



Transforming Business Operations with Customer Service Automation and AI

In this ebook you will learn:

- What is Customer Service Automation
- How can AI enhance customer service
- How AI-powered Chatbots and Virtual Assistants work
- How to use automation to increase operational efficiency and reduce costs
- What is the future of customer service
- How you can get started - with or without a contact centre

Artificial Intelligence and service automation are game-changers that are transforming organisations around the globe. Customer Service Automation is reducing costs, improving operational efficiency and providing a better experience for customers and employees.

We are entering an era where customers expect the effortless and personalised customer experience offered by brands like Amazon.

This ebook will explore how you can utilize **Conversational AI** to automate customer engagement and deliver an exceptional and consistent customer experience 24/7.

It explains the choice of digital interfaces available through which your customers can engage.

Contents

Artificial Intelligence is a broad topic that includes technologies such as Machine Learning, Natural Language Understanding, Speech-to-Text/Text-to-Speech, Deep Learning, Data Analytics, and Computer Vision. **Conversational AI** is a specific area of AI that is used primarily for customer service and includes Virtual Agents, Chatbots, Voice Assistants and Digital Humans. These and other technologies are closely integrated to provide outcomes that are similar to, or even better than, those achieved by human agents.

In this ebook we will look at how these technologies can enable Customer Service Automation including customer self-service, to deliver an exceptional customer experience every time, 24 hours a day, 7 days a week.

We will explore what is happening in the market and what the future holds.

We provide the guidance to help you build a business case for implementing AI in Customer Service Automation projects. If you are ready to get started on your Customer Service Automation Project we will walk you through the approach you need to take for a successful implementation.

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Improving The Customer Experience

Customers have long had the option to vote with their feet (or their keyboard/mouse) and switch to a different provider if they don't get a great experience. Therefore, it is no surprise that improving the Customer Experience is a top priority for most C-level Execs.



Contact Center and Customer Service

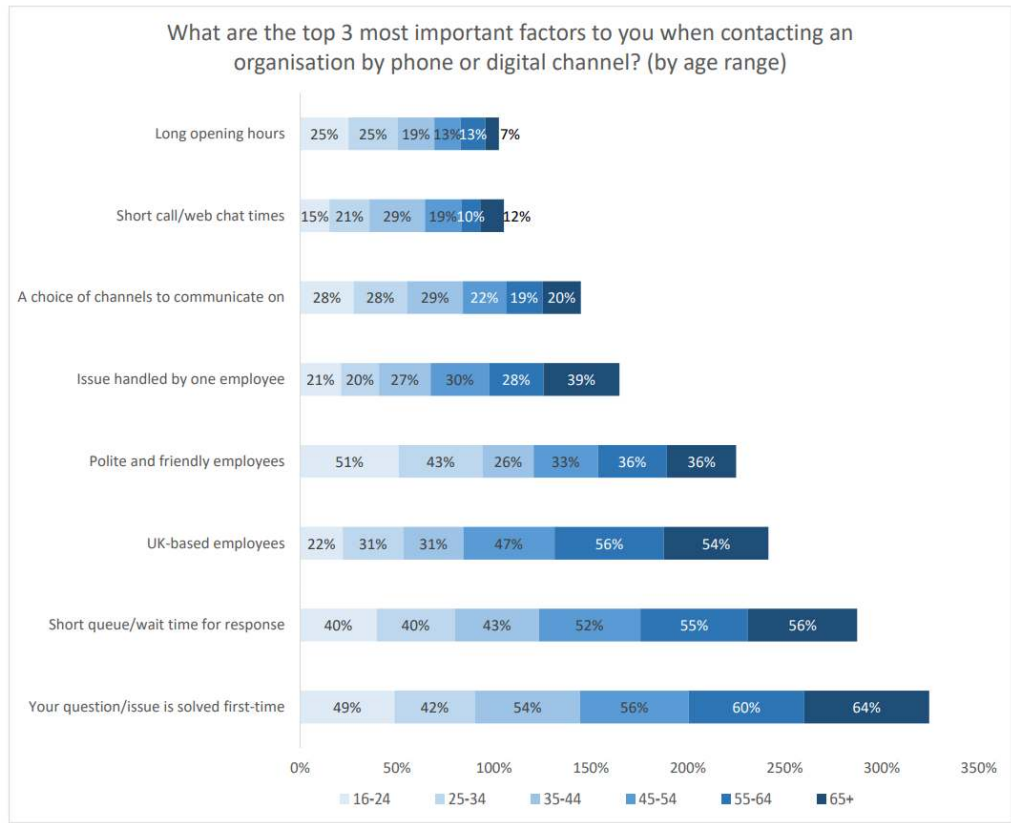
What buyers are saying about their next purchase

