

# AI for customer service

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# 01 The landscape

6 min read

When you contact a customer service department, you want fast and accurate answers. But in times of uncertainty, that preference can become a serious need. When demand spikes, call centers become bottlenecked with so many calls, chats and messages and too few human agents trying and failing to field too many queries. This leaves agents feeling burned out and inadequate. But it's not their fault. They don't have the right tools.

The COVID-19 pandemic has forced organizations to reimagine what “business as usual” means for their call centers. Traditional call center methodologies can frustrate consumers and employees in a few key ways.

### **They can't scale**

In times of emergency or uncertainty, call centers can't keep up with outsize demand. And when demand falls, they end up laying off employees, crushing morale.

### **They aren't data-centric**

Data is not being sufficiently analyzed to generate insights that would improve customer service, and employees aren't receiving training on the latest data because it's too expensive.

### **They aren't secure**

With agents working from home, managers have less oversight than usual. Knowledge bases are exposed outside the office, and many agents are taking calls in an environment that's less likely to be monitored for quality assurance purposes.

These practices are unsustainable. Fifty-nine percent of customers say they have higher expectations for customer support than they did a year ago. Customers are demanding better service, and only organizations that take advantage of the latest technology will survive. Fortunately, chatbots have skyrocketed in popularity over the last decade, and customers are more comfortable using them than ever.



But customer service departments need more than just simple chatbots. They need to provide customers with fast ways to find information and resolve issues. They need a solution that provides more than just simple answers to simple questions.

In short, they need **conversational AI**.

The technology uses sophisticated machine learning (ML) and natural language processing (NLP) to elevate customer experiences. These virtual agents can do so much more than just chat and relay basic information repurposed from a website. They can update your address, refill your prescription and upgrade your data plan. They can remember who you are and generate deeper insights about what you need. But conversational AI on its own is still not enough. To survive the next phase, customer service platforms will have to supercharge their chatbots with **AI-powered search**.

Just as you use a search box, a virtual agent must search through its corpus to find an answer for you. Search boxes used to be primitive, and you might not realize how far they've come.

- Keyword search: searches a database for documents that contain one of your search terms
- Personalized search: delivers personalized results based on your previous searches
- Recommendation engines: recommends content based on your previous interactions with a platform, without you even having to perform a search
- AI-powered search: uses advanced ML algorithms and natural language understanding (NLU) to predict answers to your questions

**Conversational AI + AI-powered search** is the next-generation paradigm for customer service, and organizations that don't embrace both technologies will be left behind. [Seventy-eight percent of customers \(PDF, 524 KB\)](#) will back out of a purchase because of a poor customer experience.

Let's explore the three ways this pair of technologies works together in customer service.



# 02 Customer self-service

4 min read

Today's consumers expect an unprecedented level of customer service more than any previous generation. When they don't receive the service they feel they deserve, they are vocal about it, sharing bad experiences widely and taking their business elsewhere. A staggering 91% of unsatisfied customers will not return to a business if they don't feel each interaction is efficient or tailored to their needs.

Customer self-service used to be a source of frustration for consumers who often found themselves yelling into their phones, "Just let me talk to a human!" But even experienced human agents have limitations compared to conversational AI. For instance, agents are expected to stay up-to-date on ever-changing product catalogs, which results in high attrition rates in call centers.

Fortunately, when equipped with AI-powered search capabilities, robust conversational AI can transform this dire situation. You can make the most of your customer care platform by infusing it with conversational AI and AI-powered search. The days of chatbots short-circuiting when asked unconventional questions or making it difficult to pass the customer off to a human agent are over. Your chatbots will never again tell your customers, "I'm sorry, I can't answer that."

How can robust conversational AI equipped with AI-powered search improve customer self-service?

## **Assistive**

Now chatbots can do more than just answer questions—they can perform purchases, schedule events, reroute shipments and so much more.

## **Conversational**

Advanced conversational AI speaks in natural human language in a human-friendly interface.

## **Omnichannel**

It lives across several internal channels, such as websites and apps, and external channels, such as third-party messaging apps, for a single point of assistance.

## **Persistent**

It remembers all your previous interactions and draws insights from your previous behaviors.

## **Smarter search**

It can use the most advanced search techniques to surface the most relevant information from your organization's knowledge bases.

## **Continuously improves**

It can use AI algorithms to continuously fine-tune its natural language understanding models resulting in better customer experiences.

## **Knows its limits**

Asks questions to determine your underlying intent rather than giving up. When it detects that a query is beyond its capability to answer, it seamlessly passes you off to a human agent.

