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Powering the AI-Human Hybrid Contact Centre

How technology, AI and human agents are working together to create the contact centre of the future and transform the customer experience

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Introduction

Gradually, then suddenly

When asked how people go bankrupt, Hemingway famously replied, “Gradually, then suddenly.” Which is an apt description of how AI technology with genuinely human-like conversational ability – promised for years, but never materialising – suddenly crept up on us last year with the launch of Chat GPT 3.5.

Now scarcely a week goes by without a new breakthrough product or piece of research appearing. How far AI will go is anybody’s guess.

What we do know is that useful AI is already here. Chat GPT is regularly being used by around 180 million people. It was the fastest consumer technology ever to hit 100 million users, which it did in just two months. Tik Tok, the previous record holder, took nine months.

And Chat GPT is just one of many AI services. There is clearly an appetite among consumers to use these kinds of technologies.

According to a **Grand View Research report**, the global chatbot market is expected to reach $27 billion USD by 2030. UiPath predicts that generative AI-based conversational assistants (like Chat GPT) will grow at 28% per year (CAGR) until 2032.

We are potentially talking about a technology that will transform not just business but society as a whole over the next decade, on the same kind of level that the smartphone did.

Customers want self-service

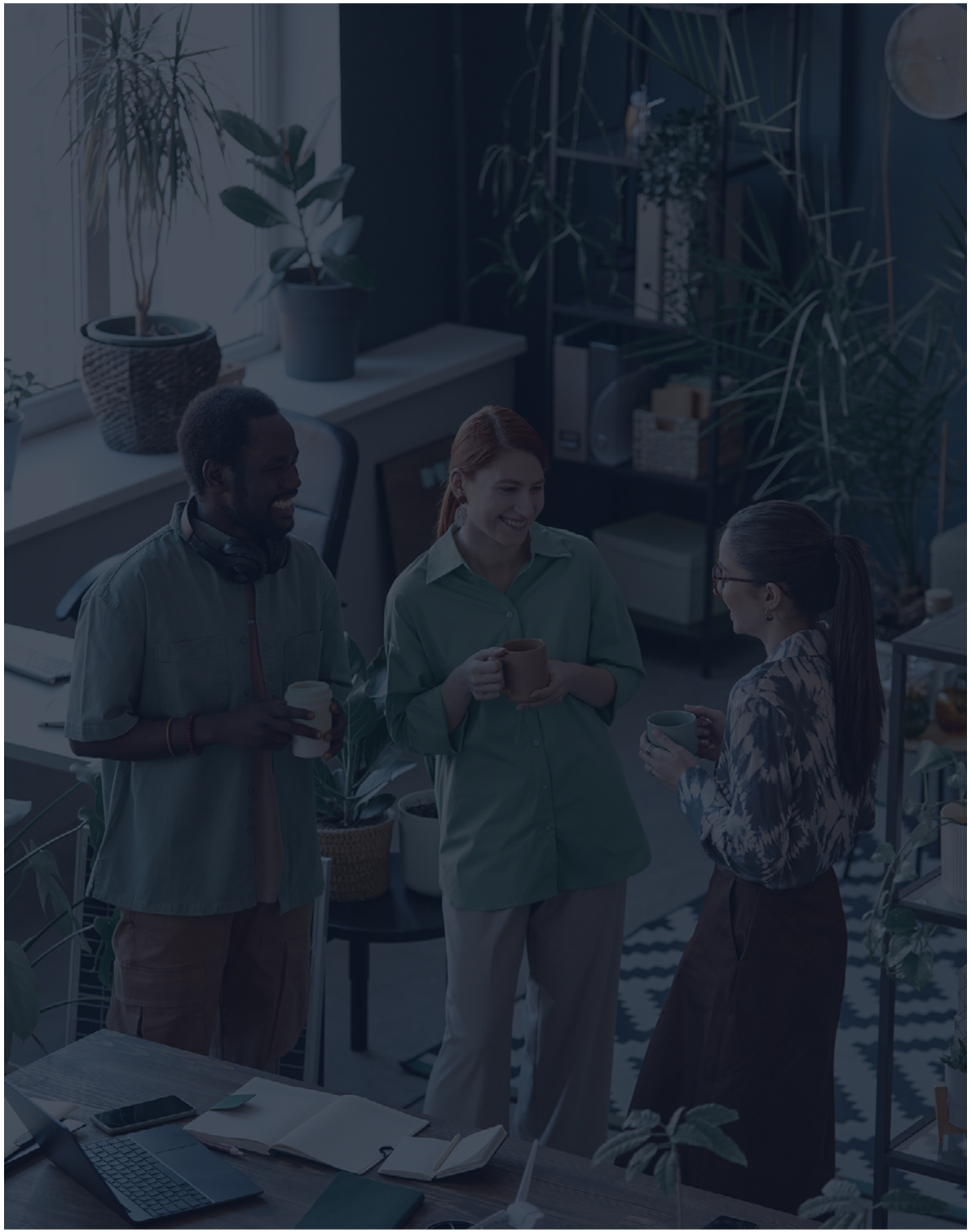
It's no secret that customers just love to help themselves if they can. And it's not just millennials. A recent Zendesk survey found that 67% of consumers prefer self-service over speaking to a company representative.

The number of customer service interactions predicted to become fully automated over the next few years varies from 10% by 2026 (Gartner) to 95% by 2025 (Servion). Gartner also estimates that by 2026, 20% of contact centre interactions will be initiated by a bot acting on behalf of a customer – a so-called 'machine customer'.

Conversational AI chatbots powered by the type of technology behind Chat GPT (Large Language Models) are estimated to cut contact centre labour costs by $80 billion. What business is going to look that gift horse in the mouth, particularly if it also coincides with what their customers want?

The global chatbot market is expected to reach $27 billion USD by 2030.

—GrandViewResearch.com



Businesses want to automate

It's no surprise that businesses want to automate as much as they can. They have been at it quite seriously now for about five centuries. Arguably, our modern world has been built on the back of thousands of innovations that sought to increase productivity and reduce labour.

UiPath's Automation and AI Trends 2024 report suggests that US companies will invest over $100 billion on AI by 2025, with global spend double that.

And it's not just Conversational AI. Businesses are investing heavily in technologies like RPA (Robotic Process Automation), IDP (Intelligent Document Processing) and process mining to automate as many business processes as possible and reduce labour costs.

The concept of Straight Through Processing – where business transactions, usually financial, are processed without human intervention – is catching on in the wider business world, particularly for back office functions such as payments, contracts and distribution.

The downside? While previous cycles of automation since the Industrial Revolution have ultimately created more new jobs than the old jobs they replaced, there is always turmoil during the transition. This time, according to Euronews, 25% of jobs across many industries could be lost by 2030. A Goldman Sachs report found that up to 300 million full-time jobs worldwide could be impacted by AI systems like ChatGPT.

A new model for the contact centre

What does this all mean for contact centres, which are among the biggest employers in the world?

Given that the lion's share of any contact centre's costs is on payroll for human agents, supervisors and other workers, you would expect many to be chomping at the bit to automate everything and slash costs dramatically.

