



Expert Insights

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Reinventing the contact center

How AI enhances experiences during turbulent times

IBM Institute for Business Value



Experts on this topic



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A crisis mid-stream

The COVID-19 pandemic is forcing organizations to rethink and radically change their operations in real time. The disruption has led to increased pressure on contact centers for reasons ranging from dramatically increased demand, to extensive and sustained order or service cancellations. One individual attempting to file for unemployment benefits for example, is said to have made 991 calls over six days to a state Department of Labor without reaching a person or virtual agent. Call 992, apparently, was the lucky number.¹

For many businesses, the COVID-19 pandemic is happening midway through an artificial intelligence (AI)-enabled virtual agent technology transformation. For those organizations, virtual agents have been revolutionizing contact centers, supporting scalability and enabling human agents to focus on more complex, fulfilling work (see “Insight: Helping the contact center”). But many other enterprises have not even started yet.

Whether in the midst of an AI transformation or at the very beginning of their AI journey, organizations have been struggling to meet demand because they didn’t move fast enough when they could. Long wait times and disillusioned or angry customers are the consequence.

Even in the best of times, customers are ready to abandon a brand after only three unsatisfactory support interactions.² Among Millennials, 22 percent said just one bad interaction is sufficient impetus to leave.³ And one banking survey found that when phone call wait times are longer than four minutes, customer satisfaction drops by a third.⁴ When they are stressed or at a disadvantage, as many are during this pandemic, customers may never truly forgive organizations that fail to deliver. Clearly, those that have not yet moved to deploy virtual agents need to move now.

Insight: Helping the contact center

There are five primary ways that virtual agents can help the contact center:

1. *Workload management:* Digital labor can resolve routine queries with no involvement from human agents. For example, a business can scale immediately, providing automated answers to new questions, such as may be necessary with COVID-19. Are there new operating hours? Has the return policy changed? Because digital agents can quickly adapt to new FAQs, it leaves human agents free to engage in the more fulfilling effort of solving customers’ more complex inquiries.
2. *Agent assist:* Unseen by customers, human agents can use a digital assistant to gather additional information, including possible technical responses, suggestions to resolve customer disputes, and opportunities to upsell.
3. *Automation:* Virtual agents can leverage robotic process automation, machine learning, and optical character recognition to ingest and update even handwritten documents, and move workload or even complete processing.
4. *Pre-screening:* When queries are escalated to a human agent, that agent is supplied with pertinent data already gathered by a digital agent, reducing handle time and burden.
5. *Smart routing:* Some companies are using digital agents to help triage incoming queries and decide how they should be routed.

When contact center meets AI

Some contact centers have already deployed virtual agents and are thus better able to adjust quickly to changes in volume and new customer concerns. They can immediately scale operations to handle unanticipated workload. Our research suggests AI's importance to organizational strategy is likely to double in the next three years.⁵

Digital labor enables multiple interactions

In some cases, customers will choose to interact directly with digital agents. For some time, AI-enabled agents have answered customers' routine questions such as, "When is the store open?" It can be trained very quickly to respond with updated information, such as new operating hours or new ordering procedures, and handle the influx of predictable new queries the contact center anticipates receiving during a crisis.

This new digital labor can be used to intelligently assist human agents, accessing back-end systems in the background to complete process work, such as filling out forms, locating existing tickets, updating systems, ingesting documents, and sending out emails. Digital agents can also engage with multiple systems simultaneously, reducing handle time and improving customer experience.

The system also can be designed to recommend the "next best action," which are predictive offerings, such as discounts or loyalty rewards. A recent survey found that extensive personalization using next best action increased average revenue per user by 166 percent.⁶

Digital agents can incorporate sentiment analysis, which assesses the language, emotion, and tone of an inquiry or comment. With sentiment analysis, a digital agent can know when not to intercede or when to provide a timely escalation. For example, if a customer calls to report a

sensitive situation, the technology can be trained to automatically transfer the customer to a human agent, who can manage the conversation with empathy and expediency.

Businesses that have not yet embraced AI or digital labor still have an opportunity to move quickly. It is entirely possible, within a days or hours, to build from scratch a system that can respond to a set of frequently asked questions. The combination of humans and digital agents working together can do much more than what either can do alone. [Click here for an explanation and examples.](#)⁷

Creating engagement hubs: Managing customer retention

Combining virtual agent technology with enhanced training for human agents is shifting the role of the contact center from a cost center to an engagement center—a place to anticipate, understand, and meet customer needs and earn customer loyalty. When implemented as part of an overall customer experience journey, these centers can serve as a safety net for all interactions, regardless of channel (see Figure 1).

