



AI for Contact Center Cost Reduction

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AI for Contact Center Cost Reduction (US edition)

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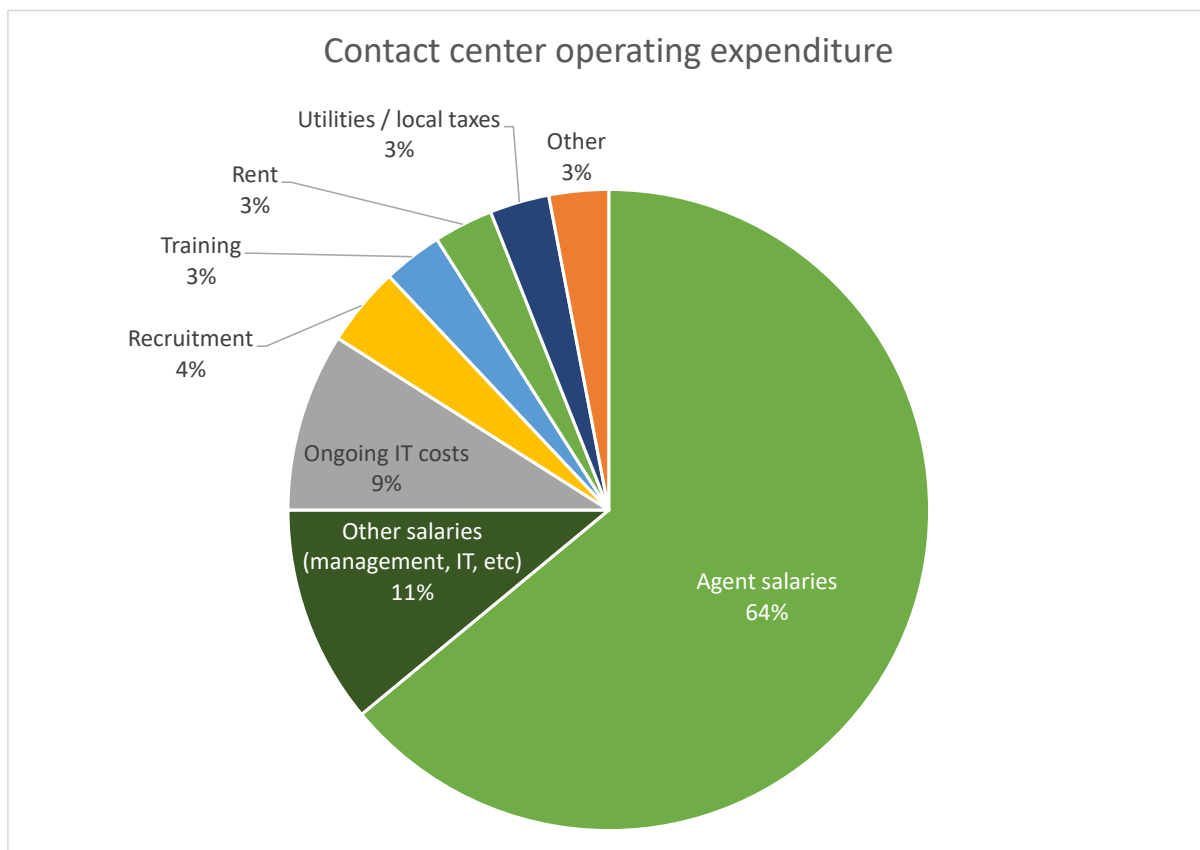


CONTACT CENTER COST REDUCTION

Almost two-thirds of a typical US contact center's operating expenditure is spent on agent salaries, with a further 11% on the cost of management, IT, ancillary staff, etc.

Clearly, contact centers wishing to reduce their costs will find savings easier to make within this segment of their expenditure, and this report shows how AI can help them to do that without negatively impacting on performance and customer experience.

Figure 1: Contact center operating expenditure



There are significant and growing pressures on US contact center costs.

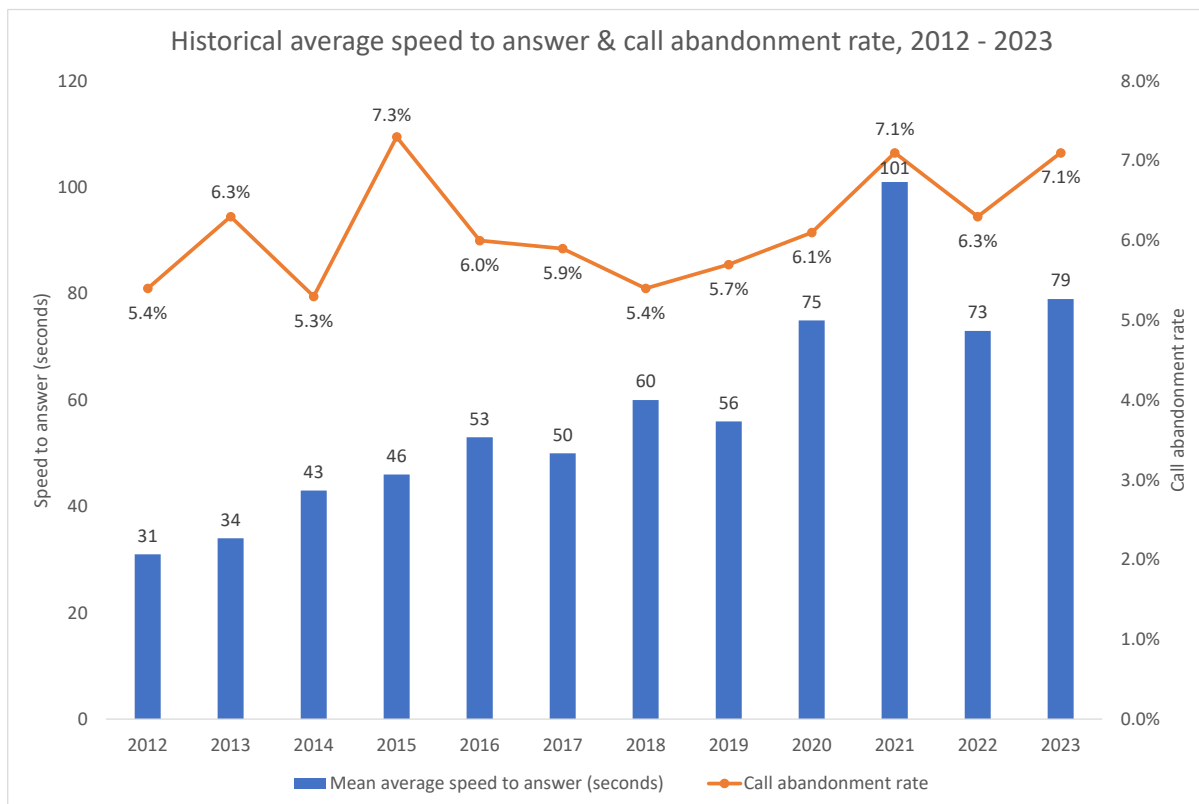
Driven in part by recent inflationary pressures, US agent salaries have risen by an average of 5.7% each year in the 2019-2023 period, compared to 0.5% p.a. in the period 2014-2018.

