Smart Money

How to drive AI at scale to transform the financial services customer experience

Executive summary

Financial services firms are accelerating the adoption of AI for customer interactions

Financial services firms understand the importance of making customer interactions AI-enabled and are taking steps to achieve this goal. The use of AI in customer interactions has grown significantly in the past three years in the industry. A number of leading financial services firms are responding to this demand with innovative solutions.

However, half of banking and insurance customers (49%) feel that the value they received from their AI interactions was non-existent or less than expected. This perhaps reflects the fact that the novelty factor of traditional industry innovations – such as basic chatbots – may have worn off. Today, people expect chatbots to be as advanced as those available from technology firms such as Google, and today only 31% say chatbots are their preferred AI-driven way to interact with financial services institutions compared to 41% for voice assistants.

Organizations derive significant benefits from AI's use in customer interactions

While AI has not lived up to customers' expectations, it offers a range of benefits for banks and insurers. Financial services firms have reduced their cost of operations by 13% and have increased the revenue per customer by 10% after deploying AI in customer-facing functions. One example is the AI-powered recommendation engine "ADA" (algorithmic decision agent), from Aviva which ranks the products that customers are most likely to buy.[1]

The industry comes last when it comes to scaling of AI-based customer interactions

While the level of organizational benefits from AI-enabled interactions is one of the highest for this industry compared to other sectors, financial services performs worst in terms of achieving scaled implementation of AI solutions. The top challenges standing in the way of achieving scale are: leadership and organizational resistance; difficulty in identifying the right use cases to scale; the long gestation periods for implementation, coupled with lack of data management; and lack of trust for high-priced interactions.

Multiple factors are critical to accelerating AI use cases to scale

Drawing on this research, best practice examples, and our own experience working with clients on these issues, we have outlined six recommendations for achieving scale with AI:

- Invest in value-driven AI to transform the customer experience
- Create trust-based and ethical AI governance approaches to drive broad-based customer adoption
- Deliver an AI experience that takes into account "signature moments" that require empathy and emotion
- Set up the technology foundation required for an AI-enabled customer engagement
- Put in place senior leadership roles for AI to accelerate adoption
- Educate customers on what AI can do for them and make AI systems explainable and transparent.

Introduction

In line with other sectors, financial services firms are accelerating the adoption of AI for customer interactions:

- The vast majority (94%) of firms across both banking and insurance say that improving the customer experience is the key objective behind launching new AI-enabled initiatives. This exceeds both consumer products (85%) and retail (87%).

- More than half say that at least 40% of customer interactions are AI-enabled.

COVID-19 has resulted in increased demand for contactless transactions, with changes in customer behavior providing an opportunity for more AI-enabled interactions for the sector: 78% of customers expect to increase touchless interactions during the COVID-19 crisis.

While AI offers significant benefits for the industry, a number of challenges are undermining organizations' AI ambitions. First, the industry's implementation of AI at scale is the lowest across all sectors. Second, customer expectations are not being met – half of the industry's customers feel that the value that they get out of their AI interactions is non-existent or less than what they expected.

To understand the progress that financial services firms have made, and the challenges they face in achieving scale, we have conducted wide-ranging research:

- **A survey of more than 5,000 customers across twelve countries: Australia, Brazil, China, France, Germany, India, Italy, the Netherlands, Spain, Sweden, the UK, and the US. We also undertook focus group discussions with customers in the US and Germany.**

- A survey of more than 300 industry executives from banking and insurance. We also conducted in-depth interviews with industry executives. More details on the research methodology are in the appendix.

We also analyzed multiple initiatives that organizations are currently implementing using AI to improve the customer experience. Drawing on the research, this report examines several themes:

- How have AI-based customer interactions evolved and have AI interactions lived up to customer expectations?

- How have organizations benefitted from AI-based customer interactions?

- What challenges do financial services firms face as they look to transform the customer experience through AI?

- How can organizations accelerate their customer-focused AI implementations?
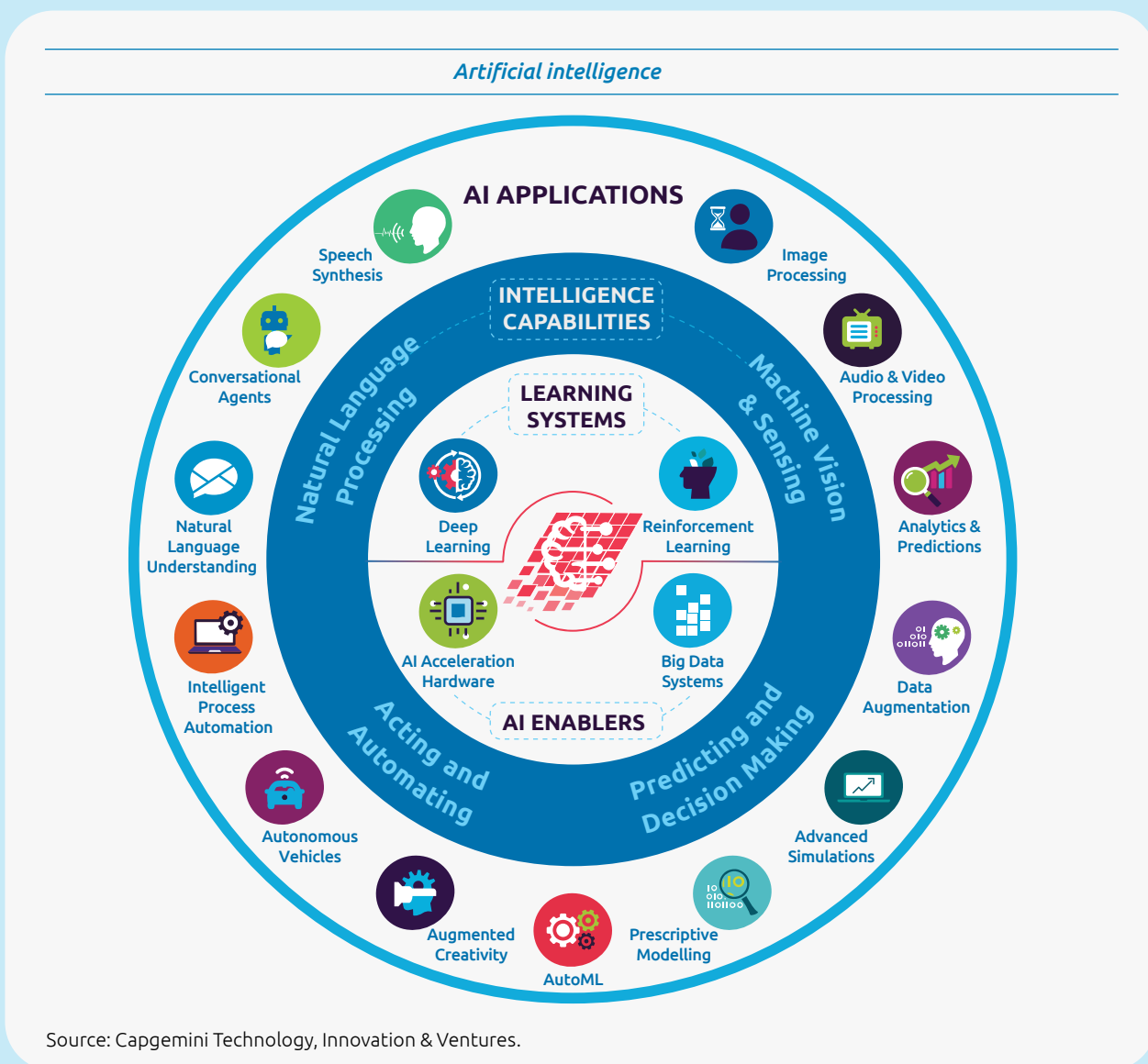
What is artificial intelligence?

