

TALKDESK RESEARCH™ REPORT

# The future of AI in the contact center



# Foreword

The importance of artificial intelligence (AI) in meeting even minimum customer expectations is undeniable in 2021. While a wide majority of enterprises recognize this “AI imperative”, there is still plenty of runway on the path to embracing it in a meaningful, transformative way.

Until recently, many organizations had adopted a hopeful “watch and see” position on AI as they waited for the technology to reach maturity.

That day has come.

Today, AI solutions significantly improve customer experience and deliver cost savings, efficiencies and new opportunities for organizations. AI is now increasingly considered a necessity to compete effectively by delivering faster, more accurate customer service.

As AI technology reshapes the world of customer service, it is also fundamentally impacting how contact centers operate.

With AI taking stronger hold in the contact center, how will it shape the future of customer experience? The role of agents? How will it change the way the contact center delivers value as it evolves in an increasingly digital and virtual world? What barriers are contact centers facing in adopting AI?

This report examines the key drivers and expectations of AI growth between now and 2025, including projected growth in investment, the reimagined customer journey, and the permanent, if evolving, role of human agents and staff in delivering value to customers and organizations.

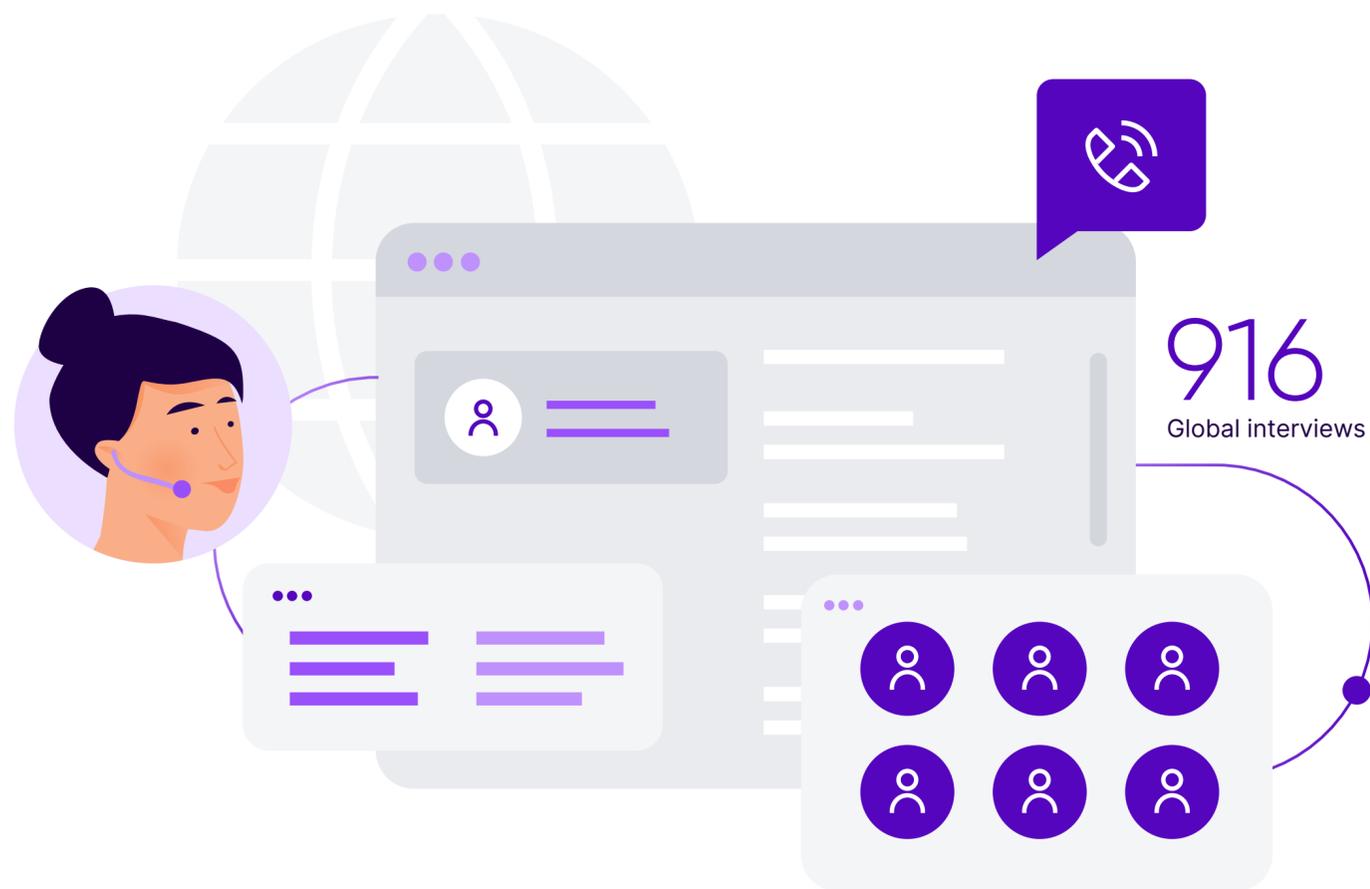
We invite you to explore this report as you prepare to implement or augment AI in your contact center.

Sincerely,



**MARGI DEINLEIN**  
Customer Insights Manager  
Talkdesk

# About this report: methodology



Our quantitative online survey research was conducted in March 2021 among qualified customer experience professionals and target audiences across 11 different global markets including: United States and Canada (North America); Australia, New Zealand, and Singapore (Asia-Pacific); France, Germany, Italy, Spain, and the United Kingdom (Europe); and Brazil (Latin America).

- 916 global interviews were collected among CX professionals employed by organizations with more than 200 full-time employees, spanning all major industries including Healthcare, Financial Services and Insurance, Retail, and eCommerce.

- CX professionals include leadership and management for customer service, customer experience, CX operations, IT and contact center agents.

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# Executive summary

As organizations mature in their AI journeys, contact centers are more effectively adopting automation to empower agents to deliver faster, more accurate, and more efficient customer service.

How does AI contribute to the customer experience delivered through the contact center? And how are brands responding to the “AI imperative”?

In this report, we examine the key drivers and expectations of AI growth between now and 2025, including appetite for investment, the reimagined customer journey, and the permanent, if evolving, role of human agents and staff in delivering value to customers and organizations.

## Our key findings include:

**Adoption and growth are supported, but barriers remain.** CX professionals recognize the importance of AI in driving a positive customer experience and operational efficiency via the contact center; yet, organizations still struggle with deploying AI in truly transformational ways.

- 89% of CX professionals believe in the importance of leveraging AI in the contact center.
- Only 14% of organizations consider themselves “transformational” in employing AI to do heavy lifting for the business.

**Lingering barriers to AI implementation still exist,** both economic and organizational, impacting AI maturity in the contact center.

- 43% of CX professionals cite the cost of tools as a barrier to AI implementation.
- 30% of CX professionals cite reliance on the IT department as a hindrance.
- 26% of CX professionals perceive a long “time to value” as a barrier to investing more in AI capabilities.

**The benefits of AI go beyond better CX.** AI is poised to improve the employee experience and streamline workflows and processes across functions to expedite innovation and go-to-market plans. As a result, many enterprises are leveraging the contact center for more than traditional customer service.

## Four key predictions on how AI will shape CX in the contact center through 2025:

**Prediction 1: Organizations will invest more in AI capabilities.**

Growing evidence of AI's maturity, as well as pressure to deliver faster, more accurate, and scalable service on par with competitors, has fueled interest in AI technologies.

- 84% of organizations expect their total spending on AI/automation to increase in 2025 compared to 2021.
- 58% of CX professionals expect AI will be “extremely important” in the contact center in 2025, a +21% projected growth rate from 2021.

**Prediction 2: Automation will drive operational efficiency and CX.**

Automating processes and workflows to save customers (and agents) time is desirable — and organizations are turning to AI for customer self-service options.

- 84% of CX professionals believe customers expect 24/7 self-service options.
- 69% of organizations have invested in AI/automation for customer self-service features.

