



The AI-enhanced customer experience

A sea change for CX strategy, design and development

IBM Institute for Business Value

Executive Report

Customer experience



In this report

Top ten benefits executives expect from AI-enhanced CX

Capabilities needed for smooth AI/CX integration

Executives' top challenges when integrating AI into CX

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Artificial intelligence: A new era for customer experience

Artificial intelligence (AI) is unleashing a new approach for customer experience (CX) strategy, design and development. We haven't seen change on this scale since the internet transformed print professionals into digital pioneers. But the timeline for evolution is far shorter than it was twenty years ago. Fifty percent of companies surveyed are already taking action to deploy AI, using it to quickly access insights and automate campaigns and processes. They can also embed it directly into new customer touchpoints. However, many companies have important capability gaps, and lack the strategy and skills needed to meet their AI aspirations. As a result, executives may be overestimating the ability of their organizations to make the shift.

Déjà vu all over again

Back in the 1990s, when the World Wide Web was the digital frontier, companies – fearful of lagging behind – scrambled to build online footprints. Those early websites were mostly brochures wrapped in HTML, but that was enough to show progress and start inventing entirely new ways of connecting with customers. With no precedents to follow, creative directors, designers, writers and developers learned by doing.

Today, AI is causing a similar seismic shift for CX teams. AI systems understand unstructured information in a way similar to humans. But they not only consume vast amounts of data with far greater speed, they learn from interactions. And because AI systems can see, talk and hear, CX teams are entering a new era: creating AI-powered experiences that feel like natural human engagement.

As more companies improve their CX by adopting AI, CX leaders and practitioners are coming to grips with AI's potential to alter the very essence of their field – from their strategies to what they design and how. To better understand the impact and profound implications of this change, the IBM Institute for Business Value (IBV) surveyed 1,194 executives from seven industries worldwide who are responsible for, or strongly influence, CX for their companies (see “Study approach” section).

Executives surveyed anticipate AI will transform CX, but are they prepared for the changes ahead?



74%

say AI will fundamentally change how they approach CX



74%

say AI will change how customers view their brand



41%

have an AI strategy – that's not many, considering the changes ahead

Executives report an enormous appetite for AI-enhanced CX (AI/CX), with 70 percent believing their industry is ready to adopt AI/CX, and three out of four predicting AI will play an important role in the future of their organizations. However, given the changes they face on many fronts, executives may be overestimating their company's ability to quickly transition to a robust AI/CX program. Our findings indicate many companies lack a strong foundation of key capabilities, such as CX governance and clean customer data – gaps that could make the integration of AI more difficult. Executives may assume they can train or hire the skills they need, but that could be unrealistic, considering the growing demand for scarce talent and the anticipated rapid pace of development.

Drivers and benefits: Why executives are so enthusiastic

It's no wonder surveyed executives are eager to adopt AI/CX. Two-thirds report AI will be a disruptive force in their industry within just two years. Only a tiny fraction – 4 percent – plan to use AI so they can be the disruptors themselves. The majority (57 percent) say responding to customer demands for more personalized experiences is their number-one reason for adopting AI. The need to maintain their customer-centric brand reputations comes in second at 51 percent. For most companies, adopting AI/CX is a defensive move – more about not being left behind than leading the way.

However, executives are not swallowing a bitter pill. Far from it. Executives cite numerous benefits they think AI will deliver, with most saying growth and operational benefits are equally important (see Figure 1). Furthermore, 68 percent claim confidence in their knowledge of how AI can drive the CX goals of their organizations.






“By implementing AI, we will predict what customers want before they even know they need it.”

Chief Marketing Officer, Retail, US






Figure 1

Benefits companies would like to realize by embedding AI into their CX

Top 5 growth benefits

- 1  Improved depth of customer engagement
- 2  Improved customer satisfaction
- 3  Increased revenue growth
- 4  Improved brand loyalty
- 5  Opportunity to create new business models/products/services

Top 5 operational benefits

- 1  Improved customer insights
- 2  Improved efficiencies
- 3  Improved decision-making
- 4  Improved cost savings
- 5  Improved employee satisfaction

n = 1,035.