Artificial intelligence (AI) is a collective term for the capabilities shown by learning systems that are perceived by humans as representing intelligence. These intelligent capabilities typically can be categorized into machine vision and sensing, natural language processing, predicting and decision making, and acting and automating.

Various applications of AI include speech, image, audio and video processing, autonomous vehicles,

natural language understanding and generation, conversational agents, prescriptive modelling, augmented creativity, intelligent process automation, advanced simulations, as well as complex analytics and predictions.

Technologies that enable these applications include big data systems, deep learning, reinforcement learning, and AI acceleration hardware.

Artificial intelligence

AI APPLICATIONS

Speech Synthesis

Image Processing

Conversational Agents

Audio & Video Processing

INTELLIGENCE CAPABILITIES

Natural Language Processing

Machine Vision & Sensing

LEARNING SYSTEMS

Natural Language Understanding

Deep Learning

Reinforcement Learning

Analytics & Predictions

Intelligent Process Automation

AI Acceleration Hardware

Big Data Systems

Data Augmentation

AI ENABLERS

Acting and Automating

Predicting and Decision Making

Autonomous Vehicles

Advanced Simulations

Augmented Creativity

Prescriptive Modelling

AutoML

Source: Capgemini Technology, Innovation & Ventures.
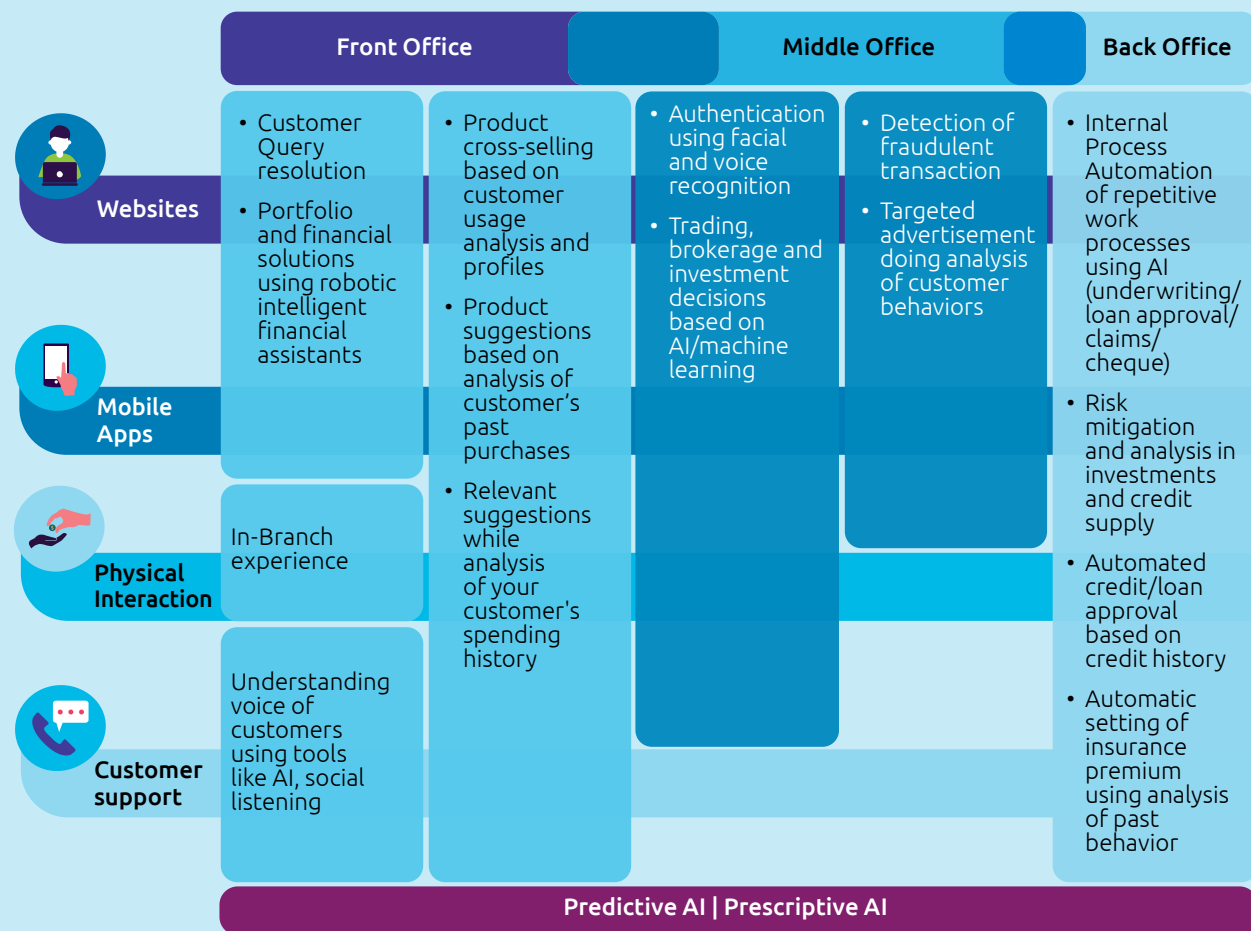
Artificial intelligence in the financial services customer experience

AI can enhance the customer experience by making engagements with banks and insurers more automated, intelligent, fast and hassle free. Organizations draw on solutions such as chatbots, voice assistants, IVR and robo-advisors and they are used across multiple channels, such as websites, mobile apps, physical interaction and customer support. For this research, we have considered 15 use cases across the front, middle and back offices which use AI to enhance the customer experience, from interaction to internal processing.

Artificial intelligence in the financial services customer experience

	Front Office		Middle Office		Back Office
Websites	• Customer Query resolution • Portfolio and financial solutions using robotic intelligent financial assistants	• Product cross-selling based on customer usage analysis and profiles • Product suggestions based on analysis of customer's past purchases • Relevant suggestions while analysis of your customer's spending history	• Authentication using facial and voice recognition • Trading, brokerage and investment decisions based on AI/machine learning	• Detection of fraudulent transaction • Targeted advertisement doing analysis of customer behaviors	• Internal Process Automation of repetitive work processes using AI (underwriting/loan approval/claims/cheque)
Mobile Apps					• Risk mitigation and analysis in investments and credit supply
Physical Interaction	In-Branch experience				• Automated credit/loan approval based on credit history
Customer support	Understanding voice of customers using tools like AI, social listening				• Automatic setting of insurance premium using analysis of past behavior

Predictive AI | Prescriptive AI

Predictive AI uses historical data, trains machine learning model on it to identify key trends and patterns. This model is then applied to current data to predict outcomes. Prescriptive AI suggests various courses of action and outlines what the potential implications would be for each action.