That is not necessarily going to be the case, however. For now, at least, some even predict a rise in the number of customer service agents. In a recent report, Calabrio found that the role of the agent will change in such a way that, even though they will become more efficient as they will be supported by AI, the tasks they perform will become more complex and timeconsuming. Meaning you could still need more of them.

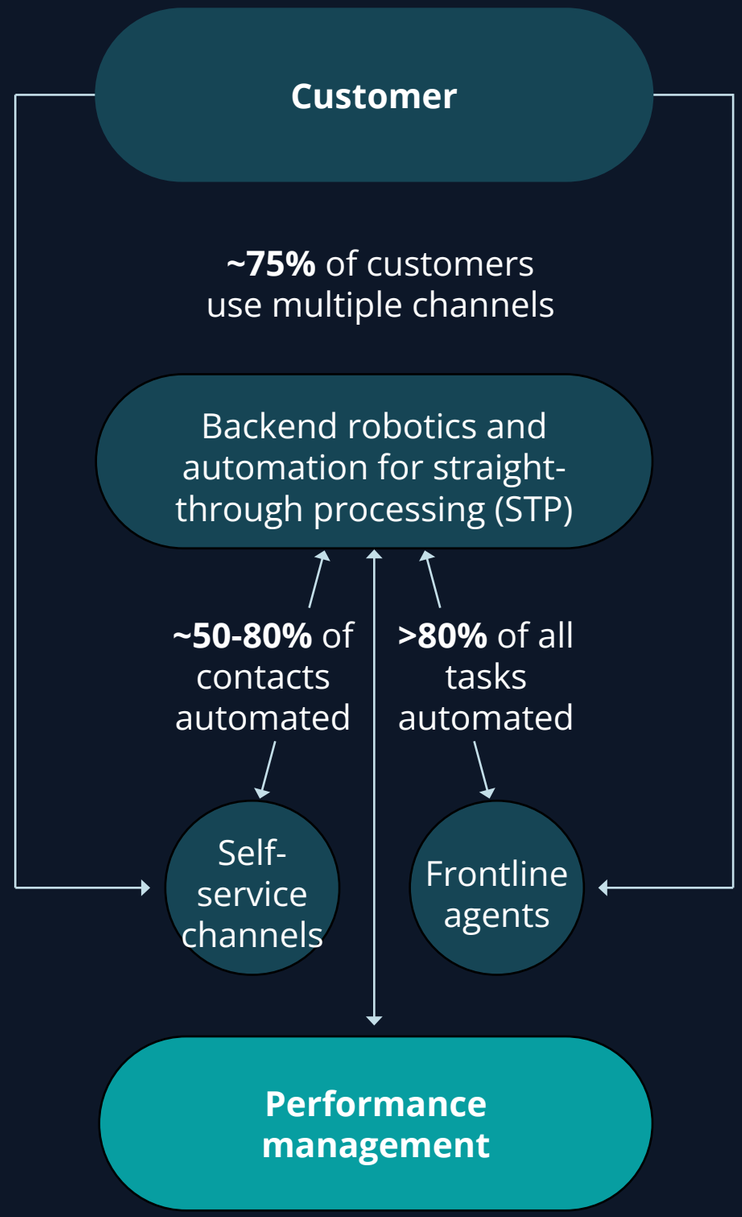
Here's the good news though if you're trying to make payroll; it could become much less expensive to hire and train these agents. AI training tools dramatically increase speed to competency, and there is also data to suggest that attrition is reduced by around 10% when agents are supported by AI technology. As a result, overall hiring and training costs go down even if headcount goes up.

So, what will all these human agents be doing if AI is increasingly doing a lot of the heavy lifting? 75% of consumers prefer to interact with a real customer service person despite improvements in automated solutions (PwC).

Here is what the AI-powered contact centre looks like:

The stages of an AI-supported customer-service process

- **A Proactive communication**
  linked to key demand drivers
- **B Intent recognisiton and nudges**
  before customer reaches out
- **C Omnichannel enablement**
  with self-service for service journeys
- **D Conversational AI**
  at each entry point
- **E Frontline enablement**
  with coaching for agents supported by a knowledge respository and AI
- **F Highly personalised, advisory interactions**
  drive relationship and value, with STP or quick resolutions of issues
- **G Performance measurement**
  via a centrally managed nerve centre that tracks resolution accuracy and efficiency



Source: McKinsey & Company

AI screens and triages all interactions at whatever point they come into the contact centre. The vast majority are processed automatically with no human intervention. Those that need human assistance are passed over to an agent, who uses AI technologies to hyper-personalise the interaction and handle it more efficiently and effectively than in the past.

A study by the Nielsen Norman Group found that agents using an AI tool like Chat GPT were able to handle nearly 14% more customer interactions per hour. That kind of efficiency increase soon adds up.

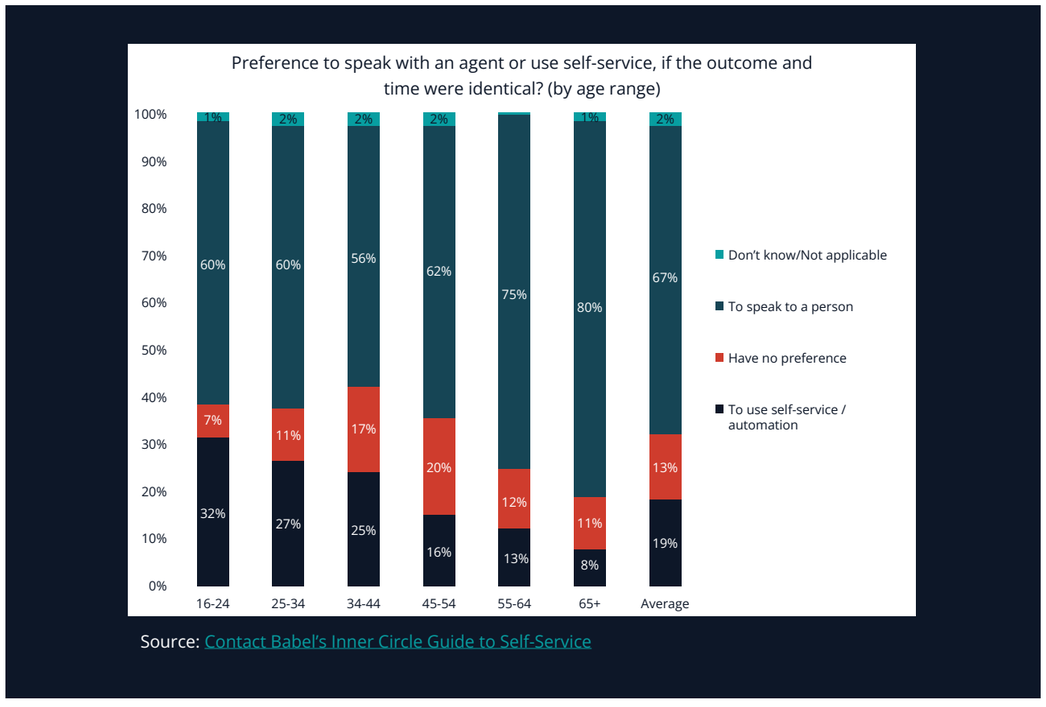
Finally, whether a customer interaction is handled by a human or by an automated system, as many as 80% of the back office tasks such as order and payment processing, document and contract creation, data entry and other admin processes happen automatically.

