



# Next-Generation Service: The Role of AI, IoT, and Automation in Contact Center Transformation



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## Introduction

*"I'm interested in things that change the world or that affect the future and wondrous, new technology where you see it, and you're like, 'Wow, how did that even happen? How is that possible?'"*

— Elon Musk

We live in a truly wondrous time where technology and humanity converge at virtually every intersection of our lives. It's difficult for many of us to believe that we once survived without cellphones, the internet, or Amazon Prime two-day shipping. Our society is incredibly dependent on technology, and that this dependency will only increase with time. There are innovations every day that fascinate and further perpetuate our obsession with connectivity. We're addicted to the always-on, digital life.

These same innovations that captivate us as consumers are finding their way into organizations and, more specifically, the service experience. This should come as no surprise. In a world that's increasingly dominated by digital natives with a need for instant gratification, these innovations are essential for organizations to ensure that they're able to deliver on customer expectations both today and in the years to come.

Companies are deploying multiple tactics to address these evolving expectations, and perhaps none has drawn as much attention as the role of artificial intelligence (AI) in service. Coupled with this, organizations are evolving and expanding their self-service options and employing data from connected devices to better inform and proactively address customer needs. But are contact centers adopting and utilizing these technologies as much as they'd like, or seeing the benefit from them?

In this research from ICMI and Oracle, we explore these trends, assess their impact on customers, companies, and employees, and provide insights into how organizations can prepare for the future.

### Key Findings:

- Within the next year, the percentage of organizations supporting IoT is expected to jump from 36% to 57%.
- While only 35% of organizations currently use AI, 85% of respondents would like to see their organizations expand its use or adopt it.
- Offering or supporting the Internet of Things (IoT) and connected technologies is causing increased and more complicated work in one out of three contact centers.
- Two-thirds (67%) of contact centers have had to train agents to handle customer interactions differently because of offering or supporting IoT/connected technologies.
- 23% of contact centers have had to hire for a different agent skillset because of offering or supporting IoT/connected technologies.
- Offering or supporting IoT/connected technologies increased agent satisfaction in 40% of contact centers, while 53% report satisfaction remaining the same.
- Offering or supporting IoT and connected technologies led to increased customer satisfaction for 50% of contact centers.
- 52% of organizations consider service to be their primary competitive differentiator; 31% considered it to be their product, while just 17% considered it to be their price.

## Consumer Adoption of IoT/Connected Products

In this study of AI, the IoT, and automation, we conducted both a consumer and an organizational analysis. We sought to understand the prevalence of these technologies in the lives of our audience, both personally and professionally. According to this research study, more than half of the consumers in our audience (58%) personally own at least one IoT/connected device.

### IOT/CONNECTED PRODUCT OWNERSHIP



**82%**  
**Multimedia**



**70%**  
**Wearables**



**52%**  
**Vehicles**



**42%**  
**Home**



**11%**  
**Exercise  
equipment**

When looking at the future likelihood of purchasing a new device, 48% of respondents were likely or extremely likely to acquire a new device within the next twelve months. When asked if the risk of a privacy breach or data hack was a barrier to purchasing an IoT/connected product, most respondents felt that it was somewhat or not at all a barrier. There was no distinguishable difference between respondents of different generations when considering both future purchase habits and risk adversity.

The findings in this study indicate that a high percentage of people utilize connected products, plan to expand their use of these products, and have minimal fears about compromising their personal information through such use. These results affirm that continued growth can be expected around IoT/connected products. Organizations looking to appeal to a broad spectrum of consumers could be successful in offering and leveraging these technologies.

## Has Next-Generation Service Hit the Contact Center?

For most organizations, Next-Generation Service has yet to arrive in the contact center. This research found that just 36% of companies offer or support IoT/connected technologies today. Of those that support these technologies, many support multiple types of devices.