The AI journey: Ladies and gentlemen, start your engines

Companies are moving fast to adopt AI/CX (see Figure 2). Of those organizations surveyed, 50 percent are past the evaluation stage and taking action. Only 13 percent report not considering AI at this time.

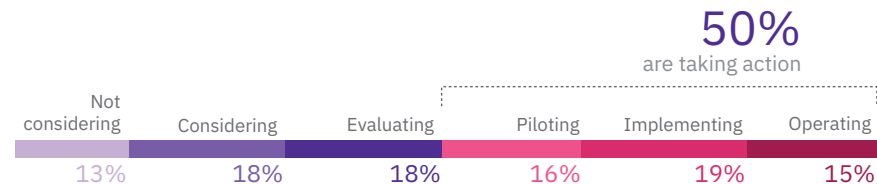
Companies use AI to enhance CX in three main areas:

- *Insights.* AI can reveal insights that help employees rapidly make informed decisions that impact CX, from refining their overarching CX strategy to providing real-time responses to customer inquiries.
- *Customer interaction.* Companies can integrate AI into customer-facing experiences or devices that customers can interact with directly, such as chatbots and robots.
- *Automation.* AI can automate behind-the-scenes processes, such as targeted automated marketing promotions and messaging.

To capture what companies do with AI in these three areas, we asked respondents what tactics they already use today and what they plan to implement within the next two years.

Figure 2

Half of companies surveyed have taken concrete action to incorporate AI into CX



n = 1,194.

“AI will provide radical personalization.”

Chief Digital Officer, Automotive, China

Credito Valtellinese: Using AI insights to become more customer-centric¹

Credito Valtellinese, an Italian retail bank, knew its future depended on evolving to customer-centric banking. The challenge: internal systems were product-oriented. The most critical data was scattered within the bank's unstructured customer data sources, making it hard to extract and exploit. Credito Valtellinese implemented a customer analysis solution that uses AI to identify, capture and index unstructured data along with online shopping habits and personal financial arrangements. Using natural language processing (NLP), the solution creates a detailed profile for each customer. This profile is used to build highly targeted segmentation models for multichannel marketing campaigns. Marketing can now independently run sophisticated cognitive analytics with improved agility. As a result, the bank has seen a 10 percent increase in campaign conversion rates.

Insights

On average, 24 percent of respondents who are using AI today say their company employs AI to provide insights that help their CX teams make quicker, more informed decisions. They are applying these insights to their CX strategy, customer service and marketing campaigns (see "Credito Valtellinese" case study). They anticipate this activity increasing within the next two years (see Figure 3). Executives predict an especially steep jump for UX design, with an increase of 114 percent.

Figure 3

Companies anticipate substantial growth in AI-driven insights for CX over the next two years



Today n = 884, 2 years n = 1,035.

Customer interaction

Companies are exploring an impressive number of innovative ways to embed AI into customer interactions (see “Knorr” case study). Not surprisingly, they are heavily focused on adding an AI layer to traditional digital channels. The availability of cloud-based application program interfaces (APIs) and open source options make it relatively easy for developers to build AI-powered apps quickly and at low cost. Nearly 40 percent of companies using AI today say they are doing this. As these initiatives mature, companies are turning their attention to the next wave for AI.