Top Project Requirements

- #1 Enable automated self-service support
- #2 Improve contact center agent performance
- #3 AI chatbots
- #4 Support for multiple locations/remote agents
- #5 Automate customer-facing processes

Source: Tech Target Contact Centre and Customer Service Confirmed Projects September 2020

Recent research into 1,000 UK consumers identified the most important factors to a customer when contacting an organisation:



Source: Contact Babel UK Contact Centre Decision Maker's Guide 2021-22.

First contact resolution (FCR) and a short wait time for a response are the two important criteria across almost every age group. This shows that adding AI driven self-service, reducing handling times and increasing FCR, can significantly contribute to an improvement in the customer experience.

Many of the executives surveyed are now looking to Customer Service Automation to provide advanced customer interactions.

What is Customer Service Automation?

The cost to serve customers utilising traditional methods is high and often doesn't meet their expectations. Today's customers are demanding better, faster and a more personalised experience than ever before. Delivering a great service at any time of day or night, through a host of different channels is challenging. Customer Service Automation offers digital first technology to streamline the customer service process and offer instant and consistent responses to customer enquiries across every channel with scale.



Getting the Technology Right

Humans are complicated creatures, and it is difficult enough for other humans to understand them sometimes, never mind for machines! Human communication is subtle, nuanced and very complex which makes it difficult to recreate human interactions artificially.

For humans to have authentic conversations with machines a combination of technologies is required. Conversational AI bridges the gap between human and computer language and makes two-way communications more natural without having to use specific words or phrases. The intelligence derives from systems learning the different ways that customers communicate, enabling them to understand the requests better, learn from them, and improve the responses offered.

Customer Self-Serve

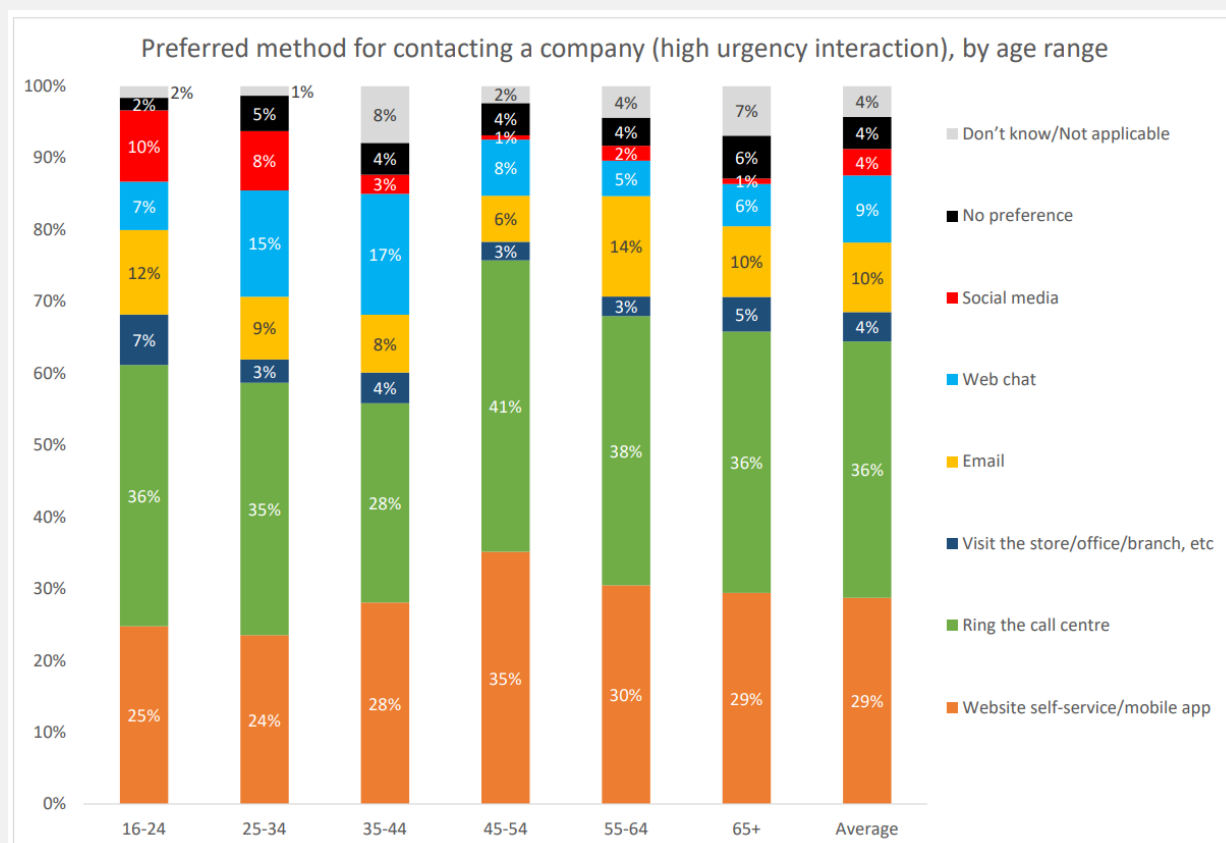
One of the main objectives for AI within most Customer Service Centres is to increase the ability for customers to self-serve. This dramatically reduces costs and provides an improved customer experience through faster response times and higher first-contact resolution rates. All of this through the customer's channel of choice.