**Prediction 3: Humans will rise in the AI-enabled contact center.**

As AI reshapes the way contact centers operate, the role and necessary skills of the human agent will also shift.

- 79% of CX professionals believe AI will provide more tools to human agents, versus replacing them.
- 63% of CX professionals do not believe their agents currently possess the skills required to maximize the value of AI technology.

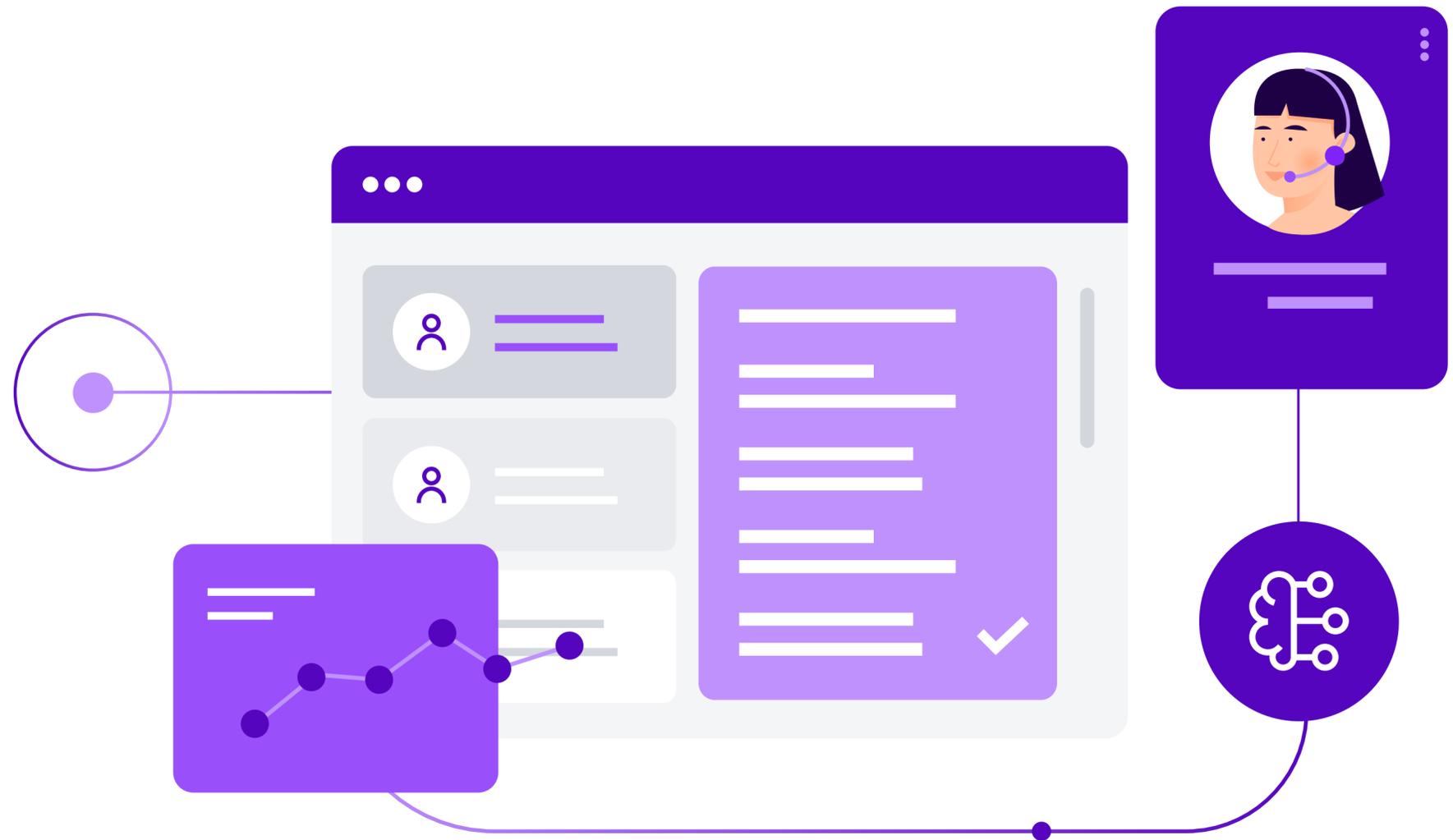
**Prediction 4: AI will streamline the customer journey, securely.**

CX professionals will seek to leverage AI and automation to create a smoother, simpler customer journey—one that delights customers and drives revenue. Enhancing and automating data security with AI is top of mind.

- 80% of CX professionals believe AI will provide a better overall contact center experience for customers.
- 79% of CX professionals believe interacting with AI offers more security than interacting with human agents.

# I. The state of AI today (2021)

As enterprises increasingly rely on AI, the proof of its ability to minimize manual effort, expedite innovation, and improve customer outcomes continues to grow. This rising tide of automation is serving as a source of inspiration for CX professionals to reconsider how the customer experience can be further elevated—particularly via the contact center.



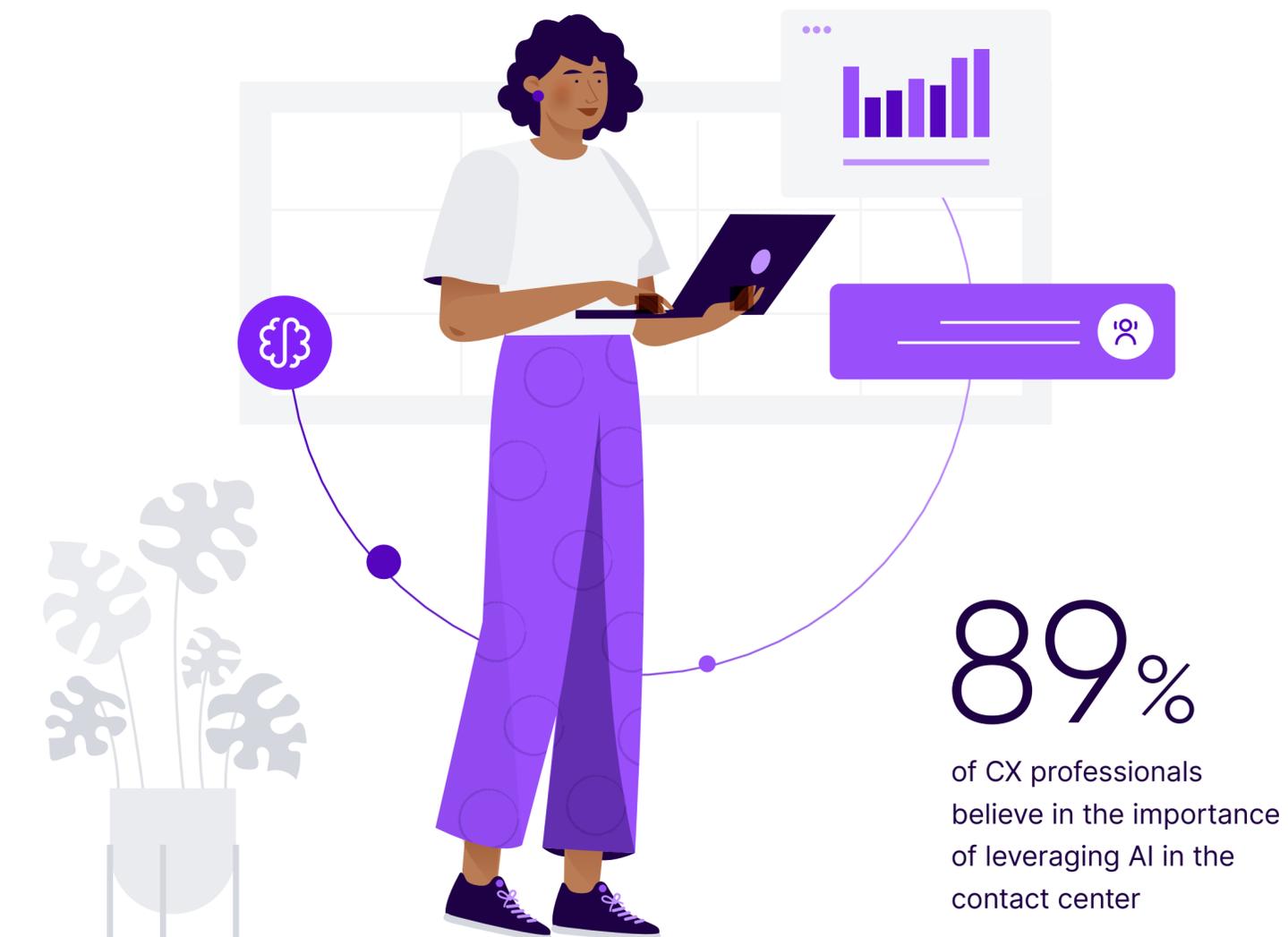
## AI is here to address the challenges and opportunities facing contact centers today.