Source: Capgemini Research Institute.

AI interactions are growing fast for the industry but fall short of customer expectations

More than half of financial services firms have more than 40% of their customer interactions AI-enabled today – three years ago, this was just one in every 100

Financial services firms understand the importance of making customer interactions AI-enabled and are taking steps to increase AI interactions. Nine in ten say that improving the customer experience is the key objective behind launching new AI-enabled initiatives and customers are becoming comfortable in interacting with AI-enabled channels on a regular basis. *"Insurance companies will have the ability to better understand customers and risks,"* says Zhu You Gang, senior vice president of Ping An Property & Casualty Insurance. *"Technologies will drive the industry transformation and upgrading, which will reconstruct existing insurance business processes, as well as optimize and innovate products to provide a better service experience."* [2]

Currently, more than half (53%) of banks and close to two-thirds (62%) of insurers have more than two-fifth of customer interactions AI-enabled (Figure 1). Three years ago, this stood at only 1%. Insurance firms show higher adoption compared to banks, but the gap is likely to be bridged in the next three years according to executives.

Insurance companies are extensively deploying AI to equip agents to handle customer queries more efficiently. For instance, Next Insurance, an online-based insurer for small businesses has taken the middleman out of insurance by automating much of the policy and claims process. The company relies on AI and machine learning to create targeted policies that meet customers' specific needs. The goal of the company is not to become a faceless organization, but rather to use technology for the more mundane tasks so that agents are free to interact with customers in a more meaningful way. [3]

Figure 1. Insurance firms have applied more AI across the value chain compared to banks
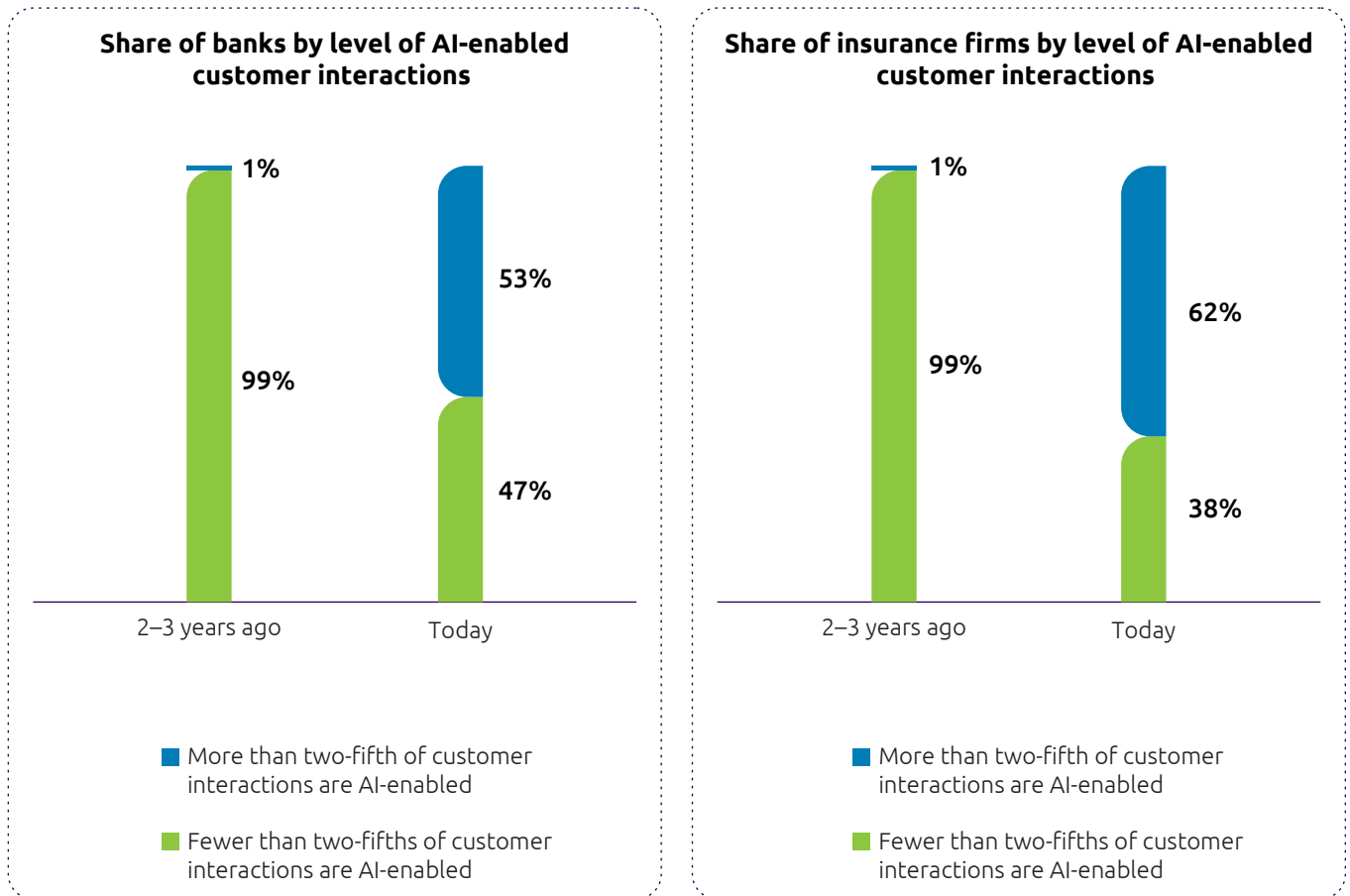
Share of banks by level of AI-enabled customer interactions

- 1%
- 53%
- 99%
- 47%

2–3 years ago | Today

■ More than two-fifth of customer interactions are AI-enabled
■ Fewer than two-fifths of customer interactions are AI-enabled

Share of insurance firms by level of AI-enabled customer interactions

- 1%
- 62%
- 99%
- 38%

2–3 years ago | Today

■ More than two-fifth of customer interactions are AI-enabled
■ Fewer than two-fifths of customer interactions are AI-enabled

Source: Capgemini Research Institute, AI in CX executive survey, April–May 2020, N=160 for banking and 158 for insurance.