# 03

## Agent assist

5 min read

Even the most state-of-the-art chatbots can fail to answer a customer's query. Human language is complex, and bots, while getting closer all the time, sometimes fall short in understanding its nuances. Sometimes you really just need to speak to a human.

The good news is that conversational AI can be used to empower human agents. Just as customers query AI assistants, so too can agents, helping improve their productivity and the quality of the interaction for the customer. Far from rendering the jobs of agents obsolete, this technology allows agents to focus their time and energy on the most complex customer problems. Virtual agents eliminate a lot of the rote work that agents may find repetitive, tedious or unchallenging. Humans and AI assistants are working together side by side, each doing what they do best.

If a conversation with an AI assistant becomes tangential or overly complex, or if the customer becomes frustrated, the human agent can take over to provide a "human touch."

Conversational AI, coupled with AI-powered search, can empower agents in numerous ways. Here are the primary ones.

### **Eliminate rote work**

Automation frees human agents from repetitive tasks, allowing them to focus on the most challenging, stimulating cases and reducing the monotony of their day-to-day role. This helps prevent agent burnout and its resultant attrition.

### **Provide seamless transfers**

Customers get frustrated when they have to repeatedly explain their problem to multiple entities. When an advanced chatbot answers the call, it can pass contextual information to a human agent so the agent doesn't need to annoy the customer with repeat requests for information.

### **Fill in the gaps**

Chatbots are always online, 24x7, so they can field queries when human agents are busy or not at work.

### **Gain a supercharged search**

Currently, on average, in a 6-minute customer service call, four and a half of those minutes are devoted to agents doing manual research. Even experienced agents need time to comb through databases for answers. But with AI-powered search, agents can pinpoint specific answers fast.

### **Reduce training**

Chatbots put all the company's institutional knowledge at the fingertips of every agent, even new hires. Agents spend less time memorizing documentation, saving the organization's resources.

### **Boost morale**

When agents spend more of their time resolving interesting, high-level problems that take advantage of their unique expertise, or making customers feel valued, they feel more like important, strategic team members.

### **Improve the employee experience**

Agents can use conversational AI for more than just helping customers. They can also use it to receive support at work. Whether that's looking up their accrued vacation days or resetting a password to the company intranet, AI can quickly resolve employees' day-to-day issues while cutting down on HR and IT costs.

# 04 Contact center insights

3 min read

**Sixty-six percent of consumers** have used at least three communication channels to contact a company, making gathering and correlating data increasingly difficult. According to the Harvard Business Review, only 3% of companies said they can act on all the customer data they collect.

We've discussed how conversational AI with AI-powered search benefits customers and employees. Now we're going to examine how this new paradigm transforms the management of customer service.

By integrating analytics into the process, the customer service department can use collected data to surface powerful strategic insights.

Calls, emails and chat logs can all be mined along with agent notes, surveys and other forms of customer behavior to paint a picture of how the contact center is performing. What's more, analytics tools can reveal patterns in data that can inform strategies for improving processes for compliance, agent performance, customer sentiment and sales effectiveness.

Here are some ways that advanced analytics can help leadership improve call center processes.

### **Parse language to reveal hidden insights**

Go beyond simple transcription of customer interactions by extracting meta-data and revealing relationships to uncover the root cause of customer frustration.

### **Bring all the data together**

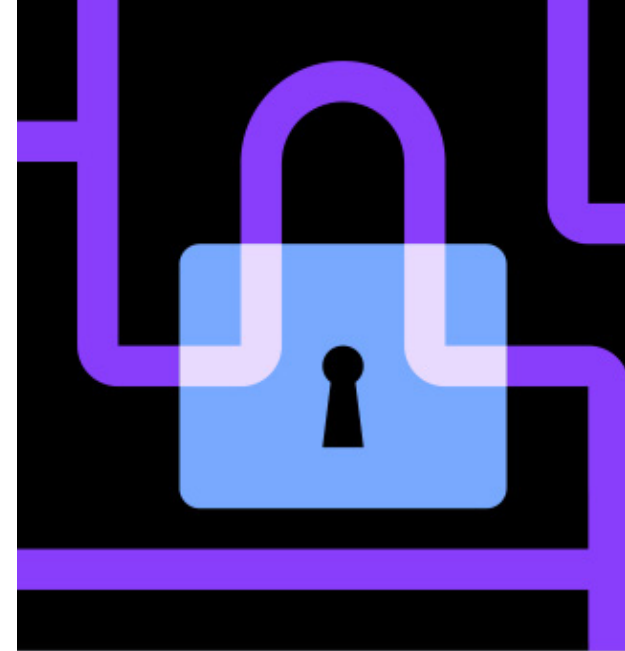
Bring together customer interaction data from across every medium and touchpoint.