Despite this, there has not been a positive impact on agent attrition, which averaged 22% per annum in 2019-2023, compared to 20% in 2014-2018. As the report shows later, agent attrition has a significant effect on contact center costs, impacting operational performance as well as increasing the pressure on recruitment and training costs.

Can contact centers simply decrease headcount in order to cut costs? The operational metrics suggest otherwise: driven by longer and more complex calls, the US contact center industry as a whole is seeing longer queue times and higher call abandonment rates, both of which impact negatively on customer experience and revenues.

Clearly, cutting headcount without a radical readjustment in how contact centers actually operate would be counter-productive to quality and customer experience.

Figure 2: Historical average speed to answer & call abandonment rate, 2012 - 2023



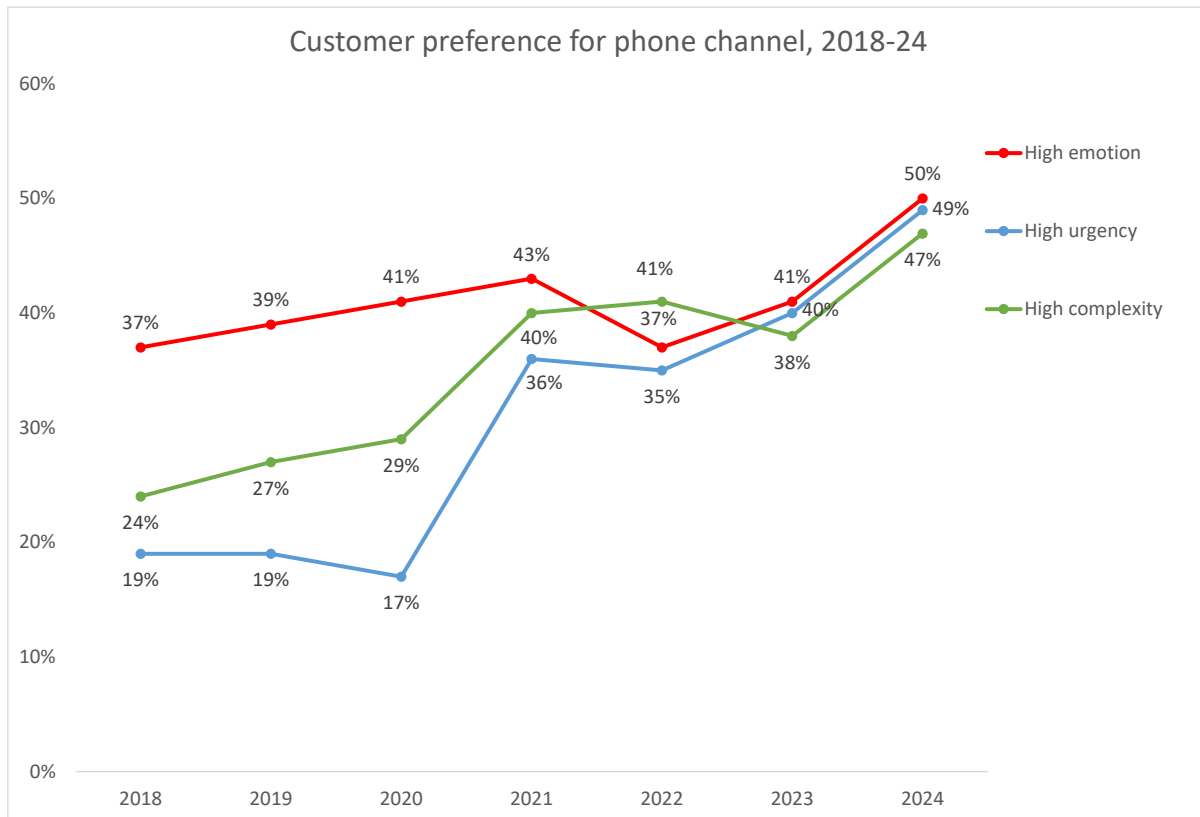
This report looks at how AI-enabled solutions can ease the cost of handling customer interactions, without simply adding more live agents or damaging customer experience.

One of the most popular suggestions for how to do this is to encourage customers to use self-service rather than live agents.

This strategy has worked quite well for simple and low-value interactions, but as the following chart shows, customers are actually moving away from self-service towards the telephone, especially for more urgent and complex enquiries.

This is driven by customers believing that telephony is the gold standard of business interactions, and any company that wants to hold onto its customers still has to provide a high level of telephony service when necessary, regardless of how sophisticated their self-service functionality is.

Figure 3: Customer preference for phone channel, 2018-24



Businesses actually agree with customers: 80% state that telephony is the best channel for customers with highly emotional interactions to use, with the figures for high urgency being 62% and for high complexity 74%.

Based on what customers say, there is no doubt that for the foreseeable future live telephony will remain key to customer experience.

This report now looks at how AI can cut costs in the live voice and live digital channels (especially chat and email), as well as how self-service can be enhanced to encourage more customers to use it.

The report also considers the effect of quality on cost, as well as the hidden cost of agent attrition and how AI can help to alleviate that.

CUTTING THE COST OF TELEPHONY

Live telephony currently accounts for 64% of the inbound interactions handled by US contact centers.

As such, any improvements to the efficiency or actual number of live calls received could make a significant difference to contact center costs.

The report looks at three use cases for AI in reducing live call costs:

- Cutting back on unnecessary calls through improving first-contact resolution and proactively communicating with customers
- Improving agent capabilities and efficiency through using AI-enabled analytics for quality and workforce management
- Reducing call lengths by improving efficiency throughout the call.

FIRST-CONTACT RESOLUTION & PROACTIVE CUSTOMER CONTACT

Both first-contact resolution (FCR) and proactive outbound customer service are concerned with improving customer experience, but also can have a significant positive impact on reducing the volume and cost of unnecessary inbound calls.

AI AND FIRST-CONTACT RESOLUTION

It can be stated with some confidence that first-contact resolution is one of the keys to a successful contact center.

While ContactBabel research shows that customer satisfaction rating is the most important metric, the vast majority of survey respondents from both businesses and customers place first-contact resolution as being one of the top 3 metrics that are most **influential** on customer satisfaction.

Logically, to improve customer satisfaction, a business has to improve first-contact resolution rates. Yet the contact center industry has not reported any lasting or significant ongoing improvements in first-contact resolution, with it actually declining slightly over time.

While the average call is more complex than it used to be – requiring follow-up work and perhaps more expertise – this drop in first-contact resolution does have a negative impact on customer experience, as well as harming profitability by increasing the costs incurred by repeat calls.