Virtual agents, agent assists, and other AI-powered tools can now reliably perform critical contact center tasks with limited need for human intervention. From automating back-end call logging and analytics, to identifying security issues, to solving routine customer issues, the potential for AI is nearly as diverse as it is vast. Yet, AI is more than a back-end operational tool; the efficiencies gained often translate into better experiences for **customers** (e.g., faster self-service, smoother, more accurate interactions) and **agents** (e.g., fewer manual tasks and more effective training and coaching opportunities).

Percent of organizations interested in solving for key contact center challenges in the next 12 months:



## CX professionals recognize the importance of AI



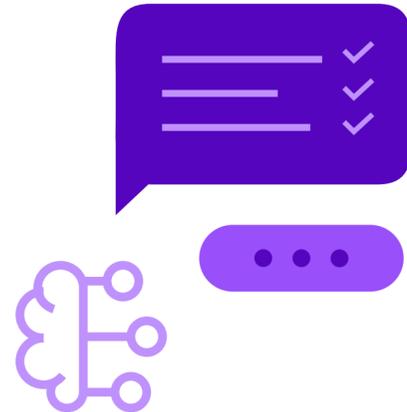
\*Talkdesk CX Professional Digital Priorities Survey, Talkdesk Research, October 2020

## AI maturity curve

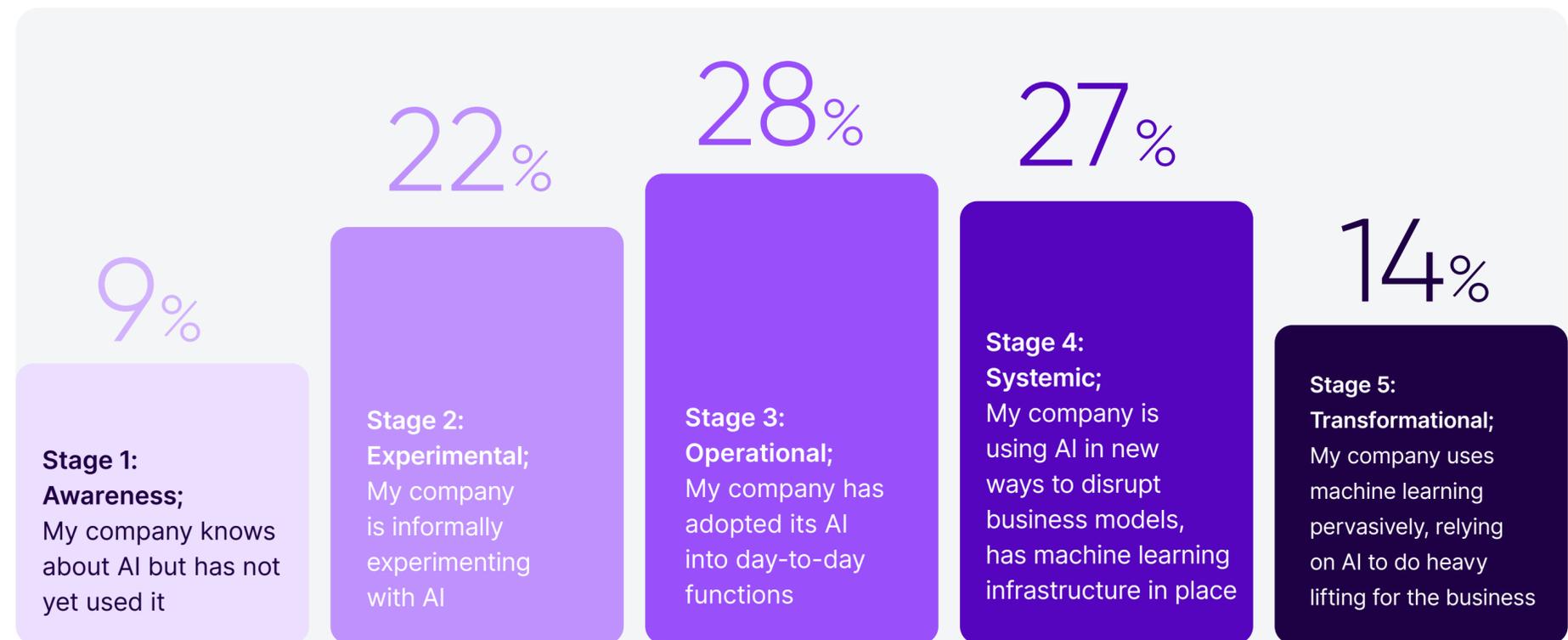
Despite the perceived importance of AI, the path to true maturity is still somewhat uncharted by most organizations. Only 14% of businesses consider themselves truly 'transformational' in their use of AI today, though enterprise-sized businesses slightly outpace their commercial-sized counterparts in this capacity. It's evident that there is still significant runway to push toward systematic and transformational use of AI.

69%

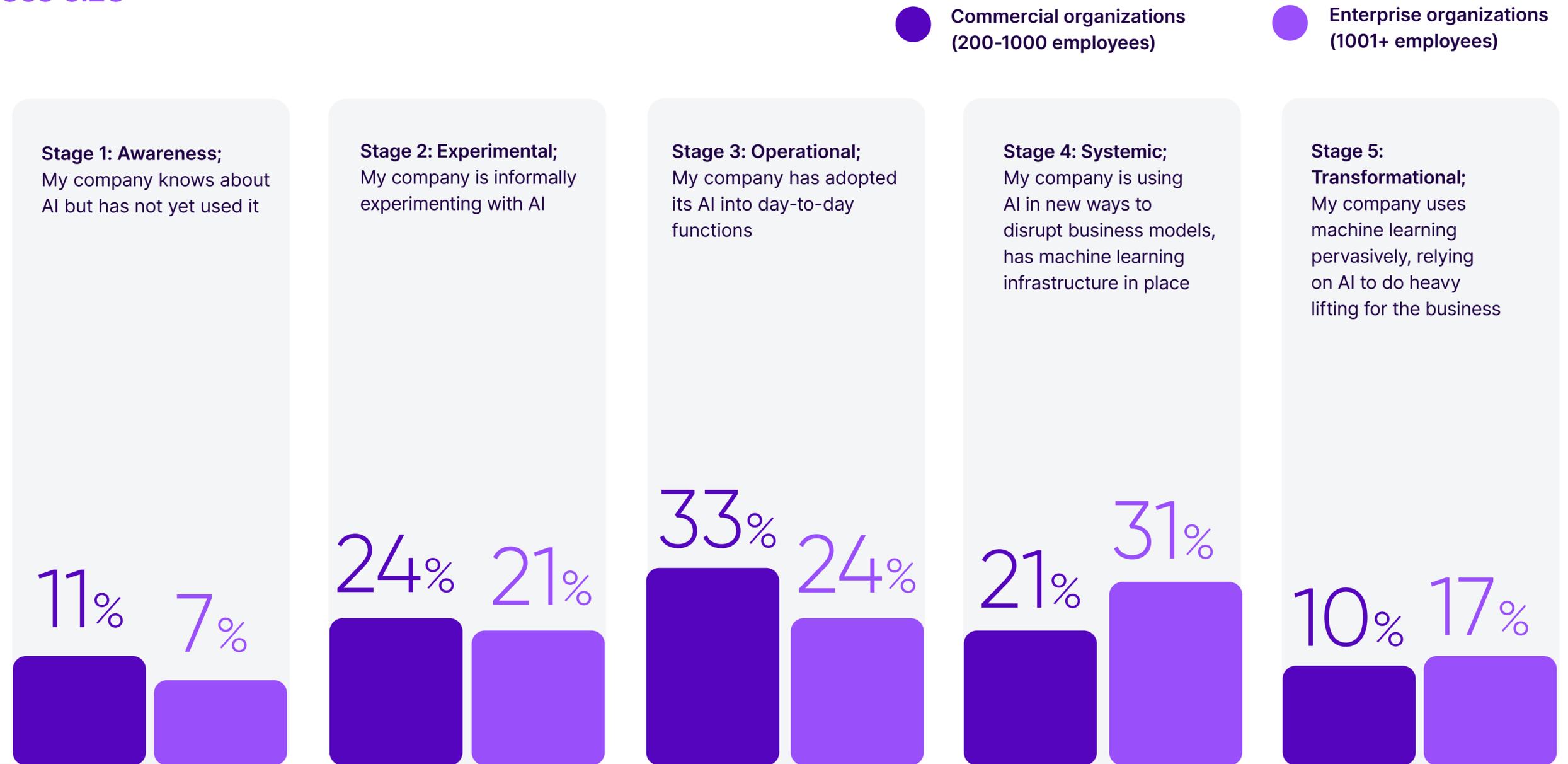
of businesses have adopted AI, but just 14% consider themselves to be truly transformational in their use of the technology