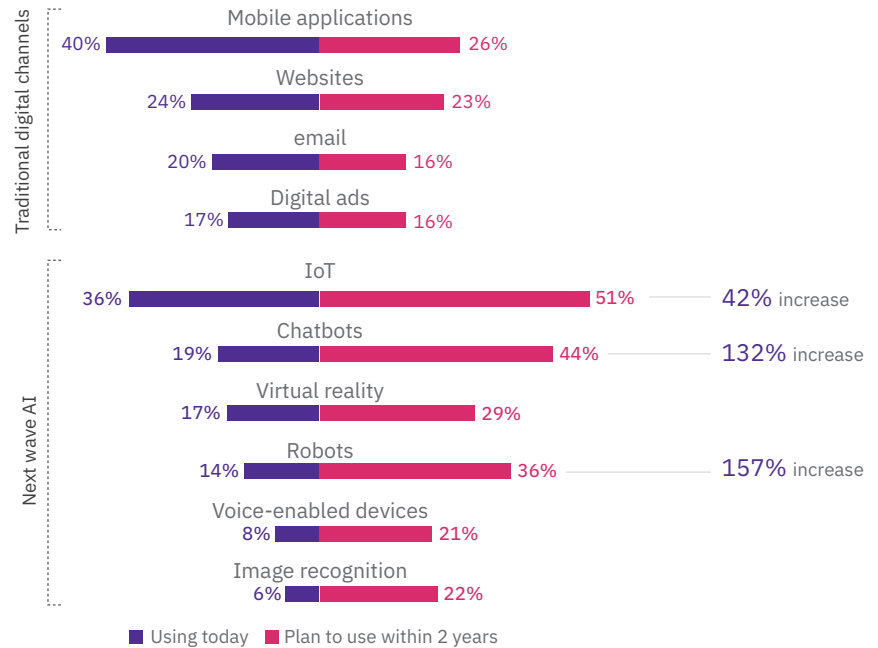
Organizations are pursuing newer digital channels like the Internet of Things (IoT) and chatbots almost as much as traditional channels (see Figure 4). Respondents anticipate these initiatives taking off within the next two years. More than half plan to embed AI into IoT by then, while 44 percent expect to be using AI chatbots, a 132 percent increase. And more than a third, 36 percent, predict they will introduce robots to enhance their CX, a 157 percent increase.

Knorr: Using AI to personalize the customer experience²

Knowing Millennial foodies are often interested in small, artisanal food brands, Knorr wanted to help ensure its big global brand also made it into their shopping baskets. This food brand owned by Unilever created the “Flavour Profiler” for the Knorr Love at First Taste campaign using AI technology. Modeled like a simple personality quiz, the profiler instantly analyzes consumers’ answers and classifies them into one of 12 flavor personality types and then serves up perfectly tailored recipes. Sitting at the core of Knorr’s popular campaign, the Profiler has received 1.3 million visits, and purchase intent among Millennials has increased by 12 percentage points.

Figure 4

Organizations expect significant growth in the next wave of AI-enhanced customer touchpoints such as IoT, chatbots and robots



Today n= 884, 2 years n = 1,035.

Automation

The automation of CX processes is seeing the least traction of these three areas because respondents might assume it is more complex to evaluate and implement. While executives predict increased activity over two years, they don't expect automation to see the dramatic escalation cited for other AI/CX initiatives (see Figure 5).

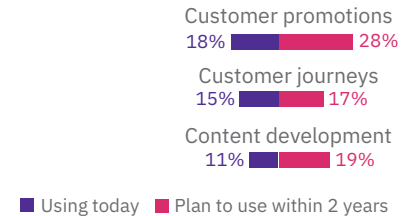
This is a missed opportunity to exploit the full value of AI/CX. AI could break through many of the barriers that have challenged CX teams, from creating and modifying vast numbers of campaign assets, to manually managing how and when those campaigns are executed (see case study, "Using AI to automate marketing campaigns"). Not only could companies reach personalization at an extensive scale, they could realize efficiency savings and redirect teams to focus on higher-value priorities.

Using AI to automate marketing campaigns for improved productivity and results³

A North American retailer had a wealth of information on customer preferences and buying habits. Because integrating this data into the campaign management tool was difficult, the data went unused. The company wanted to harness this data and automate campaign workflows, making it easier to tailor content to the right audience. Marketing used to require four days to design and launch generic emails. Now, with AI-powered campaign automation software, teams produce rich, personalized campaigns in just one and a half days, enabling them to respond quickly to business needs. Marketing has also boosted email open rates, helping incentivize conversion and strengthen loyalty.

Figure 5

Most companies underestimate the power and potential of CX automation



Today n = 884, 2 years n = 1,035.

