



The Inner Circle Guide to AI, Chatbots & Machine Learning

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The Inner Circle Guide to AI, Chatbots and Machine Learning

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ABOUT THE INNER CIRCLE GUIDES

“The Inner Circle Guide to AI, Chatbots & Machine Learning” is one of the Inner Circle series of ContactBabel reports. Other subjects include Cloud-based Contact Centers, Omnichannel, Self-Service, Outbound & Call Blending, Workforce Optimization, Customer Interaction Analytics and PCI DSS Compliance, and can be downloaded free of charge from [here](#).

The Inner Circle Guides are a series of analyst reports investigating key customer contact solutions. The Guides aim to give a detailed and definitive view of the reality of the implementing and using these technologies, and a view on what the future holds.

As well as explaining these solutions to the readers, we have also asked the potential users of these solutions whether they have any questions or comments, and we have selected six of the most popular to ask to the report’s sponsor. The answers to these are distributed throughout the report and give interesting insight into real-life issues.

Statistics within this report refer to the US industry, unless stated otherwise. There is a version of this report available for download from www.contactbabel.com with equivalent UK statistics.

“Small” contact centers are defined in the report as having 50 or fewer agent positions; “Medium” 51-200 agent positions; and “Large” 200+ agent positions.

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AI: DEFINITIONS AND TERMINOLOGY

Within the customer contact space, there is a great deal of interest in how artificial intelligence (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 organizations. 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.

As AI can be given access to all of the relevant data a company holds on its customers, as well as unstructured data held elsewhere (for example, forums or social media channels), it has a far wider source of knowledge from which to draw, compared to human agents. In theory, an AI with sufficient sophistication could make human agents all but unnecessary, but for the foreseeable future, AI will usually work alongside its human colleagues.

The usage of the term 'AI' in the contact center covers an enormous area, and is often used by solution providers, media and businesses to refer to functionality that may only very tenuously be said to be linked to true AI, which is itself a wide-ranging term for technology solutions which appear to emulate human cognitive capabilities through the 'understanding' of complex, natural language requirements, in order to reach its own conclusions and improve itself.

Rather than arguing about semantics, the umbrella term of AI will be used descriptively rather than prescriptively within this report. Its use within the contact center will be linked to three broad types of linked functionality – the "4 A's of AI" – analysis, anticipation, augmentation and automation.

Analysis:

Whereas for humans, enormous, fast-changing datasets make understanding and action more difficult, AI requires extremely large sets of data in order to find patterns and work optimally. Tools such as speech-to-text and optical character recognition (OCR) enable the AI to normalize data and compare like with like, and machine learning allows systems to improve accuracy and the effectiveness of outcomes without constant input and tweaking from human users.

Anticipation:

Based upon the customer's history, the context of the interaction, and the factors influencing successful outcome of similar interactions in the past, AI will be able to predict the best action to take. This may be in the form of an answer taken from the knowledge base, the correct prioritization and routing of a call, or the prompting of an agent to ask a specific question or make a relevant sales offer.

Augmentation:

The AI is able to gather relevant information from numerous sources in real-time in order to provide enhanced information to human agents or the self-service system, increasing the likelihood of a successful outcome. The AI is also tasked with updating relevant systems and initiating the correct business processes.

Automation:

In circumstances where there is a high level of confidence that the solution presented by the AI is correct, human intervention may be circumvented altogether. The AI system may monitor the interaction in real-time, using sentiment analysis to determine whether there is a need for a live agent to collaborate.

DEFINITIONS

AI (artificial intelligence)

Within the boundaries of this report, AI will be used as an umbrella term for solutions which appear to emulate human cognition through the ‘understanding’ of complex, natural language requirements, in order to reach its own conclusions, learn and thus improve itself.

Within the contact center, AI involves technologies such as machine learning, speech-to-text, deep learning, analytics, chatbots and natural language understanding, all closely integrated and working together, aiming to provide outcomes similar or even superior to those achievable by human agents.

Some of the typical characteristics of AI-enabled solutions include:

- An understanding of the customer’s meaning and intent, rather than just accurately decoding the syntax of the request
- Use of multiple questions in a conversational format to improve understanding
- Using past outcomes to predict and deliver the likeliest most successful output
- The use of confidence levels rather than a binary right/wrong output
- The ability to improve future outcomes without constant human input or monitoring.

Chatbots / Virtual Agents / Virtual Assistants / Conversational AI

As with so much in the world of AI, there is disagreement about definitions. In the case of chatbots, virtual agents, virtual assistants and conversational AI, it is better to focus on the functionality and ‘intelligence’ powering it, rather than the phrase in itself.

AI for customer contact is currently best known for chatbots, applications that run automated tasks and simulate 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.

Chatbots are not always fully-automated or AI-enabled, and may in fact be a glorified FAQ interface, lacking ‘understanding’ and simply searching through keywords. However, some use NLP and can ask questions to understand customer intent and improve the accuracy of the output, and may also use machine learning to improve future outcomes.

In this report, “chatbots” and “virtual agents” are used interchangeably and refer to the same functionality.

Virtual assistants (VAs) are not dedicated to a single task (such as customer service), and can assist in numerous ways such as taking notes, carrying out web research, setting alarms, communicating with smart devices, etc.

Both chatbots and VAs are conversational interfaces, but the level of AI involved can differ greatly.

Machine Learning / Deep Learning / Neural Networks

Through the use of pattern recognition, previous outcomes and other algorithms, machine learning enables systems to improve themselves without the need for continuous human user input (although supervision and guidance is often needed in reality). It relies upon extensive datasets and computational power in order to make predictions with theoretically continually-improving levels of confidence.

Based on the workings of the human brain, neural networks consist of input and output layers as well as one or multiple hidden layers (Deep Learning uses multiple layers, each carrying out their own specific task), working to find patterns which will be too onerous or complex the humans to identify. Neural networks can be trained to spot patterns in data and provide accurate output, with programmers correcting any mistakes. Eventually the neural network can ‘understand’ whether it is producing accurate output, with far less human correction.

Neural networks can be set up using supervised or unsupervised learning techniques. Supervised learning techniques involve giving the neural network a specific problem such as “is this customer likely to complain?”. Programmers then provide the system with large datasets of customers who have or have not complained, and then the neural network will find patterns of characteristics that make some customers more prone to complaint. They are then able to predict which customers are likely to be dissatisfied, allowing the business to act accordingly. In the case of unsupervised learning, no specific output is given to the system, which will then find patterns in the data and classify groups accordingly. Supervised learning is by far the more common use of AI in businesses.

Natural Language Processing / Understanding (NLP/NLU)

NLP refers to the branch of AI which enables computers to understand human language, whether spoken or written. It goes beyond speech to text processing - although of course accurate transcription is vital - and attempts to understand the actual intent of the customer. NLU is a subset of NLP which looks at the challenges of understanding human communication, such as mispronunciation, sub-optimal word order, slang and other elements which are a natural part of human speech but which can cause major problems for computers due to their unstructured and outlying nature.

One of the keys to successful automated service, whether 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.

Predictive behavioral routing

Predictive behavioral routing uses insights gathered from historical calls and the analysis of customer communication types in order to choose the agent whose skills and characteristics are most likely to achieve a positive response from the next caller in the queue.

Predictive behavioral routing uses millions of algorithms to decode the language used by agents and customers, in order to understand sentiment, personality type, preferred method of communication, emotional intelligence and transactional attributes (such as ability to overcome objections and willingness to sell).

Each customer can be allocated a specific personality style, and when calling again, are routed through to an agent whose performance when interacting with this specific personality type has generally positive results. The matching of agent-customer communication styles has enjoyed significantly higher sales closure rates and better customer satisfaction scores than the average. 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.

Robotic Process Automation (RPA)

Robotic process automation (RPA) consists of digital software agents that handle repetitive, rules-based tasks at high speed, with great consistency and accuracy. The RPA workforce acts in the same way as human agents, working at the presentation layer level rather than requiring deep integration with systems, replicating the work that live agents 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.

Unlike simple scripting, RPA may use machine learning and NLP to recognize products and processes that have been recently added, ‘understanding’ that while it may be unfamiliar with a new product, that it should treat it in the same way as any other product, recognizing the type of datum or process for what it is and acting accordingly. NLP may be used to identify and understand exceptional written notes on an order – a special request, for example – and be able to process the work without having to mark it for manual intervention.

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 center 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 that cannot be handled by AI-enabled RPA being flagged to human supervisors who can investigate why a particular task could not be completed as designed.

RPA has can assist contact centers 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.

Sentiment Analysis

Using natural language processing, text analysis and voice biometrics, AI can identify calls which fall outside the norms of customer sentiment, which can then offer the option to escalate the interaction according to business rules. However, there is a 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).

USE CASES FOR AI IN THE CONTACT CENTRE

IMPROVE SELF-SERVICE AND ASSISTED SERVICE

SELF-SERVICE

TELEPHONY SELF-SERVICE

A typical IVR solution works on the basis that the majority of customer enquiries can be solved by offering a limited number of solutions or options. This works well in cases where the caller has a simple request (e.g. speak to a sales agent or get a balance update) but often fails where there is a complexity to the requirement. Even in the latter example, banks have commented that analysis of these types of call show that customers ask for this information in thousands of different ways, which throws up significant problems for speech recognition. Although touchtone IVR reduces the number of options and thus ambiguity, it is by its nature only useful in a limited number of calls.

Unlike touchtone IVR where an specific input is acted upon exactly the same way, natural language processing and machine learning techniques allow AI-enabled speech recognition to give different outputs depending upon what has been proven to be successful in the past.

Looking at the prevalence of voice self-service, 60% of respondents offer a full telephony self-service channel (either through DTMF IVR or automated speech recognition), with the finance and retail sectors leading the way. The manufacturing, medical and insurance sectors were least likely to be doing so.

There is a distinct pattern in full DTMF self-service when considering contact center size, with 90% of respondents from large operations doing this, compared with 60% in the mid-sized sector and only 39% of small contact centers.

Of those contact centers offering telephony self-service, a mean average of 31% of calls were handled entirely by self-service without requiring an agent.

Figure 1: Overall proportion of calls handled entirely through self-service (only in respondents which offer telephony self-service)

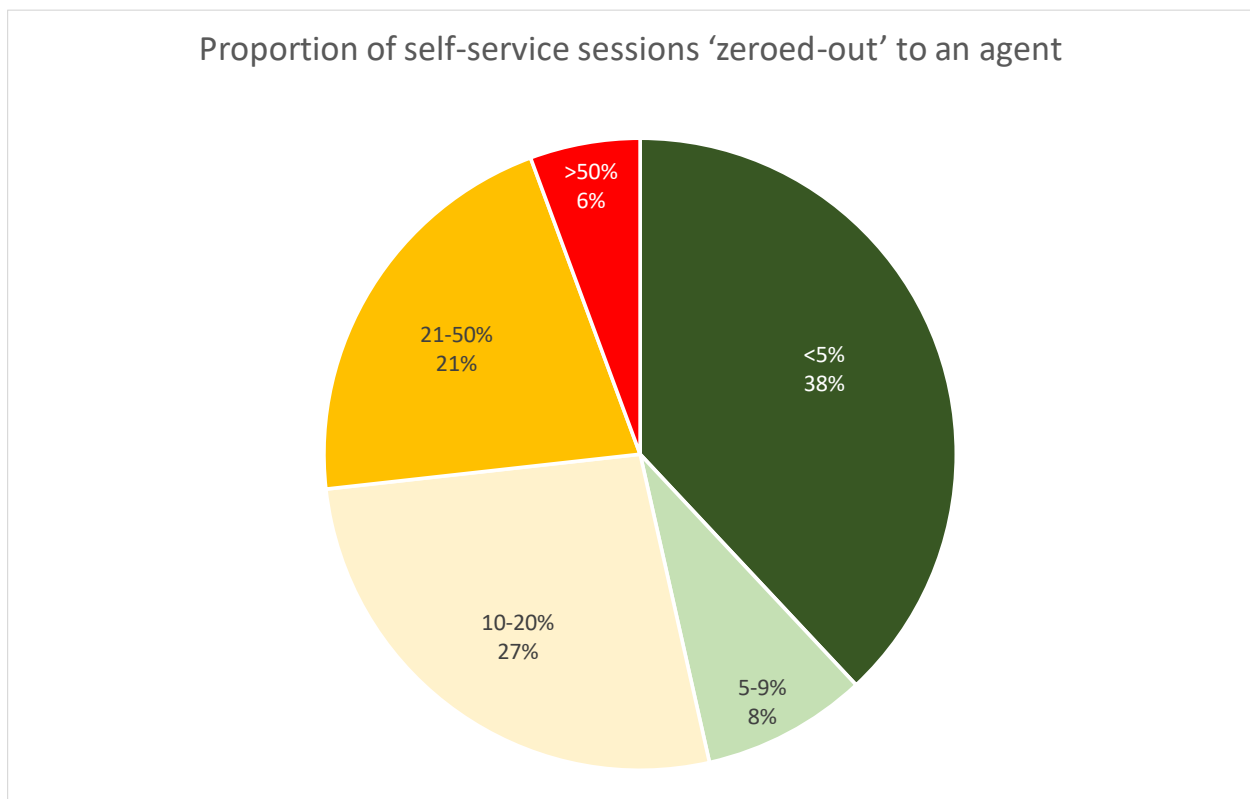
Proportion of calls handled entirely through self-service <u>if offered</u>	
1 st quartile	43%
Median	25%
3 rd quartile	9%
Mean	31%

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 hectorated into using an unhelpful and irrelevant self-service system.