## Which of the following best describes your company's current experience level in utilizing AI/automation?



## AI maturity by business size



With AI promising and proving to deliver improved CX, cost savings and efficiencies, what may be hindering adoption?

# Key barriers to AI adoption and maturity

Before evaluating the barriers to AI adoption, let's consider a broader view of what is happening in the world of customer expectations.

Today's customers demand real-time support—either via self-service or a live agent—and they want it 24/7. They expect a seamless experience across channels, and they expect intelligent service, which means each brand interaction should begin with a basic understanding of both the customer and their problem.

But many contact centers are not poised to deliver on these customer needs and preferences. Why?

- Many solutions were built 25+ years ago, before the digital revolution.
- Legacy systems are often inflexible, slow to adapt to changing business needs, and lack the capacity for innovation needed to adopt a new technology like AI.
- Older technologies often operate in silos, with little or no integration with CRM or other systems.

This isn't just a problem with on-premises systems. It is also an issue with first-generation cloud solutions. While many contact center professionals long to adopt AI technology, its successful implementation often requires a thorough review of the entire tech stack. On the other hand, cloud-native contact centers are equipped to leverage AI from day one and are well-positioned to deliver a great CX, now and in the future.



## A comprehensive AI strategy is essential for success

Beyond the technology shifts needed, perceptions of cost, reliance on IT, long time to value (TTV), and negative short-term impact to customer satisfaction (CSAT) are all perceived barriers to adopting AI in the contact center.

To realize the full value of AI and challenge these perceived barriers, organizations should consider a cross-functional AI strategy—one that weighs the jobs to be done against the current technology gaps, aligns and informs all relevant stakeholders across the business, and focuses on long-term success and ROI.

## Perception: AI is expensive.

- **43%** of organizations cite cost of tools as a barrier to AI implementation.

**Reality:** AI for the contact center is an investment to weigh against the estimated ROI. Efficiencies gained by automating routine tasks, freeing up agents to focus on higher-value initiatives; more effective training and coaching; and the ability to mine data in a fraction of the time can all have a positive impact on the bottom line.

## Perception: Reliance on IT support will hinder AI progress.

- **30%** of CX professionals believe reliance on the IT department will impede progress in implementing AI.
- **27%** of CX professionals cite lack of data maturity/infrastructure as an obstacle to AI maturity.



**Reality:** A robust AI strategy for the contact center will require input from multiple stakeholders, including IT. Yet, there is a clear benefit to this; IT has broader visibility across tech stacks and solutions and can be a valuable partner in identifying where maturity is lacking, as well as what may be needed to improve. And with new 'human-in-the-loop' technology emerging for contact centers, non-technical contact center teams will soon be able to improve AI models independently from IT.

## Perception: AI has a long time to value.

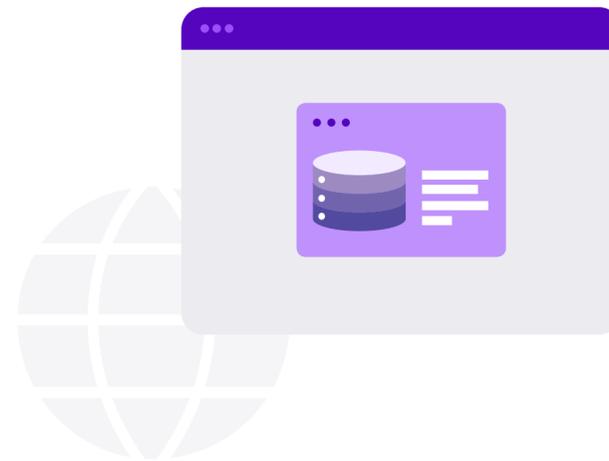
- **26%** of CX professionals consider long time to value (TTV) a barrier to effectively implementing AI in the contact center.
- Only **4%** expect to see a return on AI investment within less than three months of implementation.

**Reality:** As is often the case with any new technology investment, ROI will take some time to grow and evaluate. Measuring the efficiencies gained by AI may take a few months, but the long-term value can be significant.

## Perception: AI implementation will negatively impact CSAT.

- **55%** of organizations believe that AI will negatively impact CSAT in the short term.

While a short-term dip in CSAT may give CX leaders temporary pause, failure to implement AI and automation carries an even greater risk to CSAT in the long term, which happens to be the leading metric used to evaluate contact center performance today.



**Reality:** A negative impact to CSAT associated with AI implementation is often recoverable in the long-term, and may be avoidable with a thoughtful, proactive implementation strategy. Some early adopters of AI technology have observed temporary dips in CSAT as AI takes hold in the organization, but these can be recovered quickly with the right team and approach.

**“We saw our CSAT drop a little bit [upon AI launch], and then as time went on, we changed the way the AI worked and made it so that when somebody says, ‘I want to talk to a customer experience agent right now,’ that’s what they get.”**

—CX SPECIALIST, MOBILE TICKET SALES COMPANY

## Top 10 contact center KPIs measured in 2021: Ranked by importance

1. Customer satisfaction (CSAT)
2. Service level
3. First call resolution (FCR)
4. Average speed of answer (ASA)
5. Average time in queue
6. Average handle time (AHT)
7. Average hold time
8. Average talk time
9. Cost per contact
10. Customer effort score



## Top 5 risks associated with not fully leveraging AI and automation in the contact center (opportunity costs):

1. Lower customer satisfaction
2. Lower operational efficiency
3. Higher staffing costs
4. Slower response times
5. Loss of business to a competitor

As contact centers balance the tension between an AI imperative and perceived barriers to implementation, it appears the strongest path forward lies in placing the customer experience and satisfaction at the center of these strategic decisions.

## II. The future of AI (2025)

The majority of enterprises expect to adopt and increase their investment in AI over the next four years. They will do so with the expectation that AI will not replace humans, but will instead aid and empower agents to better meet customer needs and demands.

The role of human agents will evolve, and the focus of the contact center will grow to deliver broader value as a customer engagement layer across the organization.

Our research highlights four key predictions about how AI will shape the future of the contact center over the next few years. While the potential for AI is wide open, it's clear that brands effectively leveraging AI to deliver a unique experience will be well-positioned to meet the customer demands of tomorrow.