So the question then becomes, how do you build that model? What interactions and tasks get automated, and why? What technologies are needed to make the automation part of it work? And what technologies are needed to ensure human agents are able to hold up their side of the bargain too?

AI and Automation in the Contact Centre

The first part of the equation is to use AI and other technologies to automate as many contact centre and back office functions as you can. But a word of warning!

Before you automate any customer interaction, check that's what your customers want. The thirst for selfservice and automation is not felt as keenly by all demographics and age groups.

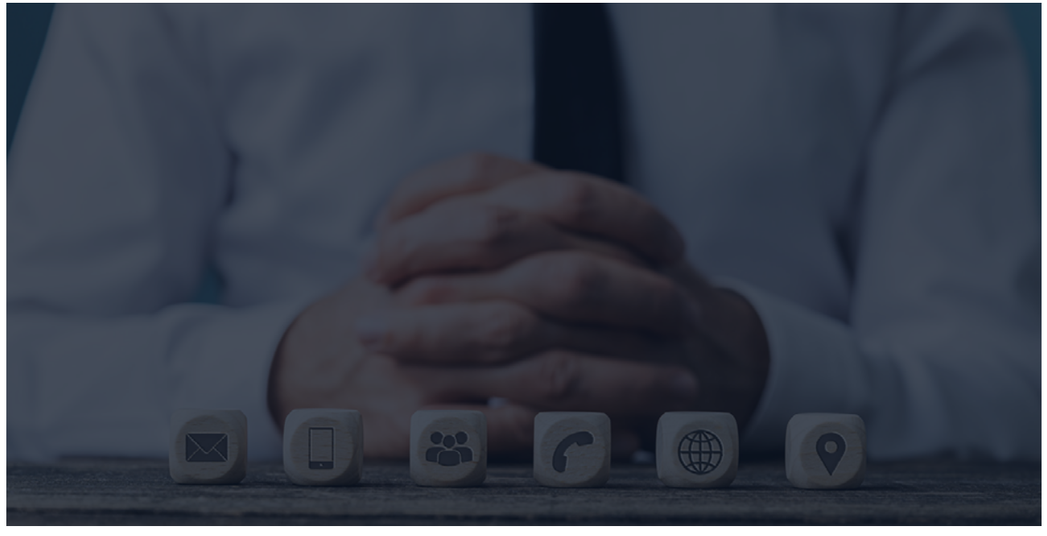


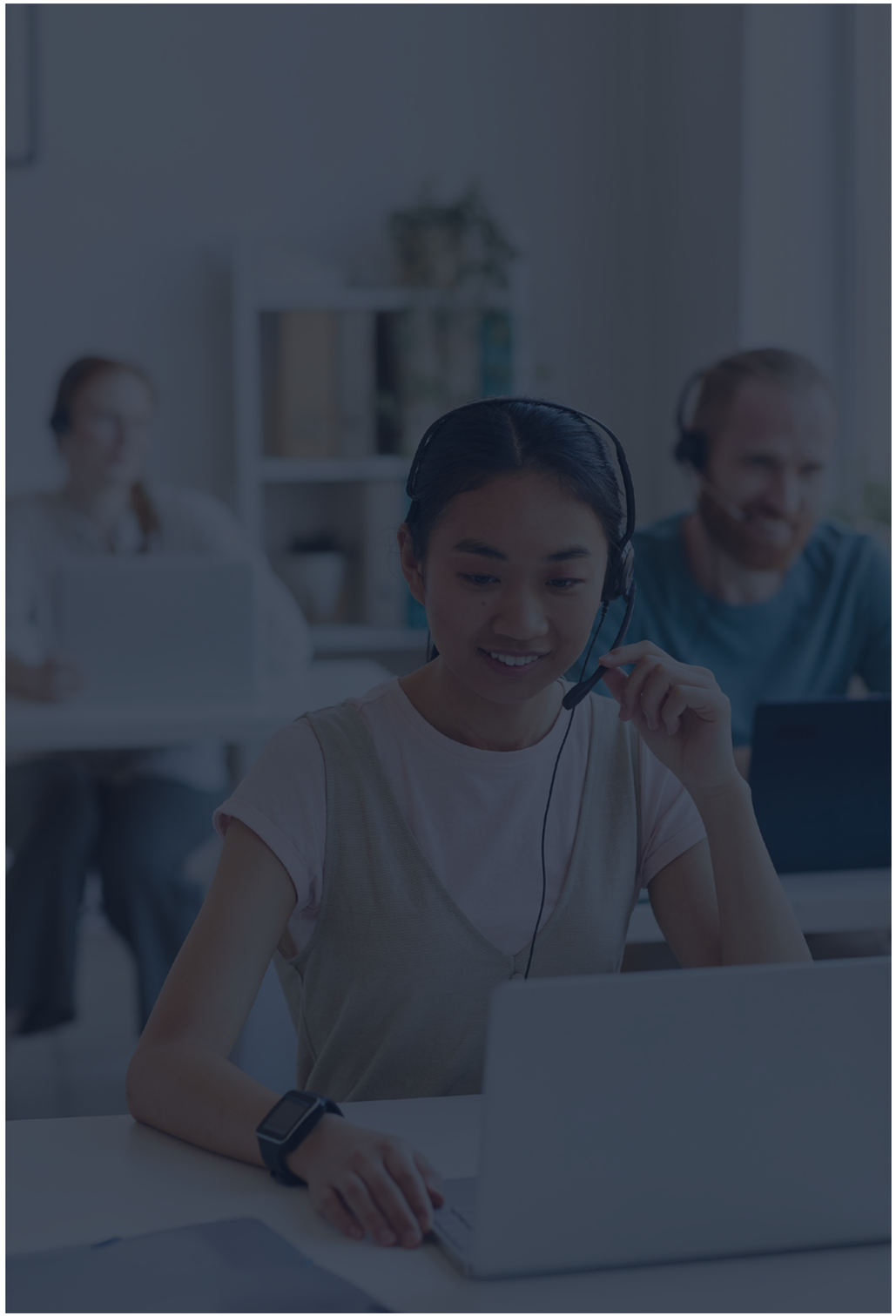
Source: Contact Babel's Inner Circle Guide to Self-Service

As you can see from the above graph, all things being equal, most consumers still prefer to speak to a person. Surprisingly that includes younger generations too.

Regardless, it appears that most contact centres are starting to deploy conversational AI in much the same way they have deployed IVR over the last 20 years – as the first line of defence/greeting at most entry points into the contact centre. Its primary purpose is to deflect customers to self-service and lower cost channels, or to triage them into the most appropriate live agent queue.