Figure 2: Proportion of self-service sessions 'zeroed-out' to an agent



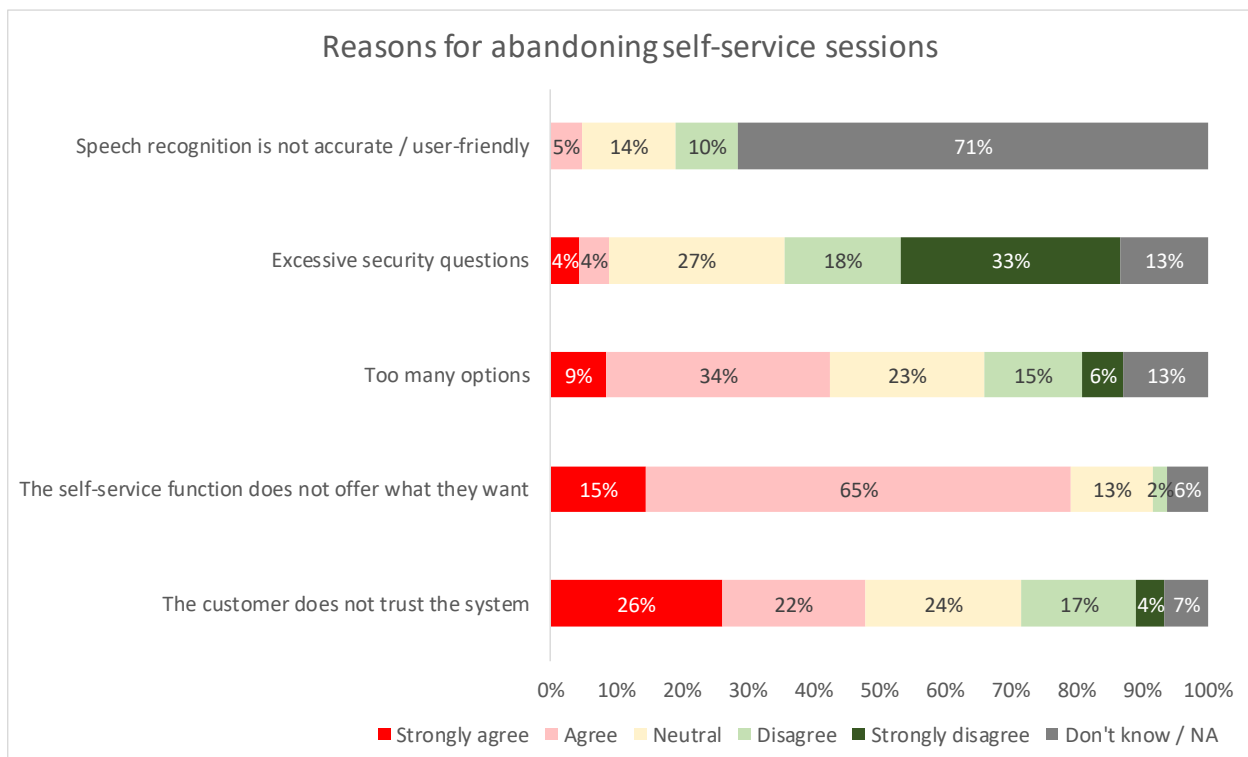
Overall, a mean average of 17% of calls that go into the self-service option are "zeroed-out": instances where the customer decides that they in fact wish to speak with an operator.

By a considerable margin, respondents agreed that the main reason for abandoning self-service sessions was that the self-service function simply does not offer what the customers want, with 80% of respondents stating that this is a factor. While this at first glance may appear negative, it is the case that even in the most commoditized and transaction-driven environments, a substantial proportion of customers will want to speak to a person: either because the system does not allow them to do what they want, there is a complicating factor involved, or simply that they wish reassurance or have multiple questions. In such circumstances, it is the customer's choice to abandon the session, and this does not have to be a particularly negative experience as long as a clear exit path that leads to a live agent is marked early in the process. Situations where businesses hide their agents from customers, making them go around in IVR loops are the ones that give all telephony self-service a bad name.

43% of respondents agree that having too many options presented to customers as a major reason for them seeking human assistance, and it is noticeable that 26% of respondents strongly believe 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. (NB – the speech recognition question was asked only to those respondents using it).

Using AI-enabled natural language recognition can alleviate the first of these issues, as there is no fixed menu to navigate and no limit to the number of options a customer has to explain their issue. The onus is placed upon the system to understand the customer's intent, rather than forcing the customer to shoehorn their request into a format allowed by the predefined rules and format of the business.

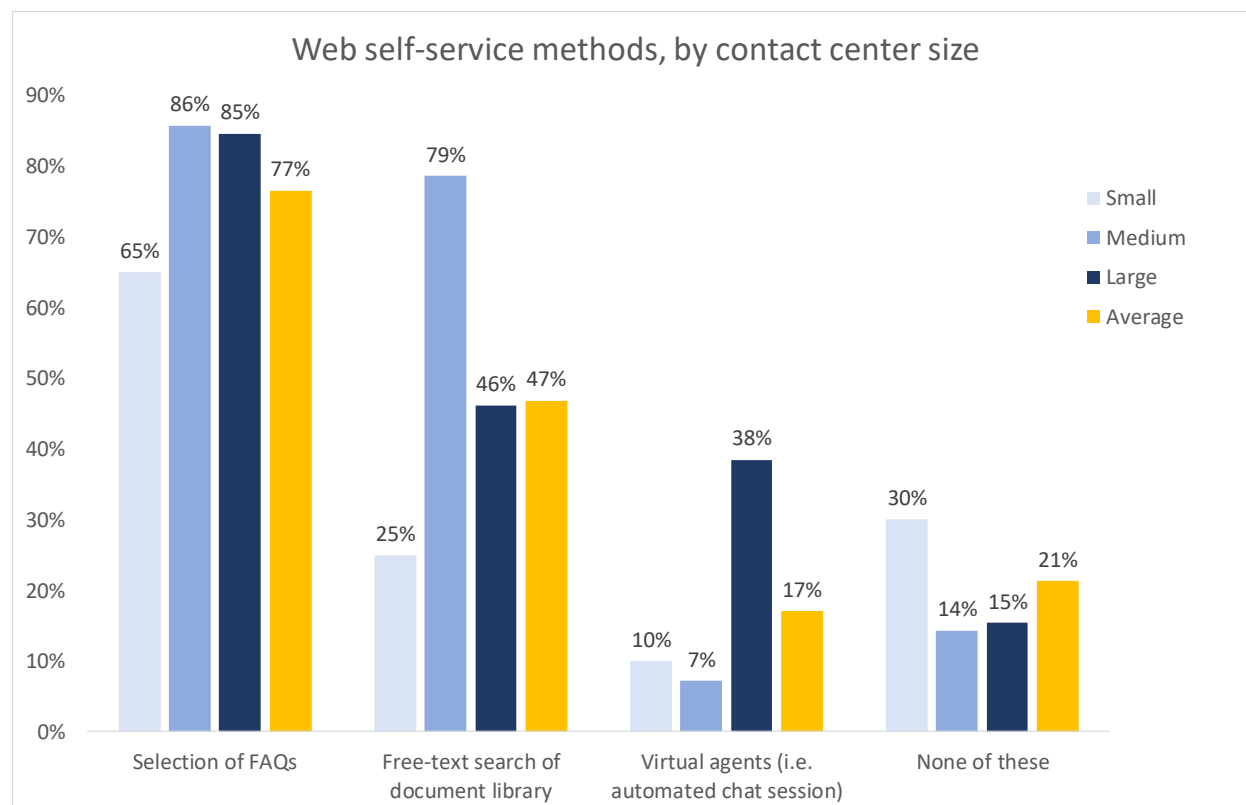
Figure 3: Reasons for abandoning self-service sessions



WEB SELF-SERVICE

By far the most prevalent form of web self-service is that of the FAQ (frequently-asked question), which is used by 77% of respondents. The free text search of the document library is somewhat less well supported, at 47%. Virtual agents are employed by 17% of respondents, far more often those within large enterprises. 21% of respondents offer no web self-service at all.

Figure 4: Web self-service methods, by contact center size



For most businesses, the customer is given free rein to search through documents, pre-written answers and archives, hoping to stumble across the right answer for themselves. The often proves time-consuming and ultimately frustrating for the customer, who will then go elsewhere or call the contact center in a negative mindset. An AI guide would be a valuable aid in improving CX and deflecting unnecessary calls.

ASSISTED SERVICE

The use of AI to assist agents in real time within a call offers the chance of a real paradigm change: by the nature of the job, an agent-customer interaction has always necessarily been between two people, and the level of support that an agent can actually receive within a call is very limited. Advice on learning points have been restricted to post-call reviews, rather than realistically being able to improve the outcome of the interaction in real-time. AI offers an opportunity to provide timely and effective support to every agent as necessary, actually within the call. AI can provide the agent with suggestions about next best action, pull up relevant information from the knowledge base, make suggestions based on customer history and sentiment about optimal cross-selling and upselling opportunities, and even the style of conversation that this customer may prefer. This has a positive impact on first contact resolution as well as customer experience, and is of particular use to less experienced agents and in unfamiliar subject areas.

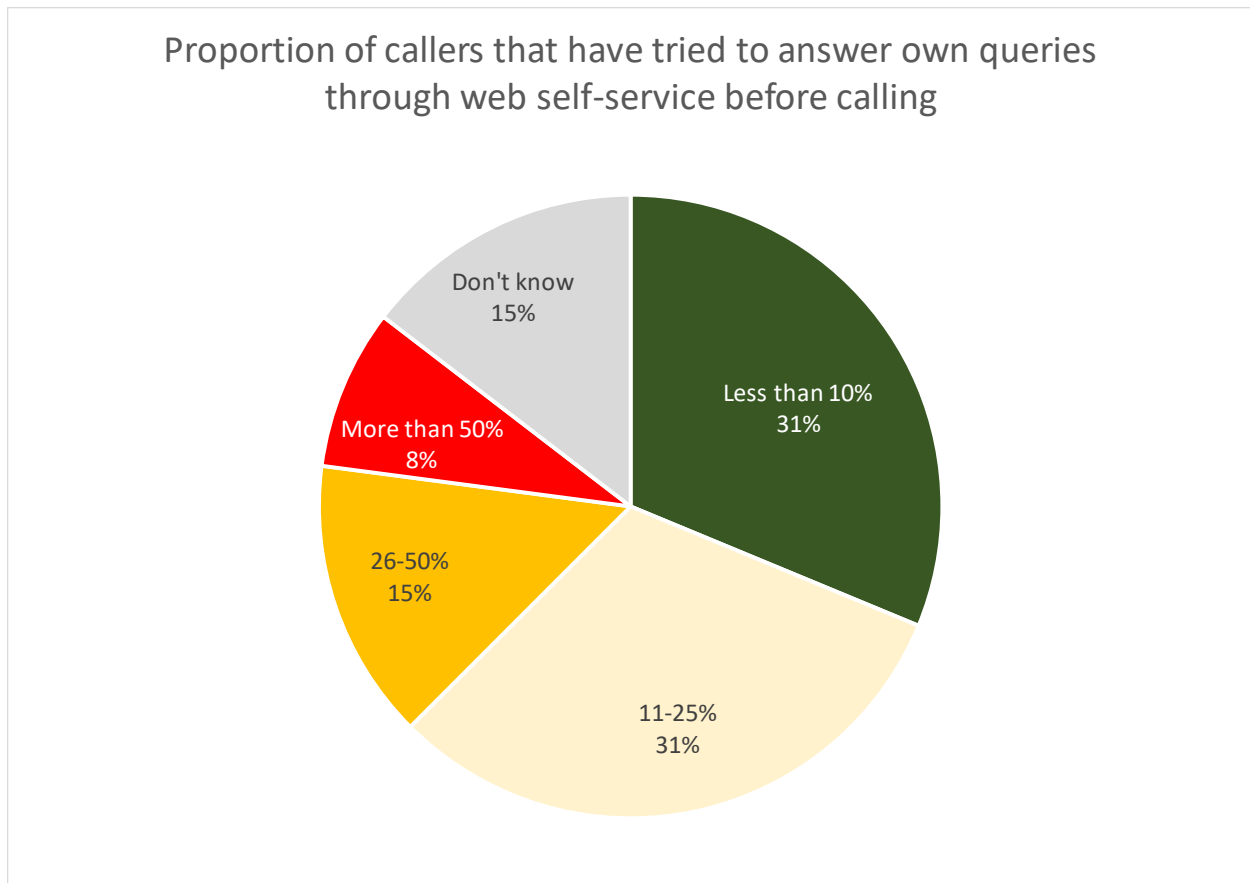
AI can work alongside agents to provide relevant knowledge that may be otherwise take a long time to find, and update the knowledge bases available to humans and AI self-service systems using an automated feedback loop that is constantly improving based on actual outcomes.

It's possible to fix customer service problems before they occur: for example, sudden numerous requests about the same thing is likely to indicate a breakdown in a specific business process or the occurrence of an outside event. AI can quickly recognize that this is an issue, and deliver information solutions to an agent's screen, to the chatbots and note that changes should be made to the IVR announcement.

Sometimes, a web self-service session doesn't deliver what the customer needs, and then the escalation from web self-service to a live agent must be managed. Although 31% of survey respondents state that fewer than 10% of customers have tried to resolve issues online before calling the contact center, 23% of businesses state that more than 1 in 4 calls of their calls come from people who have failed to complete their objective on the website first.

Worryingly, 15% of respondents using web self-service do not have any idea of its success from the customers' perspective.

Figure 5: Proportion of callers that have tried to answer own queries through web self-service before calling



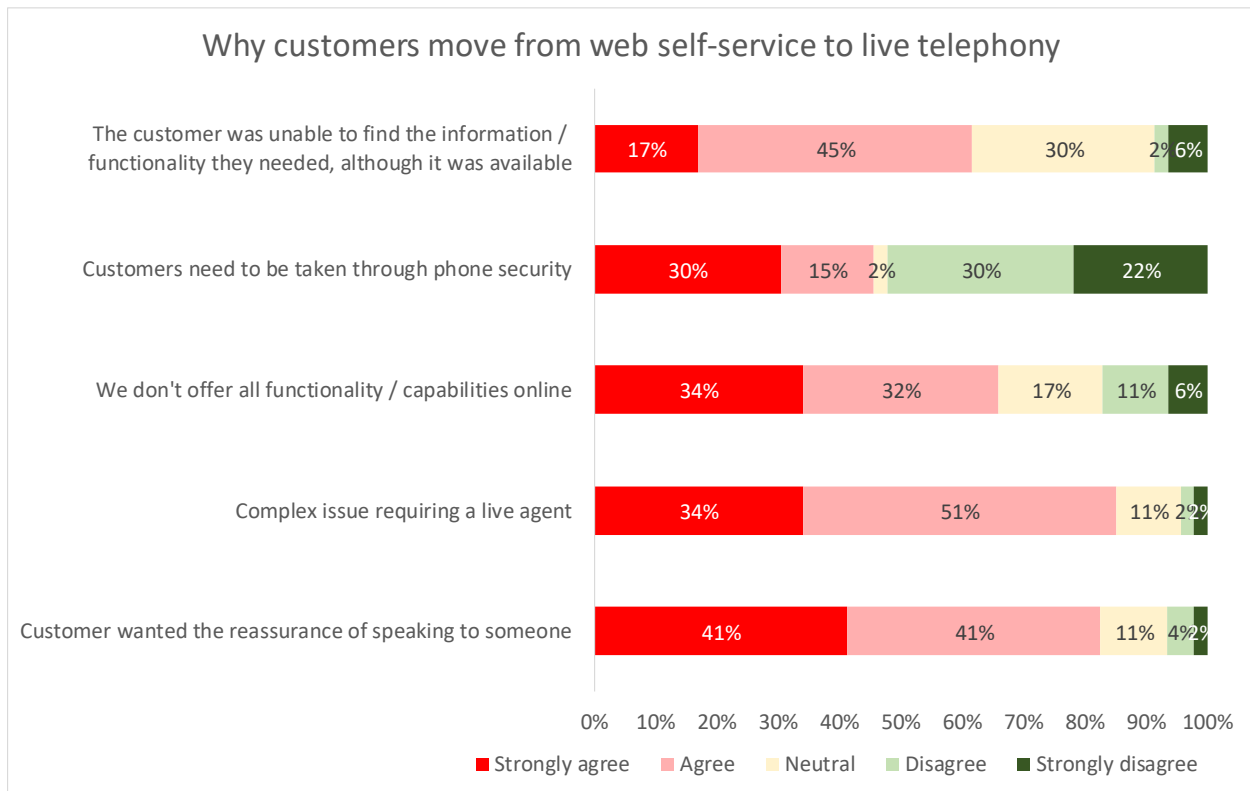
When looking at the reasons for escalation to a live agent, 85% of survey respondents agreed or strongly agreed that their customers that web to phone escalation involved a complex issue requiring a live agent to complete successfully.