### **Connect the dots**

Pinpoint customer issues quickly and determine correlated challenges by analyzing conversations and automatically recognizing patterns hidden in the data.

### **Better understand your customers**

Automatically track the most common customer frustrations, before and during interactions, and then use that data to reduce call times and allocate resources more efficiently and effectively.



# A new way to infuse AI into your business

3 min read

To recap, conversational AI + AI-powered search are a pair of technologies with the potential to redefine the customer experience so comprehensively that customers will become frustrated when organizations fail to capitalize on their benefits.

IBM's conversational AI offering is called Watson Assistant, and its AI-powered search offering is called Watson Discovery. Each product is transformative on its own, but together, they have the potential to drive even stronger results. Meet the technology:

- Watson Assistant is the conversational AI platform that your customers, agents and employees actually want to use. With Watson Assistant, you can reduce costs while improving the customer and agent experience—and achieve a 310% ROI over three years. And because it can be deployed in any cloud or on-premises environment, smarter AI for customer service is finally available wherever you need it.

- Watson Discovery is market-leading AI-powered search technology. Use text analytics and NLP to break open data silos and retrieve specific answers to your questions while data mining to analyze and identify relationships buried in enterprise data. Watson Discovery uses NLP to understand and be easily trained in the language of your domain.

## Watson Assistant + Watson Discovery

### Assistive

Watson answers questions, but it also helps you perform complex administrative tasks.

### Understands the language of your business

Watson understands human language, but it can also learn the vocabulary of your industry and even internal terminology unique to your organization.

### Individualized experience for every customer

Watson remembers all your previous conversations, preferences and behaviors, and uses this data to streamline and personalize your experience.

### Omnichannel

Watson can help customers on phone calls, web chat, SMS and more. It can also bring conversations from all these channels together so customers have a consistent experience.

### Constantly learning

The more your customers interact with Watson, the smarter it gets. Every interaction is a learning experience, resulting in better service over time.

### Understands complex data

Watson Discovery surfaces insights buried inside charts and graphs, video, audio and other forms of unstructured data, using the smart document understanding feature.

### Scalable, flexible, secure, and deploys anywhere

Watson can live on any cloud and integrate with your existing customer service technology. It is designed to securely support millions of conversations.



# 06

## Real-world success stories

5 min read

Regions Financial Corporation is one of the largest full-service providers of consumer and commercial banking, wealth management, and mortgage and insurance products and services in the US. When Regions found it was transferring far too many calls from its interactive voice response (IVR) system to human agents, creating a tremendous cost to the company and reducing its customer satisfaction scores, it partnered with IBM to integrate a smarter solution.

### Customer self-service

Regions and IBM created a self-service virtual agent for customers to get their questions answered. Within the first year, Watson managed 331,000 customer care calls—equivalent to 28 full-time equivalents (FTEs) in agent capacity.

### Agent assist

Regions also deployed agent assist, which provides bankers and agents answers to customer inquiries from a knowledge management database. Using agent assist, agents saw a 10% reduction in average call handle times, freeing up thousands of hours of agent capacity.

### Customer service insights

Finally, Regions used Watson to analyze call recordings to extract key insights into call categorization and customer needs. After three years, these three use cases resulted in USD 5.2 million in benefits.



Regions' experience is one that thousands of other organizations share as they use Watson to improve the way they serve customers, enable agents and differentiate their experience while controlling costs.

The [Forrester Total Economic Impact Report: Watson Assistant](#) calculated that although focusing on just the customer could produce around USD 13 million in savings, the combined value of all the different elements of AI for customer service was almost double that number—USD 24 million—and had a 337% ROI.

Read more about how organizations around the world are finding success with Watson.

- East Japan Railway reduced response times at its call center by 30% by integrating a cloud-based cognitive contact center support system powered by Watson.
- One of Spain's largest lenders, [CaixaBank](#), used IBM Watson Discovery and IBM Watson Assistant to create a new AI-based customer service platform. The result? The virtual assistant instantly answered 80% of queries, drastically reducing call center volume.

- [Verizon](#) partnered with IBM to create its cognitive customer experience platform, which is powered by Watson Speech to Text, Watson Explorer and the IBM Watson Data Platform, with its use of IBM® Streams. This technology stack allows Verizon to ingest data from several sources, including the audio from ongoing calls.
- [Humana](#), one of the largest healthcare providers in the US, uses Watson to provide a faster, friendlier and more consistent way for administrative staff at healthcare providers to access healthcare information without having to speak with a live agent. The solution also achieves an accuracy rate of more than 90% in understanding callers and directing calls.

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