AI can help contact centers improve the vital FCR metric in various ways:

Interaction analytics: AI analyses historical data to identify common customer issues and the solutions that have been effective in resolving them. AI can then suggest the most likely solutions to agents during the first call, increasing the chances of resolving the issue without the need for follow-up.

Using root cause analysis, AI can find patterns in past interactions to identify recurring issues that frequently require multiple contacts to resolve. This then provides the business with the insight to fix the business processes that are causing these issues.

Intelligent routing: AI algorithms match incoming calls with the best-suited agents based on various criteria, including agent skills and expertise, caller intent and customer profiling.

Compliance-based routing can ensure calls are routed to agents who are certified or trained to handle specific regulatory requirements, reducing call transfers or call-backs.

Agent assistance: AI-enabled agent assistance helps first-contact resolution by providing the right information at the right time, something which is especially useful for inexperienced agents.

The AI draws on the knowledge base, and through following the conversation in real-time can gather the relevant information and present it on the agent's screen without them having to navigate across multiple screens, which also reduces the call duration and cost.

The AI can also make sure that the agent has followed all of the correct procedures depending on what they are trying to do – for example, reading out contract details and writing data into all of the fields required for a successful sale – which reduces the risk of repeat calls due to agent error.

Post-call work can also be optimized through automatic initiation of any back-office processes required, reducing the risk of human error.

AI can also help with reducing repeat calls through maintaining and disseminating consistent and correct information across all channels, making it available to digital agents as well as phone agents.

More information on how to improve first-contact resolution rates can be found in [“The Inner Circle Guide to First-Contact Resolution”](#).

AI AND PROACTIVE CUSTOMER CONTACT

Through anticipating customer needs and addressing concerns before customers feel the need to reach out, AI can proactively engage customers in order to reduce the costs associated with high volumes of incoming calls:

Anticipating Customer Needs: through analyzing historical data, purchase behavior, and customer interactions to find the occasions when customers are likely to need support or information, AI can help businesses reach out to customers before they even experience problems. This is often done on a low-cost channel such as email or SMS, and can deflect a significant proportion of inbound calls.

Automated Notifications and Reminders: sending personalized, automated notifications to customers about upcoming appointments, billing issues or product deliveries can be done across multiple channels, usually email and SMS.

This has been done for many years, and does not require AI, but by connecting this activity to the anticipation of customer needs as mentioned above, companies can be more targeted and accurate in the information that they send, reducing more inbound calls.

Automated Follow-Ups: After a customer interaction or purchase, AI can follow up with the customer to ensure they are satisfied and don't have any lingering questions or issues, reducing the number of inbound service calls received.

Sentiment Analysis: by tracking customer sentiment in each interaction, customers expressing frustration or dissatisfaction can trigger an outbound contact to resolve the issue proactively, avoiding escalations that could result in inbound calls or complaints.

This can also be applied to a poor result from a customer satisfaction survey, as resolving issues raised before they escalate prevents customers from needing to make inbound calls later.

AUTOMATING QUALITY AND WORKFORCE MANAGEMENT

AI can help to optimize the contact center workforce, not only by ensuring the right number and type of agents are available at the right times, but also through a greater understanding of the agents' performance than is possibly by purely manual means.

Optimizing quality and resourcing can help to avoid costs associated with poor quality interactions and over- or under-resourcing the contact center, and using AI to analyze volumes of data far larger than is possible through traditional manual methods means that accuracy and insight will be greater.

AI-ENABLED WORKFORCE MANAGEMENT

AI-powered tools analyze historical call data, seasonal trends, marketing campaigns, and any other relevant factors (such as holidays or events) to predict future call volumes more accurately. The contact center can then be resourced correctly, avoiding either wasted cost or suboptimal performance.

Schedules can be based on the skills and experience which agents have, rather than just using a generic agent template, with peaks and quiet periods which will require different levels of staffing being predicted accurately.

Sudden call spikes can automatically trigger dynamic schedule changes, and automatically allocate extra resource (for example, asking remote, part-time or gig agents to log in, without having to involve a resource manager first).

In the longer term, AI-enabled workforce management can assist with capacity planning by analyzing customer growth trends, expected changes in product or service demand, and other external factors.

This assists with the timing and extent of new resourcing and training requirements, meaning there is less wasted cost.

AI-ENABLED ANALYTICS FOR QUALITY MANAGEMENT

Traditionally, QA teams manually review a small sample of customer interactions to assess agent performance, customer satisfaction, and compliance with policies.

AI-enabled QA systems can process and evaluate every single interaction efficiently and at scale. This can cut contact center costs in a number of ways:

Automated analytics and agent scoring: uses natural language processing (NLP) and speech recognition to transcribe and analyze customer conversations across channels, and detects keywords, customer sentiment, tone, and agent compliance.

Furthermore, AI can automatically score agent performance automatically by analyzing factors such as adherence to scripts, resolution rates, empathy, and responsiveness.

Reducing the manual effort involved in performance reviews saves time and human resource cost. AI-driven insights can improve training programs by providing personalized feedback to agents, reducing agent attrition and replacement costs. The reduction in the need for manual review costs is significant, especially in large contact centers, and the monitoring of 100% of interactions improves accuracy and fairness.

Real-Time Monitoring and Feedback: evaluates conversations in real-time, detecting issues like compliance, long pauses, incorrect information, or a missed resolution or cross-selling opportunity, providing immediate feedback to agents while on the call so issues can be handled immediately rather than needing follow-up calls or escalation.

Sentiment Analysis: negative customer sentiment detection means that calls can be flagged for further review or action, reducing potential losses from customer churn and addressing dissatisfied customers who might require higher-cost interventions later.

Compliance Monitoring: by following the call in real-time, systems ensure that agents follow regulatory requirements and policies, such as data protection, proper disclosures and the reading of terms and conditions, flagging non-compliant behavior for review later or for correction within the call itself.

Compliance monitoring minimizes the risk of regulatory penalties and lawsuits, which can be extremely expensive. It also reduces the cost of having people carry out compliance checks.

Analytics for Business Improvement: by collecting and analyzing vast amounts of interaction data to identify trends, common customer complaints, and areas for improvement, organizations can focus on the processes, product offerings, and training methods that are causing the most problems, have the greatest potential to cut costs or to improve performance.

USING AI TO CUT CALL LENGTHS

Quite apart from the additional costs being borne by companies with longer calls, the effect on customer experience is pronounced: our annual surveys with thousands of UK customers consistently report that the key drivers for positive customer experience are short queue times and high first-contact resolution rates.

AI-enabled solutions can be applied not only to reduce any wasted or low-value time within the call, but also to provide richer content to customers and assist agents to do their job more efficiently and productively.

There are numerous reasons why a call can be long, and businesses should consider which parts of a call are necessary and which are not. The following elements of a typical call are considered:

- Customer identification and authentication (typically around 10% of the overall call time)
- Talk time (70%)
- Post-call wrap-up (20%).