In 2018, Gartner reported that nearly 85% of support interactions would no longer need human intervention. As consumers are exposed more and more to digital services, they expect instant responses 24 hours a day, 7 days a week.

Research has shown that 81% of customers attempt to find the answer themselves before reaching out to a live representative. Intelligent self-service addresses both the customers' desire to take control whilst reducing the overhead on the business.

According to recent research, the preferred method for contacting a company for an urgent enquiry across almost every age demographic is through self-service.



Source: Contact Babel UK Customer Experience Decision-Makers' Guide 2021-22

Chatbots, Virtual Assistants and Digital Humans

The term Chatbot is a well-known phrase, and there are both good and bad examples of the technology. Early examples were basic and lacked intelligence, whereas the new offerings are both intelligent (through AI and emerging technology) and connect to all sorts of data, enabling powerful functionality and compelling results. These intelligent "Bots" are more often referred to as Virtual Assistants or Virtual Agents. Digital Humans is a less-known term that uses a combination of speech and web services, adding a life-like human avatar to the engagement. A visual interface can show expressions and empathy, as well as having a natural sounding voice, providing a more engaging and natural experience.

Whichever interface you offer your customers, utilising AI and Machine Learning greatly enhances the ability to hold conversations regardless of the way a customer may phrase their enquiry. By combining multiple AI services you improve the ability to learn using either re-enforced training from humans or letting the AI self-train itself.

AI-powered Customer Service Automation enables organisations to deliver instant and personalised experiences to customers, to their preferred device, through speech, messaging or visual interfaces, providing them with an accurate and consistent experience.



Conversational AI and How AI powered Assistants work?

The subtle and nuanced way humans communicate is very complex and difficult to recreate artificially, which is why several natural language principles including Natural Language Processing (NLP), Natural Language Understanding (NLU) and Natural Language Generation (NLG) are used. These principles identify the underlying intent behind the request when a person types or speaks, then by asking further questions can deliver detailed responses that mimic human conversation.

Conversational AI platforms are the foundational technology for development of Chatbots and Virtual Assistants.

The most immediate potential of conversational AI is to remove the simple, frequent and monotonous enquiries away from advisors: webchats tend to take longer than phone calls due to agent multi-tasking and many email response rates are measured in days. The table opposite demonstrates that webchat is not significantly cheaper than voice contacts so there is still huge potential for cost saving in automating services.

Average Cost Per Inbound Contact

Channel	Mean
Phone	£4.55
Email	£4.10
Web chat	£2.56
Social media	£2.37
IVR	c. 30-50p
Web self-service	c. 5-10p

Source: Contact Babel Inner Circle Guide to AI, Chatbots and Machine Learning

When thinking about digital channels to automate, do not forget about channels that use voice. Full interactive conversations can be automated across telephony and through smart speakers in exactly the same way as messaging.