82% of respondents also felt that customers wanted the reassurance that a live agent brings to a conversation.

66% stated that the functionality that the customer calling in required was not available online, but interestingly, 62% stated that they received calls about issues that could be resolved online, but customers were unable or unwilling to do so.

45% of respondents believed to some extent that lack of website security authentication was an issue in receiving inbound calls.

Figure 6: Why customers move from web self-service to live telephony



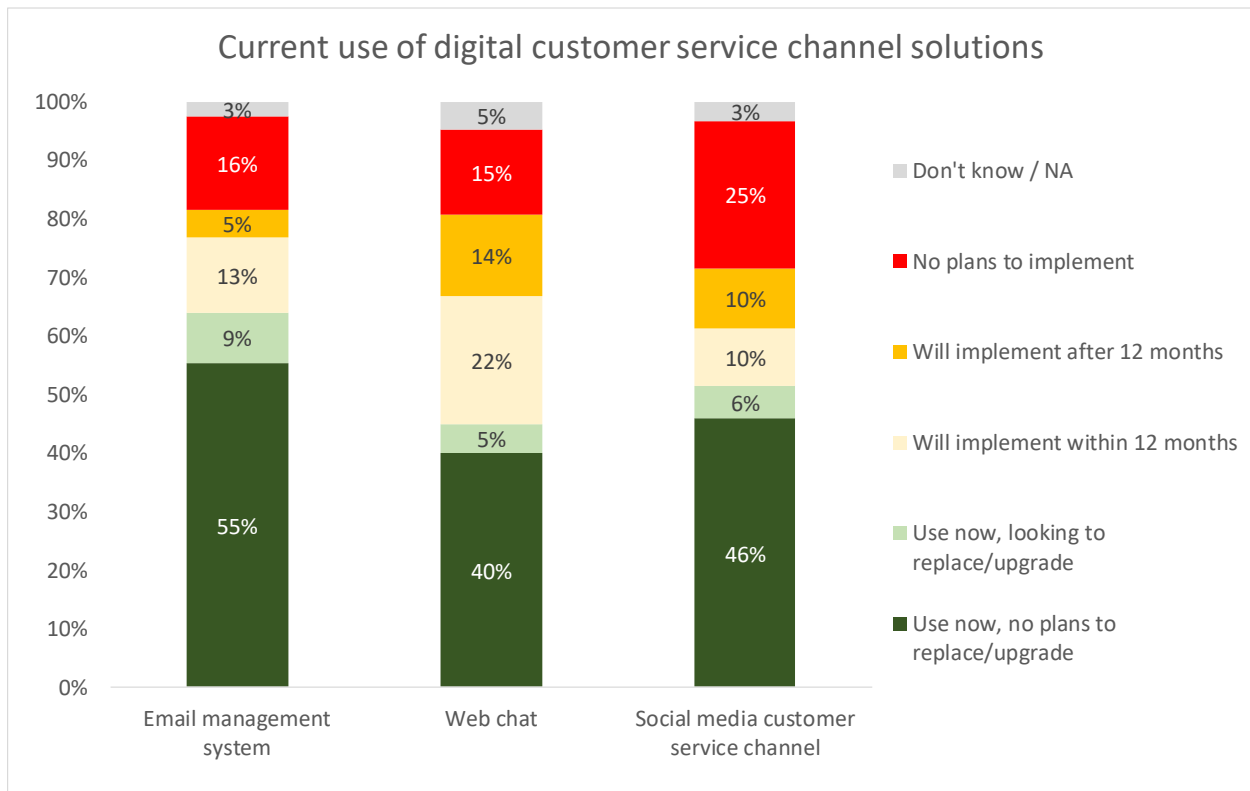
AI can assist with some of these issues, especially assisting the customer to find the right information through conversation and questions.

IMPROVE DIGITAL CHANNEL EXPERIENCE & DECREASE COST PER CONTACT

One of the traditional main rationales for any contact center investment is cost reduction. This has particularly 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. There has been similar expectation from many businesses that offering digital customer contact channels would be a way to decrease cost per contact, with emails offering opportunities for templated and automatic responses, and web chat promising multiple concurrent interactions.

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 email and social media, and 45% for web chat. Interest in these solutions from those not already using them remains strong.

Figure 7: Current use of digital customer service channel solutions



When email 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.

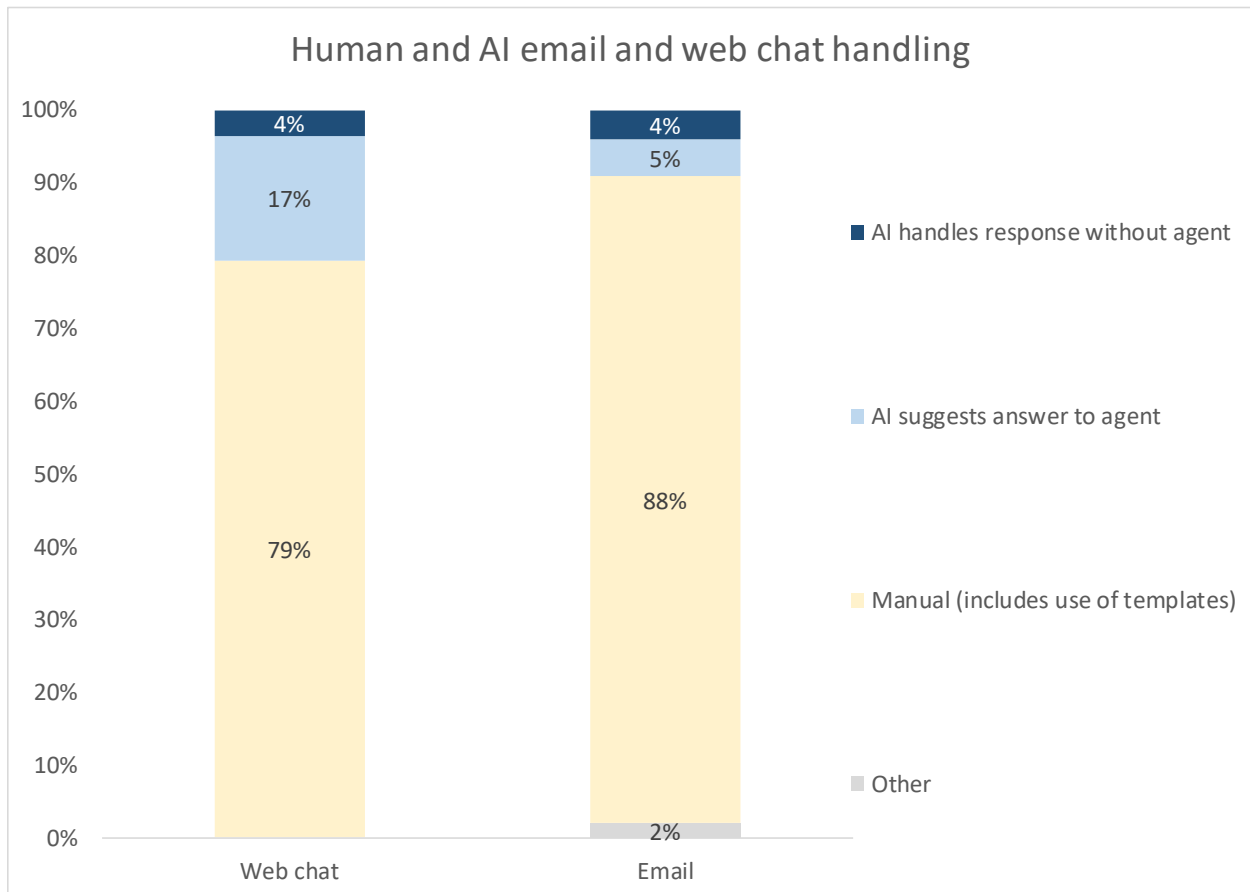
Looking at figures from hundreds of US contact centers, it seems fair to say that although there is some cost differential between telephony and the digital channels, it is by no means dramatic. One of the main reasons for this is that there is still a relatively low level of automation being used in 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 8: Cost per inbound interaction (phone, social media, email & web chat)

Channel	Mean	1st quartile	Median	3 rd quartile
Phone	\$7.18	\$8.92	\$5.50	\$3.01
Email	\$5.79	\$10.00	\$4.00	\$2.00
Web chat	\$5.71	\$10.00	\$3.60	\$2.50
Social media	\$4.80	\$7.50	\$4.40	\$2.50

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 combining to provide superior service at a lower cost.

Figure 9: Human and AI email and web chat handling



Apart from self-service, perhaps the most suitable digital channels for AI investment are web chat and email, and these are explored in greater depth in the next sections. Social media is also potentially of interest and similar processes can be applied to this channel as well, but generally speaking, volumes are much lower than for the other digital channels.

IMPROVE WEB CHAT

Perhaps the most obvious potential use of AI in the customer contact environment is in handling digital enquiries, where web chats generally take far longer than phone calls (due to agent multitasking, and typing time) and some email response rates can still be measured in days.

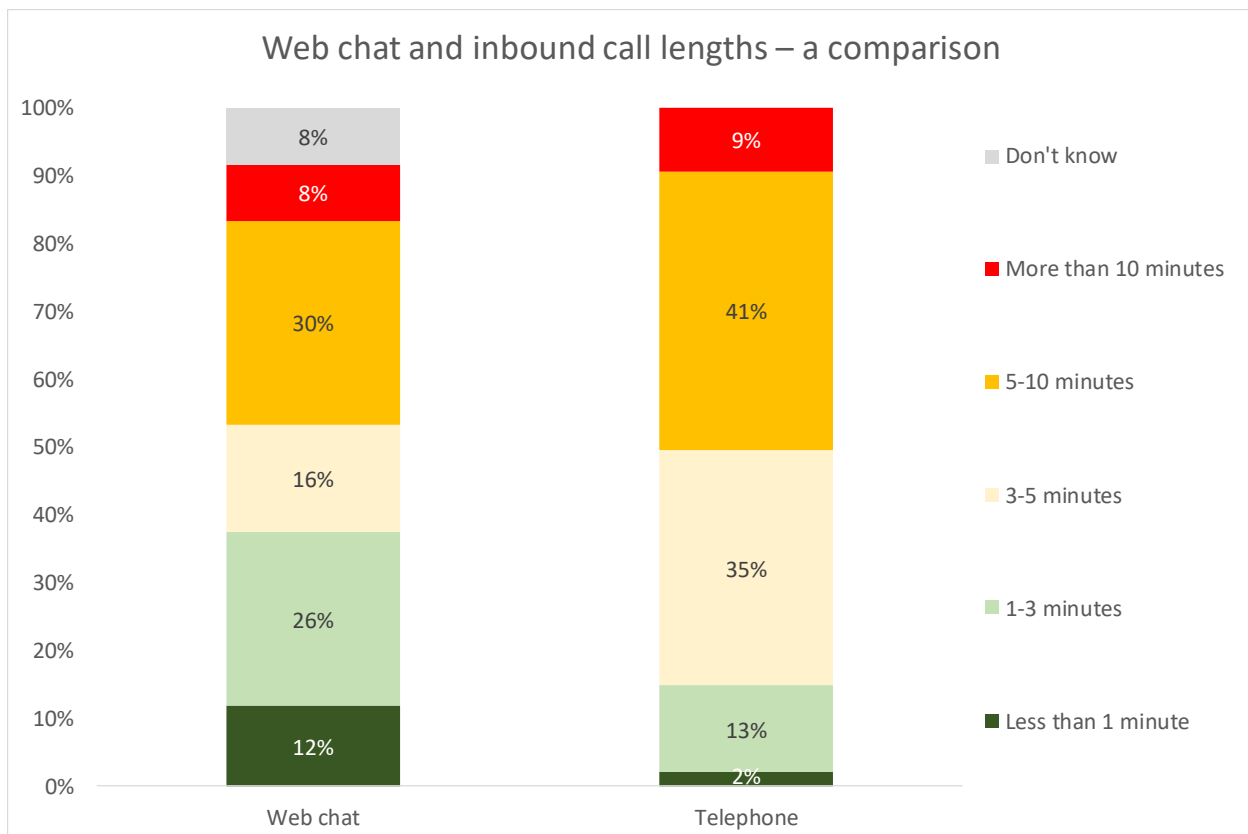
As the cost of web chat is broadly similar to other channels such as email, voice and social media, there is considerable room for increasing efficiencies and lowering costs.

Web chat automation has grown in 2018, mainly as a result of initial handling by automated chat bots which may then hand off to live agents where appropriate (up from 12% to 17%).

Further comparing the experience of web chats with telephone calls, surveys find that 54% 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 shorter overall length of interaction over web chat: 38% of web chats are handled in less than 3 minutes, compared to only 15% of phone calls, almost certainly due to the average complexity of phone queries being greater than other channels.

Figure 10: Average length of a web chat



The most sophisticated chatbots or virtual agents encourage the visitor to engage with them using natural language, rather than keywords. The virtual agent will parse, analyze 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 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 customer's 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 center knowledge base in order to provide a list of most likely answers, which will increase the accuracy of response and decrease the overall time to serve.

Virtual agent functionality is of interest to most sectors, however the commercial reasoning and business drivers differ greatly. Banks have an appreciation that they need to understand their customers to keep them loyal in a highly commoditized and competitive environment, and as such there is considerable interest in using virtual agent functionality within Voice of the Customer initiatives. For example, using real-time analytics, such organizations 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.

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 personalize the experience, (for example including details of relevant offers to that customer).