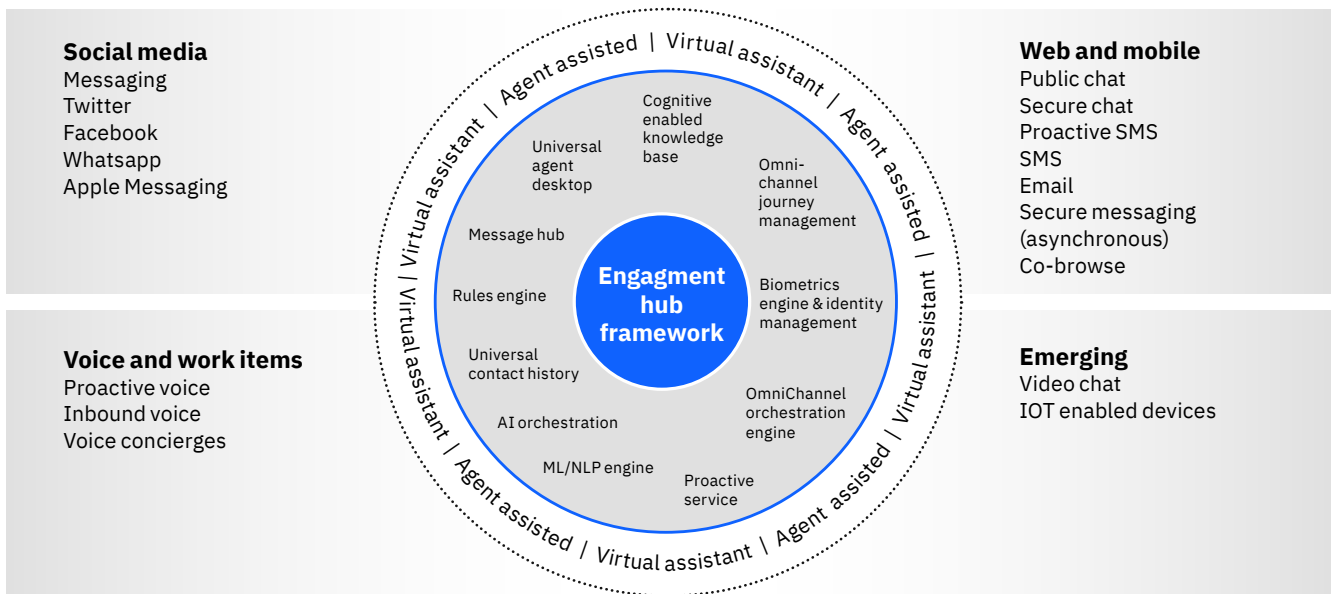
Even before the pandemic, reliable and meaningful interactions with contact centers, along with other touchpoints, were becoming increasingly important to customers. Today's more advanced contact centers have been evolving into engagement hubs, where ready access, responsiveness, accurate information, and empathy have never been more important.

When well-executed during an emergency, they can be the source of competitive differentiation by delivering improved customer and employee satisfaction, which, in turn, tends to build loyalty and trust. One example: as the pandemic began to spread in North America, requests for help or information to the airline WestJet increased more than 1,600 percent on Facebook Messenger and WhatsApp. The airline's virtual agent completely handled 87 percent of the issues, helping lower response time.⁸

It is entirely possible, within a matter of days, to build from scratch a system that can respond to a set of frequently asked questions.

Figure 1

A cognitive customer care offering



Source: IBM Institute for Business Value.

The majority of Millennials, and a growing number of individuals in other generations, prefer using self-service options. Indeed, more than 70 percent of Millennials say a phone call is not the best way to resolve customer service issues.⁹ A variety of information sources, such as FAQs, forums, online chats and automated services—rather than human-staffed call centers—are used with greater frequency.

With these tools, customers can manage interactions on their own timetables, without worrying about interruptions or being tied to a linear conversation. It is critical that both the human agents and the digital labor have seamless access to the same data, tools, and knowledge, and that these be refreshed frequently and integrated across channels.