AI and automation are also used, of course, to completely automate routine customer interactions and many of the back office processes that follow on from a customer contact. In this next section we will have a quick look at several of the main uses of AI and automation.





AI-Powered Routing and Triage

At the frontline, AI systems, primarily in the form of sophisticated chatbots and virtual assistants, have redefined the way customer interactions are initiated and managed. In the form of Voice or Visual IVR, AI has the ability to more efficiently route and triage customer queries than traditional IVR.

Using advanced algorithms, AI systems can use natural language to ask customers about their problem. Unlike before, this can now be a genuine two-way dialogue. Using the information it gets, the AI can swiftly assess and direct customer inquiries to the appropriate channels or agents, or handle them itself, ensuring an efficient and effective service experience. Depending on the channel used, this function could be carried out by a chatbot on webchat, messaging or social media channels.

Whether voice or non-voice, the general idea is for the AI to take each interaction as far as it possibly can. If at some point it gets stuck, or the customer requests it, the chatbot hands over to a human agent.

Enabling technologies include:

Voice Recognition Technology: Used in voice bots and IVR systems to interact with customers through voice commands, providing a hands-free service experience. It's used for tasks like call routing, basic inquiries, and voice-activated self-service.

Natural Language Processing (NLP): Empowers chatbots and virtual assistants to understand and respond to customer inquiries in a more humanlike manner. NLP is used for enhancing customer interactions, ensuring more accurate and contextually relevant responses.

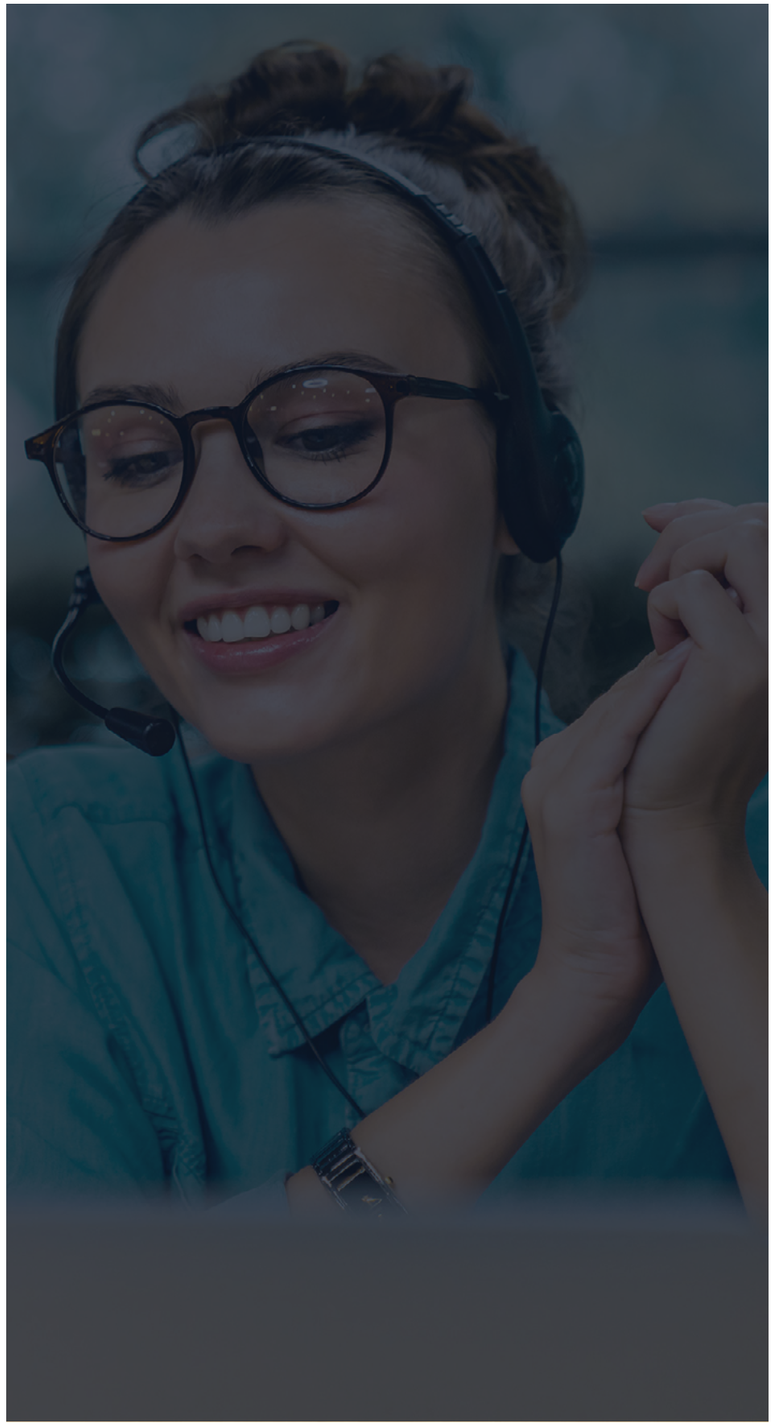
Automating Routine Customer Interactions

Beyond triage, AI is also increasingly handling entire customer interactions without the intervention of human agents. Over the past few years this type of automation has been handled by chatbots and, to a lesser extent, voice activated virtual assistants.

Until the advent of LLMs (Large Language Models) like Chat GPT, most chatbots were not really intelligent and could only produce a number of pre-programmed responses to a narrow set of queries they had been trained to recognise. Voice activated assistants like Siri and Alexa have been in many people's homes for a number of years, but are still quite limited in what they can do.

The new generation of LLM Generative AI bots, however, are capable of conversing naturally using voice or text on an almost unlimited range of subjects. Because they are accurate at interpreting natural language, they generally identify the customer's intent correctly and are able to respond naturally just like a human agent would.

Over the coming years, the breadth of queries it will be possible to automate should expand considerably – to the point where the decision about whether to automate a particular interaction type will not be down to the technology but other factors such as customers' preferences, the needs of the business, and the brand experience you want customers to have.



Enabling technologies include:

Large Language Model (LLM): An advanced AI that processes and generates human-like text by analysing vast datasets to understand language patterns and context.

Chatbots and Virtual Assistants: AI-powered chatbots and virtual assistants interact with customers using natural language processing. They handle routine inquiries like account information, FAQs, and basic troubleshooting, enhancing customer self-service options.