The Customer Service Automation platform can also provide agent assistance, where the Virtual Assistant listens in on messaging or voice conversations and can make suggestions of the most appropriate response the agent or advisor should make.



AI is now starting to appear in back-office automation, commonly known as RPA.

Robotic Process Automation (RPA)

Robotic Process Automation (RPA) can dramatically improve agent efficiency. RPA uses digital agents or 'bots' to handle repetitive, rules-based tasks with high accuracy and consistency. For example, assisting agents with back-office tasks such as change of address requests, ticketing processes, document reviews, and validating customer account information.

Interactive Voice Response (IVR)

IVR is a traditional technology for automating certain phone services without having to speak to an agent. Customers access limited menu options via touch tone keypad selection or speech recognition and pre-recorded announcements enable access to predefined services. The IVR guides you through specific choices to access information. The connections to databases allow customers to perform transactions such as looking up information or purchasing tickets. These services did cut costs for businesses but were not always well received by customers.



Natural Language Interactive Voice Response (IVR)

Second generation IVR's are more widely known as Voice Assistants, they offer a much better user experience and allow the user to communicate in a natural way. Using Natural Language, customers communicate through voice rather than typed text. Automatic Speech Recognition (ASR) technology and Artificial Intelligence determine what question is being asked and respond with the most relevant answer. To improve the recognition levels over time you can choose to let the AI train itself or use the customer service team to manually add training phrases.



Voice Authentication

As applications become more driven by speech, voice authentication will become more prominent. Voice biometrics is a way to confirm a customer's identity based on a unique characteristic - their voice. A voice is as unique as a fingerprint and consists of a combination of characteristics that are completely individual. Voice authentication is harder to fake than fingerprints, doesn't require the customer to remember passwords, and provides a simple way to identify themselves over the phone in a quick and effortless way. For organisations it removes the need for advisors to ask lots of questions and can save over 30 seconds per call.

Knowledge Base and Dynamic Data Retrieval

AI-powered self-service applications are reliant on data to reference answers. When you introduce a new topic, training data must be added to enable the system to understand the enquiry and to respond with the correct information. This data can be manually input, pulled from templates that have been previously developed or gleaned from previous interaction data. Once enabled, AI can continuously learn and improve its responses based on customer interactions. Experienced providers will have specific domain knowledge and templates that can be used to fast-track the set-up process with proven workflows.

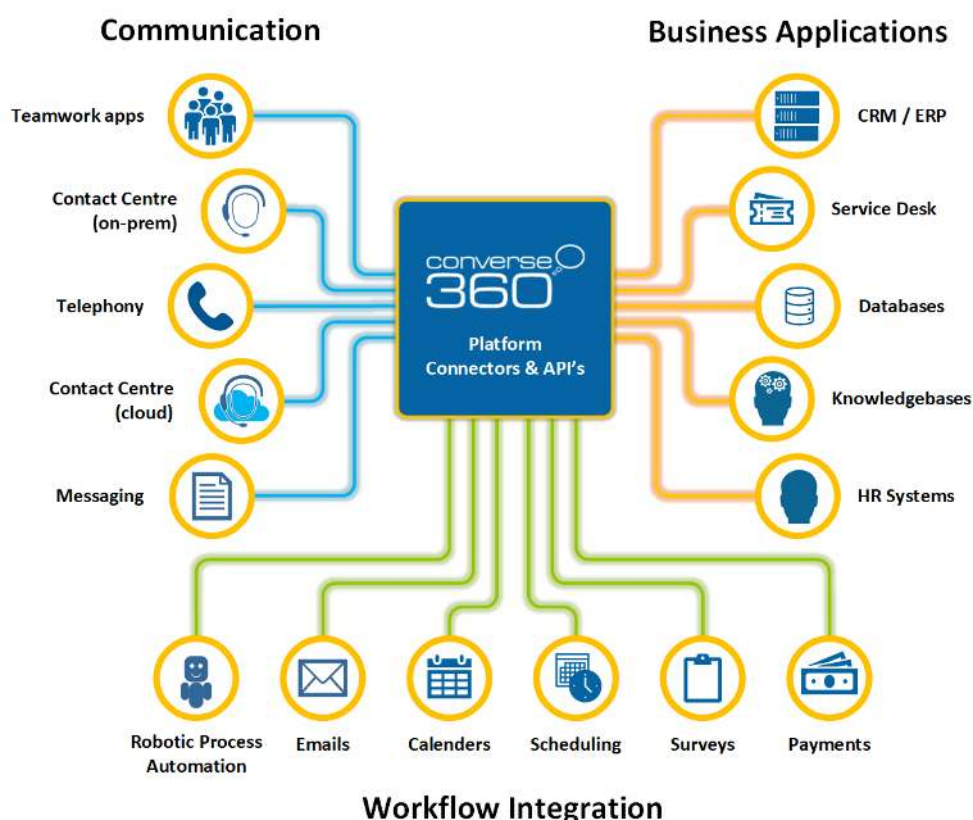
When enquiries are more complex, the technology can access content in documents, external knowledge bases, databases and product manuals. It can gather information from business applications such as CRM's, Service Desks, HR systems, or industry specific systems. A real-time dynamic look-up will be more appropriate in some cases, where content is constantly being updated.