AUTOMATED CUSTOMER AUTHENTICATION

Automated customer authentication not only reduces the threat from fraud, but also frees up significant time within a call which can be used to decrease call queues.

Dedicated authentication solutions such as voice biometrics and call signaling analysis are increasingly being used, especially in the finance industry, but these are often expensive and may not be suitable for all businesses.

A mean average of 65% of inbound calls to US contact centers require caller identity verification. This takes an average of 46 seconds per call, which is 10.4% of a typical call's length (costing an average of 72c per call).

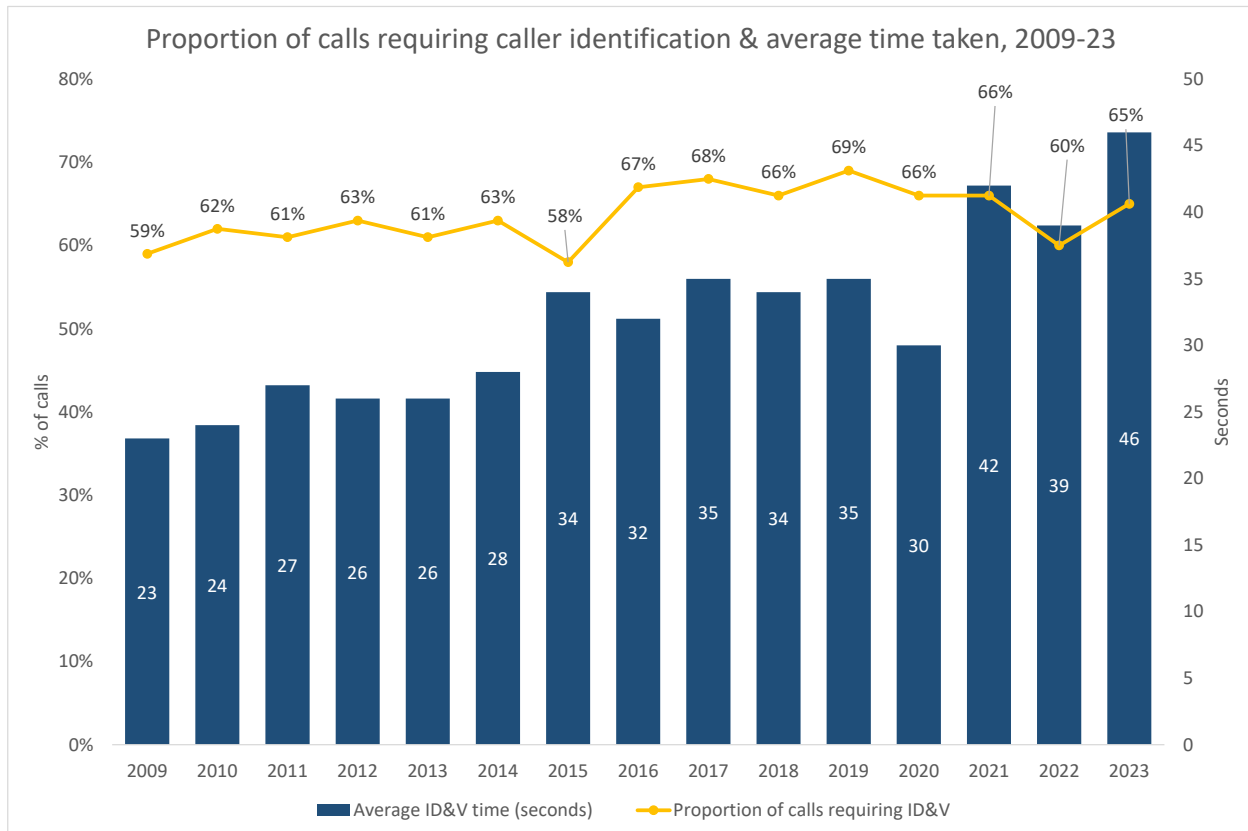
90% of these calls are authenticated by agents, with 11% carried out by touchtone IVR, 4% through speech recognition and 1% by voice biometrics (the total is greater than 100% as some interactions require more than one method to be used).

The estimated cost to the US contact center industry of manual customer authentication is over \$11bn each year, yet this adds nothing to the customer experience. It also impacts negatively on agent engagement or productivity: an agent may spend half an hour or more of their shift doing the mundane and repetitive task of taking customers through security.

Voice biometric solutions are often expensive and not suitable for some businesses, but there are still opportunities to cut the cost of customer identity verification.

As the following chart shows, both the prevalence and duration of customer authentication is increasing, raising costs across the contact center industry.

Figure 4: Proportion of calls requiring caller identification / verification & average time taken, 2009-23



Having an AI-enabled voicebot rather than an agent take customers through security reduces costs while providing a similar level of customer identification to live agent authentication, and has real potential to improve both productivity and agent morale.

The security process remains the same as if it were a live agent taking these details, with the voicebot simply taking their place. If the voicebot detects undue levels of stress or anxiety, it can flag the call to the agent as potentially fraudulent and further security checks can then take place.

AI can improve knowledge-based authentication by learning from previous interactions and dynamically generating questions that are harder for fraudsters to predict or research, but easier for the real customer to answer.

For example, instead of static questions, AI generates real-time questions based on recent transactions, locations, or interactions that only the legitimate customer would know.

AI systems can also analyze large datasets of customer behavior to detect unusual patterns that might indicate fraud, such as calling from a new location or device.

For more information about customer authentication solutions, please download [“The Inner Circle Guide to Fraud Reduction and PCI Compliance”](#).

OPTIMIZING TALK TIME

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

Within calls, time and money can be wasted by:

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

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

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

Apart from cutting down on wasted time, this also has a positive impact on first-contact resolution and customer experience, and is of particular use to less experienced agents and for unfamiliar subject areas.

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

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

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

Accessing a single screen: Many of today's contact centers use complicated, multiple applications, often only loosely linked, which require skilled and experienced agents to navigate, let alone to manage interaction with customers successfully at the same time.