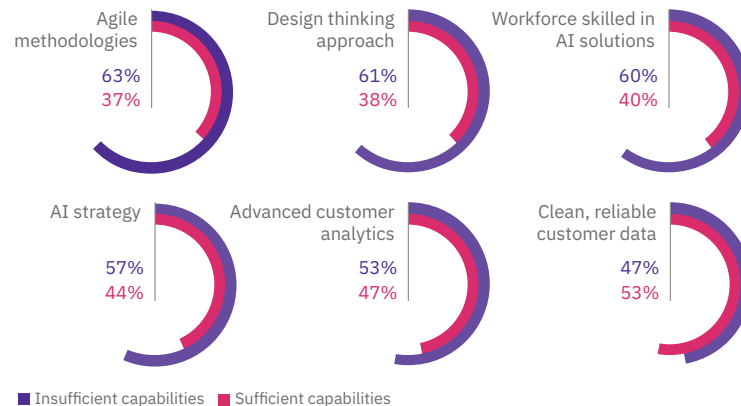
Capabilities for AI/CX: Mind the gap

The majority of respondents report having clear objectives for CX, enterprisewide CX strategy and design standards, and easy access to CX data. But a fair proportion give lukewarm responses when asked about the more challenging aspects of CX. These include understanding customers at an individual level, measuring CX ROI and maintaining a CX governance program, which as many as 29 percent say they essentially don't have.

We also asked executives about other capabilities needed for a smooth AI/CX integration (see Figure 6). More than 60 percent make little use of agile methodologies or a design thinking approach.⁴ Three out of five respondents report their workforce doesn't have sufficient AI skills. More than half describe their AI strategy or use of advanced customer analytics as inadequate. And while 53 percent trust their customer data is clean and reliable, as many as 47 percent doubt they can claim the same.

Figure 6

Many organizations report capability gaps that could make it challenging to implement AI/CX



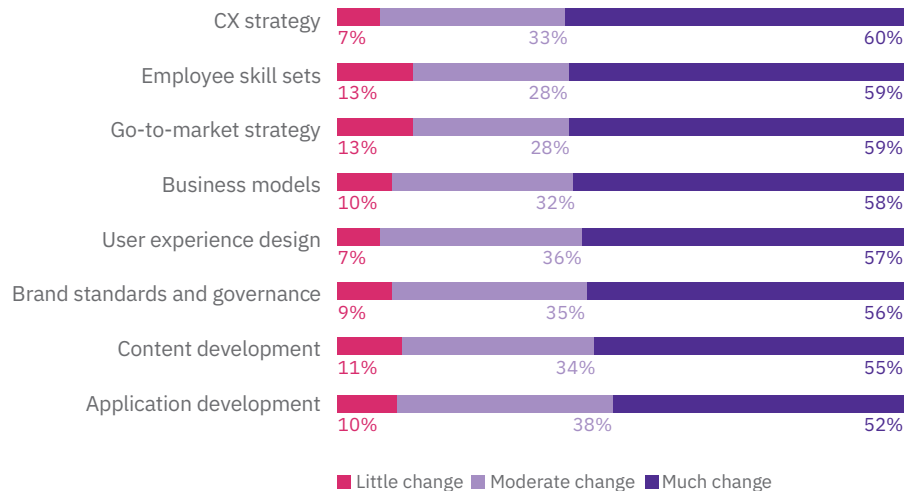
n = 1,035. Percentages may not equal 100% due to rounding.

Changes and challenges: A reality check

When you add these capability gaps to the tsunami of change that executives predict, a more complex, challenging picture emerges. Companies may not be prepared. Three-fourths believe AI will fundamentally change their approach to CX and how customers view their brand. The majority of CX owners expect AI will require them to significantly transform everything from their CX strategy to how they design experiences and develop content (see Figure 7).

Figure 7

CX owners expect the adoption of AI/CX to trigger change in many aspects of their business

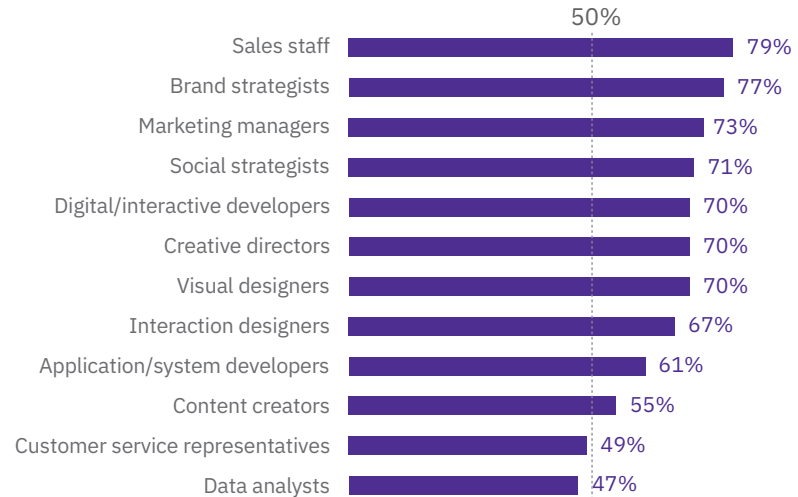


n = 396.