Workflow integration

For self-service to be effective it must replicate a great Customer Services advisor, who has access to different applications from where they can:

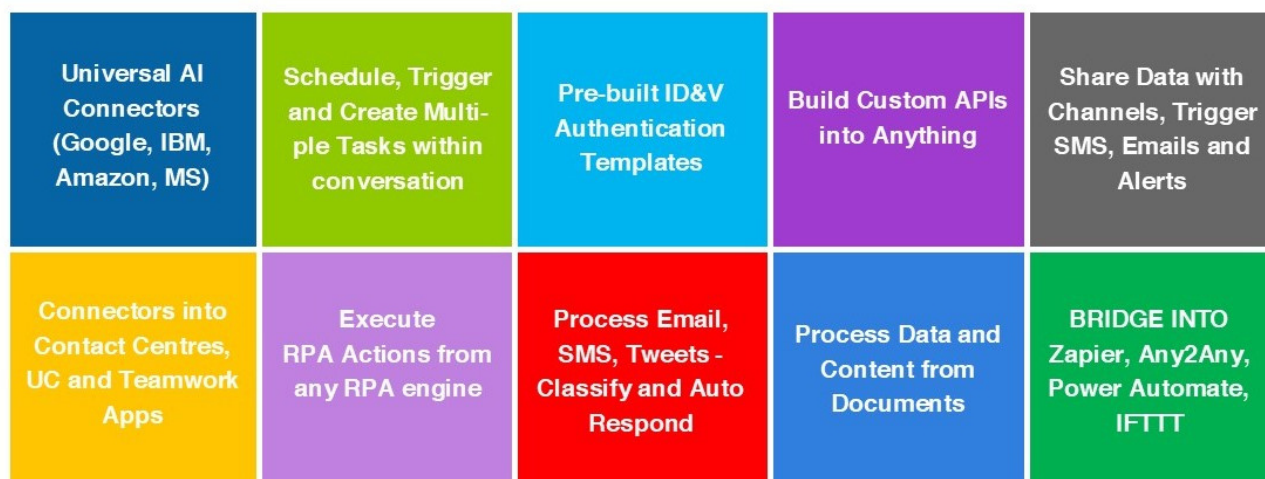
- retrieve information
- perform transactions
- update systems
- record interactions
- trigger a communication back to the customer
- hand to another team member

To replicate this journey a Customer Service Automation platform needs to be a central hub for connecting the disparate systems. The converse360 Assist-Me Service Automation platform offers either pre-built integration modules or an SDK framework that allows integrations to any open and API-ready application.



Application Integration

The converse360 Customer Service Automation platform includes powerful middleware that enables connectivity into almost any business system. The portal includes a low-code approach for non-developers to connect to all applications through a simple drag and drop GUI. After the APIs are set up, the workflows can be created that access these APIs through a no-code conversation design tool. This provides the most powerful functionality, which is accessible to everyone.



Handoff to Live Agent

There will always be situations where a live advisor will be able to support your customer better than technology can. But live advisors often aren't available 24/7, during peak times, or across every channel. This is where blending automation and live interactions can deliver the best experience. Integration into your existing contact centre platform or Teamwork application enables you to control exactly when to engage your Customer Service team, using rules or processes that are consistent and present the conversation history to the agent to negate any repeated information.