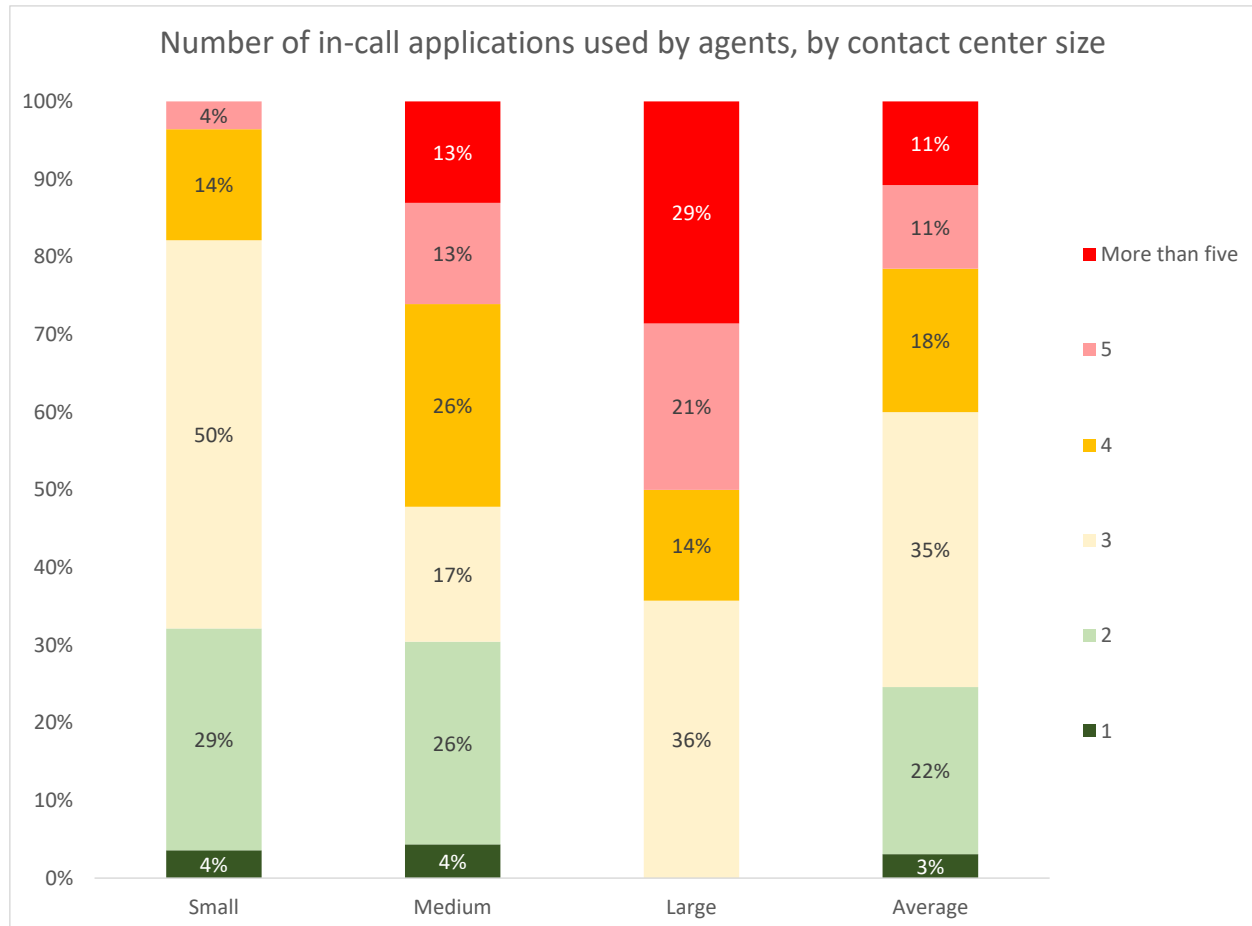
In most cases where complex, multiple applications are used, they are necessary for the agents to do their job, so the question is not "How can we reduce the number of applications?", but rather "How can we improve how the agent uses the applications?".

At the moment, due to complexity, expense and the sheer weight of constant change, applications are either integrated very loosely, or not at all. Agents are trained (or more likely, learn on the job) to switch rapidly between applications, relying on their experience to make sure they don't forget to do what's required

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

Only 3% of US contact centers report using a single agent desktop within a call, with 97% requiring their agents to navigate multiple screens and applications within the call, and 40% needing agents to handle four or more.

Figure 5: How many applications does an agent use within a call? (by contact center size)



There are significant issues around not asking or forgetting to key in information, failing to initiate the correct follow-on processes or type in consistent data, which can often lead to unnecessary repeat calls. The use of multiple applications will have a negative effect on training times and accuracy rates for new agents as well.

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

Within the call, AI-enabled agent assistance can help the agent to provide the right information at the right time, seamlessly linking with multiple back-office applications and databases, providing only what is relevant onto the agent's screen.

Depending on the experience or profile of the agent, what the customer is trying to do and any regulatory inhibitors, on-screen buttons can be enabled or disabled, or access to fields limited according to business rules.

Furthermore, adherence to business processes and industry regulations can be assured by making the agent complete all of the required steps in the transaction (for example, adding call notes, reading disclaimers, etc.).

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

This is not just an issue for older customers, as 56% of the youngest cohort reported experiencing this either “very often” or “fairly often”.

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

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

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

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

We estimate that the industry-wide cost of repetition is over \$2.5bn per year and that this will cost a typical 250-seat contact center over \$250,000 each year.

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

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

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

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

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

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

If the customer is made aware and agrees that an AI is reading out these statements, and that they have the right to speak to a human at any time, businesses may wish to consider using AI to do this.

The agent can then carry out an extra work connected to the call while the terms are being read out, which could save time and cost overall.

ALL-IN-ONE

AI-Powered CX for Organizations of Any Size



AI-Powered Customer Experiences

Intelligent self-service, seamless omnichannel transitions, personalized interactions at scale.



Actionable Insights

Real-time sentiment analysis, trend identification, proactive issue resolution, and data-driven product innovation.



Empowered Agents

Real-time guidance, automated tasks, streamlined workflows, AI-driven performance analysis.



Unmatched Security & Scalability

Cloud-native architecture, CRM-first approach minimizing PII storage, seamless scaling with business growth.



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“ UJET shares our commitment to ensuring that support issues are being resolved with minimal touchpoints and in record time.

Kevin H.
Vice President of Engineering

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REDUCING POST-CALL WRAP-UP

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

The post-call wrap-up stage can waste a lot of time and money through sub-optimal manual processing of data. For example, a change of address request could take many minutes in a manual environment, with several separate databases having to be altered, which is itself a process prone to error, risking at least one extra unnecessary future phone call from the customer trying to put things right.

Reducing wrap-up time through AI-enabling the agent desktop is not simply a matter of writing consistently to the correct databases, although this is a key element.

The contact center also initiates a number of processes elsewhere in the enterprise: it is the prime mover for sending out documents and items, arranging deliveries, taking payment and many other key elements to a successful customer-business transaction. Automation solutions (including robotic process automation - RPA) can handle these processes in a consistent, accurate and rapid manner.

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

Using natural language processing and generative AI, call summaries detailing all of the relevant information can be created in real-time which can then be checked and amended by the agent, substantially speeding up the process. Individual agents will have varying writing and summarizing capabilities, so this also ensures consistency of quality.

The next agent to speak with that customer will also benefit from having a concise and accurate note of what has been discussed previously, meaning that it is not only the original call which is shortened. If appropriate, the call summary can also be emailed to the customer, which shows them that the business has understood their query and is acting upon it. Having an accurate call record at hand could also remind the customer of key points and action items, preventing some unnecessary repeat calls.

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

CUTTING THE COST OF LIVE DIGITAL INTERACTIONS

As the table below shows, digital interactions such as email, web chat, social media and messaging account in total for around 28% of US contact centers' inbound interactions.