Executives are also expecting much change will be needed to sufficiently upskill their employees to develop and manage AI/CX. They anticipate an impact to the majority of CX-related roles (see Figure 8). In our experience, even the adoption of e-commerce and mobile didn't elicit such widespread change.

Figure 8

Executives expect AI/CX to change the way many CX-related professionals do their jobs



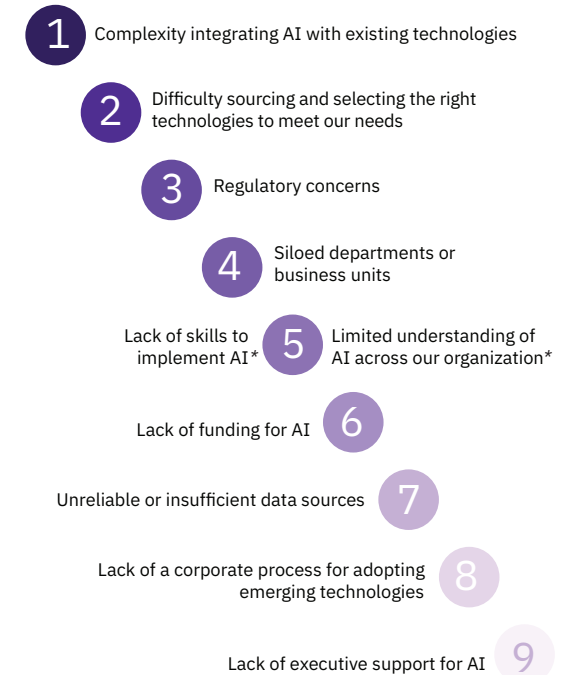
n = 1,035.

How are executives planning to bridge their skills gaps? Executives who strongly influence CX – but aren’t owners – are far more inclined to think training is the answer (60 percent). But only 28 percent of CX owners say this is viable, with recruiting new in-house talent their preferred solution. Given how many jobs are changing and the short supply of individuals with the necessary CX and AI skills, it’s doubtful either of these options could enable companies to upskill quickly enough to meet their two-year AI/CX predictions.

While the skills deficit clearly poses a barrier, it is not among executives’ top concerns. Rather, their top two challenges fall within the technical realm of AI integration (see Figure 9). Additionally, respondents are less worried about unreliable or insufficient data sources, even though when asked about their capabilities, almost half reported they weren’t certain they could trust their customer data.

Figure 9

Executives’ top challenges when integrating AI into CX



*The same ranking number indicates a tie. $n = 1,035$.

What percentage of IT budgets are dedicated to AI/CX initiatives?

Today, 59 percent of CX owners report that line item as 5 percent of their IT budget or less. Over the next two years, executives expect significant growth: 67 percent predict AI/CX spend could be more than 5 percent. Among this group, 28 percent believe AI/CX spend could rise to 10 percent, and 20 percent think it could reach 15 percent.

Expectations and progress: Early results are promising

To justify their AI/CX efforts, 57 percent of respondents say their organizations expect a 5 to 15 percent return on investment (ROI). Almost half plan to achieve this within two to three years, and 61 percent say they are on schedule. (See sidebar, “What percentage of IT budgets are dedicated to AI/CX initiatives?”)

In addition to their financial expectations, organizations are mapping their AI/CX key performance indicators (KPIs) to anticipated benefits. Sixty percent target customer satisfaction as the favored KPI, far outpacing other measures such as customer acquisition (42 percent), customer loyalty (32 percent) or revenue (28 percent).