European bank: Using virtual agents to improve customer satisfaction

Due to the COVID-19 pandemic, customer inquiries increased at a European bank. In addition, the bank had high levels of staff absenteeism from sickness and self-isolation. IBM quickly engaged with the bank, accelerating a longer-term virtual agent project to help manage the flow of calls to the contact center. Rapid implementation—inception to production in just three business days, without interrupting continuity of operations—is helping about 2,000 customers per day since it activated virtual agent technology.

For more examples, see “Insight: Using virtual agent technology in the fight against COVID-19.”

Reduced call times improve outcomes

Whether they’re looking to drive revenue, cut costs or improve customer satisfaction and experiences, enterprises running large customer- engagement centers are all about saving time. When shaving just five seconds off an average call can save a business millions of dollars, imagine the benefits to businesses that have already reduced their average call time by minutes.¹⁰

AI, which powers digital agent technology, is a cornerstone of modern customer engagement centers. It can help enterprises reduce wait times and the time it takes to resolve an issue, and help drive consistency of delivered services. Technology has evolved such that automated assistants can deliver all of these while substantially improving customer service at the same time. Consider this:

- More than 60 percent of failed customer- support calls could have been solved with better access to data.¹¹ Utilizing human labor and virtual agent technology collaboratively and layering in automation can put the right information in front of the customer in near-real-time.
- When a customer’s contact center experience crosses more than one channel, only 36 percent of centers can keep track of it.¹² An appropriately architected engagement hub helps route contacts to the best source of help. AI-enabled centers can route repeat callers to the agent who handled the prior call, if available. AI can also use the data from open requests and anticipate a customer’s needs, offering options at the beginning of the conversation, which reduces the time needed to solve the problem.
- A mere 17 percent of centers can identify the problems that negatively impact customer experience.¹³ With machine learning and data mining, each contact can be analyzed to assess its success or failure.

Virtual agent technology also has the potential to improve job satisfaction and reduce turnover among customer service employees. The economic benefits of happier employees can make a sizable difference to the bottom line.¹⁴ A turnover rate of 30-45 percent annually, can cost upwards of USD 100,000 for a call center staff of 50, so reducing turnover can deliver substantial savings.¹⁵

Insight: Using virtual agent technology in the fight against COVID-19

The University of Arkansas for Medical Sciences

quickly deployed a virtual agent that quickly answers questions about testing, symptoms, or other resources. New information is sent to a mobile COVID-19 triage clinic electronically to help speed response time. Average registration time has been reduced by 50 percent for those using the digital agent technology.

In the city of **Lancaster in Los Angeles County**, citizens can get up-to-date COVID-19 information and answers to common questions, such as symptoms and recommended procedures to follow in case of infection.

Children's Healthcare of Atlanta uses the "COVID-19 Pediatric Assessment Tool" to walk parents through a series of questions and recommendations on suggested next steps that a parent should take. Recommendations are made according to the healthcare system's established protocols.

In New York, the **County of Otsego** is making COVID-19-related information available to help citizens quickly get answers regarding the pandemic. The County's virtual agent will be able to answer citizens' questions, such as: "How do I apply for unemployment?"

The city of **Austin, Texas** information on COVID-19 will soon be available for citizens in the form of interactive conversations on where to get testing and other information.

The **Czech Ministry of Health** is using COVID-19 virtual agent technology called "Anežka" to advise citizens about prevention, treatment, and other topics on the pandemic.

In Greece, the **Hellenic Ministry of Digital Governance** offers COVID-19 information and interactive conversations on preventive measures issued by the Greek government.

The **Polish Ministry of Health** is using VAT to provide COVID-19 information and answers to common questions, such as symptoms and recommended procedures to follow in case of infection.

The **Andalusian government** in Spain has deployed a virtual agent to help respond to citizens' queries about COVID-19. It is available through the app "Salud Responde" and the Public Agency for Health Emergencies website, built in collaboration with the Andalusian Health Service, SAS.

In Wales, the National Health Service, **Cwm Taf Morgannwg University Health Board**, is using CERi, an English and Welsh speaking virtual assistant to support healthcare workers and the general public who need information or have questions on the prevention and treatment of COVID-19, along with general information about the virus.

The ability to resolve customer service issues before they escalate has the potential to lower “shopping cart” abandonment rates in the purchasing cycle.