The Rise of Bot-to-Bot Communications

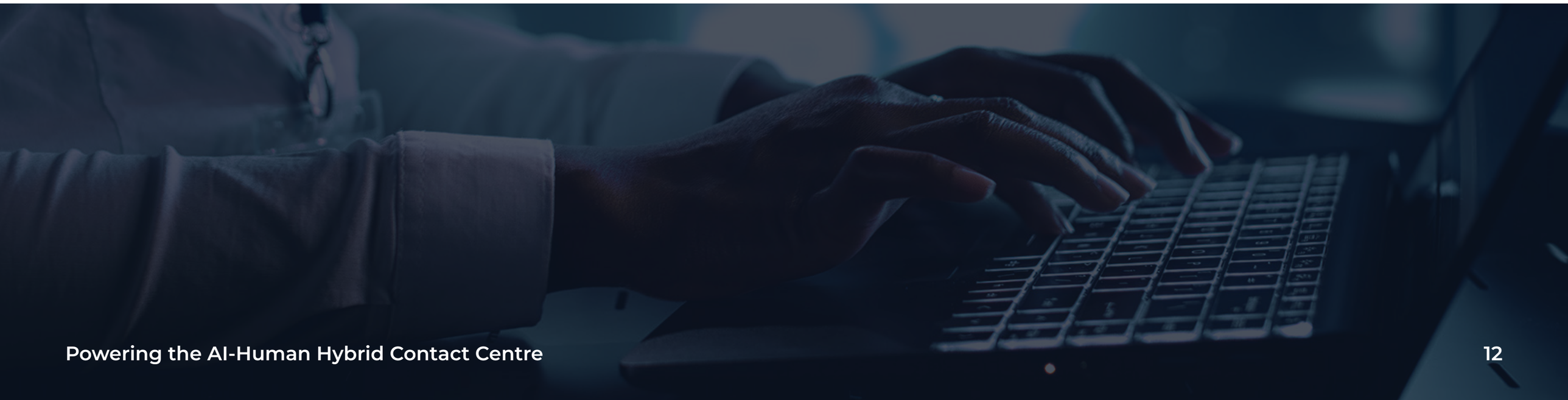
Another upcoming frontier in the evolution of AI in customer service is the rise of bot-to-bot communications. This novel approach allows automated systems to interact with each other, creating a streamlined and efficient process for handling various back-office tasks and customer service functions.

It is not beyond the realm of possibility that most consumers could, within a decade, have their own personal virtual assistant bots that handle routine transactions for them like paying bills, and even sort out customer service issues for them. With more networked sensors being placed into more devices to create the Internet of Things (IoT), much of the bot traffic into a contact centre could also come from such smart devices, such as a printer automatically ordering a delivery of ink. Bot-to-bot communication paves the way for faster, more efficient customer service by automating interactions between different systems and platforms.

Enabling technologies include:

Machine Learning Algorithms: Continuously improve the accuracy of chatbots, virtual assistants, and other AI tools by learning from interactions and data patterns. Also used to refine customer service responses and predict customer needs.

Predictive Analytics: Uses data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data. Can anticipate customer needs and preferences, allowing bots to offer more relevant and proactive service, predict potential issues or requests in order to address them proactively. Also aids decision-making between bots, leading to more efficient and accurate responses and actions.



Back Office Process Automation

We have looked so far at how customer interactions get routed more efficiently or become entirely automated. At the end of most interactions, of course, actions need to be taken such as orders processed, payments taken, and products despatched. There is also usually wrap time when the agent writes up notes from the interaction they just had and launches whatever follow up processes are required.

Technologies such as Generative AI, Robotic Process Automation (RPA), and Intelligent Document Processing (IDP), among others, are starting to automate many of these previously time-consuming and labour intensive activities. For example, rather than write up notes after a call, the entire interaction can be automatically and neatly summarised by a Generative AI model such as Chat GPT and entered into the CRM system, saving the agent a significant amount of wrap time.

By automating these mundane and repetitive tasks, AI allows human agents to concentrate on tasks that require more critical thinking and problem-solving skills.

This not only improves overall productivity but also enhances employee satisfaction by allowing them to engage in more meaningful work.

Enabling technologies include:

Robotic Process Automation (RPA): Automates repetitive, rules-based tasks. RPA is used in back office processes like data entry, form processing, and document handling, improving operational efficiency and reducing manual workload.

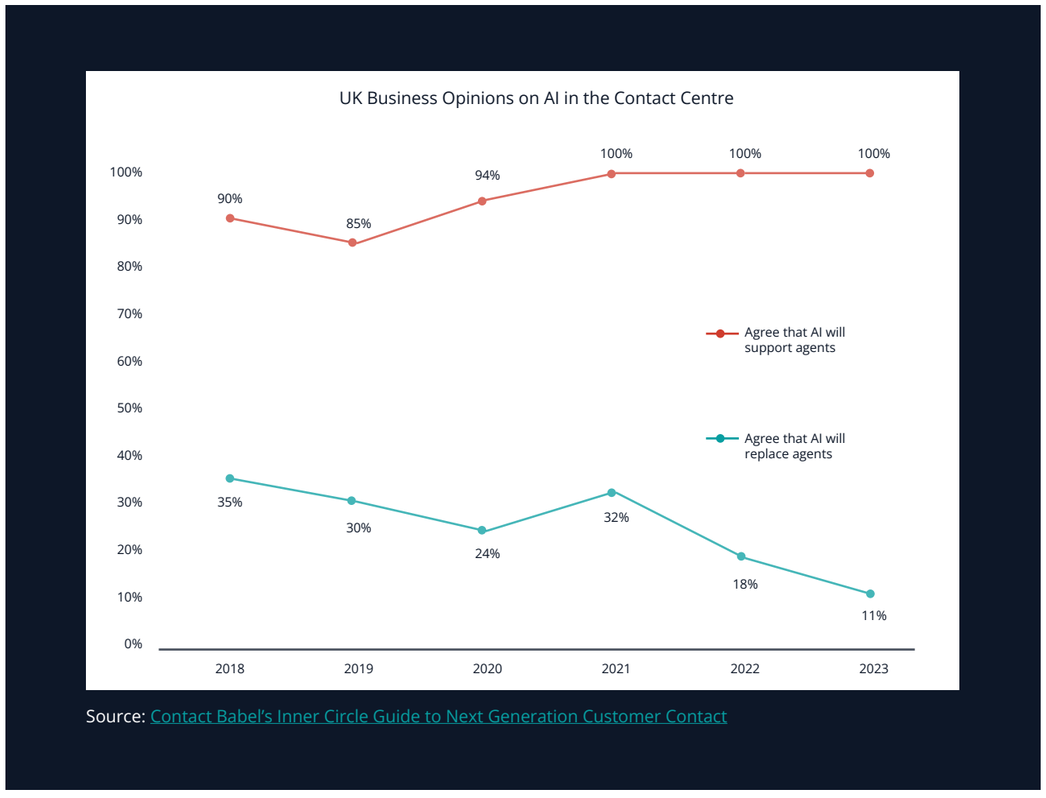
Intelligent Document Processing (IDP): Focuses on automating the processing and handling of documents and unstructured data. IDP is used for tasks like extracting data from forms and emails, aiding in faster and more accurate data management.

API-Driven Automation: Integrates with various systems to automate complex tasks across different platforms. Used in customer service for tasks like booking, billing, and connecting different service tools, enhancing the seamlessness of customer experiences.

The Role of the AI-Enabled Agent

The rise of AI and automation of course leads to one obvious question: Will the day come when chatbots and voice bots entirely replace human agents in the contact centre?