Most respondents who are piloting, implementing or operating AI/CX say they are achieving their KPIs. In fact, for customer satisfaction, 32 percent claim “extreme success” and 47 percent say results are good, which is encouraging. But companies need to resist overemphasizing this particular KPI, as it may not reveal enough detail about AI’s actual effects on their business.

For example, brand impact can be a more nuanced KPI. Only 8 percent of those surveyed use brand impact as an AI/CX KPI without also including customer satisfaction. These companies report they are more profitable than their competition and have CX capabilities to a “large extent.” Significantly, 69 percent believe they are successfully achieving a positive impact to their brand with AI/CX.

But, clouds are on the horizon

Despite executives' rosy projections for AI/CX, some of their responses signal potential problems. For example, almost 40 percent aren't certain their AI/CX efforts tightly align to the IT strategy of their organizations, and 10 percent say they definitely do not. This means too many CX teams could be working in a vacuum. Given concerns about the complexity of AI integration and sourcing the right technologies, CX teams should be collaborating with IT. Yet siloed departments continue to be a barrier for some organizations.

Equally troubling is the overwhelming confidence – cited by 71 percent of executives – that their CX employees understand how AI can help them be more productive. Considering the massive changes CX teams face, this seems overly optimistic. We think AI does, in fact, increase productivity. But given all the speculation about AI and jobs, CX teams might not be fully informed and on board. To avoid undue disruption or morale problems, companies should consider a comprehensive change management program.

All told, our analysis points to most executives focusing on what could be termed “AI 101.” With many organizations just crossing the threshold into AI, this “start with the basics” approach is understandable. But the pace of AI development is escalating quickly. To stay competitive, companies need to pay more attention to the vision, strategies and fundamental capabilities required to go beyond merely establishing an AI footprint.

Recommendations for a course of action

Position AI/CX as a strategic shift, not a technology upgrade

Even though most respondents report knowing how AI will help them reach goals and change customers' views of their brands, fewer than half have an AI strategy in place. It's important to treat the adoption of AI/CX as a significant strategic and cultural shift for your business, not simply the installment of a new technology.

Create an overarching AI strategy in the early stages before rollout – a phased strategy that articulates a vision and approach for AI/CX and how it will enhance experiences for customers, as well as employees. Apply this strategy to both low-hanging AI fruit like mobile apps as well as more sophisticated AI-powered programs like automated, hyper-personalized customer journeys. Communicate this vision with transparency, not only to help customers understand the benefits, but to help employees gain inspiration and direction.

Establish enterprisewide governance for AI/CX

If you are just embarking on your AI/CX journey, you may feel you don't need a governance program yet, but this is precisely the time to establish one. By doing this at the onset, you can integrate program oversight with a comprehensive understanding of virtually all AI-related initiatives, even when CX teams are just learning the ropes.

Build a program to oversee cross-functional data, development activities and business implications. Include brand guidelines for new AI-powered technologies such as NLP or virtual reality. And create a process and standards to measure the impact of AI/CX initiatives to determine the ROI of your efforts.

Use AI to attract and retain the best and the brightest

Companies could face a future in which CX professionals are increasingly concerned with skills relevance. If they're not gaining AI experience, opportunities with competitors could beckon.

Establish a robust AI/CX program that will send a powerful message to potential talent, positioning your organization as a technology-savvy innovator. Recruit ambitious employees who are driven to create breakthrough AI experiences. Like the early web pioneers, these are the types of individuals who can invent new and exciting ways to connect with customers. Acquiring hands-on AI/CX experience is both a benefit and a differentiator. Don't be shy about promoting this as an opportunity.

Tap your ecosystem to get the AI/CX skills you need

Executives want to fill their skills gaps through training or hiring, but this poses challenges. With so many CX jobs evolving, who is equipped to do the training? And with the fierce demand for AI/CX talent, how quickly will organizations be able to hire the people they need?

Alternatively, leveraging your ecosystems in creative ways may be the most expedient path toward achieving AI/CX goals. Seek out ecosystem partners that have the expertise your organization lacks. Through collaboration, you could extend AI/CX (and the resulting data) in ways that can create wins for everyone involved.

Seize this opportunity to create something entirely new

Don't limit your vision for AI's transformational potential. AI's ability to predict outcomes with astonishing speed and simulate natural human interaction means engaging customers in completely new ways.