## AI offers benefits beyond better CX

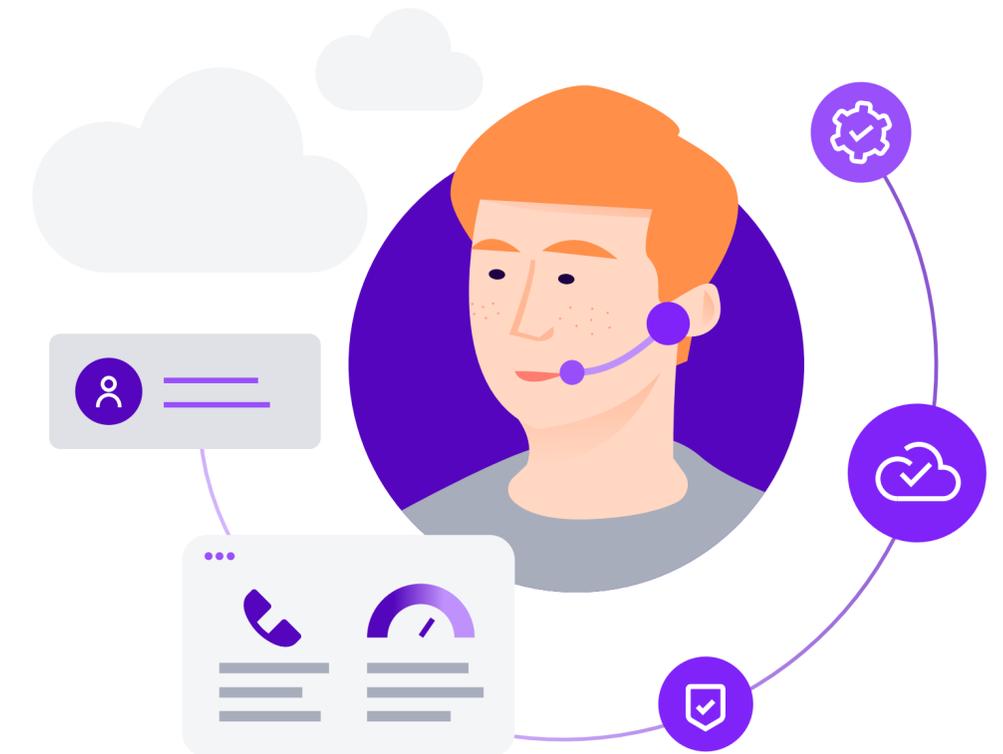
In addition to improving customer experience, AI is poised to enhance the employee experience. It can **streamline workflows and processes** across departments to **expedite time to market** and **grow revenue**.

On the heels of a global pandemic that stretched CX departments to do much more than resolve customer issues, many organizations are reevaluating the strategic position of the contact center.

When offices and stores closed in 2020, many customer service representatives assumed the roles of store associates and sales associates—often serving as the primary or only point of contact for customers at home under lockdown. Without a brick-and-mortar alternative, the contact center effectively became the front door of the business.

Today, organizations are exploring whether the contact center, equipped with the right cloud and AI-enhanced platforms, should continue to do more than traditional customer service. If so, AI can certainly help to facilitate this wider scope.

AI's ability to handle routine customer requests and interactions positions human agents to take on more complex engagements. In doing so, it may act to expand their impact in ways not possible before. **Contact centers leveraging AI and human agents may find themselves with greater capacity to task human agents with outbound calls, proactive customer service, and selling.** This optimizes the value of human work and generates new opportunities to deliver exceptional, differentiated customer experiences.



# Prediction 1: Organizations will invest more in AI capabilities

CX professionals believe AI is critical to the success of the contact center, and anticipate that investment in AI technologies will continue to climb between now and 2025. This expected increase in spending reflects a growing belief that today's contact centers must compete in ways that only AI can support.

84%

of organizations expect their AI spending to increase in 2025 compared to 2021

58%

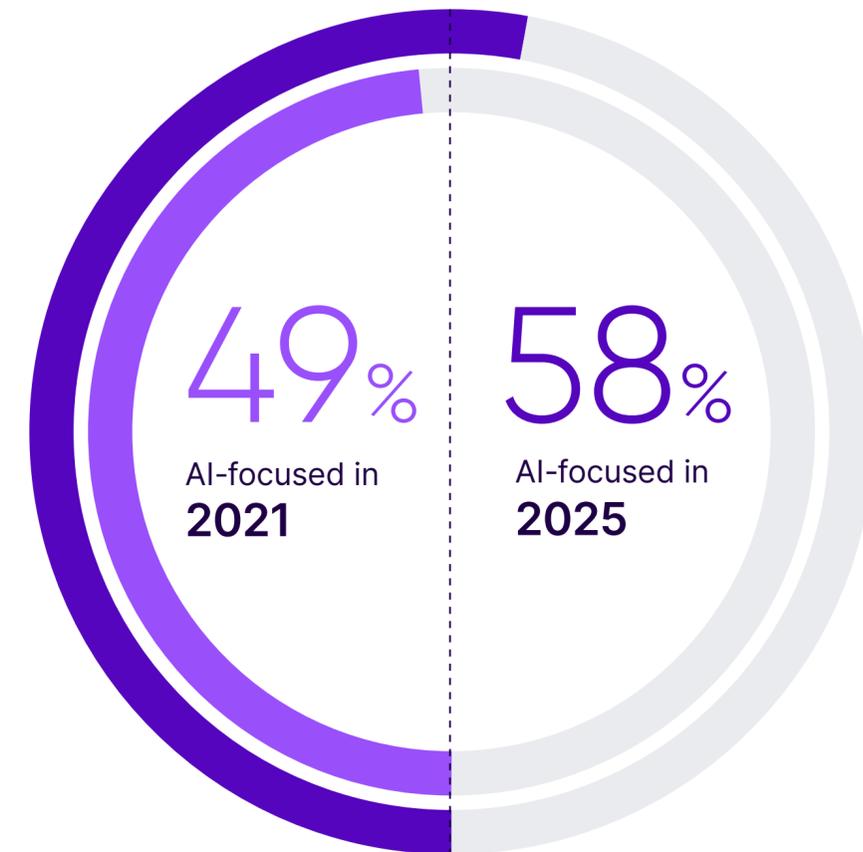
of CX professionals expect AI will be extremely important in the contact center in 2025 - a +21% projected rate of growth in importance from 2021

64%

of CX professionals cite deeper investment in artificial intelligence (AI) functionality as a priority for their contact center

According to CX professionals, by 2025 the optimal mix of AI vs. human agent interactions will favor AI.

Optimal mix of customer interactions:



Priority order  
for future  
AI investments  
(percent  
of organizations  
who have  
prioritized but  
have yet to invest)



25%

AI for intelligent  
recommendations



24%

Real-time error  
detection



23%

Data analysis  
for insights



23%

Speech  
analytics



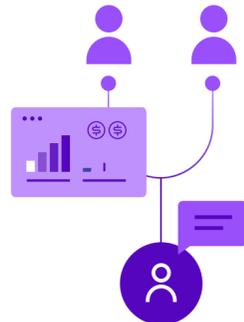
22%

Self-service features  
for customers



22%

AI training for  
contact center  
leaders



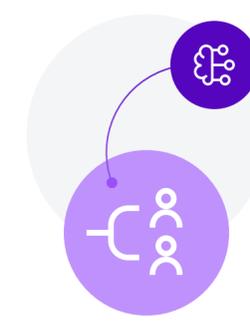
22%

Training and  
performance  
management



22%

Workforce  
management



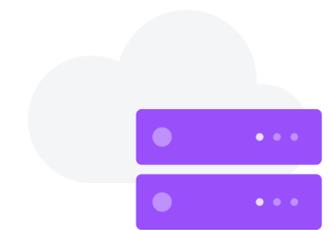
22%

Intelligent  
routing / IVR



21%

Voice-to-text  
capabilities



20%

Automatic  
data entry

## Prediction 2: Automation will drive operational efficiency and CX

One of the key benefits of AI technology is its ability to automate processes and workflows that previously required human effort and presence. Identity and account verification, tracking order and return/repair status, inquiries on billing and balance status, making and changing reservations—the routine customer service inquiries that would otherwise comprise a significant portion of human agents' time can all be executed with AI.