Contact Centres and Telephony Systems

For enquiries that are better handled by a live advisor Customer Service Automation platforms must integrate into contact centres. A platform should intelligently manage the events that trigger a transfer from a Virtual Assistant to a live agent or to another automated process.

Hand-off and escalation parameters can be configured including key words or phrases, customer sentiment, specified intents, customer identity as well as untrained topics. Contact Centre Agents/Supervisors with real time monitoring capabilities can also have escalate and barge features.

Where customers have engaged through messaging applications such as webchat, Facebook Messenger or WhatsApp the platform will identify if the Contact Centre is currently open. If the Contact Centre is open customers will be transferred, along with all metadata and conversation transcript, to an advisor giving them the session history.



Not Just for Contact Centres

For businesses that don't have a contact centre but utilise software such as Slack or Teams, the Customer Service Automation platforms must be able to transfer the customer chat session into a team space for an advisor to respond. If you don't have a Contact Centre or team application, customer information can be captured and sent to an email address.



Many organisations that don't have a contact centre are still able to automate customer journeys using service automation and Virtual Assistants:

- **Healthcare** – booking, changing, and cancelling appointments
- **Manufacturing/supply chain** – tracking materials, process, orders, and stock
- **Training** – scheduling and providing training and certification
- **Facilities** – report maintenance issues, track ongoing repairs/maintenance, book meeting rooms, provide health and safety documentation
- **Marketing/Sales** – providing supporting materials to end users, journalists, investors. Scheduling meetings and product demos.
- **HR** – screening job candidates, tracking applications process, processing standard HR requests.
- **Customer Service** – and of course many organizations have a customer service department that doesn't have a call centre. These departments can benefit from triaging as many customer queries as possible through automation.

For any department that has a lot of repetitive questions and tasks, service automation could help free up your staff for more meaningful projects.

Benefits of Customer Service Automation

Reduce Costs and Increase Operational Efficiency

- Reduction in volume of live chat requests that can now be handled by AI Chatbots
- Increase in telephony self-service using Conversational AI / natural language IVR
- Many simple and frequent queries answered by Chatbots or speech assistants
- Webchat queries that can be handled solely by AI Chatbots agent Average Handle Time for webchat is reduced to zero agent hours
- Reduction in the average live chat time
- Voice biometrics allows Chatbots to initially identify and verify (ID&V) a caller, saving an agent an average of 40 seconds per call
- AI-powered Assisted Service for Agents can reduce the average handle time per call by suggesting best-next-action or pulling up relevant information from the knowledge base. This reduces the need for screen switching and streamlines the call. This can also increase First Call Resolution (FCR)
- Using Robotic Process Automation (RPA) to update multiple systems following customer conversations saves agent time switching between screens during the call and reduces post-call wrap-up times
- Chatbots can be used to manage times of excessive demand, peak times, staff sickness or out of hours requests, providing back-up to live agents when they are not able to deal with call levels

Grow Revenue

- Increased customer satisfaction means higher retention rates
- AI can suggest relevant cross-sell or upsell options to the customer or to the live agent while on the phone

Better Employee Experience

- Agents will spend less time on mundane calls and repetitive tasks
- Agents have more time to focus on more valuable calls, revenue-generating projects or where customer empathy may be required
- Aids staff retention and future recruitment

IBM estimate that Chatbots can answer 80% of standard questions.

Gartner highlight that 25% of employee interactions with applications will be via voice by 2023, up from under 3% in 2019.

Average Costs for Inbound Contact via Different Channels

Channel	Mean
Phone	£4.55
Email	£4.10
Web chat	£2.56
Social media	£2.37
IVR	c. 30-50p
Web self-service	c. 5-10p

Source: Contact Babel Inner Circle Guide to AI, Chatbots and Machine Learning

Gartner are predicting that 15% of all customer service interactions will be completely handled by AI this year, an increase of 400% from 2017.

What's Happening in the Market?

"Our latest AI research shows 86% of businesses currently reaping the benefits of better customer experience through AI, and 25% of companies with widespread AI adoption expect to see the tech pay out in increased revenue during 2021. The pandemic has uncovered the value of AI, lending itself to enhancing tasks related to workforce planning, simulation modeling and demand projection."