While it's fine to plan your AI transition with specific projects in mind, also empower CX teams with a spirit of entrepreneurship and innovation. This could generate new channels, products and services. Back these initiatives with incentives and funding, dedicated time, collaboration and data sharing. Establish processes for promoting promising ideas from pilot to market. Adopt a design thinking approach – this practice is perfectly suited to customer-centric AI/CX exploration.

Are you ready to use AI to enhance your CX?

- How can you build a CX vision that includes a strategy for AI?
- What steps can you take to expand your current CX governance capabilities to address AI considerations?
- How can you better understand the AI capabilities across your ecosystem (see Figure 10), and how can you team with others to fill your skills gaps?

Figure 10

Certain industries gravitate toward specific AI/CX tactics

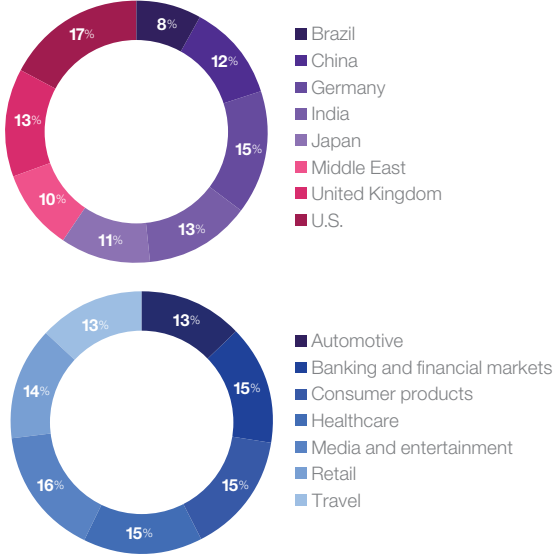
Which customer-facing AI/CA initiatives are industries* deploying?		Top industries deploying today	Top industries planning to deploy within 2 years
	Mobile apps	Banking and financial markets	Banking and financial markets
	IoT	Automotive	Consumer products
	Website	Banking and financial markets	Media and entertainment, Travel
	Email	Travel	Banking and financial markets
	Chatbots	Banking and financial markets	Healthcare
	Robots	Automotive	Automotive
	Virtual reality	Automotive, Travel	Healthcare

**Industries surveyed include automotive, banking and financial markets, consumer products, healthcare, media and entertainment, retail, travel. n = 1,035.*

Study approach and methodology

In cooperation with Oxford Economics, the IBV surveyed 1,194 executives, including C-suite members such as Chief Executive Officers, Chief Marketing Officers, Chief Digital Officers, Chief Innovation Officers, Chief Customer Officers and Chief Experience Officers. Participants also included CX leaders such as the head, vice president or director of functional areas like marketing, customer service and support, customer experience and sales.

These individuals are all either primary owners of their company’s CX, share CX responsibility with other leaders, or wield significant influence over CX teams. They represent seven industries: automotive, banking and financial markets, consumer products, healthcare, media and entertainment, retail, and travel. Participants come from companies located in Asia Pacific, Europe, the Middle East, North America and South America. All data is self-reported.



Percentages may not equal 100% due to rounding.

For more information

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- 2 “Knorr: Love at First Taste.” IBM case study. Accessed January 26, 2018. <https://www-935.ibm.com/services/ibmix/case-studies/knorr.html>
- 3 IBM Institute for Business Value analysis based on IBM client project.
- 4 Design thinking is a powerful approach that enables teams with diverse skillsets to spur innovation and creative problem solving. Though it can be employed to address virtually any challenge, because it is a customer- or user-centric approach, design thinking is often used to define and create brand-differentiating experiences. In particular, IBM Design Thinking starts by “bringing together a series of traditional design techniques, such as personas, empathy maps, as-is scenarios, design ideation, to-be scenarios, wireframe sketches, hypothesis-driven design, and minimum viable product (MVP) definition. To these traditional design approaches, IBM Design Thinking adds three core practices: hills, playbacks, and sponsor users.” For more information on IBM Design Thinking go to: https://www.ibm.com/cloud/garage/content/think/practice_design_thinking/

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