AI-enabled financial transactions are a part of daily life for one-in-two customers (Figure 2). During our focus group discussion, a customer confirmed: *"I use chatbots most of the time. It's on my phone, computer and speakers. And so my usage has increased considerably."* A number of banks are launching AI initiatives to let customers interact with them on a regular basis. For example, Atom is an app-based bank that does not have any branches. The app uses biometric security based on face and voice recognition. Everyone who joins Atom gets to name their own bank, have their own logo, finished off with their own color palette for the app.[4]

Charles Elkan, Global head of ML, Goldman Sachs says: *"AI can help improve speed, access and reliability of customer service. From a customer applying for a personal loan online to a client receiving automatic notifications when they might want to divest from a particular industry or stock."*[5]

Figure 2. Half of the customers have daily AI-enabled interactions in the sector

Customer touchpoints with AI-enabled interactions in financial services in 2020

Daily	51%
Weekly	29%
Fortnightly	10%
Once a month or less	7%
Not Sure/Can't say	3%
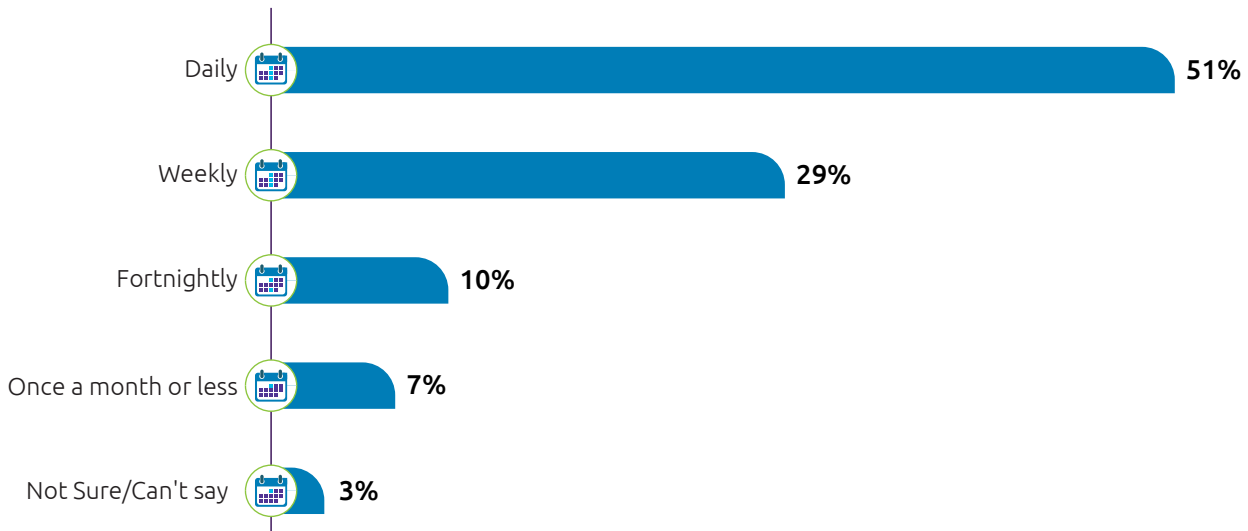
Source: Capgemini Research Institute, AI in CX consumer survey, April–May 2020, N=992 banking and insurance customers.

COVID-driven changes in customer behavior present an opportunity for banks and insurers to accelerate AI deployment

COVID-19 has resulted in increased demand for contactless transactions, with changes in customer behavior an opportunity for more AI-enabled interactions for the sector:

- 78% of customers expect to increase their use of touchless interactions, through voice assistants, facial recognition, or apps, to avoid human interactions and touchscreens during COVID-19, compared to 61% post COVID-19.

- Close to half (45%) of customers said they will increase their use of contactless payments during the pandemic, which includes cards, internet banking, and mobile payments. Interestingly, COVID-19 is prompting a major shift in the older segment, which has traditionally relied on cash transactions. The consumer adoption of contactless payments has grown by 37% in the 61–65-year age group, and a 33% increase in the over 66-year age group. This as an opportunity to drive AI adoption even faster amongst customers.[6]

COVID-19 brought to fore the importance of digital channels readiness for customer interactions due to reduced availability of workforce for customer interactions. For instance, befo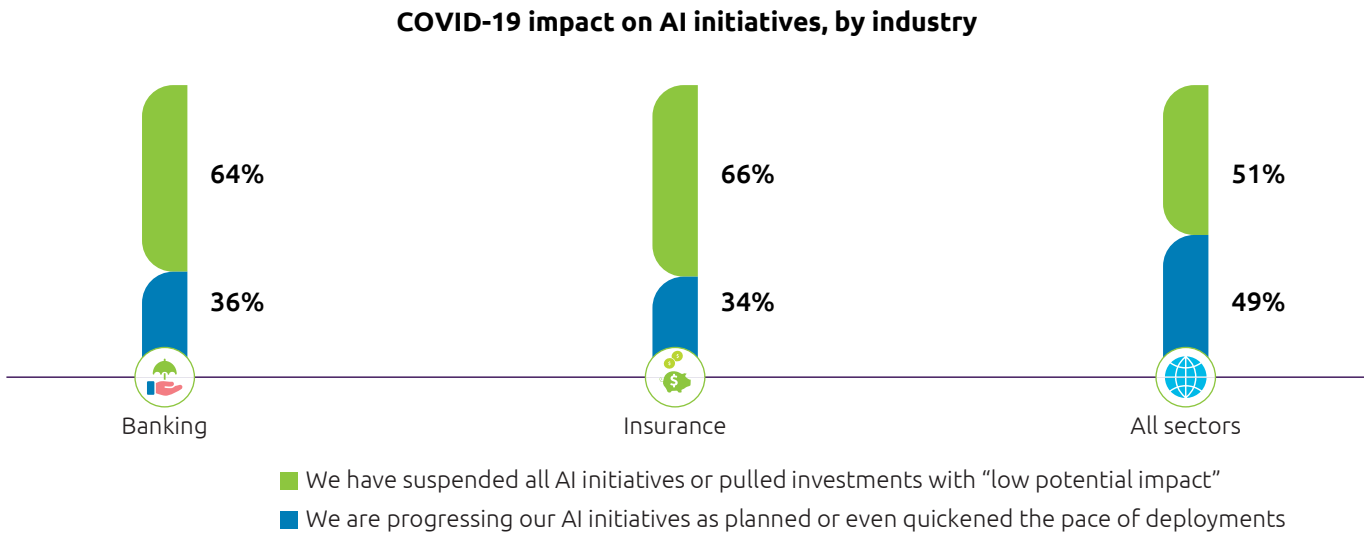re the COVID-19 outbreak, consumer adoption of mobile apps stood at 18% for insurance, compared to 47% for banking. However, customers expect a 7–8 percentage point increase in the use of insurers' mobile apps and websites in the next six to nine months due to multiple initiatives by insurance firms.[7,8]

During COVID-19, Zurich Insurance Group scaled up technologies such as voice recognition, auto transcribing interviews and digital signatures to allow claims to be assessed and processed remotely.[9]

Financial services firms must use this opportunity to ensure digital expectations of customers are met. We found over one-third (36%) of respondents have found a new provider during this crisis and they will stick with this provider in the future.[10]

However, banking and insurance firms' AI investments have faced a significant COVID-19 impact, with nearly two in three executives saying they have put AI investments on hold or pulled investments with "low potential impact" due to financial crunch during the pandemic. Hence, finding the best customer-centric use cases becomes more important than ever (Figure 3).

Figure 3. Investments in AI initiatives with low potential have been impacted due to COVID-19

COVID-19 impact on AI initiatives, by industry

	Banking	Insurance	All sectors
We have suspended all AI initiatives or pulled investments with "low potential impact"	64%	66%	51%
We are progressing our AI initiatives as planned or even quickened the pace of deployments	36%	34%	49%

■ We have suspended all AI initiatives or pulled investments with "low potential impact"
■ We are progressing our AI initiatives as planned or even quickened the pace of deployments

Source: Capgemini Research Institute, State of AI survey, March–April 2020, N=954 organizations implementing AI.