Anand Rao, the Global Artificial Intelligence Lead at PwC

70%

of customer interaction will involve Chatbots, Machine Learning and mobile messaging by 2022 (Gartner)

15%

of all customer service interactions will be completely handled by AI this year, an increase of 400% from 2017 (Gartner)

80%

of standard questions could be answered by Chatbots (IBM)

95%

of IT leaders are prioritising workflow automation technologies like Chatbots (Salesforce)

53%

of service organizations are going to use Chatbots within the next 18 months (SalesForce)

81%

of all customers attempt to take care of matters themselves before reaching out to a live representative (Harvard Business Review)

69%

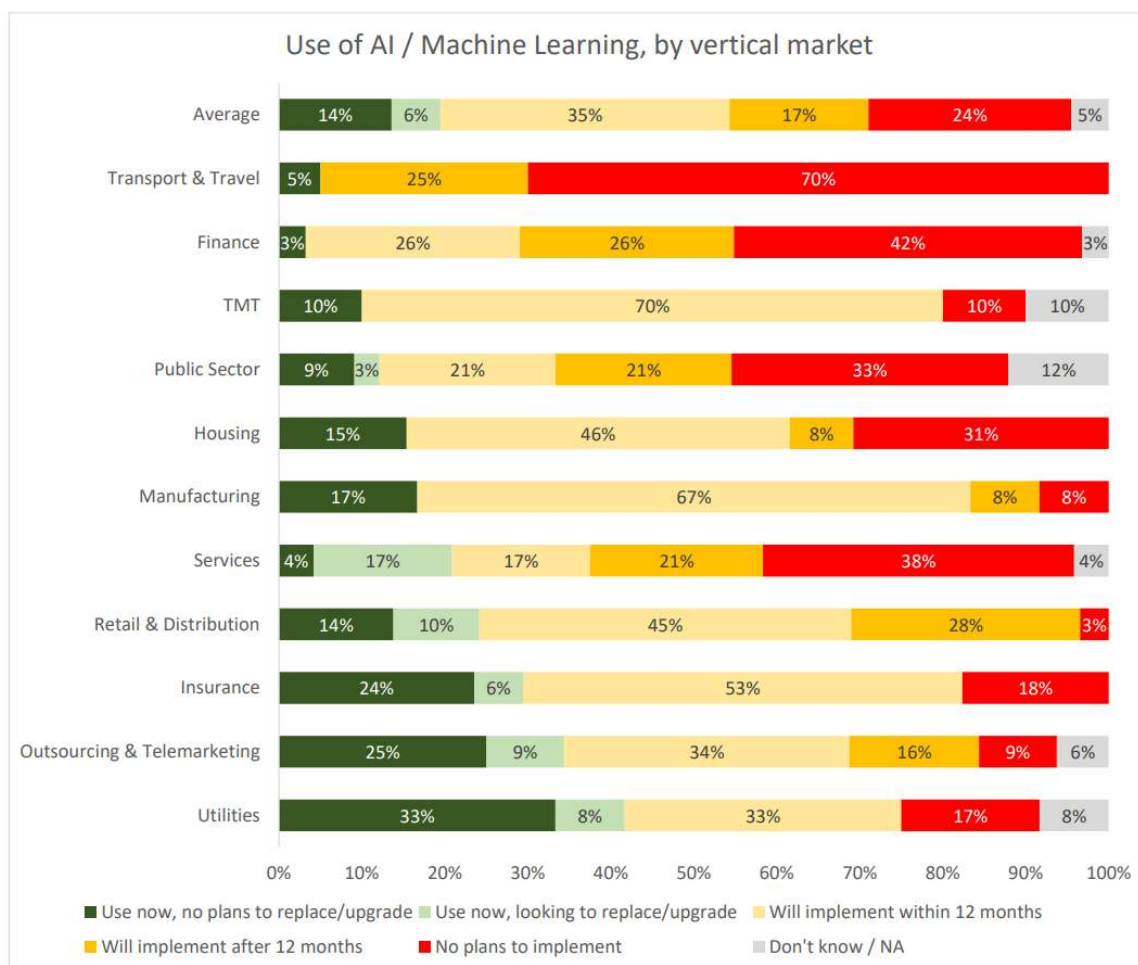
of users prefer Chatbots because they deliver quick answers to simple questions (Salesforce)

60%

of customers want easier access to self-serve solutions for customer service (Ovum)

Research by Contact Babel indicates that at present only 20% of UK Contact Centres are using AI or Machine Learning meaning the market anticipates a huge increase in AI projects in the coming months.