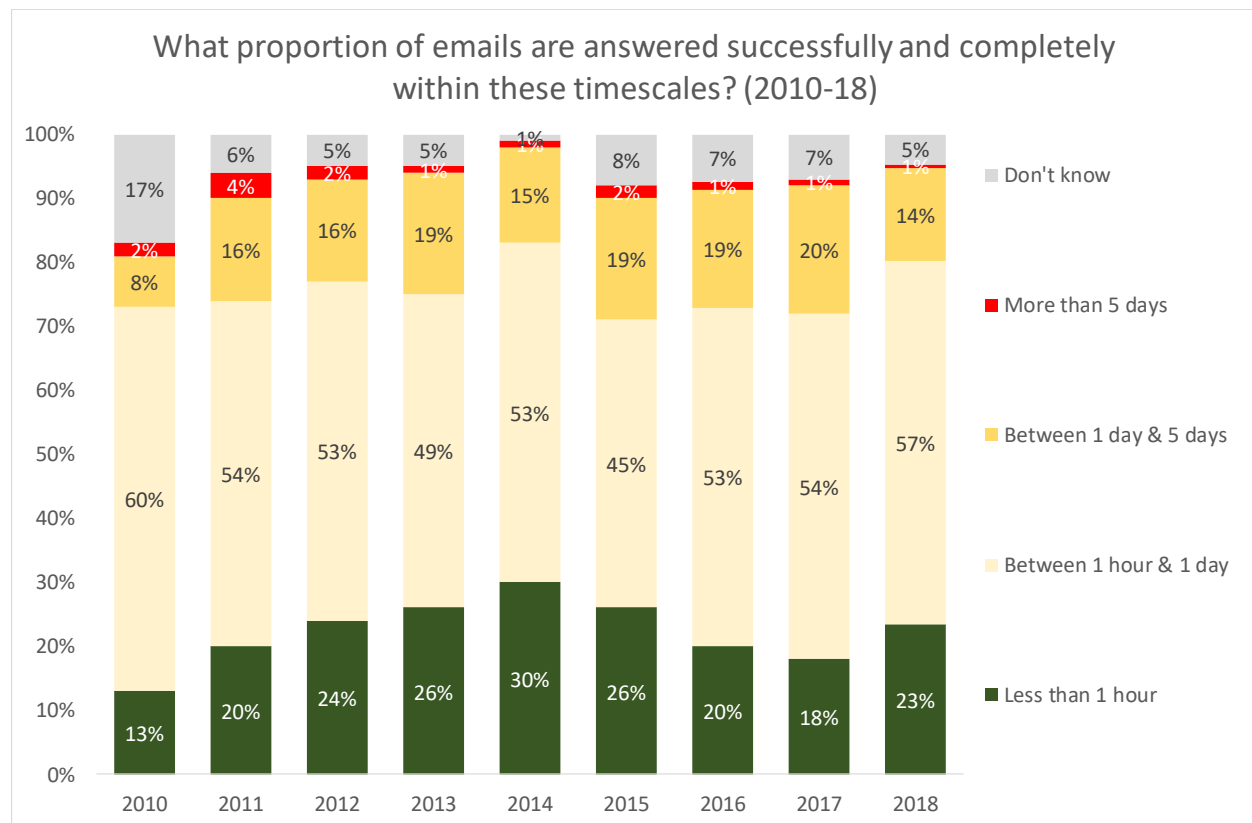
It's important to reiterate an earlier point: not all chatbots or virtual agents are powered through AI and machine learning – many use programmer-defined rules and scripting in order to retrieve answers from a knowledge base. While these types of chatbot have their place in tightly-defined situations where there are a relatively small number of options or answers, businesses should remember that not all chatbots work the same way.

IMPROVE EMAIL RESPONSE

While it is not possible that all emails can be answered in a similar 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 centers have become so used to managing the telephony queue that they neglect multimedia interactions.

The result is that digital interaction response times have historically been sacrificed to meet telephony service levels, and although steady and significant improvements in the response rates have been seen between 2010 and 2014, recent years' surveys see email response times deteriorating, perhaps as a result of email now being used more for complex enquiries, with simple requests being handled by self-service.

Figure 11: What proportion of emails are answered successfully and completely within these timescales? (2010-18)



Taking longer than one day to answer an email runs the risk of the customer losing patience, and going elsewhere or phoning the contact center, placing a greater cost burden on the business than if they had just called in the first place. This figure increased somewhat from 16% in 2014 to 21% in 2017.

2018 saw a significant reported improvement both in the proportion of emails answered within one hour, and also in the proportion taking more than one day to answer. Future surveys will see if this is a sustainable improvement.

AI can also be used for email to create responses that look as though they have been written by a person rather than a machine, using natural language processing to write content, as well as understand it. Emails can be tailored based on the customer's history and behavior, optimizing marketing messages as well as service, sending emails at a time when they have been calculated that they are most likely to be opened. Personalized emails can be sent, based on subscribers' past email browsing activities to understand the type of content that they actually care about. This is a way in which AI can outperform human agents, who do not have the time or expertise to find patterns or draw conclusions from huge amounts of data.

END-USER QUESTION 1:

HOW DO WE MEASURE THE ROI OF AI? ARE THERE ANY QUICK WINS WE CAN USE TO SHOW OUR SENIOR MANAGEMENT?

opentext™ OpenText measures ROI by calculating the actual cost to the business of servicing customer contacts. This is done by considering the loaded costs of service and number of contacts made on all channels. The immediate payoff of OpenText Explore comes from how the solution provides an ability to understand why customers contact your organization in the first place and having clear and accessible insight into all of these interactions. Such information can be used to understand how you might reduce and more rapidly resolve your customer support issues.

Once in place OpenText™ Explore™ can reduce and improve the quality of your customer interactions, requiring only one-tenth of the resources traditionally needed. This process can be automated, providing time and effort-savings that allow you to see clear ROI. OpenText can help you create an ROI business case for your organization that's ready to present to your decision-makers.

PREDICT & DISCOVER PATTERNS THROUGH ANALYTICS

REAL-TIME SPEECH 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 something¹”), refers to the discovery and understanding of patterns in data, and is currently something that had by definition only happened post-call when all data are fully present. Real-time monitoring on the other hand, looks for and recognizes predefined words, phrases and sometimes context, within a handful of seconds, giving the business the opportunity to act. However, AI can be trained to understand intent and recognize patterns through immersion in vast quantities of historical data, so that when a call is taking place, it can draw upon this knowledge and provide advice or action that has proven successful previously, moving towards the actual provision of real-time analytics.

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

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

For some businesses, real-time is an important and growing part of the armory 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.

¹ <http://www.oxforddictionaries.com/definition/english/analysis>

Real-time analytics can be used in many ways:

- monitoring calls for key words and phrases, which can either be acted upon within the conversation, or passed to another department (e.g. Marketing, if the customer indicates something relevant to other products or services sold by the company)
- alerting the agent or supervisor if pre-specified words or phrases occur
- quality checking the agent for speech clarity and speed and notifying them of any changes to be made
- 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
- 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
- detecting negative sentiment through instances of talk-over, high stress levels, 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 analytics, and recognition of key words, phrases, instances of talk-over, emotion and sentiment detection, pitch, tone, speed and audibility of language and many other important variables can be presented on the agent desktop within the call, triggering business-driven alerts and processes if required.

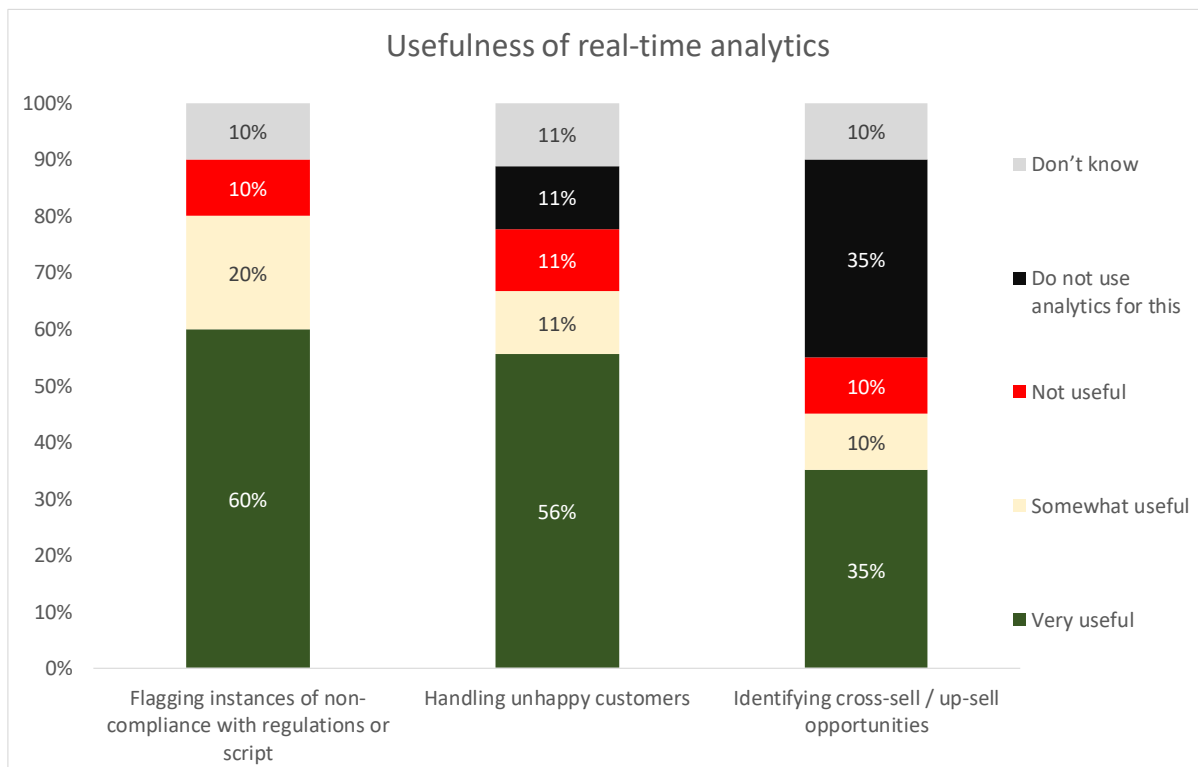
The speed of real-time analytics is crucial to its success: long delays can mean missed, inappropriate or sub-optimal sales opportunities being presented; cancellation alerts can show up too late; compliance violations over parts of the script missed-out may occur as the call has already ended. However,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

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

Combining AI-enabled real-time and post-call analytics, along with sentiment analysis, can quickly identify large groups of dissatisfied customers that may be complaining about the same thing, providing actionable insight to the business within minutes or hours, rather than days.

Real-time analytics 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 12: Usefulness of real-time analytics



THE USE OF ANALYTICS & AI IN CARD FRAUD REDUCTION AND IDENTITY VERIFICATION

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

Of these, voice is the only biometric that can currently be used over the phone, making it a viable identity verification solution for contact centers. It should be noted that 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 behavioral 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 centers 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 analyzes the background audio of the call.

Some biometric solutions use neural network speaker recognition systems, which run in the background throughout the length of the call (including the IVR phase), stripping away background noise which can be used to mask identity.

Voice biometrics, while an excellent authentication tool, is not enough to deter fraud attacks. In fact, in 2015, researchers at the University of Alabama² 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.

One alternative method of customer identity verification that can be used alongside biometrics 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.

² <http://www.biometricupdate.com/201509/uab-researchers-find-that-automated-voice-imitation-can-spoof-voice-authentication-systems>

DISCOVERY

'Discovery' is a term often used within the customer contact analytics industry, and refers to a deep, automated analysis of trends, patterns and results which are identified by the speech analytics solution rather than the knowledge or insight of the human operators. Discovery will help users to find calls that are similar to each other, perhaps through similar groupings of words or phrases, and explore these links to discover the issues driving them.

The ability to see trends - to know that the instances of the words 'website' and 'password' have increased by 2,000% this week compared to the norms of the past 6 months - quickly identify likely pain points for the customer and potential broken processes. The continual tracking and analysis of similar information or categories over time also allows a business to see whether the remedial action that they put into place has actually worked.

Many analytics solutions offer automated discovery and this is an area that will always be improving and becoming more subtle and effective, having huge potential benefits for businesses.

Of course, any analysis where the direct beneficiary is not the contact center must be properly aligned to the organization's objectives and strategy, encouraging changes to be made to areas that have already been earmarked as needing improvement. Otherwise, if the focus is not aligned with strategic goals, information merely becomes 'nice to know', rather than actionable.

Customer interaction analytics has the ability to tear down the virtual wall between the contact center and other areas of the business, meaning that the business intelligence extracted can be shared and valued by parts of the organization that otherwise have little to do with the contact center. With the historical and ongoing difficulty in getting the business to value the customer contact operation fully, this can only be a good thing politically.

Text analytics can be used within discovery mode 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.

END-USER QUESTION 2:

SOLUTIONS SUCH AS SPEECH ANALYTICS AND KNOWLEDGE BASES / CASE-BASED REASONING HAVE BEEN AROUND FOR A LONG TIME. WHAT'S SO DIFFERENT ABOUT AI?

opentext™ Speech analytics are a mature technology and provide great levels of insight. OpenText Explore has OpenText™ Magellan™ AI-powered analytics integrated into the solution to take speech analytics to the next level, providing the means for your business to more fully understand, through the collection and analysis of larger volumes of data, what customers say to you and about you. AI makes data more accessible and easier to analyze for business users. Contact data becomes 'big data' ready for use by the wider organization to help drive solutions such as knowledge bases and case support.

OPTIMIZE BUSINESS PROCESSES

ROBOTIC PROCESS AUTOMATION (RPA)

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

RPA does not replace existing systems, simply sitting on top of existing logic and applications, using them in the same way that human contact center agents, chatbots 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 centers 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.

One of the major applications suitable for RPA is assisting front office agents. The agent desktop lies at the heart of the integrated contact center, 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 centers use complicated, multiple applications, often only loosely-linked, which require skilled and experienced agents to navigate, let alone to manage interaction with customers successfully at the same time. 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 maximize revenues have been missed.

The result is that even though a contact center 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 optimizing the agent desktop without needing to rewrite systems or integrate deeply with multiple applications and databases.

With 87% 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.

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 significant negative 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.

AI can work in association with other process automation solutions (which may in themselves not fall under the category of AI). For example, in the case of unstructured data such as customer emails or letters, optical character recognition can assist the entry of the customer requirements into the business system. Using natural language understanding, AI is able to discern the intent of the enquiry, using a knowledge base and assessing the previous best responses to similar enquiries in order to provide an agent with a recommended solution. It is very likely that the agent will be given the option to add or amend this response before sending to a customer. Any feedback from the customer can be assimilated in order to gauge success and fine tune future responses. Robotic process automation can also be used in order to update customer records accordingly.