Customer expectations are not being met from AI-enabled interactions

As interaction levels have risen, customer expectations of AI have also climbed, but the industry is not necessarily meeting these heightened expectations:

- One in two banking and insurance customers feel that the value that they derived out of their AI-based interactions was non-existent or less than what they expected (Figure 4).

- This figure is higher for customers in France, Spain and the Netherlands where more than 60% of customers agree that the value from AI interactions was non-existent or less than what they expected (Figure 5).

There could be a number of reasons why customers feel underwhelmed:

- The perceived lack of incentives that customers receive in exchange for organizations using their personal data. Our research shows that 57% of customers believe that they do not have any incentives for allowing AI to use personal data.

- The absence of a human touch in AI interactions. For instance, 79% of banks and insurers admit that customers want AI interactions which are human like; however, all customers do not feel this is the case. As many as 35% of customers believe that AI interactions by banks and insurers are not human-like.
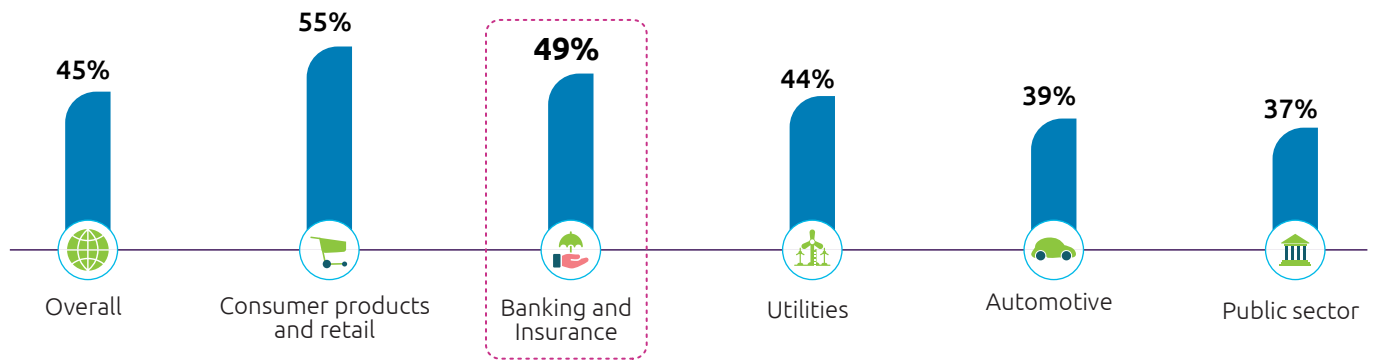
- Moreover, customers expect to be informed about any AI interactions, but executives are not aware about this need: 71% of customers said they want to be made aware when they are interacting with AI-enabled channels, but only 29% of executives believe this to be the case.[11] **This requires a shift from an efficiency-centric approach to experience-centric.** For example, investment firm Vanguard has a new "Personal Advisor Services" (PAS) robo-advisor that offers customers a combination of automated investment advice with guidance from human advisors.[12]

Customers want AI-based interactions to be transformational leading to faster problem resolution. Bhargavi Nuvvula, head – corporate technology, BNY Mellon, an American multinational investment banking services holding company, points out that customer expectations have changed as companies such as Amazon have set a new standard in what is possible: *"Customer expectations have been changing from old economy to on-demand economy to instant fulfillment, thanks to advances in consumer technology by product companies such as Apple, Google, Amazon, and others."*[13]

Currently, the most preferred medium for AI interactions in financial services customers is voice assistants (41%). For instance, Liberty Mutual, an American insurer has enabled customers to interact through Alexa-enabled devices for queries, estimates or to connect to an insurance agent.[14]

Figure 4. Customers are not deriving the value that they expected through their AI interactions, by sector
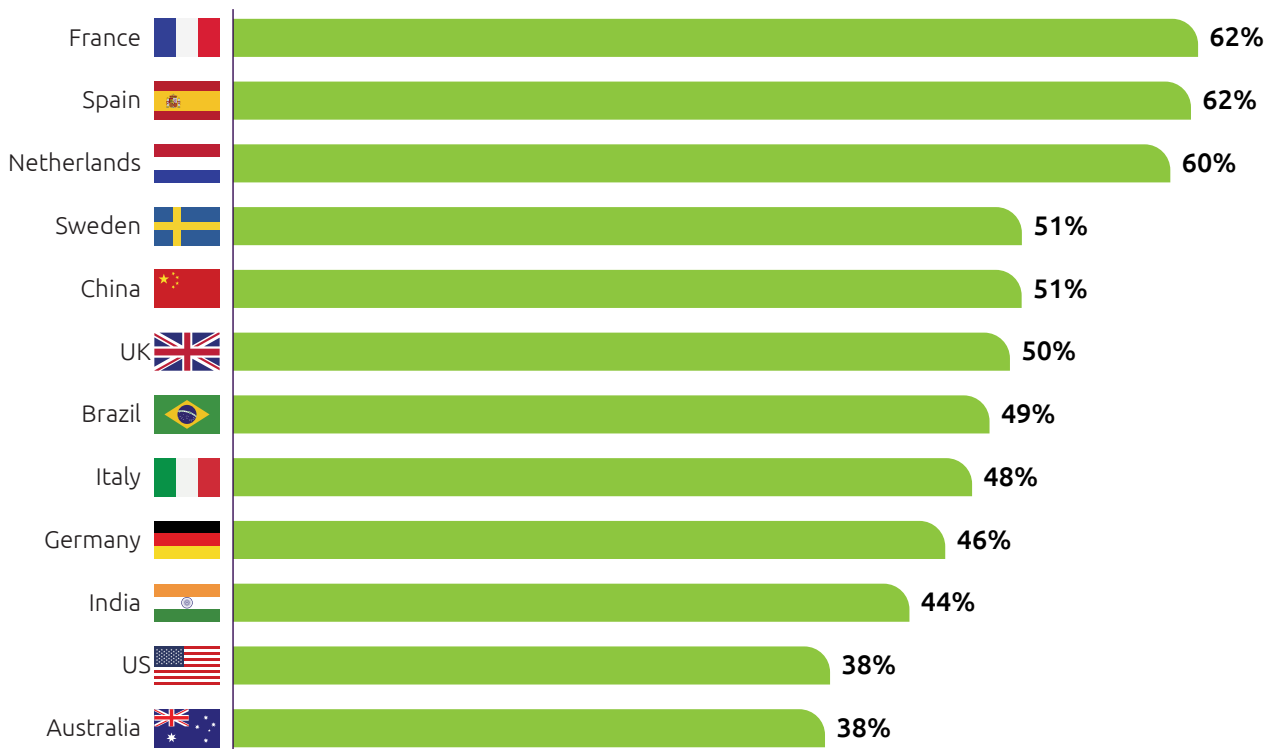
"The value that I received out of my interaction with AI was non-existent or less than I expected"

45%	55%	**49%**	44%	39%	37%
Overall	Consumer products and retail	Banking and Insurance	Utilities	Automotive	Public sector

Source: Capgemini Research Institute, AI in CX consumer survey, April–May 2020, N=5,300 customers from all sectors, 992 customers from banking and insurance.