### COMPANY SUPPORT FOR IOT/CONNECTED DEVICES AND SERVICES



**66%**  
**Apps**



**42%**  
**Business  
equipment**



**32%**  
**Vehicles**



**31%**  
**Wearables**



**31%**  
**Facilities**



**25%**  
**Shipments/  
packaging**

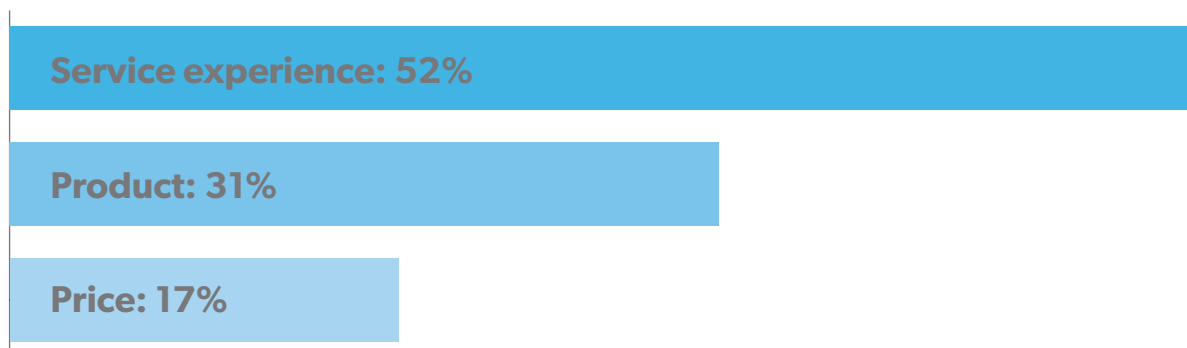
Many organizations (65%) are not utilizing AI; the most common use case in those that do is speech recognition (17%). One of the perceived benefits among organizations utilizing IoT/connected technology is the robust access to data and user intelligence that may otherwise go unleveraged. Understanding that this is a frequently articulated benefit of such technologies, this research evaluated whether organizations were tapping into these valuable insights. Shockingly, approximately one out of every three organizations that support IoT/connect products don't collect data from them. This is a tremendous oversight that exposes both vulnerability to service failures and an inability to deliver well-informed, customized experiences.

So, if not using the data isn't a sustainable approach, how do the organizations that do leverage their data use it?

The primary way that contact centers use data collected from IoT/connected products is to offer value-based services based on customer behavior and business intelligence. (43%)

When done well, using IoT/connected product data in this way enables organizations to competitively differentiate themselves via the service experience. This is an important consideration, as this research found that, across all organizations, the service experience is an organization's key competitive differentiator.

### PRIMARY COMPETITIVE DIFFERENTIATORS



Customers 2020 research by Walker predicted that by the year 2020, the service experience would be the most important component of a business's strategy in 50% of organizations. This current research study from ICMI would indicate that organizations have recognized the importance of the service experience at a faster-than-anticipated pace. While this is encouraging news, it only increases the pressure on organizations to adapt and evolve their people, processes, and technologies to compete on the level of service experience.

Because of the heightened emphasis on and value of experience, the ways in which organizations leverage data and customer insights into action will significantly affect their ability to remain competitive. To better understand how this should change from current state, this research further evaluated the ways in which contact centers use data from their IoT/connected sources.

**51% of contact centers use data from IoT/connected sources to empower contact center managers with real-time metrics, KPIs, and customer data.**

**44% of contact centers use data from IoT/connected sources to empower contact center agents with real-time metrics, KPIs, and customer data.**

When it comes to using data to detect and resolve problems, it is apparent that organizations face serious operational challenges.

**26% of contact centers can leverage data from IoT/connected products or devices to automatically and proactively resolve a detected problem.**

**27% of contact centers can detect a problem, but require an agent to find the solution**

**47% of contact centers are unable to use data from their IoT/connected sources to identify or resolve a detected problem**

While 25% of organizations report facing no challenges in the collection and utilization of data from IoT/connected sources, the majority face a similar challenge: they have too much data collected from too many disparate sources with no good way to consolidate it.

Leveraging data effectively can only happen with the right systems and tools. The most common business information tools found among the contact centers surveyed are:

**1**

Agent performance and capability scorecards (63%)

**4**

Data analysis (root cause, business performance) (43%)

**2**

Historical dashboards (55%)

**5**

Post-contact survey capability (42%)

**3**

Real-time dashboards (51%)

The primary way that contact centers wished they used the data collected from IoT/connected products is to automate common customer requests and service interactions through bots/AI (32%). Only 33% of the contact centers surveyed are currently doing this.

The second most popular way in which contact centers wished they used the data collected from IoT/connected products is to deliver customer history and preference data to contact center agents (28%). Only 38% of the contact centers surveyed are currently doing this.