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 center performance metrics that were analyzed in the context of the proportion of time that agents spend navigating through multiple in-call applications. It is important to note that although there appears to be a correlation between superior performance metrics and less screen navigation, 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 center 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 calls, improved agent availability, and lower call abandonment rates.

Figure 13: Selected performance metrics, by number of in-call or post-call applications used

Metric	Respondents spending 0% of call navigating between screens	Respondents spending 30%+ of call navigating between screens
Median average speed to answer	15 seconds	89 seconds
Call abandonment rate	4.5%	8.0%
Call duration (seconds)	348	394

It is logical to hypothesize 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, 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.

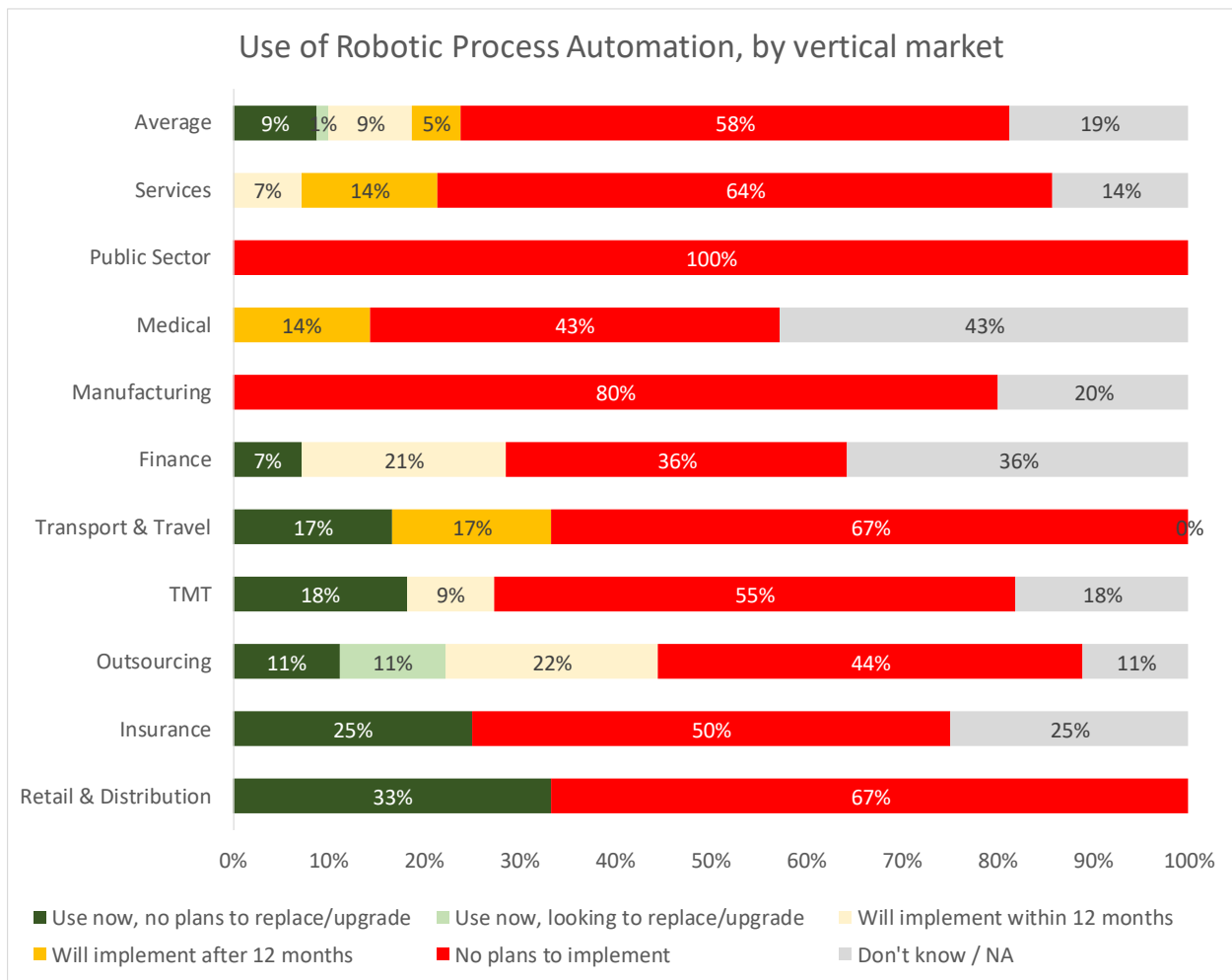
Additionally, manual inputs involved in transferring data during wrap-up commonly lead to data entry and processing errors, causing an adverse effect on operational efficiency, contact center cost, performance and customer satisfaction. Cost per call rises, productivity per agent declines and first-call 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 center 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 optimizing the agent desktop is not simply a matter of writing consistently to the correct databases, although this is a key element. The contact center also 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.

Current reported levels of RPA usage are relatively low, with 10% of respondents stating that they are using it in 2018. Those in retail & distribution and insurance are most likely to be using it, although penetration rates are low in every vertical market.

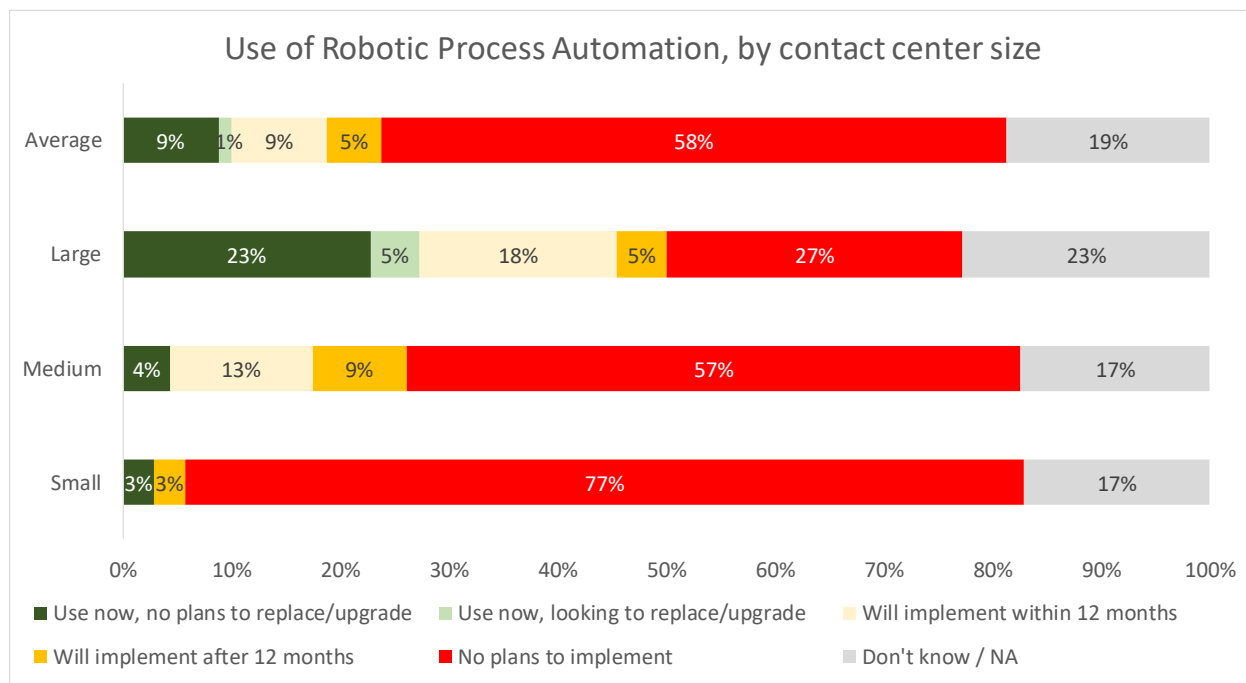
However, there is a significant interest in doing so, especially in finance and outsourcing, where back office processes can play a large part in the success of the overall customer experience, and where there may be many systems, processes and applications for an agent to familiarize themselves with.

Figure 14: Use of Robotic Process Automation, by vertical market



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

Figure 15: Use of Robotic Process Automation, by contact center size



IMPROVING THE CUSTOMER JOURNEY

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

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

IMPROVE WORKFORCE OPTIMIZATION & TRAINING

Speech analytics offers the capability to monitor and score 100% of calls automatically, and machine learning can use this large pool of data in order to analyze patterns of agent behavior and characteristics connected with best outcomes, in order to develop performance and training programs always down to the individual agent level. Specific gaps in knowledge or capabilities can be identified and addressed based on thousands of calls, rather than relying upon manual evaluations which can only process a handful of calls from each agent.

Being able to score every call through an automated AI process means that the quality assurance team is able to review specific calls that have been flagged up as being potentially important, rather than hoping that they stumble across them in a random assessment. This may include calls where specific language is used, has long pauses, or where the agent or customer raises their voice or talk across one another. The AI system can be trained to understand which calls are “normal”, and which are outliers more likely to require input from the quality management department.

AI enables marketing departments to predict the likely success of their campaigns, and translate this into how the contact center or wider customer contact arena will be impacted, providing predictions on how resourcing and training will need to be changed to meet customer requirements. Being able to use peripheral data such as the specific level of agent experience available, the day upon which the marketing campaign is launched and even the time of the year will improve resource forecast accuracy.

IMPROVE ROUTING STRATEGIES & OUTCOMES

AI can be applied to IVR interactions, asking a series of questions to customers using natural language processing to understand their intent. Depending on the customer requirements, it may be possible to answer the query without using a live agent, or in those cases where agents are needed, the prioritization and routing of the call can be optimized, decreasing call transfer rates and increasing first contact resolution. Over time, routing strategies will move away from being rules-based and towards cognition, which will also feed forecasting and scheduling processes.

Predictive behavioral routing uses insights gathered from historical calls and the analysis of customer communication types in order to choose the agent whose skills and characteristics are most likely to achieve a positive response from the next caller in the queue.

Predictive behavioral routing uses millions of algorithms to decode the language used by agents and customers, in order to understand sentiment, personality type, preferred method of communication, emotional intelligence and transactional attributes (such as ability to overcome objections and willingness to sell).

Each customer can be allocated a specific personality style, and when calling again, are routed through to an agent whose performance when interacting with this specific personality type has generally positive results. The matching of agent-customer communication styles has enjoyed significantly higher sales closure rates and better customer satisfaction scores than the average. 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.

AI IMPLEMENTATION

It's important for businesses to understand that if they're not already using AI, then they haven't already missed the boat, and that even with unlimited budget and resource, there are many contact center activities that are more appropriate for a person to do.

For first-time deployments, the focus should be on the AI solution delivering a high-quality solution to a relatively small and clearly defined business process or issue, rather than taking on more complicated situations, even if there is a potentially higher benefit. It might be appropriate to start with a self-service-focused chatbot project, and then look to roll out AI to other parts of the customer journey including call routing, back-office processing, analytics and agent assistance.

Apart from the dangers associated with an overly complex initial AI project, scale is also an issue to consider. To begin with, businesses may consider it wise to limit the number of concurrent customer or agent users that AI supports (i.e. dozens rather than hundreds of concurrent users), in order to learn what works and what needs improvement in each use case, and in order to optimize processing performance by providing the right amount of processing capacity. Over time, machine learning tends to require less processor power and running a relatively small scale AI implementation for a few months will provide a more informed view of what full-scale usage of AI will involve, meaning that the right amount (and cost) of processing power can be established.

If you're considering implementing AI, there are some questions that you should ask yourself first:

- Is there a specific pain point or issue within the operation that needs to be addressed? e.g. lack of available resource to handle existing enquiries, suboptimal business processes, inability to analyze large datasets, etc.
- How does this affect the customer experience, and how would the customer like this to be improved?
- Are there solutions in the marketplace that have successfully addressed these issues already in live environments?
- How quickly can this be implemented, and what initial and ongoing resource will actually be required to make it run successfully?
- What upheaval would it create within the existing operation? What effect does it have on the customer experience?
- Are the improvements measurable?
- Is there a sufficient volume of data in order to train an AI system effectively?
- Will our infrastructure or existing platform need to be replaced?
- Is AI definitely the most appropriate way of dealing with this issue?



Organizations each day continually gather massive amounts of data from myriad sources. This is particularly true in contact centers. CEOs recognize data is critical to supporting efforts to maintain business success and stay ahead of competitors. IT leaders and engineering are in the hot seat, managing the expense, time and manpower required to develop intelligent business solutions for the organization.

OpenText Explore™ is a technology solution that allows executives and call center professionals to view cross-channel interactions, gaining a complete and comprehensive picture of customer behaviors and relationships.

Explore is a powerful customer interaction analytics tool that uses Artificial Intelligence (AI) to obtain valuable insights from the analysis of customer call recordings and chat sessions in combination with customer behavioral data drawn from social media, worldwide blogs, web forums and emails. Customer behavior insights are made available in near real time to professionals in contact centers and across business units throughout an enterprise. This information makes it possible to more effectively resolve customer issues and ultimately help organizations improve sales across every channel.

By integrating voice and multi-channel analytics with AI solutions, OpenText provides a fast way to see across 100 percent of customer touchpoints and interactions, gain rapid return on investment and benefit from a business-ready solution to drive change.

OpenText Magellan™ is a flexible, AI-powered analytics platform that combines:

- Open-source machine learning with advanced analytics,
- Enterprise-grade business intelligence that acquires, merges, manages and analyses big data, and,
- Big content stored in the contact center.

Magellan delivers machine-assisted decision making, automation, and business optimization.

Business analysts Forrester Research say **70 percent of enterprises expect to implement artificial intelligence (AI) over the next 12 months**¹. Don't get left behind!

www.opentext.com/Explore

www.opentext.com/Magellan

¹ Forrester Research- Predictions 2018: The Honeymoon for AI Is Over

END-USER QUESTION 3:

DOES AI REQUIRE REPLACEMENT OF ANY EXISTING TECHNOLOGY, OR WILL IT WORK ALONGSIDE WHAT WE ALREADY HAVE?

opentext™ AI can unlock the value of untapped and often unstructured contact data that already exists within your current systems and solutions. It is common for organizations to have duplication in their monitoring and reporting solutions, all trying to solve the same problem. OpenText™ Explore™, because it is an integrated solution, can reduce the number of reporting solutions required across the business using built-in AI and can also become a data source for big data analytics that supports your efforts to drive operational change.