In sectors such as retail, manufacturing, TMT and services, email plays a much larger role, and web chat has a significant place in the retail and TMT (technology, media and telecoms) and medical vertical markets.

Figure 6: Inbound interactions by channel, by vertical market

Vertical market	FS	INS	MAN	MED	OS	PS	RD	SVCS	TMT	Mean
Telephone (live agent)	62%	78%	47%	67%	75%	87%	56%	74%	49%	64.1%
Email	4%	10%	43%	13%	10%	7%	16%	18%	30%	19.4%
Telephone (self-service)	25%	6%	4%	1%	6%	4%	9%	4%	6%	6.5%
Web chat	6%	4%	3%	12%	3%	1%	18%	1%	11%	4.3%
Social media (customer service)	0%	0%	1%	5%	3%	0%	1%	2%	3%	2.4%
SMS / messaging	1%	0%	1%	1%	3%	0%	0%	1%	1%	1.8%
Letter	2%	2%	1%	1%	0%	1%	0%	0%	0%	1.4%

Key: FS: Financial Services. INS: Insurance. MAN: Manufacturing. MED: Medical. OS: Outsourcing. PS: Public Sector. RD: Retail & Distribution. SVCS: Services. TMT: Technology, Media & Telecoms.

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

Care should be taken when considering vertical market statistics, as the research sample size may be small. Use only as an indication of relative importance.

There has been great enthusiasm for offering digital channels, as businesses expected them to be a cheaper alternative to live telephony.

While this is in part true – as the following table shows – the differential between channels is not yet particularly significant.

The differential between telephony and email cost – and especially web chat – can in part be attributed to increased levels of automation and also templates being used to lessen the requirements for agents to write entirely new responses each time.

Figure 7: Cost per inbound interaction (phone, social media, email & web chat)

Channel	Mean	1st quartile	Median	3rd quartile
Phone	\$6.91	\$8.38	\$7.25	\$4.00
Email	\$5.13	\$6.00	\$4.00	\$1.50
Web chat	\$5.36	\$7.75	\$6.00	\$3.00
Social media	\$5.50	\$8.00	\$5.00	\$2.50

While these figures show that digital channels are in fact cheaper than telephony, it should be noted that web self-service is estimated to cost a few cents per interaction, and that an IVR voice interaction costs 25-75c, so even digital channels are considerably more expensive than self-service.

Moving digital interactions to self-service is of course the long-term aim, but the majority of customer contacts on digital channels are currently still handled by agents and opportunities for cost reduction are considerable.

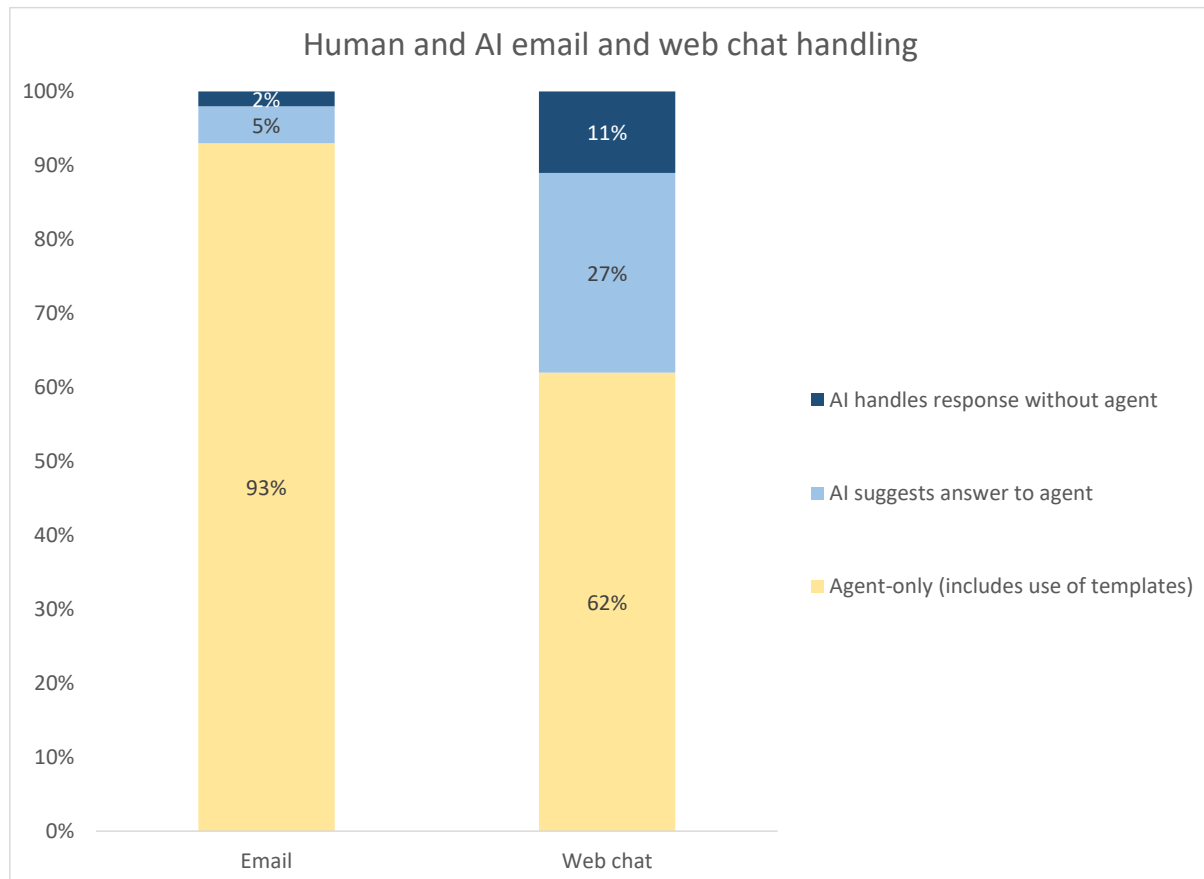
The following chart shows that while very few emails are handled entirely by AI, this year has seen another increase in the proportion of web chats being dealt with by AIs working alongside agents, suggesting responses which agents can then accept or amend.

Having a live agent in the loop reduces the risk of generative AI going off-script and providing an incorrect or damaging response. While the risks of this happening are diminishing as AI sophistication and accuracy increases, many businesses will see the high-profile examples of where AI responses have gone wrong and want some reassurance that they are managing risk.

Human/AI collaboration combines the speed of automation with the emotional intelligence of humans, providing superior service at a lower cost while limiting the risk of having customer-facing independent AI delivering an incorrect or damaging response.

The email channel offers great opportunities for AI. 47% of emails are still answered by agents using a blank email, with 46% of emails written by agents with editable templates. Only 7% of emails use AI to speed up response time and maintain accuracy, with very few of these being answered without any human input.

Figure 8: Human / AI email and web chat handling



AI can 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 and generative AI 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 providing high levels of service.