Figure 5. Customers are not deriving the value that they expected through their AI interactions with banks and insurance firms, by country

Share of customers who said the value that they received out of their AI interactions with banks and insurers was non-existent or less than they expected

Country	Share
France	62%
Spain	62%
Netherlands	60%
Sweden	51%
China	51%
UK	50%
Brazil	49%
Italy	48%
Germany	46%
India	44%
US	38%
Australia	38%

Source: Capgemini Research Institute, AI in CX consumer survey, April–May 2020, N=5,300 customers from all sectors, N=992 customers from banking and insurance.

The pace of AI implementation in banking and insurance lags other sectors

The level of overall AI implementation at scale across all areas for banking and insurance is one of the lowest across all industries from an earlier research on AI at scale (Figure 6).

We also found that the scaling of AI-enabled interactions to improve customer experience in banking and insurance firms is the lowest across all industries (Figure 11).

Figure 6. Very few banks and insurers have been able to deploy AI at scale across all areas
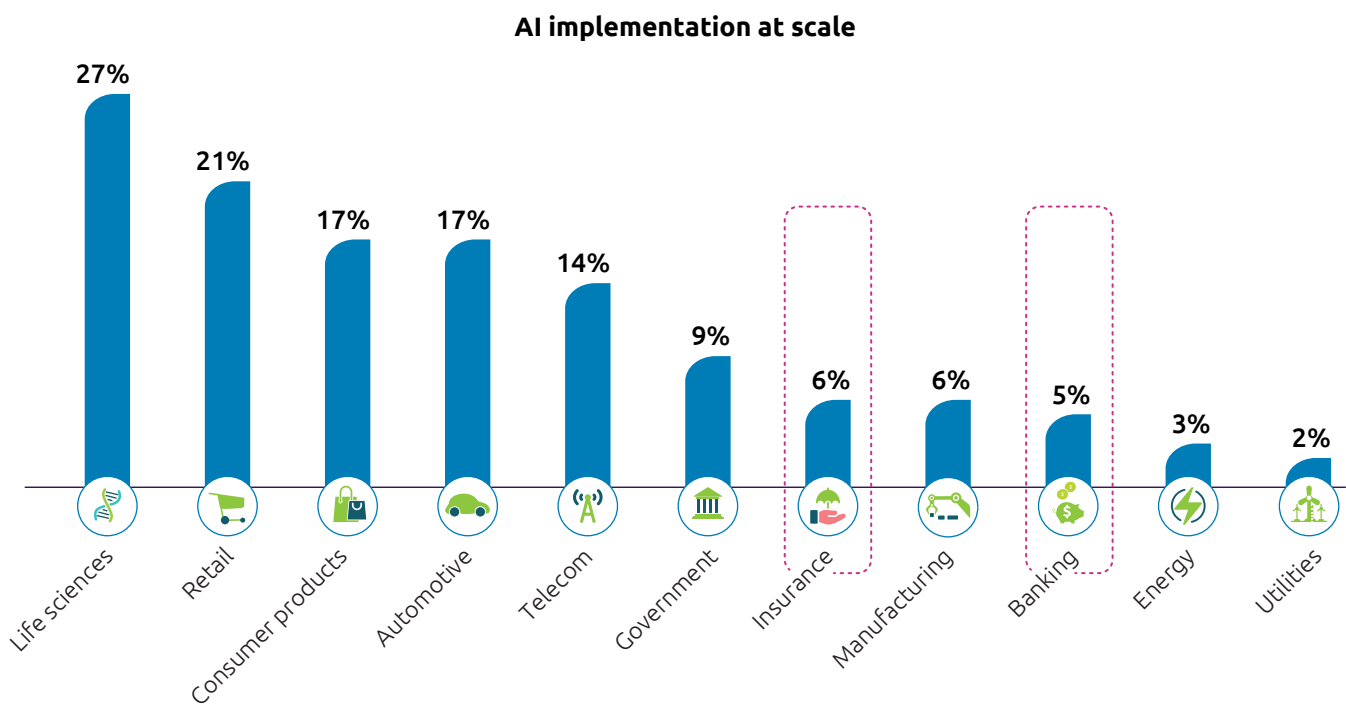
AI implementation at scale

Industry	Percentage
Life sciences	27%
Retail	21%
Consumer products	17%
Automotive	17%
Telecom	14%
Government	9%
Insurance	6%
Manufacturing	6%
Banking	5%
Energy	3%
Utilities	2%

Source: Capgemini Research Institute, State of AI survey, March–April 2020, N=954 organizations implementing AI.

"**49%**
banking and insurance customers feel that the value that they derived out of their AI interactions was non-existent or less than what they expected"

AI-enabled customer interactions offer significant benefits for financial services

While AI has not necessarily met all the expectations of customers, organizations have generated significant benefits.

Figure 7. Key benefits in customer experience and operational efficiency reported by the leading financial institutions of the world
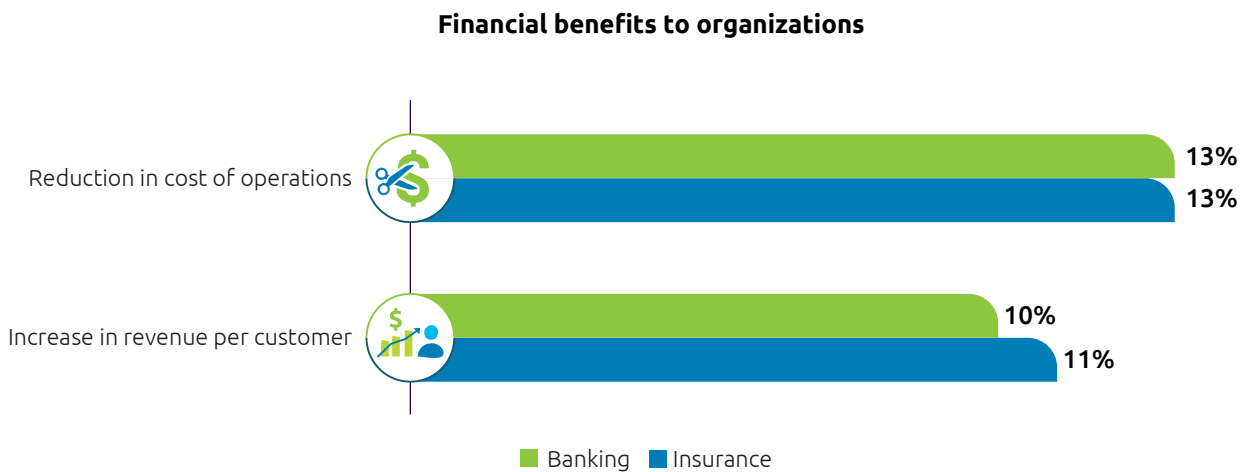
Key Benefits

AI powered cross-sell/up-sell
Aviva's AI-powered recommendation engine called "ADA" (Algorithmic decision agent) ranks by probability the products customers are most likely to buy. [1]