Reduced customer effort also improves outcomes

For many businesses, the holy grail of customer service is reducing customer effort in areas, such as placing orders, making returns, or seeking assistance. In one communications-industry example, an IBM Institute for Business Value study found that service providers who measure, and in turn, reduce customer effort had more than 250 percent higher market-share growth than their peers.¹⁶

With virtual agent-enabled messaging and chat, traditional telephone and self-service content can become highly productive. AI systems can monitor a nearly infinite amount of website and in-app activity for distress indicators, identifying customers experiencing issues and routing the problem to the best resource based

on customer-identified preference or most likely to help. This capability cuts down the effort required on a customer’s part to resolve a concern.

The ability to resolve customer service issues before they escalate has the potential to lower “shopping cart” abandonment rates in the purchasing cycle, reduce customer complaints, and improve consumer and agent satisfaction. The combination of human agents working in concert with virtual agent technology can result in better outcomes for both customers and employees. The banking group, Creval, based in Italy, is using both human and virtual agents. Creval reported an 80 percent reduction in the number of calls that back-office staff need to handle. Handling fewer calls resulted in 40 percent less effort, allowing human agents to focus on higher-value activities. And feedback from customers who interacted with the AI-based system was more than 90 percent positive.¹⁷

Action guide

Reinventing the contact center

Especially during a crisis, there are both short-term and medium-term actions that businesses can take to enhance their contact center operations (see Figure 2).

1. What contact center leaders should do first:

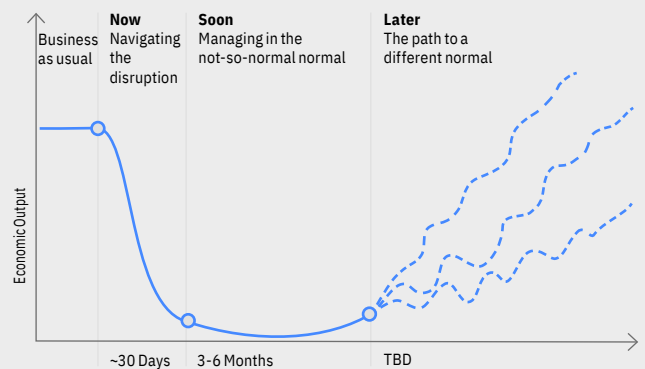
- Focus on protecting employees and supporting remote work and collaboration. Stabilize operations, including understanding current customer needs, problems, and opportunities.
- Create or update a remote work strategy. Monitor it for potential gaps or areas for improvement. Use AI to bolster remote working capabilities. This can increase staff availability during a crisis response.
- Gain leadership support to augment human agents with virtual enablement technology and get it operational quickly. Start small, using virtual agents to respond to frequently asked customer and employee questions. Consider where and how to introduce this new capability.
- Identify and layer on additional automation using a time-to-value approach.
- Survey contact center agents to understand what types of questions could be answered by virtual agents with minimal training.
- For organizations that need to remain highly focused on their core business and currently lack the expertise to quickly implement or refresh their AI-enabled solution, consider engaging a partner with capabilities to train both the human agents and the technology.

2. What contact center leaders should do next:

- Test and scale virtual agent technology for employees, customers, suppliers, and business partners. Enable more channels, such as phone, online chat, and the company website.
- Upskill the contact center team to take over some of the responsibilities that may have been outsourced.
- Explore using more advanced “agent assist” technology—that goes well beyond just FAQ deflection—to support human agent responses to more complex, challenging inquiries.

Figure 2

The path to a different normal



Source: IBM Institute for Business Value.

- Establish and capture a baseline of measurements to assess the effectiveness of virtual agent technology and its impact on customer and employee satisfaction.
- Extend remote working capabilities to include enhancements, such as data and forms processing, and workflow improvements.

3. What contact center leaders should do as they travel the path to a different normal:

- Conduct periodic analyses of virtual agent technology metrics to determine trends and areas for improvement.
- Hold a design thinking session with top agents and other employees representing sales, marketing, and customer experience. Explore opportunities for ongoing enhancements that can remake the contact center into an engagement hub.
- Optimize remote work with a more balanced mix of offsite-based and center-based employees. Fraud compliance is a good example of workflow that may be managed well from remote locations.
- Take a non-crisis look at feedback to reassess design, usage, and performance for the different normal. Is it being used strategically?

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