AI does not require data to be structured or closed, and natural language processing can understand a customer's email in context of who they are and what they have contacted the business about previously, as well as looking at the responses that have handled the issue successfully before and provided positive outcomes.

Businesses should certainly look at moving more of their emails away from templatised responses handled by live agents, starting with trying to increase the proportion of emails handled by AI and then checked by agents before they are sent out, before moving towards having AI answer emails without any recourse to agents. This would cut costs very significantly, and impact positively on profitability.

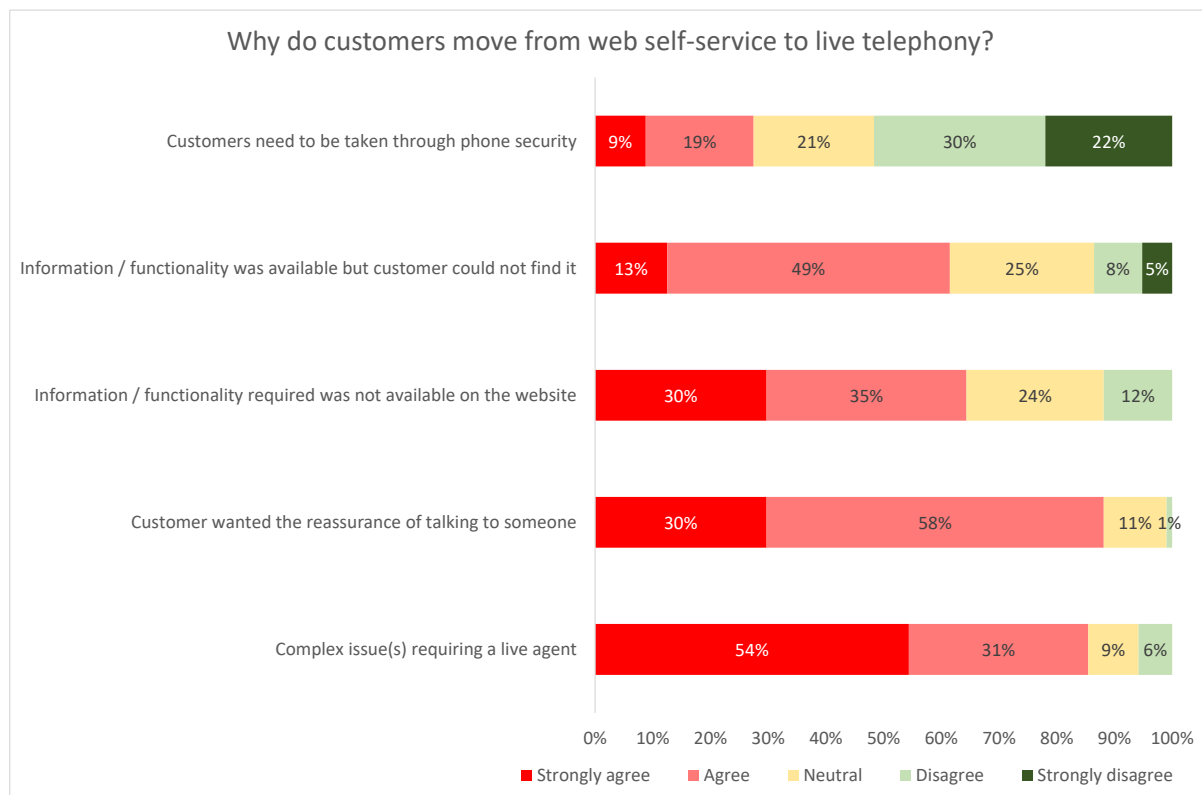
The next step is to convert these interactions fully into self-service channels, and the next section looks at how AI can help with this.

ENHANCING SELF-SERVICE

Many current self-service systems are inflexible and structured rigidly in their information flow, handling simple, unambiguous service requests by customers, such as account balances. These are often successful at delivering this information, and customers will choose this familiar and effective method of handling the simplest enquiries.

However, despite the widely acknowledged desire to move live interactions to automated channels, self-service is not as successful as it could be. Around 22% of calls into a contact center come from customers who have tried to resolve issues online through web self-service, but failed. For the voice channel, 32% of calls that go into a voice self-service channel are abandoned in favor of live voice.

Figure 9: Why do customers move from web self-service to live telephony?



Clearly, the main issue to address here is that many customers – rightly or wrongly – feel that their issue is too complex to be resolved by a chatbot or dealing with it themselves elsewhere on the website. In some cases, this will be true and there is nothing to be gained by insisting that even the cleverest chatbots can solve every enquiry. But in other cases, more effective chatbots could indeed reduce unnecessary calls.

The use case for AI-enabled chatbots to help with web self-service is very clear: there are a very significant proportion of live calls that could be handled through web self-service if the customer were confident they could do so, and that the automation solution was able to handle the type of requests being given.

CHATBOTS

Rule-based chatbots are trained to answer only a pre-programmed, specific set of questions, and while they can be extremely useful for very common enquiries, are not seen as part of the conversational AI world. They cannot handle queries outside of their programmed scope, and do not use machine learning to improve their responses. Any changes to their output or flow needs to be done manually.

AI chatbots use natural language processing – which includes speech to text transcription, allowing the voice channel to be automated – and have an understanding of the customer's context and intent. Machine learning allows them to improve responses over time. They can handle multiple questions in a single interaction and be deployed across numerous channels, including voice (where they are known as voicebots), email, social media and web chat.

Even a relatively small increase in chatbot sophistication can bring more complex enquiries into play where self-service is concerned.

Conversational AI encourages the site visitor to engage with them using natural language, rather than keywords. Many applications now offer multiple languages, encouraging customers to at least try to resolve their issue online even if the website is not in their native language, increasing the possibility that bots can help.

Virtual agents parse, analyze and search for the answer 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.

Sophisticated chatbot applications 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 that may contain a keyword. It may also try to exceed their brief by providing a list of related questions and answers to the original question, using machine learning and generative AI to predict what the next question may be and provide this answer as well.

The understanding of the context of what the customer is asking means the result can be 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.

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.

When the chatbot has low confidence that it has returned the correct result, it is able to escalate the customers query seamlessly to a live chat agent, who then has access to the self-service session history, enabling a greater chance of a successful resolution without repetition. It is generally considered best practice that escalations to real agents are not hidden from customers.

The eventual correct response can be fed back to the automated virtual agent and the knowledge base underlying it, which will make it more likely that future similar requests can be handled successfully through chatbots.

Implemented successfully, AI-enabled chatbots can provide a great deal more functionality and assistance than rules-based chatbots, going some way to addressing the main reason customers abandon the website to use telephony: that their issue is too complex.

Chatbots can also be used to address one of the other main reasons for channel migration: that the information and functionality is available on the website, but that the customer cannot find or use it.

Virtual agents can identify the reason for the customer query, and direct them to the correct part of the website, providing advice, links and ongoing support as needed.