It is likely that senior decision-makers within the enterprise have a sketchy or unrealistic expectation of how AI can help within the contact center environment. As such, it is important that the boundaries of the project are clearly understood, with relevant baseline metrics captured before the project, and clear and achievable outcomes signposted so that the eventual level of success of the project can be clearly understood.

Many contact centers may consider a limited, low-risk use case which can be implemented quickly and relatively cheaply in order to demonstrate a quick win and assert the viability of AI within a customer contact operation. For example, increasing the number of self-service interactions through improved AI-enabled website guidance in certain defined cases is an example of a project which has a clear and easily measured metric which translates directly into call and cost reduction.

Having said this, it is important for contact centers not to sell this to high-level management as being an opportunity to reduce headcount, as it is very unlikely that this will be an appropriate response to the success of an AI project, certainly in the short to medium term. It may be better for the project to be viewed as improving the customer experience through providing customers with an alternative to a frustrating web browsing experience, ending with an unnecessary and unwanted live call.

While it is important for the initial AI implementation to focus on achieving success within its own terms, it is also important that this is not seen as a tactical point solution with a single end in sight. For example, while the initial implementation may be focused on increasing the effectiveness of self-service in a defined area, the longer term view may be to roll out AI into the agent's sphere, assisting them while on live calls. As such, a roadmap of logically-linked business cases can help to establish a long-term vision which can be shared with non-operational senior personnel to help them understand the strategic use of AI across the customer-facing parts of the business.

For example, a simple yet strategic roll-out of AI may look similar to the following:

- Use a virtual assistant to improve the take-up of knowledge held within the FAQ database, by improving the search mechanism and offering a two-way conversation interface in order to provide more accurate answers. Capture the phrases used by customers in existing human web chat sessions to understand the questions they will ask your chatbot
- Place this virtual assistant upon the agent desktop in order to provide them with more knowledgeable potential answers within the call
- Meet customer requests over voice and text through the use of natural language processing, in order to assess customer intent, and provide answers or optimal routing strategies
- Improve efficiency, consistency and effectiveness of back office processes connected with the contact center through the use of robotic process automation
- Deploy analytical AI in order to discover patterns of data relevant to the business that would otherwise not be identified.

Once the process, objectives and outcome are clearly defined, the selection of a vendor and solution can then be approached. In a rapidly-growing and heavily-hyped market sector such as AI, it can be difficult to compare vendors with like-for-like solutions.

For example, in the case of chatbots, on the one hand these can be rule-based, have limited conversational capability and are unable to learn; on the other, they may use natural language processing, engage with customers in order to ask further questions to determine intent, and be capable of self-improvement. The development time, resource and cost associated with each of these types of chatbot are very different, and businesses must decide whether they are looking for a quick win, or whether they have a definite long-term AI strategy in mind.

Businesses should also consider the type of developer and implementation model that's most appropriate: some self-service chatbots can be based on off-the-shelf software which is then customized and implemented by an in-house development team, whereas some businesses may prefer to bring in third-party developers with greater experience in AI implementation. The rate of change within this technology sector is very high, so implementations that are measured in a handful of months rather than longer would seem to make more sense at this point.

At the request for proposal (RFP) stage, businesses may consider asking potential suppliers:

- What are the current capabilities of your AI solution and what does your product roadmap look like?
- How do you propose escalating interactions to live agents if the AI solution cannot handle it?
- What metrics do you propose using in order to judge the success of an AI implementation?
- What does the timeline of a successful implementation look like? Do you have a reference site?
- How do you propose to train the AI, and what will our training data need to look like?
- How do you propose to integrate AI with our existing systems, and how much customization will be needed?

At the initial stage of the implementation process, datasets that the AI models will be learning from must be analyzed, cleansed and curated to provide a solid basis for the AI solution to learn from. Vendors will have dedicated examples of neural networks that work for various business cases such as providing answers to queries or estimating the time taken for a process to be completed. These can be used as a starting point for training the AI model, and to enable it to start making predictions of its own.

While each vendor will have their own framework and architecture, they are likely to follow a similar path involving input, interpretation, action and improvement. Input is gathered by the system - often from a customer – and is then translated into a form which the system can understand (e.g. through speech-to-text or OCR). Once the data are converted, the AI looks for the customer intent behind the input using NLP as well as other metadata such as location or customer history. Once the intent has been decided with a certain level of confidence, various solutions are considered and presented to the customer. Finally, the loop is closed through gathering feedback about the success or otherwise of the answer, which is then taken into account in future interactions, with the AI learning what works best.

In theory, despite the often onerous effort involved in creating a clean pool of data, the implementation of a virtual assistant or chatbot should not have to materially change the existing IVR or web chat infrastructure, as the AI agent is treated as just another user of this technology.

The more data that the AI has to train on, the more likely it is to succeed. As machine learning works through pattern recognition, this can include metadata and context which may seem somewhat peripheral to the process, but there are likely to be patterns that have not been recognized by human users. This allows the AI model to understand customer intent and also to be able to discern which customers need to be treated in a way outside of the ordinary (e.g. in an emergency situation, if the customer is likely to defect, or if they have contacted the business multiple times in a short timeframe). Analyzing the use of existing data shows the ways in which customers want to express themselves

As with any IT project, testing is key to success but with AI implementations this is even more important. IT systems work on an input-processing-output basis, where the point of the implementation is that the same thing happens every time, reliably and predictably. As the processing element of AI involves elements of learning (and hopefully improvement), the output can change over time. This does not always end optimally - Microsoft's Tay³ is an example where the AI displayed inappropriate and offensive responses after interacting with Twitter users. Businesses should be aware that AI solutions, especially in the early stages, may require very close supervision and possibly intervention. Dedicated chatbot testing vendors offer services to make sure the chatbot is working properly before putting it into a live environment.

Measuring the performance and success of an implementation is always vital, but never more so when it is for a highly anticipated and poorly understood solution such as AI. There is likely to be far greater interest in and pressure from the higher echelons of the business as is the case for most contact center technology implementations, and thoroughly understanding the outcome of the initial implementation is vital.

There is no baseline set of metrics that every AI implementation should be measured against, although in the widest sense, the impact upon customer experience, agent experience and operational change should all be considered. Of course, it also depends on the area of the contact center business processes that implementation is aimed at improving.

³ [https://en.wikipedia.org/wiki/Tay_\(bot\)](https://en.wikipedia.org/wiki/Tay_(bot))

Some examples of AI -related metrics include:

Self-service:

- volume of self-service attempts, segmented by type of interaction
- customer satisfaction by self-service segment (particularly useful for comparing AI enabled self-service with scripted self-service)
- proportion of self-service attempts that are handed off to agents, and following from this, the proportion of these which are handled by a single agent (shows the efficiency and accuracy of routing and the collection of relevant information in the initial self-service session)
- length of self-service session (this is related to customer effort)
- change in inbound call volumes

Assisted service (i.e. the AI's impact on live agents)

- first contact resolution rates, with and without AI
- proportion/volume of simple/complex interactions and by agent
- call duration (is the AI assistant cutting down on unnecessary screen navigation by providing the answer on the agent desktop?)
- if using RPA, effect upon downstream business processes and reduced call durations and post-call wrap-up times
- impact upon customer satisfaction scores.

END-USER QUESTION 4:

WHAT ARE THE STEPS WE NEED TO TAKE TO USE AI IN OUR CONTACT CENTRE? WHERE WOULD BE THE BEST PLACE TO START?

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An important consideration regarding how can Artificial Intelligence (AI) might be used in your call center is to understand the reasons why customers contact you in the first place – and by doing so then consider how AI might help you gain a deeper understanding of those interactions. AI analytics are often first introduced by organizations in the voice communication interactions, but can also be used in other channels, including chat and email. Combining the latest voice analytics with AI can reveal the primary reasons why customers initiate contact with your business and provide insights into those interactions by type, sentiment, emotion and driver. These insights can then be used to help you understand how to reduce and ultimately simplify for your customers the number of touch points they need to make with your business when seeking help and support. Other AI projects, such as Chat Bots, can identify common questions and providing automated responses.

KNOWLEDGE MANAGEMENT

One of the most central and critical elements to a company's service capability is the knowledge base, which is vital to the accuracy and consistency of the self-service experience for both agent and customer across channels.

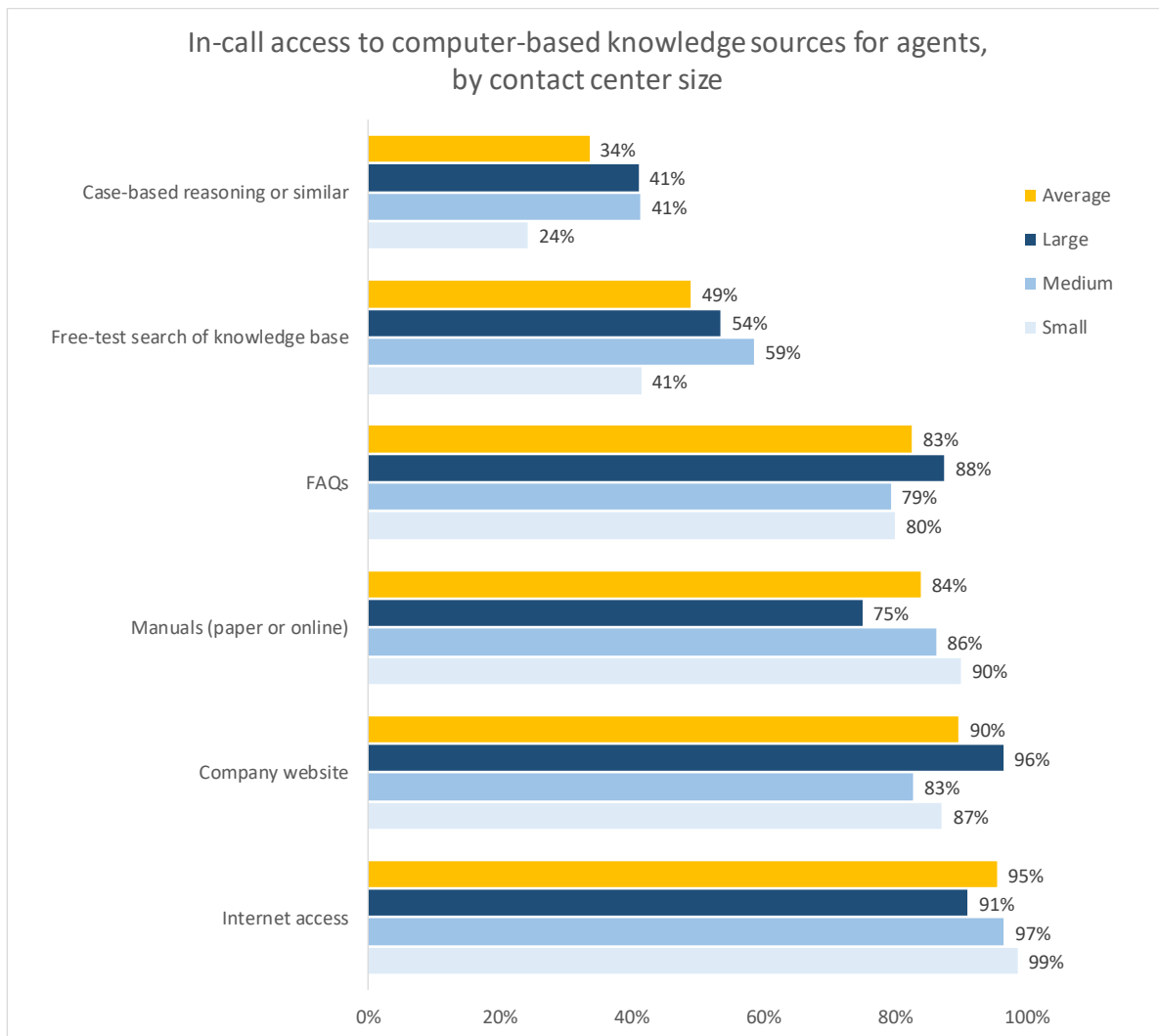
For many organizations, a knowledge base started off as a list of useful documents and files, which quickly grew into a wider, less coherent collection of information sources, requiring increased levels of expert management, amendments, editing, and deletion. However, the resources required to keep these knowledge bases up-to-date are very scarce, as the people within the business that have the capabilities and expertise to do so also have their own jobs to do. Very quickly, what started off as a useful and highly-tailored information resource has mushroomed into an expensive, out-of-date and increasingly less-useful collection of information of wildly-varying quality. AI can assist in the management of knowledge bases by feeding back successful outcomes, and noting when the answers provided did not meet the requirement.

On an ongoing basis, feedback from agents and customers will identify gaps in the knowledge base which will need to be filled by product experts. Some knowledge bases will require full-time, dedicated resource to manage them, whereas others will rely on automated systems making dynamic changes depending on callers' and agents' requirements. It is often the case that large businesses with many products and services to maintain will have numerous editors across many departments who can make suggestions, although it may only be a small handful of people who will verify and publish this information. Businesses may want to consider allowing certain contact center agents to create new entries based on their communications with the customer. Understanding which documents are being used the most allows the maintenance efforts be focused on the most important areas.

It is not just the publishing of information that is vital: crowd-sourcing of answers, and feedback on accuracy and success from the wider "super-user" community will help the business to fine-tune the knowledge base and train the AI. Processes to gather this feedback should be put in place, and continually revisited to check effectiveness, and it's 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, and AI is an effective method of doing this regularly and consistently. Those who contribute timely and useful information - whether a customer or an employee - can be rewarded and recognized accordingly. People **want** to share their knowledge with others, and enabling them to do so easily is beneficial for all parties concerned. Businesses could measure the success of the knowledge management system by measuring the return on investment from call avoidance, by the rating or score given by readers of recommended articles, or through targeted customer satisfaction ratings.

The following chart shows the knowledge resources that agents have within a call. Finding, reading, assimilating and using information actually within a call is 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 34% 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. 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 16% of respondents had effectively a clean-desk policy with no hard copy reference material available to agents, a figure which was even lower for agents working in a mixed service/sales environment, who tend to have to cover a wide range of varying topics.

Figure 16: In-call access to computer-based knowledge sources for agents, by contact center size



END-USER QUESTION 5:

HOW MUCH INITIAL AND ONGOING EFFORT/RESOURCE WILL AI REQUIRE? DO WE NEED A DEDICATED AI PROFESSIONAL TO KEEP EVERYTHING RUNNING?

opentext™ As with all technology and other solutions, some internal investment is required and the services of AI professionals can be expensive. But OpenText™ Explore™ has AI built in, which means integration already exists and your IT professionals can spend less time on implementation and integration and instead focus on higher-value activities that drive business change and improvement.