Personalized customer insights
BNP Paribas has launched an AI mobile app that provides customers with personalized insights and advice to help them better manage their money[2]

Automated document review
JPMorgan Chase has introduced an ML powered chatbot designed to analyze legal documents and extract important data points and clauses. Manual review of commercial credit agreements normally requires approximately 360,000 hours.[3]

Customer identity verification
Citibank has launched voice biometrics that analyses unique characteristics in a person's vocal pattern and cross-checks them against a pre-re-corded voice print to verify their identity quicker and provide faster assistance [4]

Virtual advisor for agents
Allianz's virtual advisor provides insurance agents with data and advice on product performance and client profile.[5]

Customer engagement
China Construction Bank will use AI for targeted customer outreach, as well as to better understand its customer base and raise levels of customer engagement [6]

ML assisted claims processing
Berkshire Hathaway uses AI powered data driven insights in its claims process to improve customer experience. [7]

Source:
1. Analytics India Mag, "How Aviva Is Powering Data Science Adoption By Partnering With International Universities," December 2019.
2. BNP Paribas, "How do banks get ahead in digital FX," January 2020
3. e HBS Digital Initiative "JP Morgan COIN: A Bank's Side Project Spells Disruption for the Legal Industry," November 2018.
4. Alacriti, "Five Examples of Biometrics in Banking," May 2019.
5. nsi insurance, "Allianz Italy uses iGenius' AI-powered platform to digitise agents' network," June 2019.
6. China Banking News, "China Construction Bank Enters Cooperative Agreement with Baidu to Leverage Artificial Intelligence Capabilities," September 2020.
7. Business Wire, "Berkshire Hathaway Homestate Companies Embraces AI With Adoption of Entire CLARA analytics Product Suite," January 2020.

AI in customer interactions delivers financial benefits for organizations

Financial service organizations that adopt AI report financial benefits in the form of reduced cost of operations and an increased revenue per customer (Figure 8). According to Lori

Beer, global CIO of JP Morgan Chase: *"The use of AI-driven technology has already helped JPMorgan Chase save $150 million in expenses."*[15]

Figure 8. Banks and insurers have witnessed reduced cost of operations and increase in revenue per customer after deploying AI in customer-facing functions

Financial benefits to organizations

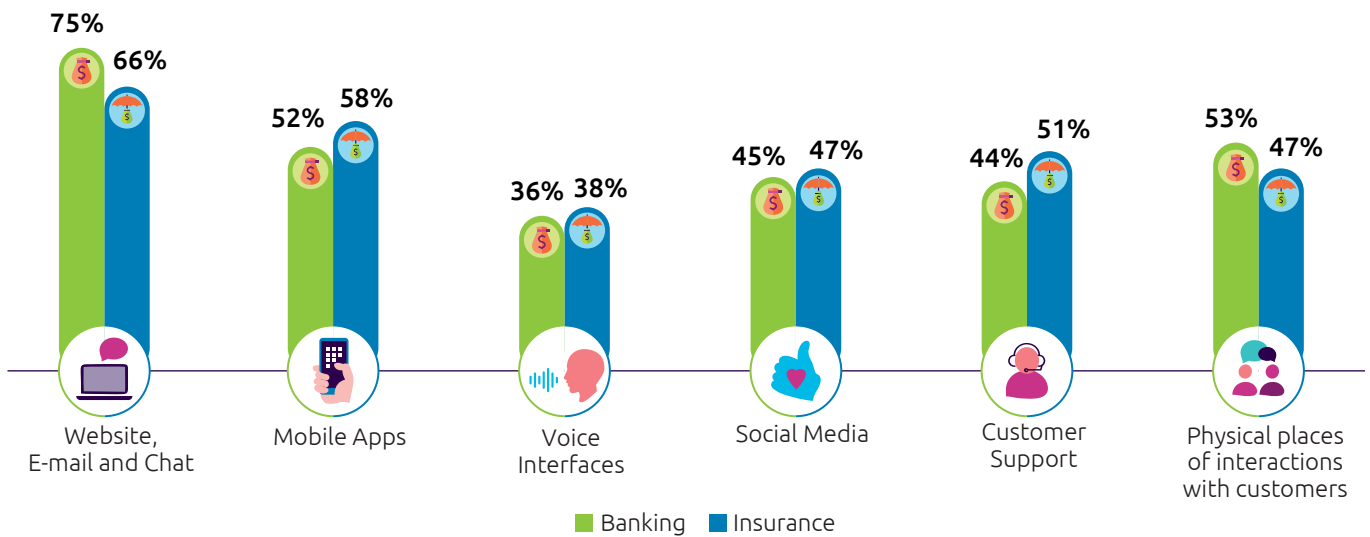|	
Reduction in cost of operations	Banking 13% / Insurance 13%
Increase in revenue per customer	Banking 10% / Insurance 11%

■ Banking ■ Insurance

Source: Capgemini Research Institute, AI in CX executive survey, April–May 2020, N=160 for banking and 158 for insurance.

AI-interactions lead to improved operations and an enhanced customer experience for organizations

While we saw that there is still more to be done to completely meet customers' expectations, AI has still helped deliver considerable improvements in customer satisfaction. Banks and insurers have witnessed greater customer engagement with brands from deploying customer AI:

- Around one in five in the industry (25% for banks and 19% for insurers) have seen a 20–40% increase in customer engagement with brands. And 71% and 78% have seen a 0–20% increase in engagement (Figure 9).

- More than eight out of ten have seen an improvement in customer and employee satisfaction and a majority have

seen increased use of AI-based engagements by customers (Figure 9).

High satisfaction results from the quicker and more efficient query flagging and resolution through AI systems in customer engagements. For instance, Lemonade's tools, including Forensic Graph Network and Project Watchtower, helped to drive down its loss ratio, which is a ratio of losses to premiums earned. It did this by filtering out bad risks, detecting fraud in real time, and responding to emergencies faster. As a result, 2019 Q4 loss ratio dropped to 73%, which is Lemonade's best result to date. Additionally, automation-powered structural change enabled the team to bring a

dramatic improvement in claim-specific NPS, which was as high as 76 for an insurance company.[16]

Wells Fargo's AI-based predictive banking app can provide mobile app users with over 50 different prompts for various scenarios. Explaining how one of these prompts works, Katherine McGee, head of digital product management at Wells Fargo, says: *"If a customer receives an incoming deposit which is not in their usual pattern of transactions and is not needed to meet their normal expenses or scheduled payments, we can highlight the deposit and suggest the customer save the funds."*[17]

Ping An, a Chinese insurance company, uses AI to solve industry pain points such as complicated loss assessment processes and difficulty in identifying hidden risk leakage. This leads to high-precision recognition of pictures, loss assessment, and pricing within seconds, effectively reducing claims costs and improving efficiency and the client experience.[18]

Blue Cross Blue Shield Association is a federation of 36 separate United States health insurance companies that provide health insurance in the United States to more than 106 million people. Blue Cross Blue Shield of Tennessee (BCBS-TN) set out to better connect with its member base using voice-bot technology. It built a custom bot that is accessible via Google Home speakers and Google Assistant. One feature of the voice-bot is "finding a doctor." When using the voice assistant, members are asked questions about their network, zip code and type of doctor requested, and the voice assistant will give them a doctor's name meeting that criteria.[19]