Contact centers want to use their data to improve the customer experience, and ICMI's research finds that it's not only harmful to the customer when then they can't—it also leads to agent disengagement, longer handle times, and increased costs.

In terms of how organizations will invest in technology to address these concerns, their near-term investments all indicate a desire to make it easier and more intuitive for customers to do business with them, but do not explicitly mention IoT tools. As we review later in this report, however, there is an anticipated shift in the percentage of organizations who will invest in IoT.

### The top three next contact center technology investments are:

- 1 Self-service
- 2 Customer satisfaction tools
- 3 Chat

Beyond these known near-term investments, the participants in this study indicated an excitement and anticipation toward the future of the contact center. They clearly see the advantages of delivering next-generation service, and their responses paint a picture of how their organizations plan to further expand and evolve their service offerings.



## Next-Generation Service: What's Next?

**Within the next 6-12 months, 57% of organizations intend to support or offer IoT/connected technologies, a 21% jump.**

While most organizations may not yet deliver next-generation service, that is expected to rapidly change over the next year. In considering the current state of next-generation service in the contact center (or the lack thereof in 36% of organizations), the monumental change that's anticipated for the future can be sobering for organizations that are ill-prepared. Beyond the negative consequences of not adapting, it's valuable to explore the changes and benefits that organizations that deliver next-generation service have recognized.

### **ORGANIZATIONS OFFERING OR SUPPORTING IOT/CONNECTED TECHNOLOGIES HAVE FOUND THAT THE SHIFT MADE A SIGNIFICANT IMPACT ON CONTACT CENTER OPERATIONS, CAUSING AN INCREASE IN:**



**the hours of operation in one out of every five contact centers (22%)**



**the number of channels supported by the contact center in 38% of organizations**



**inbound volume for 26% of contact centers**



**outbound volume for 23% of contact centers**



**the complexity of contacts handled by live agents for 37% of contact centers**

It's important to remember that a key value of supporting the IoT is to drive better business intelligence and customer experiences with more comprehensive data at an agent's fingertips. It won't necessarily lead to fewer or less complicated contacts; in fact, the opposite appears to be true, and it's having an impact on how frontline agents are trained and hired.

**67% of contact centers had to train agents to handle customer interactions differently because of offering or supporting IoT/connected technologies.**

**23% of contact centers had to hire for a different agent skillset because of offering or supporting IoT/connected technologies.**

If we introduce AI to the conversation, the research finds that organizations are widely receptive to the idea and have some very specific and common expectations as to how it would be utilized to improve the customer experience.

**85% of respondents would like to see their organizations adopt or expand the use of AI.**

It's clear that companies find the idea of using AI in customer service to be highly desirable: 41% of respondents expect their contact centers' use of bots/AI to increase in the next 12-18 months. When researching the various types of available AI, the most desired type is speech recognition, with 50% of respondents putting it at the top of their wish lists. As it specifically relates to conversational AI (chatbots), 28% of respondents would like to see their organizations utilize it in the future.

The use of AI in the contact center is part of an intentional customer experience strategy that, as this research uncovered, is built with the customer in mind. This is a shift from historical methods of planning service that often took a very inward-out approach. What this study revealed is that organizations are recognizing, and acting on, the reality of customer empowerment in the modern economy. As such, the expected benefits of using AI are incredibly customer-centric.

## THE TOP THREE EXPECTED BENEFITS FROM THE USE OF BOTS/AI ARE:

**1. Reduce customer wait times (56%)**

**2. Increase customer satisfaction (52%)**

**3. Enable agents to work on more complicated customer service issues (50%)**

Going beyond these expected benefits, the organizations that offer or support IoT/connected technologies reported some impressive results on their KPIs due to offering next-generation service.

Offering or supporting IoT/  
connected technologies  
**increased agent  
satisfaction in 40%  
of contact centers,**  
while 53% reported satisfaction  
remaining the same.

Offering or supporting IoT/  
connected technologies  
**increased customer  
satisfaction in 50%  
of contact centers,**  
while 44% reported satisfaction  
remaining the same.

### Conclusion

It's an exciting time to work in customer service, as organizations look to their frontlines to ensure their service experience stands out as a competitive differentiator. The elevated value of these service teams is driving organizations to invest in their people, process, and technologies to ensure that they're set up for success. Nobody is claiming that it's an easy task, but the advancements in the capabilities of AI, automation, and IoT/connected devices will certainly help organizations achieve their goals. Through this research, it's the hope of both ICMI and Oracle that contact center leaders not only identify their opportunities for improvement but also, more importantly, recognize the incredible value and importance of delivering Next-Generation Service.

