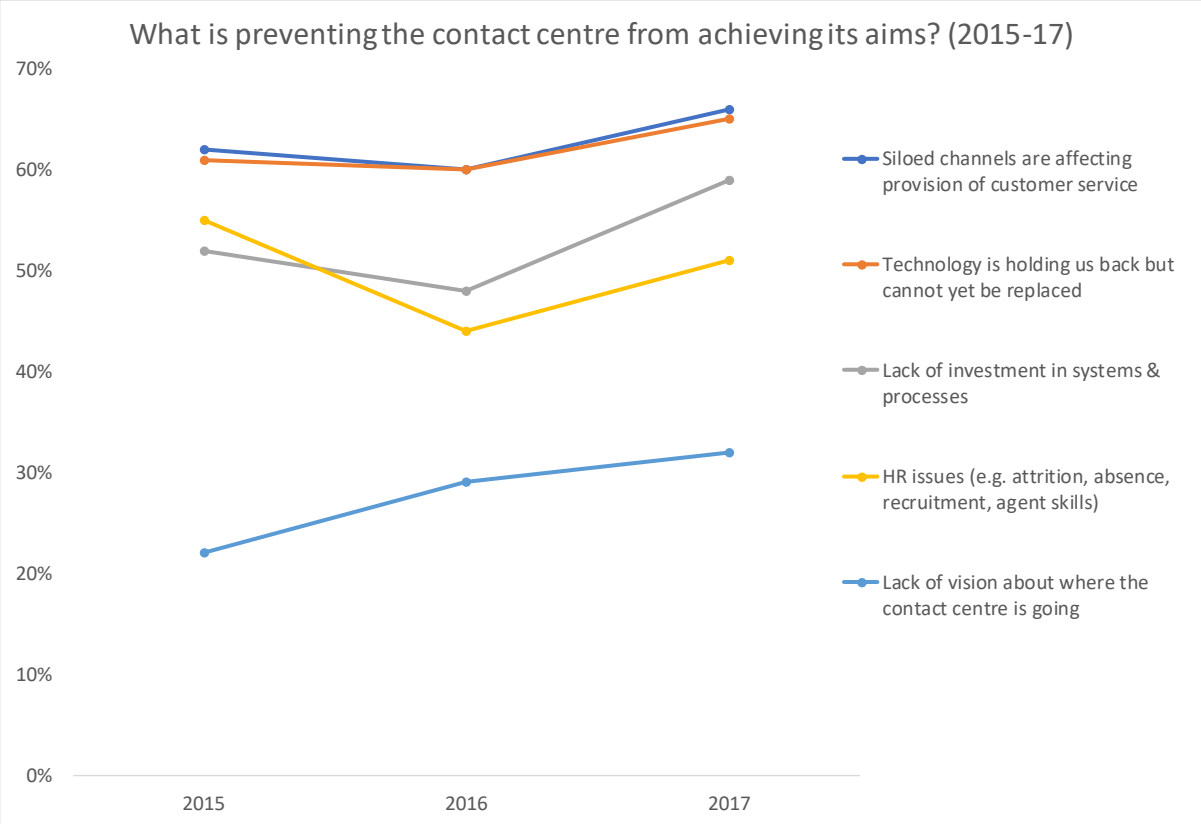
59% agree that systems and processes are holding the contact centre back from achieving its aims, supporting the previous finding that saw confidence in existing processes being diminished since 2015.

Respondents were also asked for any other issues that they felt were preventing their contact centre from achieving its aims that had not already been mentioned. Responses included:

- Budget constraints
- Fast-moving changes to the business and increased complexity
- Too little time to carry out all of the improvements identified
- Declining revenues in markets that are changing, meaning investment in the contact centre becomes less
- Reluctance to change existing, traditional working practices, which includes trying to get the non-contact centre part of the workforce to improve customer communication.

Considering historical data as well as 2017's figures, the rise in concern about the lack of vision from senior business figures over where the contact centre is going is noticeable. Most concerns have stayed at least the same since 2015, apart from a slight decline in concerns over HR. Future years will show a clearer pattern as to what is holding back the contact centre from achieving its aims.

Figure 229: What is preventing the contact centre from achieving its aims? (2015-17)



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ContactBabel is the contact centre industry expert. If you have a question about how the industry works, or where it's heading, the chances are we have the answer.

The coverage provided by our massive and ongoing primary research projects is matched by our experience analysing the contact centre industry. We understand how technology, people and process best fit together, and how they will work collectively in the future.

We help the biggest and most successful vendors develop their contact centre strategies and talk to the right prospects. We have shown the UK government how the global contact centre industry will develop and change. We help contact centres compare themselves to their closest competitors so they can understand what they are doing well and what needs to improve.

If you have a question about your company's place in the contact centre industry, perhaps we can help you.

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