CX professionals are particularly focused on using AI to save customers (and agents) time—and on adding convenience with customer self-service options.

While many customers still want the option to speak to a live agent, a majority are willing to engage with AI if it saves time and solves the issue.

Faster, more accurate solutions and a streamlined, connected workflow are both integral to delivering the level of know-me-when-I-engage-with-you experiences that customers expect today. As such, self-service options are the top priority for AI investment in the contact center.

**“When it comes to AI, the biggest deal is customer experience and agent experience, in terms of making things easier for them.”**

—GLOBAL CRM AND CX LEAD, MULTINATIONAL CONSULTING FIRM



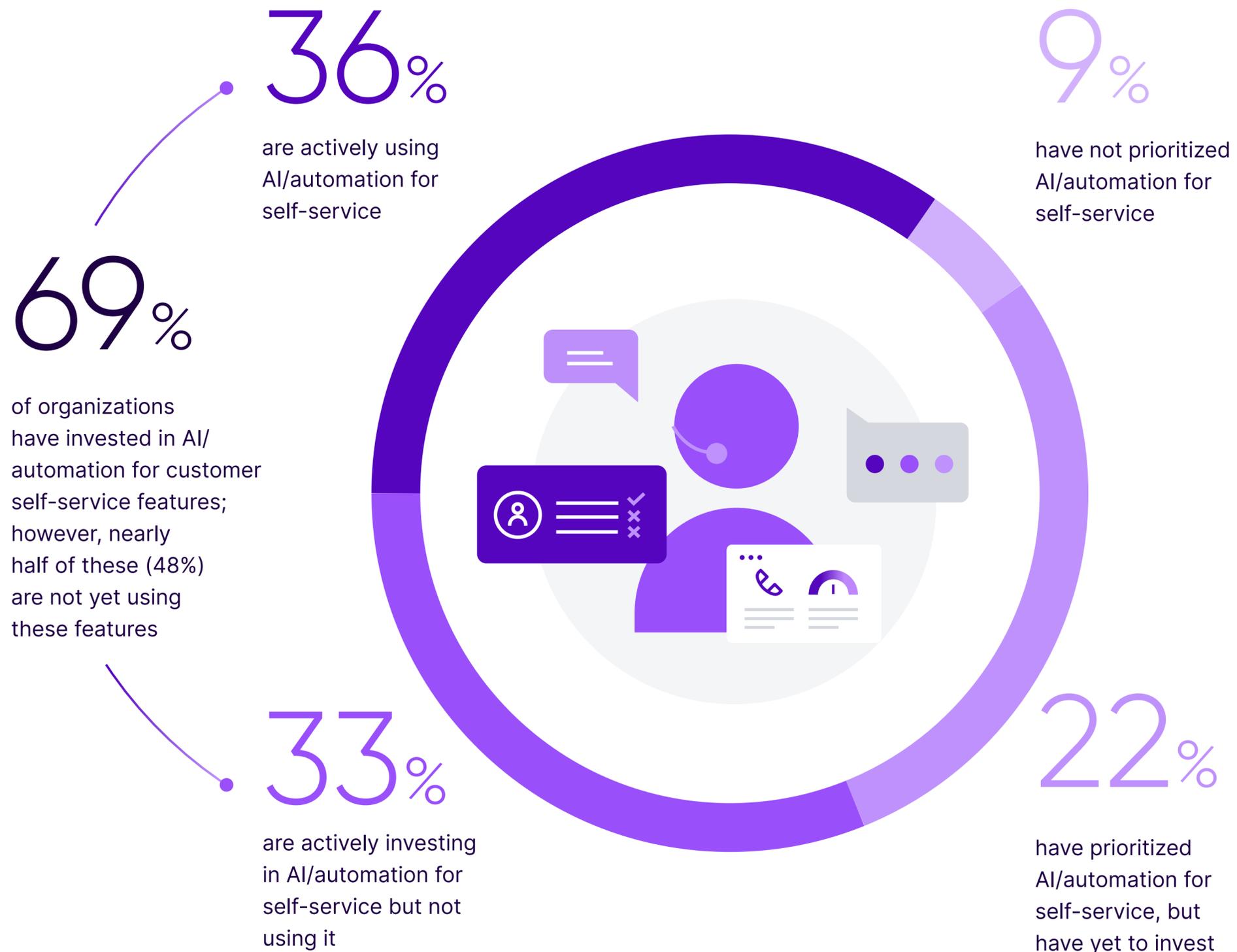
## Self-service options are a win-win for customers and businesses

Automating self-service features not only improves the customer experience but also deflects inbound calls and enables organizations to capture the elevated value of human agents. Perhaps most importantly, organizations believe their customers already expect these self-service options to be available around the clock.

**84%** of organizations believe customers expect self-service options 24/7

**“Putting more information out there for the customer is just going to make their whole experience better... Of course, it’s [also] going to lower the amount of users that you have calling or accessing the chat lines as well.”**

—DIRECTOR OF OPERATIONS & BUSINESS DEVELOPMENT,  
ONLINE LISTING SERVICE



## Prediction 3: Humans will rise in the AI-powered contact center

Since speculation first began about the business and economic implications of AI, there's been concern that AI might replace human jobs. As AI has matured and leaders have adopted a mindful approach toward its role in the workplace, it's become clear that AI is destined to enable humans to do better work, not replace them.

This is true in the contact center. With robotic process automation (RPA) and conversational AI executing routine tasks and driving self-service functionality, contact centers are reimagining the potential for human agents to deliver exceptional customer experiences.

Any customer engagement that relies on human empathy and presence still requires a highly trained human agent. With AI, human agents can be repositioned to handle high-touch outbound

calls or proactive customer care—such as notifying customers of an overdue mortgage payment and showing compassion while offering help—thus ensuring CSAT, customer retention, and driving enhanced customer lifetime value.

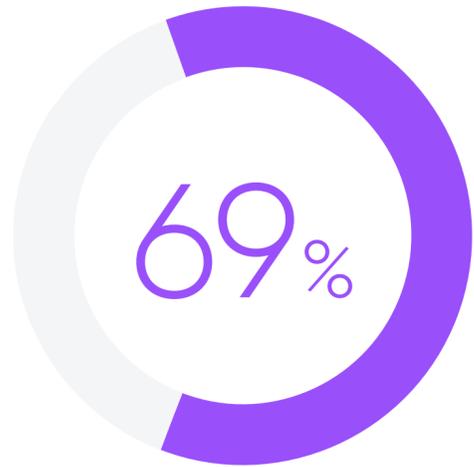
As AI begins to reshape the way contact centers operate, the role of the human agent will also shift, as will the skills needed to succeed in an AI-enhanced workspace.



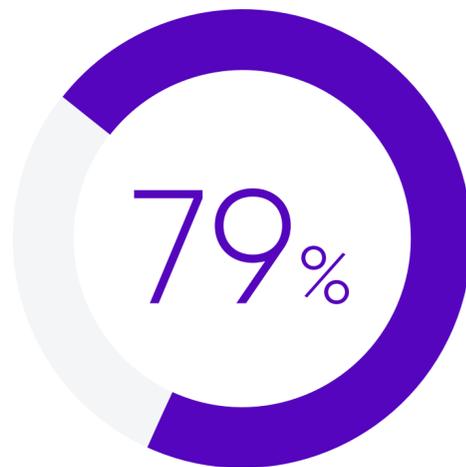
79%

of CX professionals believe AI will serve as an “assistant” by providing more support to human agents, versus replacing them

The majority of CX professionals believe in the value human agents have in driving CSAT, but recognize customers are getting used to AI interactions.



69% of CX professionals believe that customers prefer dealing with a human agent vs. AI/chatbot technology



79% of CX professionals believe customers have become accustomed to interacting with AI such as chatbots

As AI becomes integral to the contact center, there is a growing need for human agents to have training and skills in AI and knowledge of how to work with AI in delivering great CX.