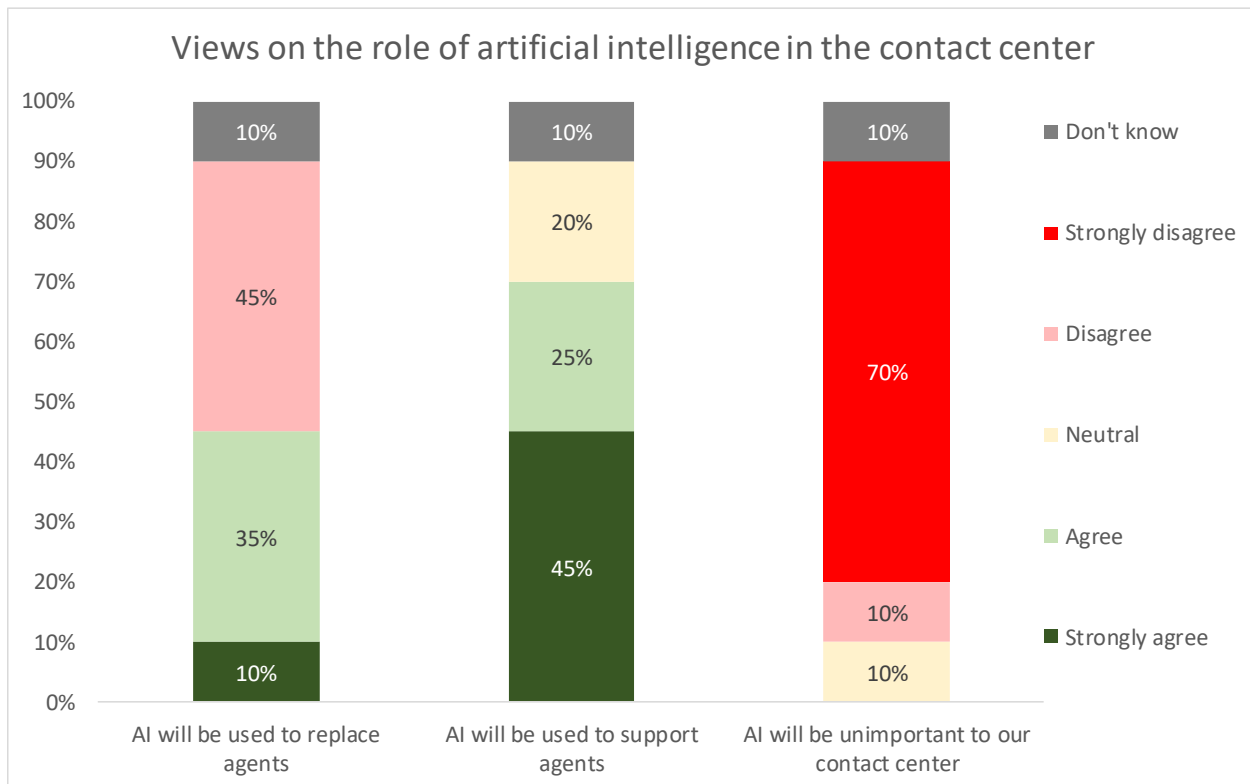
THE EFFECT OF AI: AGENT REPLACEMENT OR AUGMENTATION?

Survey respondents were very conflicted in the views as to whether AI would replace agents, with 45% agreeing or strongly agreeing that this would be the case, and 45% disagreeing to some extent. Respondents from large 200+ seat contact centers were more likely to feel that AI would replace human agents, with those in small and medium operations tending to believe 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 70% 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.

70% strongly disagreed that AI would be irrelevant to their contact center, a view which has hardened in the past couple of years. Even smaller operations were more likely to think that AI would affect their operations.

Figure 17: Views on the role of artificial intelligence in the contact center



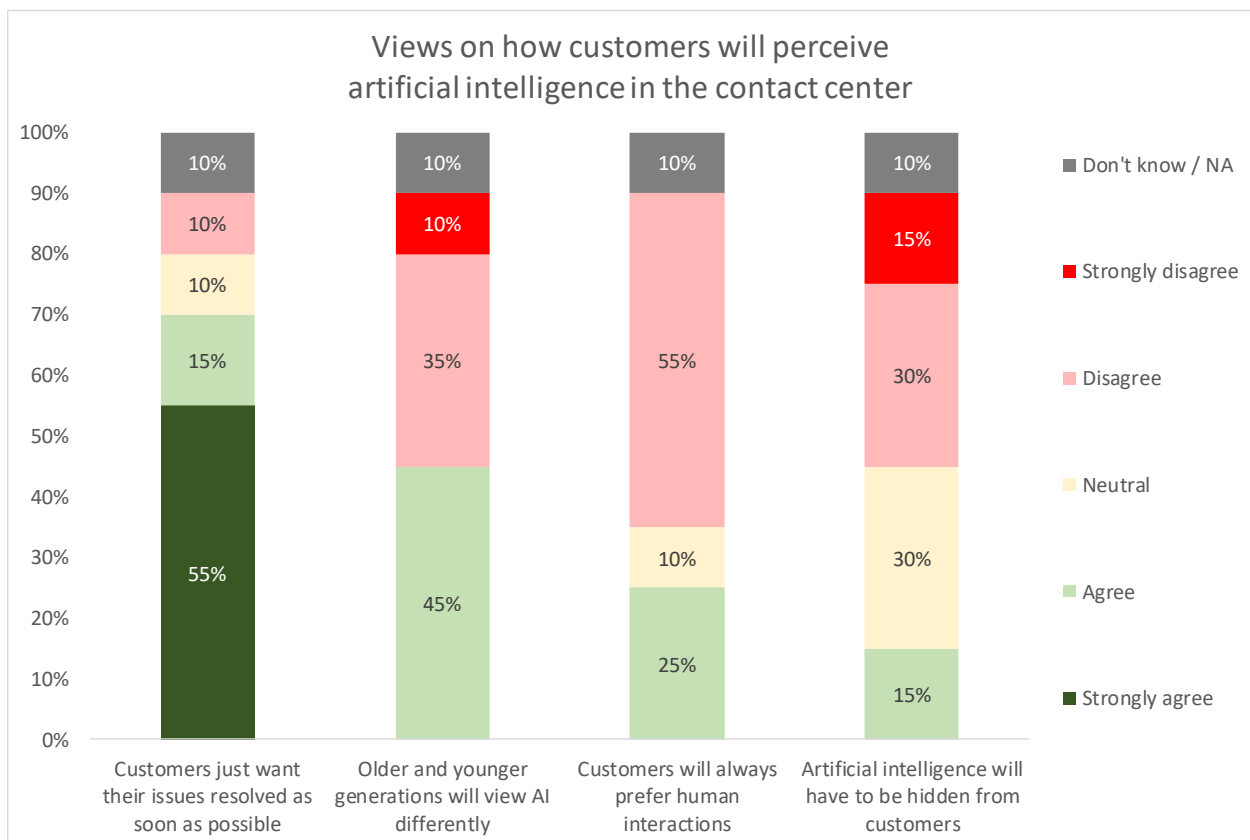
CUSTOMER OPINION

There is a widespread belief amongst businesses that customers do have a problem with AI if it helps 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 centers felt that customers would not be too concerned about being served by AI.

There was little agreement on whether older generations would take 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 general feeling that AI would not need to be hidden from customers.

Figure 18: Views on how customers will perceive artificial intelligence in the contact center

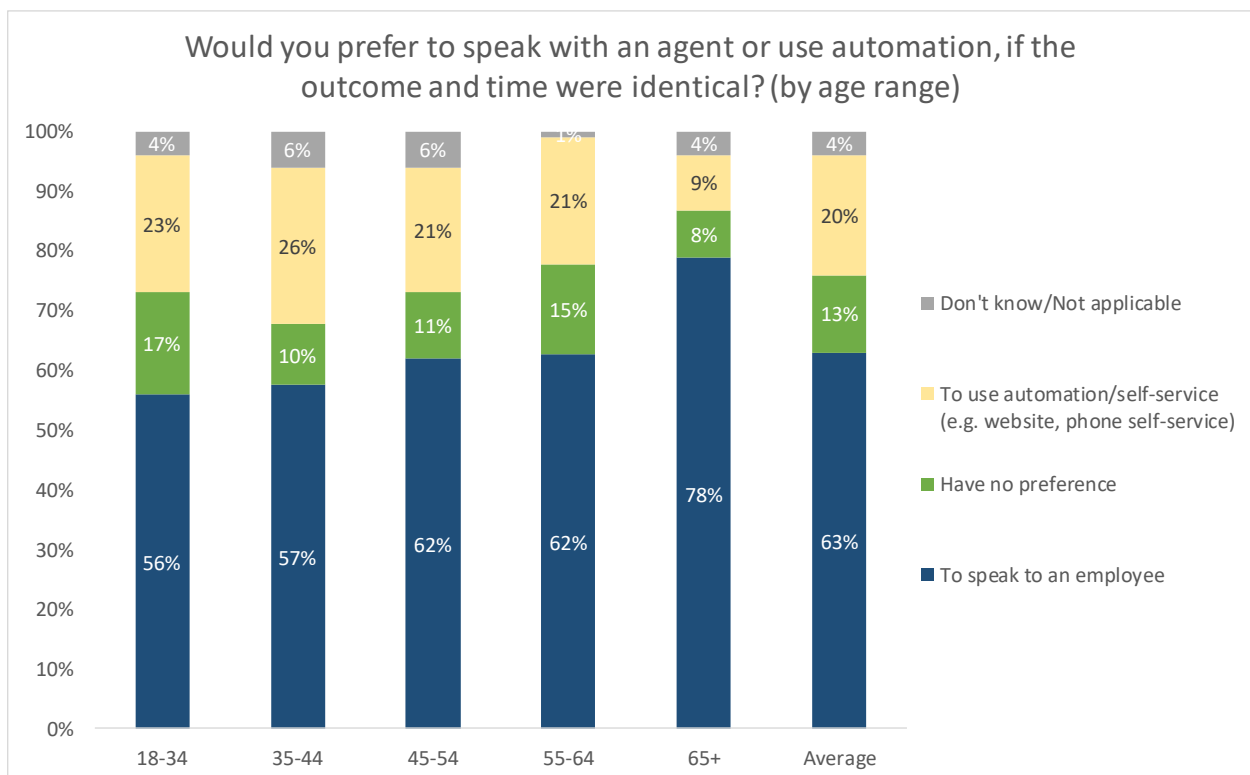


In order to gauge the level of acceptance and expectation around fully-automated customer contact, US consumers were asked whether automation or human assistance would be preferable to the customer base in circumstances where the customer effort, time and outcome were exactly the same. Bearing in mind the rapid advance and uptake in digital channels, the findings were quite surprising, as it was found that the customer base is currently strongly in favor of speaking to a human employee.

Looking at the age group of the customer base, older demographics feel more strongly about human contact, with younger customers most likely to have no preference or to choose to use automation. This fits in with our research findings that the younger section of the customer base places more value on their time, whereas the older demographic prefers to have its issue resolved first-time by a single employee.

Bearing in mind that this question emphasized that the outcome and customer effort/time **would be identical** in each case, the results show that the customer base at present is not yet at a stage where automation is generally seen as being even on equal terms with human contact, let alone the preferred method of contact with a business.

Figure 19: Would you prefer to speak with an agent or use automation, if the outcome and time were identical? (by age range)



Further analysis of these data does not reveal a pattern when segmented by income or gender.

ROADBLOCKS AND PITFALLS

In any technology implementation there will be risks of failure: with AI covering a vast amount of territory and with the potential to be misunderstood by business owners, planning and expectations must be managed very carefully.

- Expectations of what the AI implementation can actually achieve must be closely managed. There may be the expectation from senior management that headcount will immediately begin to drop, but in the majority of instances this is not why AI is being implemented. Focusing on a tightly-defined use case would reduce the risk of implementation delays and expecting too much, too soon from AI. However it is important not to see even a relatively modest implementation of AI as being a point solution, rather than a single strategic step
- There are areas of customer interaction where AI cannot come close to matching a human agent. Machines simply are incapable of feeling empathy, and even sophisticated sentiment detection at its best comes close to what an ordinary human being can do naturally. Use cases for AI should be focused upon areas where there is a gap in functionality, rather than trying to replace something that isn't broken
- AI in the contact center is relatively new, and with it being so popular, there is a shortage of skills, support and resource within the industry as a whole. In-house technology departments are less likely to have capability, expertise and experience, meaning that the risk of suboptimal deployment and the requirement for third-party assistance may be higher than with other more traditional IT implementations
- Businesses data assets must be in place before implementation of AI, as this is a technology that relies upon having large, clean pools of data that it can be trained on and learn from. Without this in place, it will be virtually impossible for any AI implementation to get close to its potential. The preparation of data will involve having an organized, non-siloed data architecture, a consistent data vocabulary, the means of accessing this data securely and quickly, and the ability to access other pieces of relevant information (e.g. customer-related metadata) in order to include greater context. Without this, it will be difficult for a machine learning process to train itself effectively, or for a chatbot to be able to use all of the relevant data in order to reach a correct conclusion
- Always have a well-designed and clear path out of the AI-enabled service and onto a human agent. Trapping a frustrated customer in a self-service session runs the risk not only of training them not to use self-service again, but also poisons the well for other companies using AI. This is what happened in the early days of email support – customers would try to communicate with one or two businesses via email, and when they didn't receive a response for days (or ever), they decided that the whole email support channel was unworthy of their time. It took many years to change this perception and to get them to trust the channel again

-
- There have been a lot of media scare stories about AI and robots making people unemployed. It is important to emphasize to agents that any AI implementation is about making their jobs more interesting and effective by allowing AI to handle simple and repetitive requests, as well as providing them with more of the information that they need to serve the customer more effectively. While agents are experts on answering customer queries, it may be too much to ask them to spend significant amounts of their time on contact curation as well. As such, businesses should consider how to incentivize power user experts (both inside and outside the enterprise) to help with knowledge management and problem resolution
 - In the AI world, knowledge management is not something that is a part-time job or that can be handled by amateurs. Consider developing more full-time, expert roles to support knowledge bases and to enable understanding of data models and flows across the entire enterprise. AI experts have to understand both data and also the real-life business / customer issues, and this resource can be difficult to find.

END-USER QUESTION 6:

IS THERE ANYTHING THAT SUCCESSFUL AI IMPLEMENTATIONS / PROJECTS HAVE IN COMMON? ANY PITFALLS TO AVOID?