Let's look at what the professionals have to say:



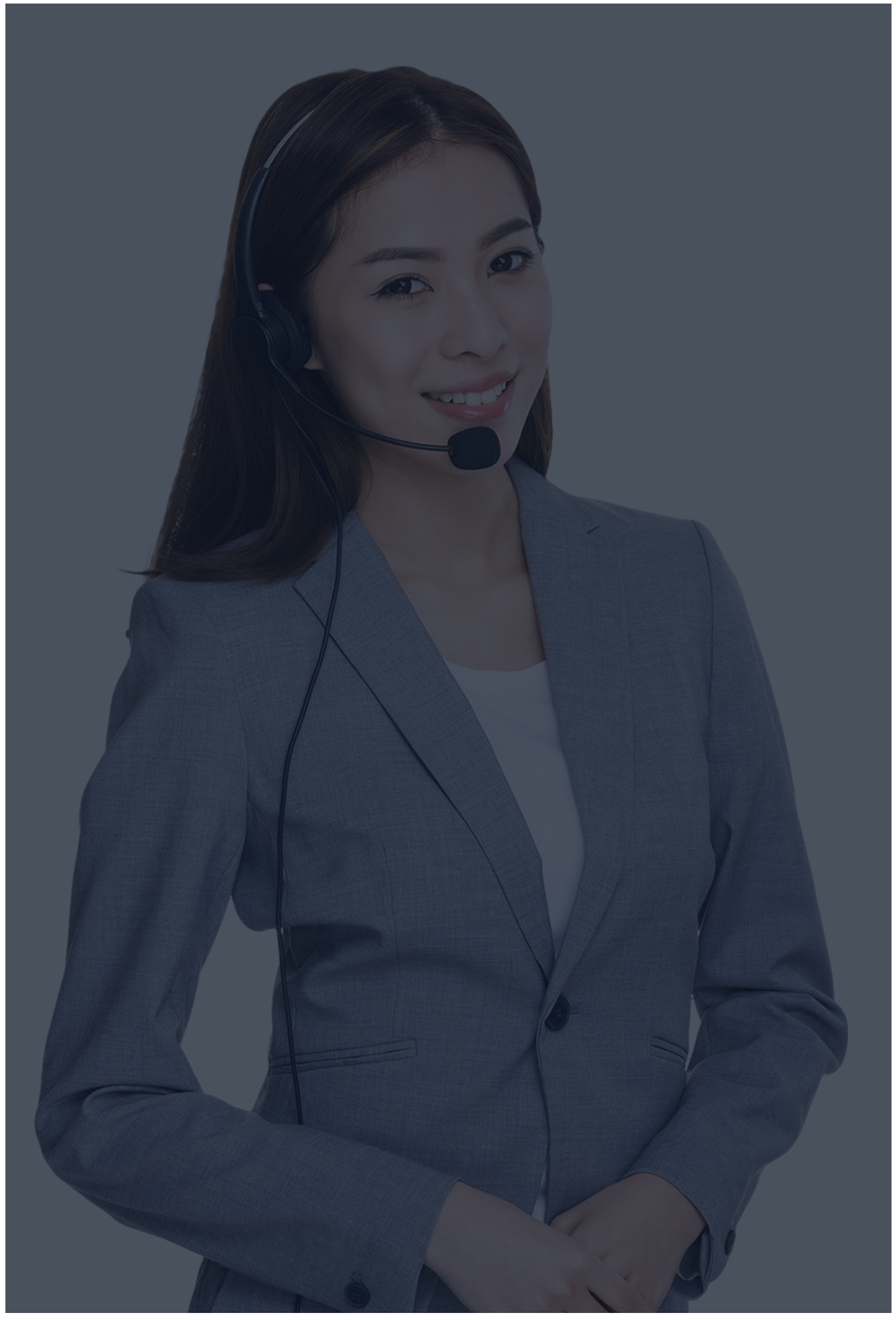
Source: Contact Babel's Inner Circle Guide to Next Generation Customer Contact

As you can see in the graph, as the capabilities of AI have become clearer and more advanced over the last few years, the number of contact professionals who believe AI will one day replace agents has decreased significantly, from 35% in 2018 to only 11% today.

This suggests that while genuine AI was thought to be a long way off, almost in the realm of science fiction, people could ascribe to it any abilities they wanted. Now that we have AI capable of holding a natural conversation, people are starting to judge it more on its genuine practical usefulness, rather than their imaginations. And reality is generally more prosaic than fantasy.

The Indispensable Human Element in Customer Service

Despite AI's efficiency, the depth of empathy and emotional intelligence inherent in human interactions is difficult, if not impossible, to simulate. There is often a nuance and subtlety to human interactions that it takes being human to pick up on – at least for now.



It is this connection between people that transforms customer service from being merely about transactions to creating meaningful experiences, building trust, and fostering long-term relationships. Those are exactly what is required for a bond to be created between a customer and a brand.

The Synergy of Artificial and Human Intelligence

Rather than replace human agents in the contact centre, most people believe the role of AI will be to assist and empower agents to deliver better results more quickly and efficiently. This is being called the Human-AI Hybrid Contact Centre, and it's what most people expect the future to look like.

In the hybrid contact centre, technology supports the human agents in several important ways:

Automating simple and routine interactions: If chatbots and voice bots are handling the routine enquiries, this frees human agents up to focus on the interactions that bots either cannot or should not handle. These are likely to be interactions with higher stakes, of a higher value to the company and customer, and probably more complex or emotionally fraught in nature.