## Top 5 most valued skills in contact center agents: 2021 vs. 2025

2021		2025		Projected Growth in Importance vs. 2021
1	Problem solving	1	Ability to work with AI functions	▲ 71%
2	Positive attitude	2	Problem solving	▼ 15%
3	Knowledge of products/services	3	Ability to evaluate the performance/ effectiveness of AI tools	▲ 63%
4	Flexibility/ adaptability to change	4	Ability to interpret/analyze data generated by AI tools	▲ 35%
5	Speed	5	Flexibility/ adaptability to change	▼ 5%

Not only will agents need new skills, but AI is expected to create new roles for humans in training, managing, and operating AI in the contact center.

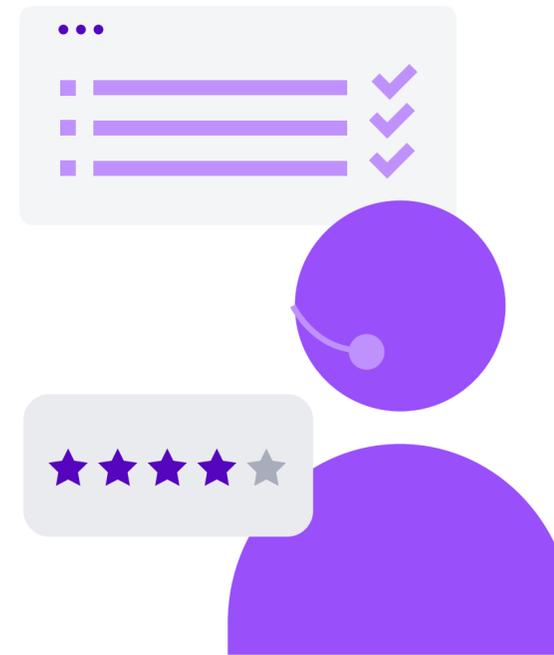
82%

of CX professionals believe AI/automation will provide new career opportunities to train AI in the contact center

60%

of organizations leverage an internal team of data scientists to retrain AI models; (compared to just 35% that use a third-party vendor)

This data highlights that organizations may be interested in keeping AI talent close. With the right tools and skillset, contact center employees can take on the responsibility of training and retraining AI models in the future.



63%

of CX professionals do not believe their contact center agents currently possess the skills required to get the most out of AI technology

Overall, contact center roles and required skills are likely to evolve in the next few years to become more strategic and technically advanced. As they do, and as AI becomes core to the contact center, CX professionals will leverage AI to further streamline the customer journey with a keen eye toward data security automation.

## Prediction 4: AI will streamline the customer journey, securely

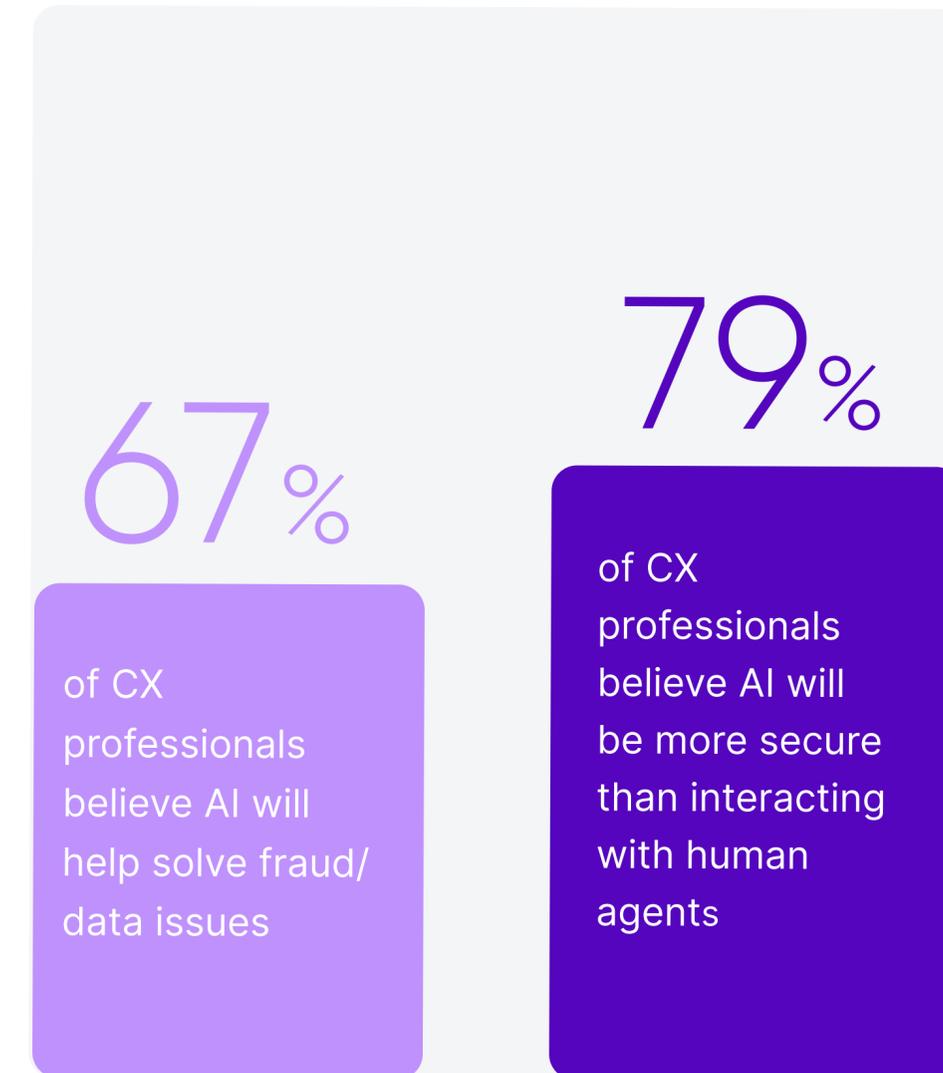
As AI reshapes the customer experience, CX professionals will seek to leverage AI and automation to create a smoother, simpler customer journey—one that delights customers and drives revenue. Effectively reimagining the customer journey will require a holistic approach that employs AI and automation to minimize friction and establish continuity at every touchpoint.

Some enterprises are already identifying back-end processes and workflows that can be automated and integrating key systems into their contact center platform. Employees also benefit from this automation as it streamlines their work, improving productivity and customer service.

When implemented well, AI and automation save customers time—long hallmarked as one of the most important things a brand can do. Fast, intuitive, and customized processes set next-generation CX apart. As customers find these types of brand experiences with increasing regularity, the CX bar will rise to an altitude only achievable with AI and automation.

**Top of mind for CX professionals is ensuring data security across the customer journey.** This will reduce friction as data security becomes a seamless part of interacting with brands and not a cumbersome extra step.

### How will AI and automation impact data security?



## How will AI and automation impact CX?

The way contact center performance is measured may also shift as AI takes on a significant role and traditional metrics can no longer be based on human behavior alone but on a combination of human and AI capabilities and outcomes.

Today, first call resolution (FCR), customer satisfaction (CSAT), average speed of answer (ASA), and service level top the list of contact center metrics. While we believe performance metrics must always be tied to measuring customer experiences, how AI will alter standards of measurement remains to be seen.