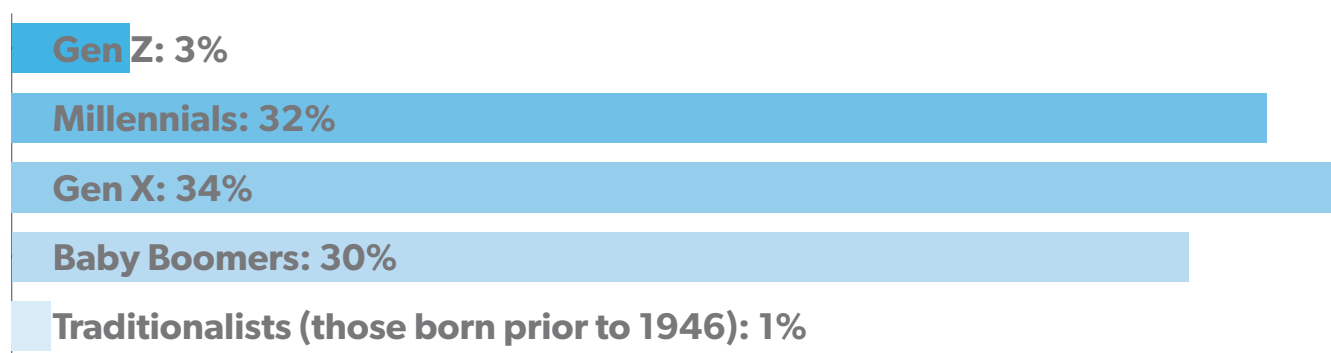
This research study revealed that organizations who embrace AI and IoT can anticipate incredible advantages and benefits, but will not do by just implementing new technologies. Companies should expect and plan now for a change in the way they hire, train, and equip their frontline teams to deliver Next-Generation Service. It will be these organizations who transform their use of technology, properly prepare their people, and employ customer-centric processes that thrive in the future.

## Demographics

Serving the contact center industry for more than thirty years, ICMI has established a robust community of practitioners from contact centers and customer service organizations around the globe. This level of engagement with a large quantity of contact center professionals enables ICMI to provide a well-informed perspective on the role of AI, the IoT, and automation in the contact center. The findings in this study represent the current state of these organizations, as reported to ICMI, with a 5% margin of error at a 95% confidence level.

The 354 respondents to this survey were primarily executives and directors (40%) and managers (39%). The remaining 21% of respondents were an assortment of contact center supervisors, analysts, and consultants whose feedback rounded out the data's insights. These respondents also represent a diversity of generations.

### GENERATIONS



North America, and the United States specifically, accounted for most respondents (90%), but individuals from the Philippines, South Africa, and India were among those from around the world who contributed to this study.

While all industries are represented in this study, four industries accounted for 48% of all responses.

### INDUSTRIES REPRESENTED



**Financial/legal services**  
**(20.6%)**



**Retail**  
**(9.3%)**



**Communications**  
**(9.3%)**



**Healthcare**  
**(8.8%)**

The contact centers in this study also represent a blend of business areas and small-, medium-, and large-scale operations.