There are massive variances in take-up of AI depending on industry sector:



Source: Contact Babel Inner Circle Guide to AI, Chatbots and Machine Learning

The difference in the levels of implementation and interest for future projects is quite striking. In Transport and Travel only 5% of businesses have implemented AI with no organisations having any plans to do so in the next 12 months.

Utilities, Insurance and Outsourcing report the greatest current use of AI, with nearly two thirds of manufacturing and TMT (telecoms media and technology) planning to implement in the next 12 months.



What Does the Future Hold?

The previous chart demonstrates that there is substantial appetite across many sectors to implement AI over the next 12 months. According to Contact Babel 35% of contact centres are planning on rolling out AI powered solutions over the next 12 months. Tech Target's Contact Centre and Customer Service Confirmed Projects report conducted research into organisations rolling out customer service or contact centre programs and confirms that 3 of the top 5 priorities being for AI or automation projects.

Of those already using the technology almost half are using applications powered by Natural Language Processing (NLP), with a quarter of businesses planning to use it in the next 12 months. Customer service is the department most likely to adopt NLP, with over half of the organisations reporting that their company is using or considering using NLP solutions to improve customer experience.



"As organizations move to a post-pandemic world, data from the Global AI Adoption Index 2021 underscores a major uptick in AI investment," said Rob Thomas, Senior Vice President, IBM Cloud and Data Platform. "A large majority of those investments continue to be focused on the three key capabilities that define AI for business - automating IT and processes, building trust in AI outcomes, and understanding the language of business."

Getting Started

The great thing about AI, in the age of cloud and as-a-service technology, is that you don't have to take an all or nothing approach to the trend.

In fact, we strongly recommend most organisations make decisions with the long term in mind but start with small projects. By this we mean that for those organisations looking to upgrade their overall contact centre infrastructure, now is the time to look at solutions built with AI at their heart, to provide a framework to build on for the future. But for organisations undertaking large contact centre system upgrades and those organisations with existing estates, we recommend you start with a small self-contained project, that has a clearly defined business issue or process e.g. Chatbots to triage digital enquiries.



It is important that the boundaries of the project are clearly defined and understood, with relevant baseline metrics captured before the project starts. You must have clear and achievable outcomes defined so the success of the project can be easily measured. A limited, low-risk user case that can be simply implemented can demonstrate a quick win to build confidence in using AI within the contact centre.

While quick wins are essential to get buy-in, it is important to view the project in the context of a longer-term vision. We recommend building a roadmap of linked businesses cases, that layout a long-term vision for the strategic use of AI across all customer-facing departments of the organisation.

Next Steps

If you feel you are ready to start on your Customer Service Automation project we can help:

[See our Virtual Assistant in action](#) in a housing environment. Follow example FAQ's, simple and complex workflows and see how transactions can use your data to retrieve personalised information.

[Request a personalised live demo](#) where we can show you the most relevant features and functionalities. How you can seamlessly blend automated responses, with live agent hand-off including context and transcripts.

[Read our blogs](#) on a range of topics related to AI, Customer Service Automation, Chatbots and Digital Humans.

Or if you just want to contact us for a discussion on how Conversational AI can grow your business we are happy to help.

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converse360 Assist-Me Customer Service Automation Platform

converse360's powerful Assist-Me Service Automation Platform uses Conversational AI and makes it simple for you to automate complex customer service interactions. It deliver a fast, effortless and personalised experience, leaving your customers feeling heard, seen and loved. The key advantage of the Assist-Me platform is its ability to interconnect with multiple existing applications rather than sit in its own silo. As customers expand the use of automation they need to invest in a platform that can support any channel, be simple to create easily manage flows, and offer a seamless hand-off to live advisors.



About converse360

converse360 helps organizations deliver digital customer engagement across any channel that is instant, effortless and personalised. Its Conversational Service Automation platform intelligently blends self-service, assisted service and live service to enable businesses to serve their customers faster and easier, 24/7 at scale.