Improving the sophistication and complexity of the issues that a chatbot can resolve will certainly help to deflect unnecessary live calls, but we should also consider the customer’s emotion and experience in this. 88% of businesses agreed that one of the main reasons for moving to telephony was that the customer wants the reassurance of talking to someone.

While chatbots can be given ‘personalities’ and avatars, the general rule of current usage seems to be that bots are shown to be bots, and are not pretending to be human.

It is debatable whether this will change in future as mimicry of human behavior and language further improves and the interactions become more convincing, but one way in which the chatbot can give reassurance is by gathering the entire conversation and generating a summary in real-time where the customer can see exactly what has been done.

If the customer is happy with the outcome and conclusions, this can then be emailed to the customer and assurances made that this has been kept on their file in case of any further issues or queries further down the line. This will encourage customers to use chatbots again, and reassure them that the organization understands and acts appropriately regardless of the channel used.

Self-service is not only about chatbots on the website. Voicebots provide a growing opportunity to reduce some live calls which could be handled as effectively – and certainly more quickly – by AI-enabled voice self-service.

VOICEBOTS

Telephony self-service accounts for only 6.5% of inbound interactions, but this is much higher in finance contact centers.

Quite apart from the potential cost benefits of AI-enabled voicebots handling customer identification as seen earlier in this report, the self-service capabilities of the voice channel can be developed far beyond what is common now.

A voicebot (sometimes known as a 'voice assistant') is an application made up from AI and natural language understanding (NLU). Voicebots convert speech to text, analyze it and respond appropriately using text-to-speech. It is integrated with CRM or a knowledge base in order to provide a greater accuracy and depth of response. It should be noted that a common use of speech recognition, such as keyword spotting in order to route a call, is not the same as a voicebot.

The success or otherwise of voicebots is very affected by how callers are encouraged to use the service. The customer needs to have the confidence that the system will understand their natural language request and may otherwise provide very short, one-word answers in the same way that some inexperienced customers still use keywords when interacting with chatbots.

If nothing is given in the way of prompts or examples, callers may give too little or too much information as they are unsure of the sophistication or capabilities of the system, and this may be a reason for high self-service abandonment rates.

Using prompts such as “describe in a few words why you are calling us, for example ‘to enquire about an existing mortgage application’” can be extremely useful in setting ground rules for the successful use of a more sophisticated voicebot self-service application.

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

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

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

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

System latency: users of even basic automated speech recognition have been aware for years that it is not close to the experience of speaking with a live agent, with pauses of several seconds typical as the system processes the speech before replying.

Solution providers claim that it is now possible to achieve latency of around half a second with an ideal voicebot set-up, but latency is something that businesses have to consider seriously when implementing AI-enabled voice assistants.

More information on the use and implementation of chatbots and voicebots can be found in [“The Inner Circle Guide to Chatbots, Voicebots & Conversational AI”](#).

REDUCING AGENT ATTRITION

The final way in which this report looks at how AI-enabled solutions can reduce contact center costs is by addressing the often hidden cost of agent attrition.

Industry estimates for the cost of replacing an experienced agent – including recruitment costs, training, onboarding and lost productivity – vary from \$10,000 to \$20,000 per agent.

For a 100-seat contact center experiencing the industry average annual agent attrition rate of 24%, this amounts to an extra cost each year of between \$240,000 and \$480,000, with no positive change being seen in performance or customer experience: this is the cost a contact center bears simply to stay where it is.

AI can predict agent attrition in a contact center by analyzing large amounts of data related to employee behavior, performance, engagement, and external factors, using machine learning and predictive analytics to identify patterns and risk factors that indicate when an agent is likely to leave:

Data Collection and Analysis

AI-enabled analytics gathers multiple data points at an individual agent level over time, such as:

- **Performance Metrics:** ongoing average handling time, first-contact resolution, number of escalations, and customer satisfaction scores
- **Attendance:** absenteeism and lateness
- **Engagement Levels:** do agents take part in optional activities, training programs, feedback surveys, or team meetings?
- **Workload and Schedule:** AI considers agent workloads, shift schedules, overtime frequency, and how these have previously impacted on attrition, burnout or agent dissatisfaction
- **Interaction Sentiment:** Sentiment analysis and emotion detection within customer interactions can show the agent's stress levels.

Identifying Risk Factors and Patterns

AI identifies key factors that correlate with higher attrition risk including:

- **Performance Decline:** a drop in performance compared to historical levels, such as lower CSAT ratings or missed performance targets, could indicate an agent is disengaged
- **Increased Absenteeism:** frequent absenteeism or requests for time off without a clear reason can be a strong indicator of potential agent attrition
- **Shift Preferences and Satisfaction:** if the agents is given mismatched schedules or frequent assignments to less desirable shifts (e.g., night or weekend shifts) without requesting them, this can affect agent morale and increase the risk of attrition or agent burnout
- **Low Engagement:** lack of participation in team activities, skipping feedback sessions, or low involvement in training programs can show agents are disengaged.

Of course, the AI analytics can't reduce agent attrition (and the attendant extra replacement costs) by itself: it can only alert management that an agent is displaying behavior or experiencing levels of stress or workload that have correlated with a likelihood of attrition. It is then up to management to handle the situation before it is too late.

SUMMARY

This report has looked at the various ways in which AI can assist businesses to cut contact center's operational costs, particularly in making agents more efficient as their salaries constitute the majority of contact center operating expenditure.

AI can be used to improve operational efficiency, enhance customer service, and alleviate common contact center challenges like long call times, agent attrition, and high call volumes, all of which impact heavily on overall cost.

Recommendations include:

- **Improving First-Contact Resolution (FCR):** AI can analyze interaction data to identify common issues and provide agents with real-time solutions, thus reducing repeat calls. AI-enabled systems can also route calls to the most appropriate agent, ensuring faster resolution and minimizing transfers
- **Proactive Customer Outreach:** AI can anticipate customer needs based on historical data and send automated notifications or reminders, reducing the likelihood of inbound calls. Proactive issue resolution through AI-driven follow-ups and sentiment analysis also reduces escalations and improves customer satisfaction
- **AI-Driven Workforce & Quality Management:** AI can optimize staffing by predicting call volumes and agent availability, reducing idle time or under-resourcing. AI tools can also improve agent performance through real-time feedback and training based on analytics and can also analyze 100% of calls automatically in order to assess quality with exceptional accuracy and insight
- **Automation of Routine Tasks:** AI can automate tasks such as customer authentication and post-call note generation, reducing call handling time. AI-driven chatbots and voicebots can handle enquiries, cutting costs by deflecting calls to self-service channels and working alongside live agents to reduce the time they spend crafting answers
- **Reducing Agent Attrition:** AI can predict when agents are likely to leave based on behavioral data, allowing management to intervene early and reduce turnover costs.

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Research reports: First-Contact Resolution; Revenue Maximization; Workforce Engagement;
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