## BUSINESS AREAS



**Customer service  
(79%)**

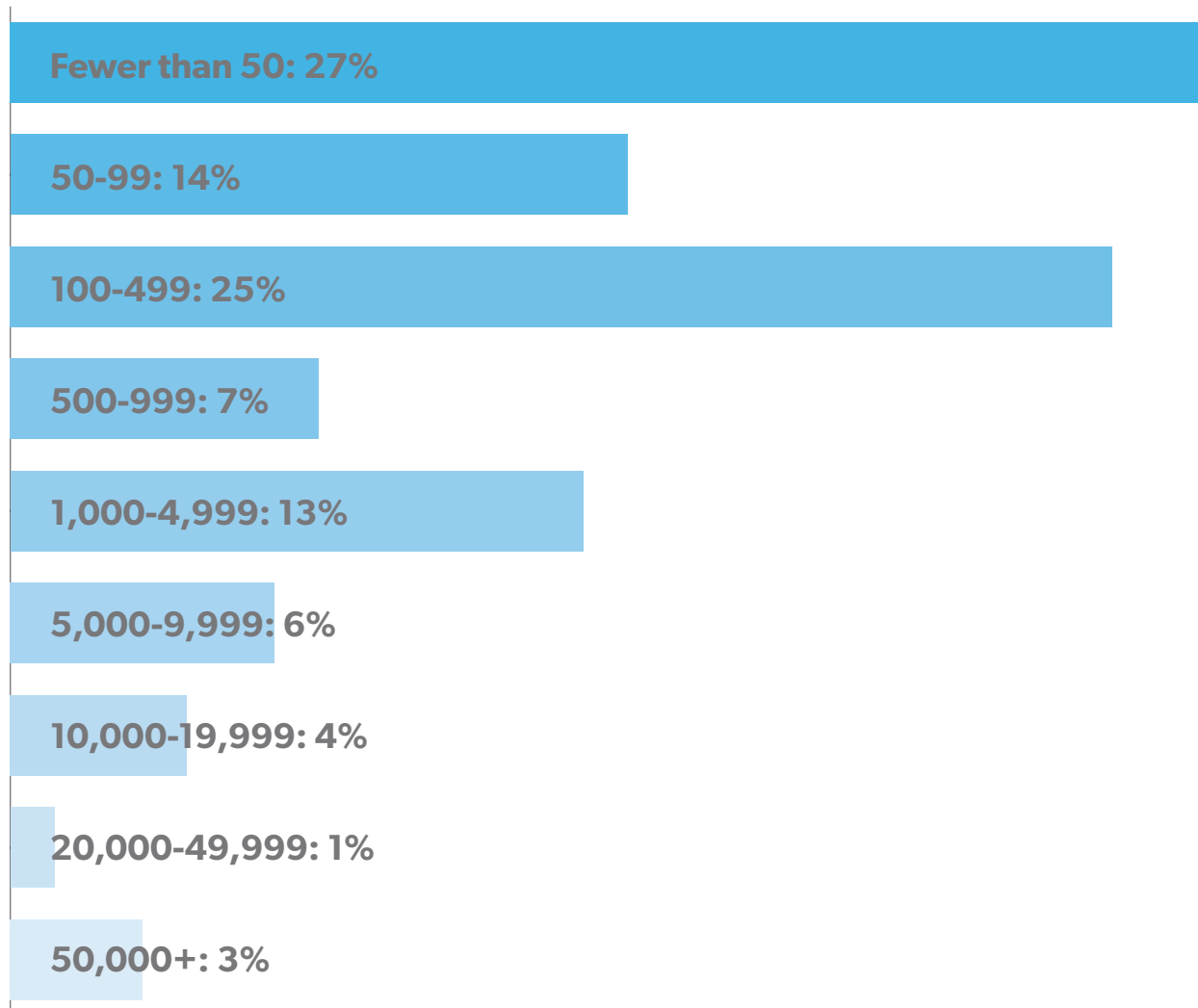


**Technical support  
(39%)**



**Sales  
(30%)**

## FULL-TIME CONTACT CENTER EMPLOYEES



Regarding the ways in which these organizations serve their customers, this research found that organizations are increasing the scope of channels in which they serve their customers. Notable areas of growth in the past year include a 17% increase in the organizations utilizing SMS/text and a 10% increase in the organizations who leverage chat. Also of interest is that number of organizations that offer inbound phone decreased by 9% in that same time.

### CHANNELS CURRENTLY SUPPORTED BY CONTACT CENTERS



### About ICMI

The International Customer Management Institute (ICMI) is the leading global provider of comprehensive resources for customer management professionals—from frontline agents to executives—who wish to improve customer experiences and increase efficiencies at every level of the contact center. Since 1985, ICMI has helped more than 50,000 organizations in 167 countries through training, events, consulting, and informational resources. ICMI's experienced and dedicated team of industry insiders, trainers, and consultants are committed to helping you raise the strategic value of your contact center, optimize your operations and improve your customer service. ICMI is a part of UBM plc ([ubm.com](https://www.ubm.com)), a global events-led marketing services and communications company.

### About Oracle

The Oracle Cloud delivers hundreds of SaaS applications and enterprise-class PaaS and IaaS services to customers in more than 195 countries and territories while processing 55 billion transactions a day. For more information about Oracle, please visit us at [oracle.com](https://www.oracle.com).