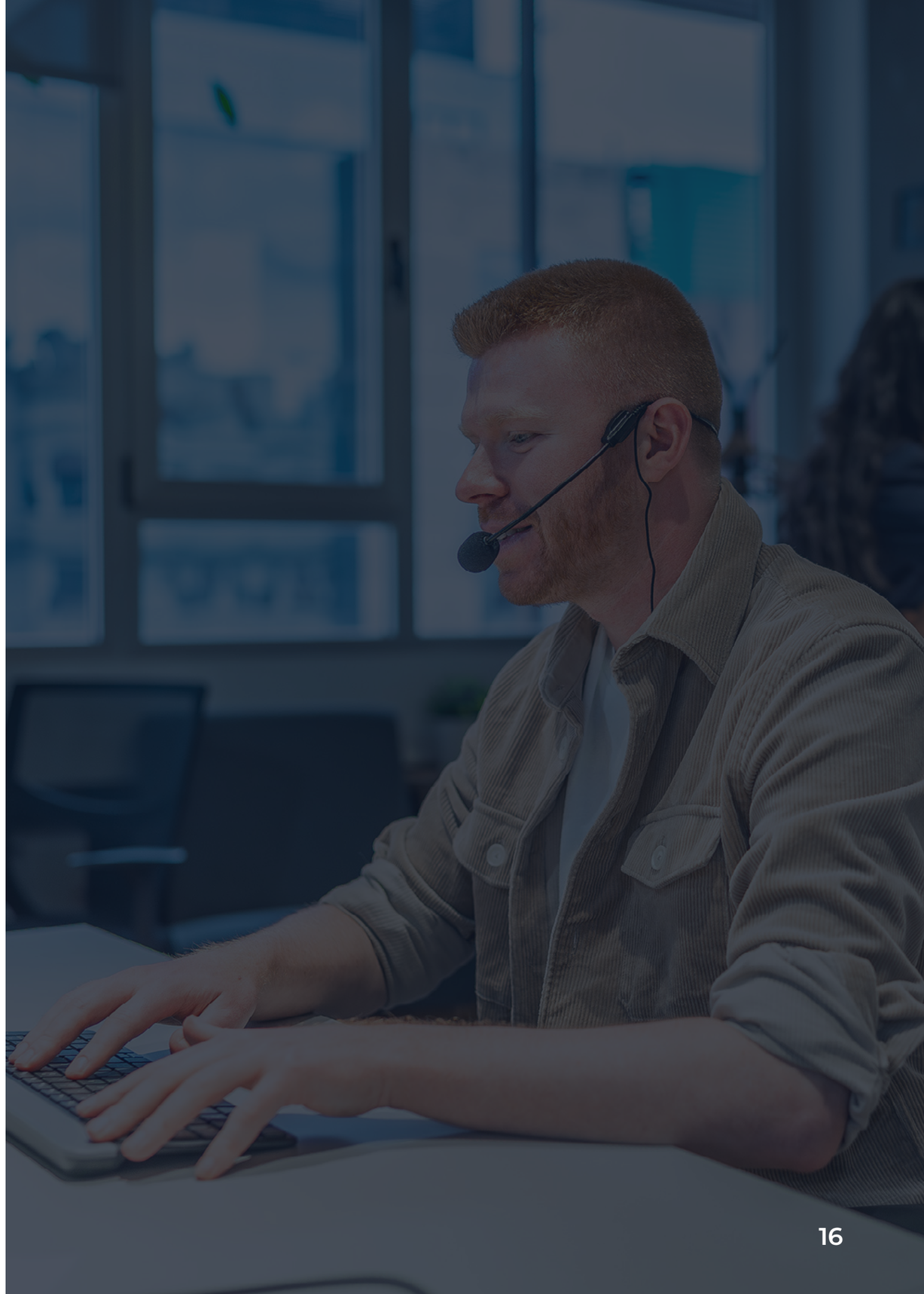
For example, if a customer has lost their credit card they're probably happy to just cancel it via chatbot and order another one. However, if a customer has had their card stolen, that can be a traumatic experience. The opportunity to hear the reassurance of a human voice may be welcome.

The benefits of this for customers, for agents, and for the company are enormous. Vulnerable or valuable customers get the one-on-one attention they need to solve their problems. The agent can take the time to deal with such a situation properly, knowing they are under less pressure to hit AHT (Average Handling Time) and other productivity targets as the bots are handling the volume interactions. And for the company it's a win-win, as they have more satisfied customers and more engaged staff, who are less likely to leave and more likely to give customers a quality experience.

Triage and routing: Not only will AI handle routine interactions with no human involvement, it will also triage most if not all incoming calls and webchats. There are several advantages to doing this.

Firstly, if an AI gathers information about the query from the customer and does the initial KYC (Know Your Customer) identification, it saves the agent a lot of time once they start speaking (or chatting) with the customer. This is a saving for the company too as agent time is billed in minutes or hours, whereas AI costs do not scale linearly in the same way as labour costs.

Furthermore, customers are more likely to be connected to the correct agent for solving their problem. And when the customer is connected, the agent will have already been briefed on the reason for the call and can have all the customer's details already popped on to their screen.



Enhanced information and decision making: Once on a call or chat with a customer, the first job of an agent is to find out everything they can about the customer's problem, and then hopefully go solve it. To do this job properly they require the right tools.

First of all, they need to be able to access the company's front-end and back-end systems such as the CRM platform, transaction database and payment processing system. Most of the time agents will have to switch between these applications and their contact centre platform where they are handling the call or chat.

This quickly becomes unwieldy and difficult, particularly for an agent helping multiple customers at the same time, as they often do in live chat. Whether all your systems are integrated or not, a single user interface such as an agent desktop or a workflow (a kind of advanced and flexible script) in which agents manage the whole interaction provide a more seamless user experience to agents, and ultimately to customers too.

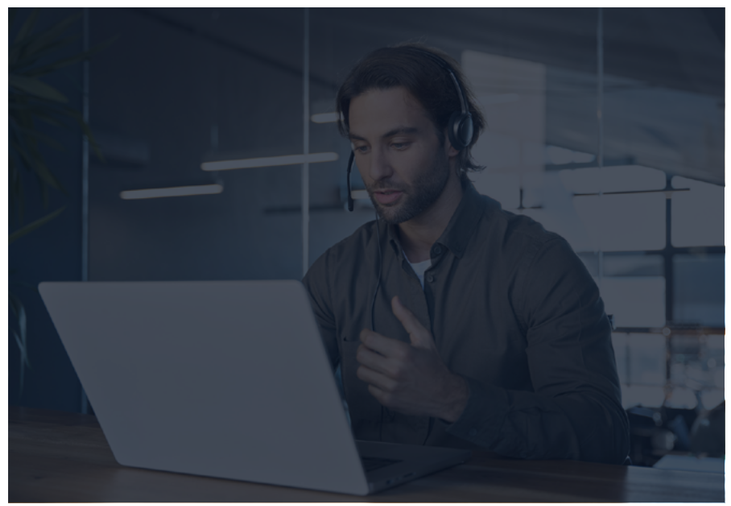
Secondly, agents need to know what questions to ask and what steps they need to take the solve the customer's problem. A workflow tool that prompts agents with what to say, and then allows them to input answers can go a long way to boosting AHT and other indicators like FCR (First Contact Resolution) as well as customer satisfaction. Workflow software helps agents solve customer problems more quickly.

The more intelligent your workflow software is, the better the results you will achieve. For example, some workflow software uses conversational analytics (or real-time analytics) and sentiment analysis to listen to interactions in real-time. The AI doing the listening can then prompt the agent with information relevant to the call by simply popping it on their screen. This could include past purchase history or a suggestion of an offer to make based on the AI's prediction of what will appeal, increasing personalisation of the interaction for the customer.

Upskilling and Training: The increased use of AI in customer service means that human agents will only be dealing with more complex or thorny issues. Which in turn means that they are going to need more training than before to up their empathy and investigatory skills.

The focus should also be on continuous learning and development to ensure agents can effectively collaborate with AI tools. This involves training agents to interpret the output of analytics and manage AI driven tools, all while retaining their soft skills.

AI interaction simulations can assist here in allowing agents to practice multiple different types of interactions with a Generative AI posing as different types of customer with different types of problems.



Technologies that Enable the Human-AI Hybrid Contact Centre

Advanced Knowledge Management: A robust knowledge base with detailed troubleshooting guides and access to expert advice. This software helps agents to resolve complex issues by providing them with comprehensive resources and a smart search function, assisted by AI, which enables quick problem-solving and improves the quality of response.