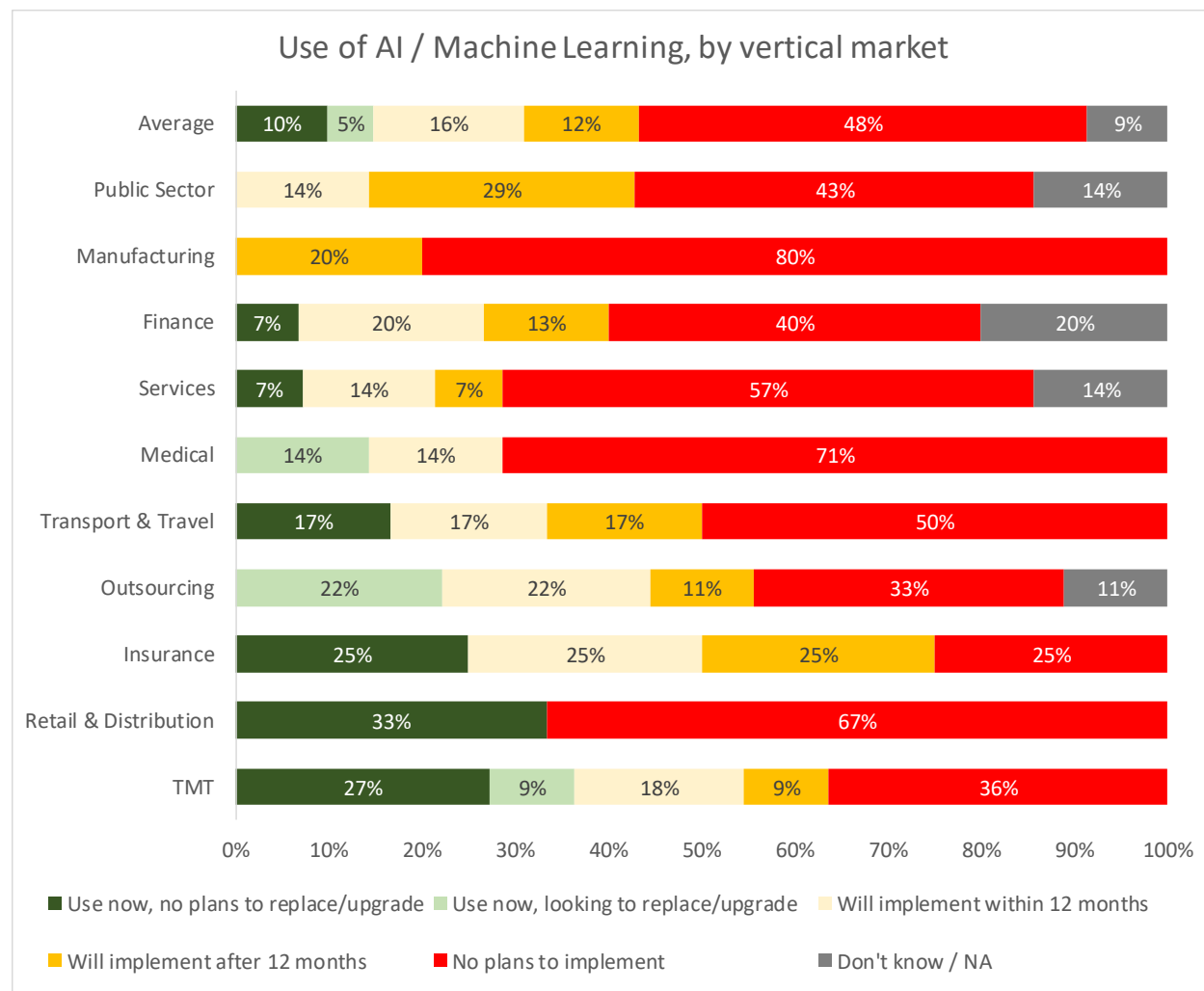
opentext™

With AI projects, it is important to carefully choose the initial data sources to be used with a solution because a project can be undermined with untrustworthy or unusable data. Solutions that provide integration between a number of data-gathering sources are preferred. OpenText™ Explore is fully integrated with OpenText™ Qfiniti™ call recording and is integrated with OpenText™ Magellan™ providing a single unified business solution.

CURRENT USE AND FUTURE PLANS FOR AI

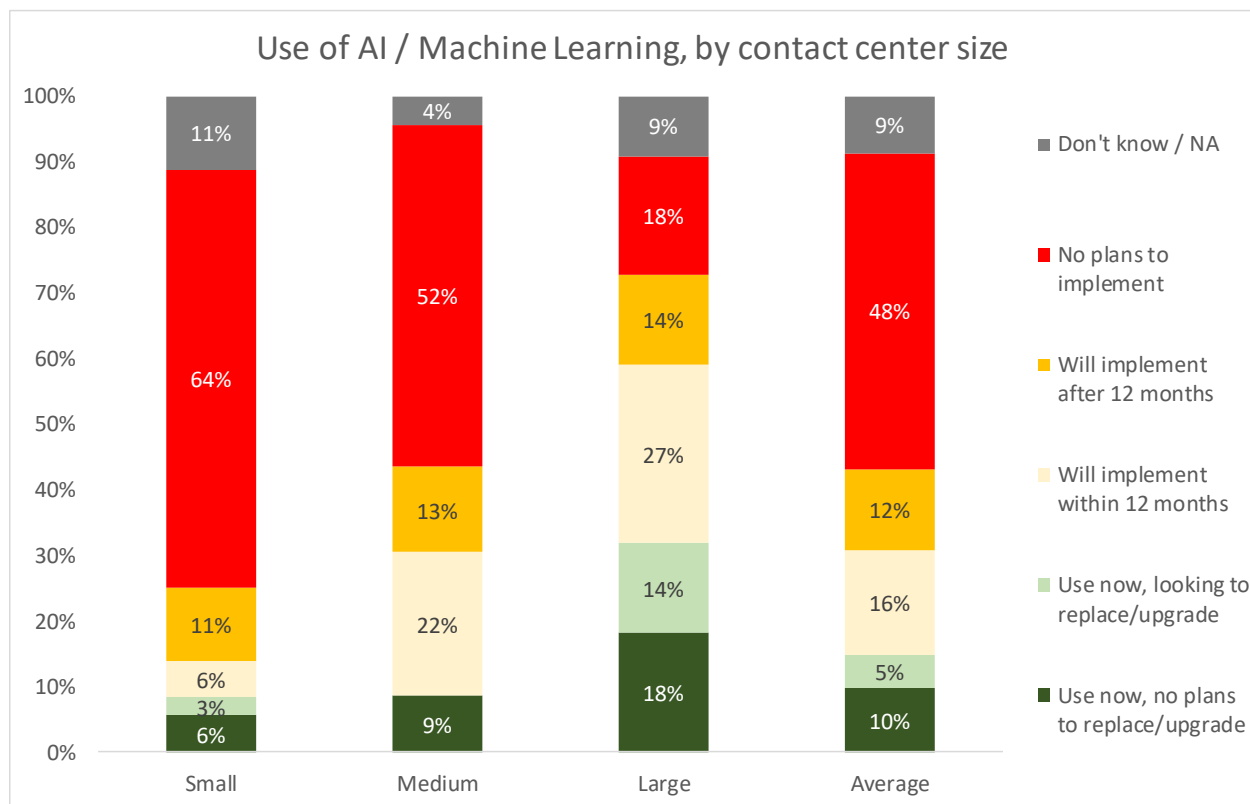
Despite a low current use of AI across industries, there is widespread interest in implementing this solution, with 28% of respondents that do not currently use AI intending to implement it, especially in large operations and the outsourcing, finance and insurance sectors.

Figure 20: Use of AI / Machine Learning, by vertical market



As AI works most effectively with very large pools of data to learn from, it is of no surprise to see large contact centers being at the forefront of implementation. These operations are also the most likely to have large numbers of self-service sessions which can be optimized through AI.

Figure 21: Use of AI / Machine Learning, by contact center size



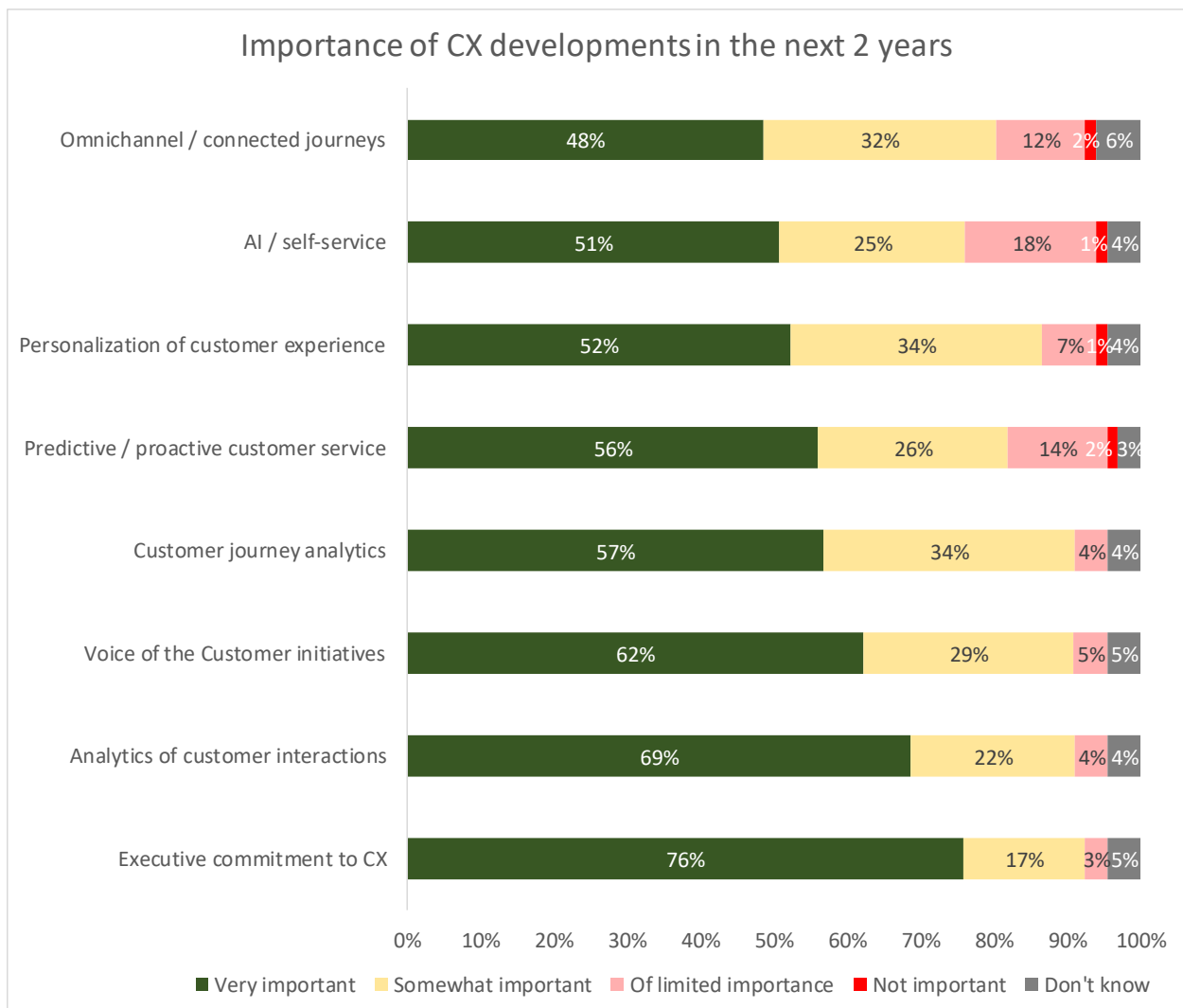
THE FUTURE OF AI IN THE CONTACT CENTER

THE VIEW FROM CX DECISION-MAKERS

CX decision-makers were asked their opinion on how important various customer experience developments would be to their organization in the next two years.

Perhaps the most striking finding was that the most important factor determining the future success of the customer experience program was not technology-related, but rather a requirement for the continuing and strengthening executive commitment to improving customer experience, without which the multi-departmental CX initiatives could not hope to succeed.

Figure 22: Importance of CX developments in the next 2 years



All of the customer experience developments and investments offered as choices to survey respondents were seen as being important, but it is interesting to note that omnichannel and the application of artificial intelligence to self-service were not universally seen as being vital to the success of the customer experience program, supporting the view that businesses have not missed the boat if they haven't yet implemented AI.

Businesses' interactions with customers will become a highly-polarized mixture of the automated and the personalized. 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 personalized 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 real, where systems talk directly to other systems without a human being involved at all. 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 center (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 organize a replacement part and engineer visit with the customer's permission.

THE FUTURE ROLE OF AI IN THE CONTACT CENTER

AI isn't a silver bullet, nor have businesses missed the boat. In fact, some of the solutions sheltering under the wide AI umbrella aren't - strictly speaking - AI at all.

There seems little doubt that the eventual overall roadmap of the contact center industry will lead to significant levels of AI involvement in customer contact, but in the foreseeable future this is likely to improve self-service and assisted agents, rather than having seismic effects on headcount. An AI implementation whose success is to be measured mainly by the reduction in HR resource is unlikely to do well.

At this stage, most businesses might decide that implementing AI in a small scale on a clearly-defined user case was the most appropriate action to take, building up their in-house knowledge and expertise while following a strategic implementation roadmap.

In the case of such a heavily-hyped technology, expectations should be managed and care taken in identifying and forecasting the improvements that the initial AI implementation can bring, with the success of the project being clearly based around specific, easily-understood metrics.

In the longer-term, there's no doubt that AI will be used as a key part of handling customer interactions in most businesses, but the question is: how? The use of AI should be focused on use cases where the AI does a better job than a human, whether that's being quicker, more accurate, available 24/7 or able to see patterns in data that no person could see.

It's our view that people call people not because they want to hear a friendly voice, or that they're Luddites who won't countenance automation, but because they've found through experience that this is the most effective way of making sure their issue is resolved. So while AI-enabled automation will handle much of the simple work, customers will still seek out a live channel for complex or emotional interactions: probably voice, but perhaps digital too, as customer confidence in this channels builds up. Yet even here, AI will be playing a part, identifying the customer's intent, gauging their sentiment, and understanding through past experience what the appropriate actions for the agent will be. Over a long period of time, AI will become thoroughly enmeshed in every element of customer interactions: the rise of the robots will be slow, but inexorable.

ABOUT CONTACTBABEL

ContactBabel is the contact center industry expert. If you have a question about how the industry works, or where it's heading, the chances are we have the answer.

The coverage provided by our massive and ongoing primary research projects is matched by our experience analyzing the contact center industry. We understand how technology, people and process best fit together, and how they will work collectively in the future.

We help the biggest and most successful vendors develop their contact center strategies and talk to the right prospects. We have shown the UK government how the global contact center industry will develop and change. We help contact centers 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 center industry, perhaps we can help you.

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