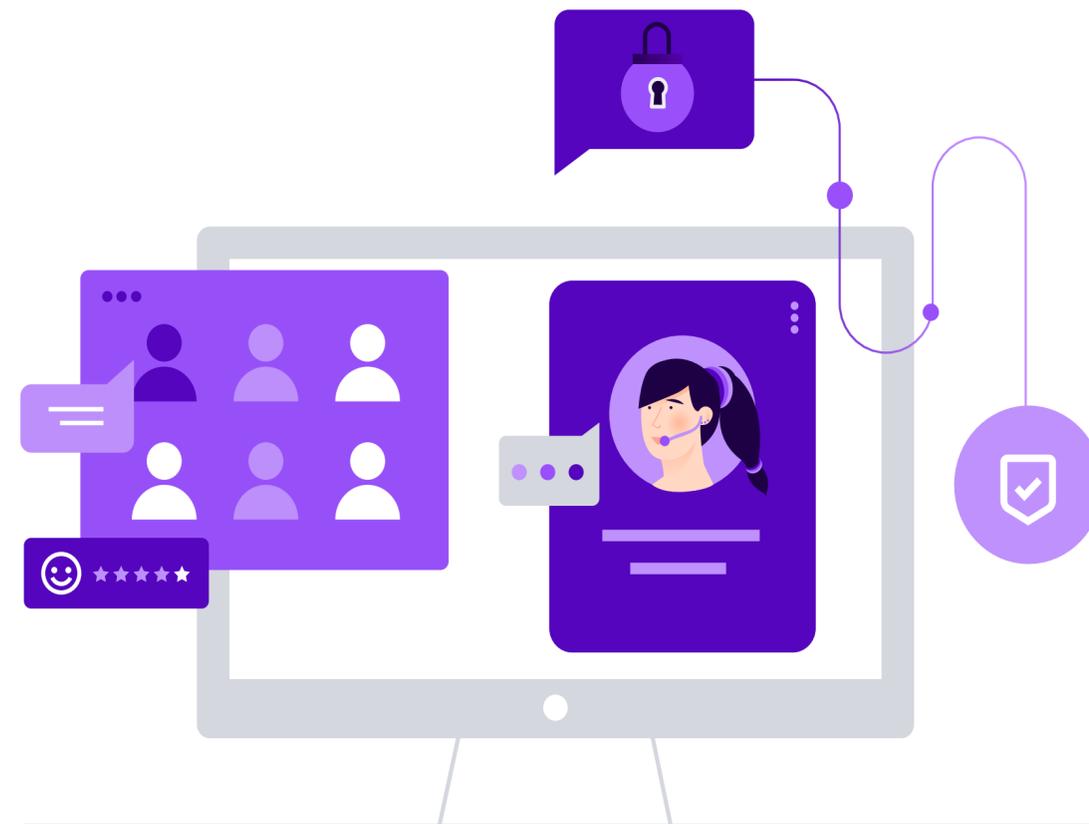
# 80%

of CX professionals believe AI will provide a better overall contact center experience for customers



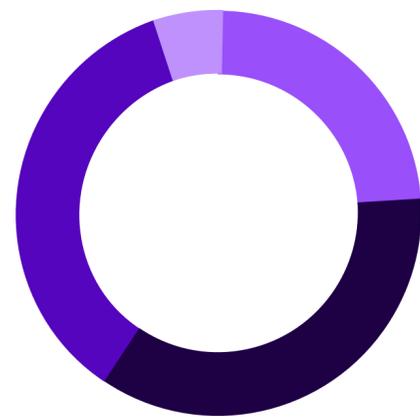
# 84%

of CX professionals believe AI will improve their ability to resolve customer issues



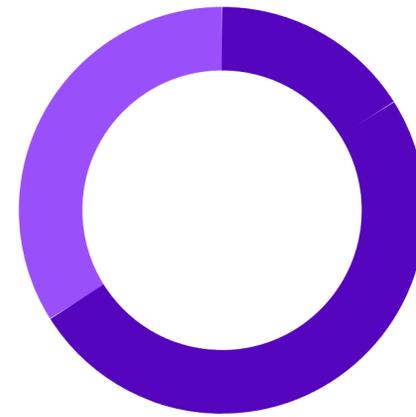
# Survey demographics

## CX professionals



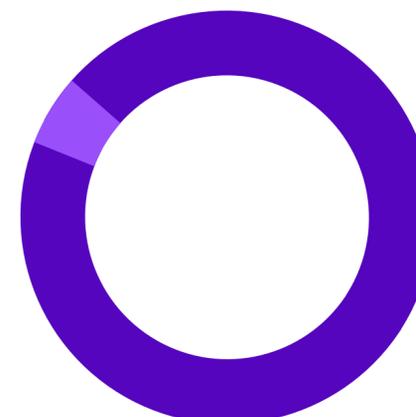
### Region

- Asia-Pacific: 24%
- Europe: 33%
- North America: 33%
- Latin America: 11%



### Business Size

- Enterprise (1001+ Employees): 59%
- Commercial (200-1000 Employees): 41%

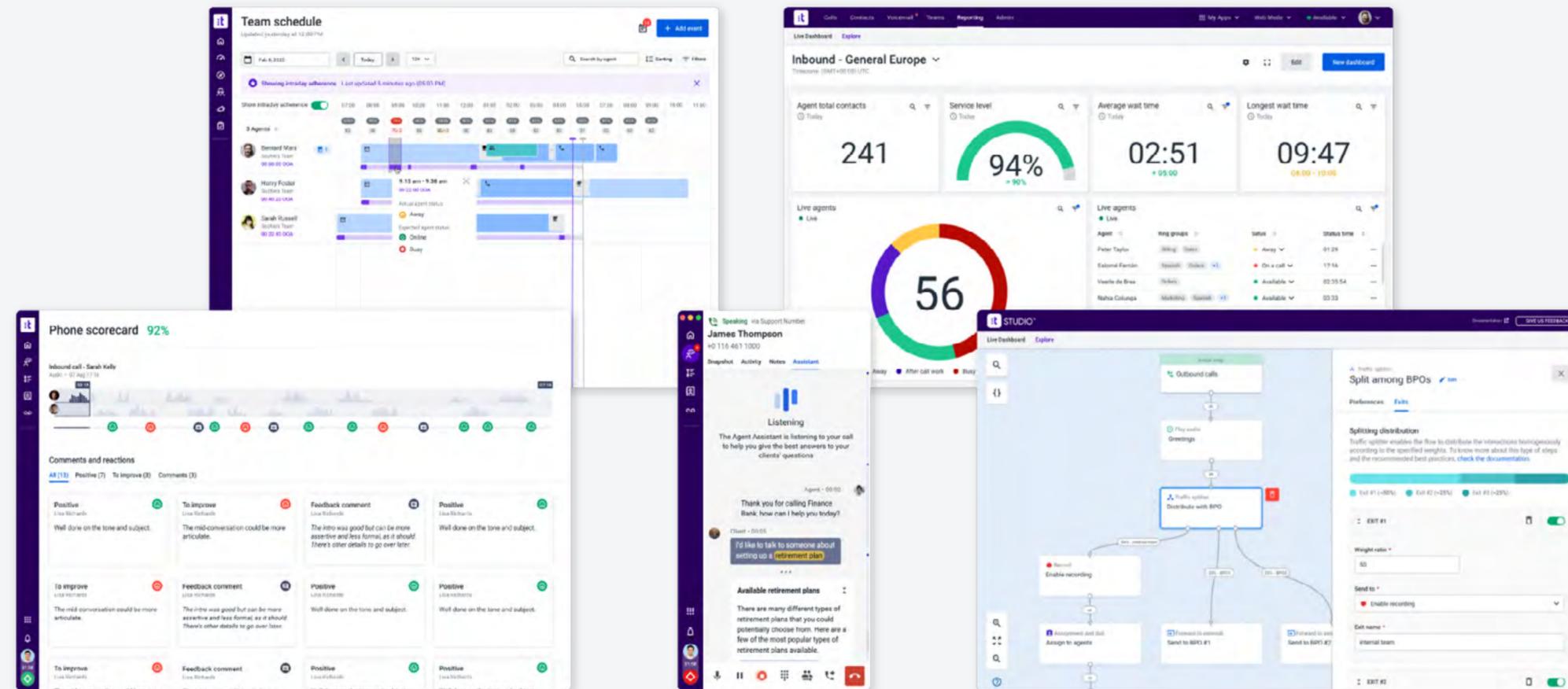


### Profession

- CX/Customer Service/Contact Center Leadership: 89%
- Contact Center Agent: 11%

Note: Percentages may not sum to 100% due to rounding.

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