Customer Intelligence Platform: These platforms consolidate customer data, purchase history, and preferences to give bots and agents alike an instant snapshot of who a customer is and what their preferences might be. Such platforms provide valuable insights into customer behaviour and the journeys they take so that agents can offer personalised service and address issues more effectively.

AI Virtual Assistant: Either on their desktop or in their workflow application, software like this helps agents by suggesting relevant knowledge articles and solutions based on the context of the current customer interaction. They can also recommend next best actions during a call, enhancing the quality of service and boosting sales through informed suggestions.

Unified Desktop Tools: Integrate various systems, CRM data, and agent resources into a single interface. They streamline the handling of customer interactions across channels, providing agents with all necessary information in one place and reducing handle time.

Advance Contact Centre Workflow: Guides agents through individual customer interactions by presenting a systematic, step-by-step process for them to follow.

This ensures consistent, high-quality service. By breaking down complex customer issues into manageable tasks, the workflow tool helps agents navigate through inquiries efficiently, offering appropriate responses and solutions.

Advanced Analytics: Continuous analysis of interaction data and customer metrics allows for ongoing identification of improvement opportunities. These insights help in refining processes and enhancing customer experience, informed by data-driven strategies.

Intelligent Omnichannel Routing: This system routes customer interactions across various channels to the most appropriate agents, ensuring a smooth and consistent customer experience regardless of the communication medium used.

Real-Time Coaching and Training: Tools providing real-time guidance and virtual reality training environments enhance agent skills, especially in handling complex scenarios and developing soft skills, leading to improved performance and efficiency. Generative AI can take on the role of trainer and simulate interactions by posing as real customers, enabling agents to play out realistic scenarios.

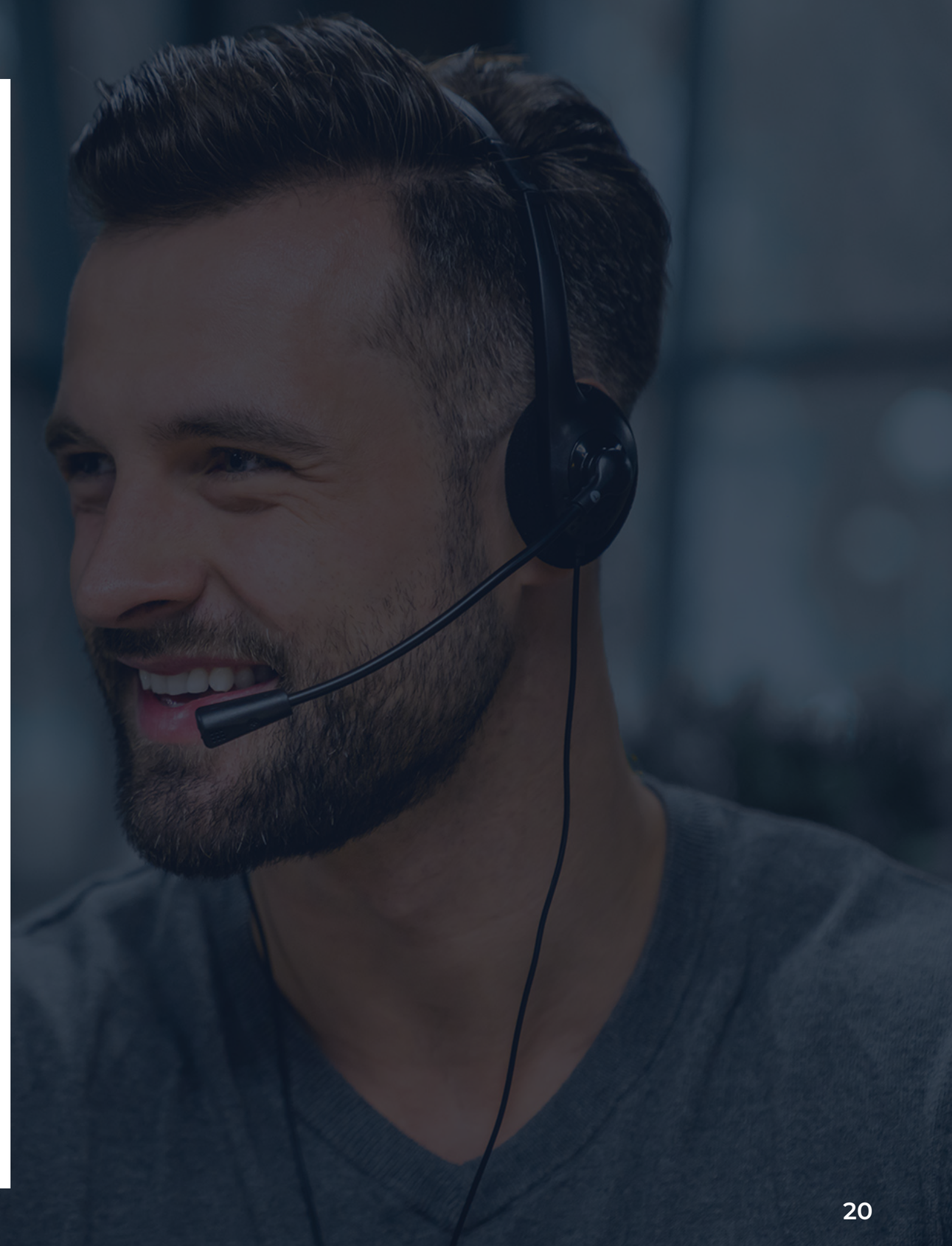
Gamification: Incorporating game-like elements into agent activities, such as leaderboards and reward systems, to motivate and engage agents, leading to improved performance and job satisfaction.

The Agent's New Role in the Hybrid Contact Centre

The idea behind the Human-AI Hybrid Contact Centre is that technology will automate most of the routine, repetitive work that has historically prevailed in the contact centre and back office. As we have seen, that doesn't necessarily mean the end of the road for human agents, or even a reduction in headcount.

Human agents excel in areas requiring creativity, nuanced understanding, and prudent judgement – qualities where AI still falls short. For example, no chatbot can match a compassionate human in sensing distress and offering reassurance. No AI tool today has the ability to tenaciously chase up a customer issue, and track down whatever information is needed to solve the problem, wherever it may be hiding – in a colleague's brain, in an enterprise system, in a deprecated database.

Human agents, in short, will develop into a mixture of empathetic counsellor, private investigator, and customer champion, taking up arms on behalf of the individuals they interact with to get their issues resolved. They won't do this alone, of course – they will be ably assisted by the technology that surrounds them.



How Invosys CCS Enables the Human-AI Hybrid Contact Centre

For over 20 years, Invosys's contact centre software has been designed to improve the experience of agents by putting the power of the contact centre's entire technology stack at their command from a single interface.

Our workflows guide agents through complex interactions, prompt them with the next best step to take, and allow them to pull data from and input data to multiple systems without ever having to switch screens.

Now imbued with Machine Learning and AI capabilities, Invosys's workflow, knowledge base, analytics, QM and training software are built to empower the agent to deliver the customer experience your customers deserve.

To arrange a demo, and discuss how Invosys's solutions can work for your business, please get in touch.

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