Figure 9. Most financial services firms have seen improvement in customer satisfaction and job satisfaction of employees as a result of deploying AI in customer interactions

Share of financial services firms deriving benefits due to deploying AI in customer interactions
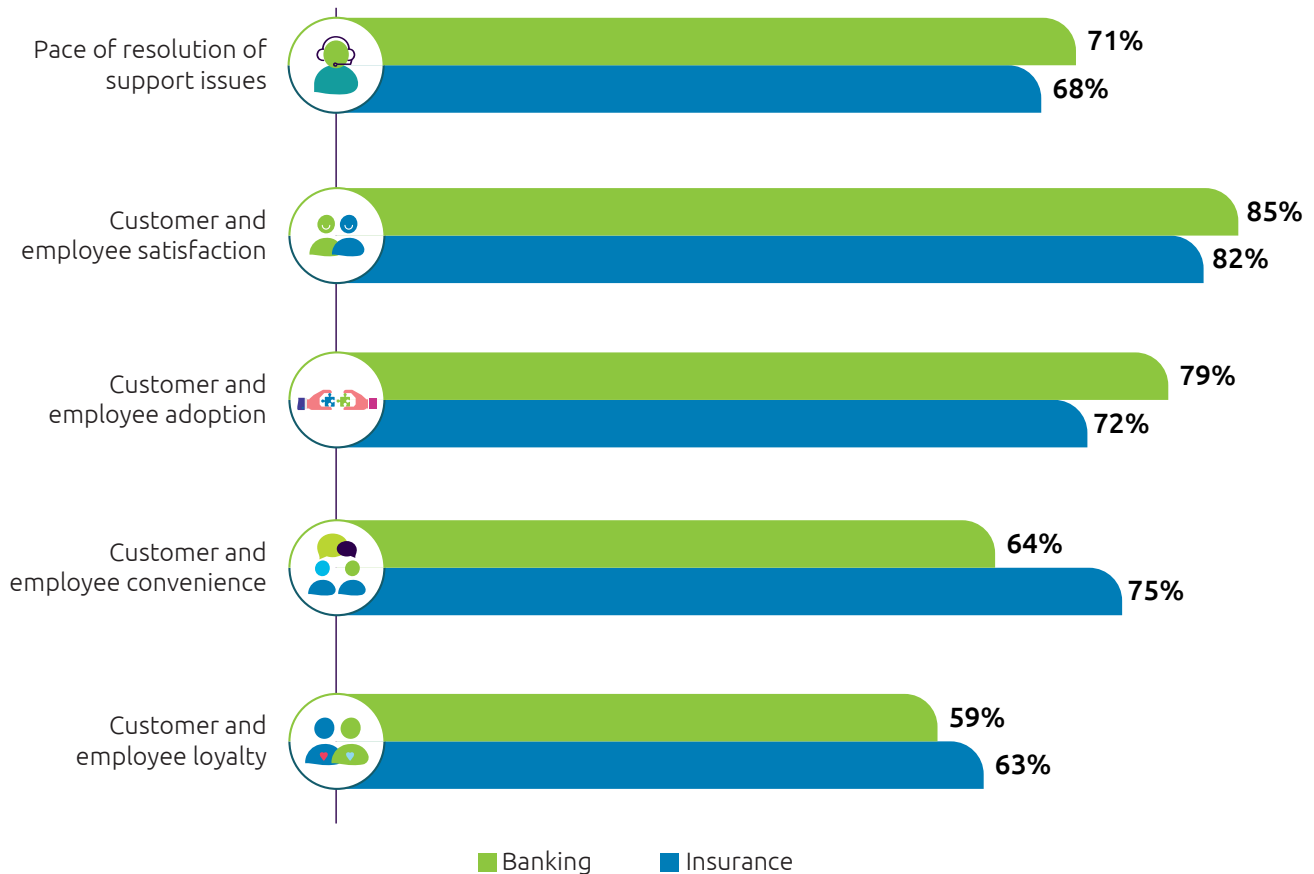
	Banking	Insurance
Pace of resolution of support issues	71%	68%
Customer and employee satisfaction	85%	82%
Customer and employee adoption	79%	72%
Customer and employee convenience	64%	75%
Customer and employee loyalty	59%	63%

Source: Capgemini Research Institute, AI in CX executive survey, April–May 2020, N=160 for banking and 158 for insurance.

Customer interactions with AI are not limited to a few key touchpoints but are spread over multiple channels throughout the financial services value chain (Figure 10). AI has taken over channels such as websites, email, and chat services by automating answers to the commonly asked customer queries. Several banks and insurance firms are deploying AI on social media platforms to gauge customer preferences through sentiment analysis. Even physical places of interaction with customers, such as ATMs, are seeing the advent of AI, with humanoids simplifying processes such as applying for credit cards and opening of new accounts. These two processes are understood to be major pain points for customers.

Figure 10. Channels in which organizations are using AI to improve customer experience

	Website, E-mail and Chat	Mobile Apps	Voice Interfaces	Social Media	Customer Support	Physical places of interactions with customers
Banking	75%	52%	36%	45%	44%	53%
Insurance	66%	58%	38%	47%	51%	47%

Source: Capgemini Research Institute, AI in CX executive survey, April–May 2020, N=160 for banking and 158 for insurance.

J.P. Morgan has automated responses to client queries on e-mail and chat to improve client service and operational efficiency. [1]	ICICI Lombard has partnered with Microsoft to develop India's first AI based car inspection feature in its mobile app that automatically approves or rejects a claim. [2]	ALiX by BNP Paribas is a digital trading assistant that delivers content & running commentary over voice to traders. [3]	The Bank of Italy involved AI to understand customers' general preferences and where the bank itself stood among competitors. [4]	ICICI Prudential Life Insurance has introduced a chatbot service LiGO on Google Assistant in India to answer customer queries. [5]	SBI is using an AI-based solution that scans the facial expressions of the customers and reports whether the customer is happy or sad so that it can service them better. [6]

Source:
1. JP Morgan, "Technology at our firm, Applied AI & Machine Learning", October 2020.
2. Microsoft, "AI takes the pain out of car insurance in India," January 2019.
3. The Trade, "BNP Paribas gives FX algos a voice with launch of 'ALiX' digital trading assistant", September 2019.
4. itransition, "4 ways to incorporate AI in fintech to improve your customer-facing practices", November 2019.
5. Financial Express, "ICICI Prudential Life launches AI-powered voice chatbot on Google Assistant," September 2020.
6. Fintech News, "Artificial Intelligence comes to the rescue of banks", September 2018.

Banks and insurance firms are deriving high benefits from AI in customer engagements, yet the initiatives are not scaled

We found that the organizational benefits for banks and insurers through AI in customer engagements is the highest across sectors (Figure 11). Financial services firms have implemented multiple use cases for AI-enabled customer interactions. However, when we look at the scaling of use cases, we find that financial services firms have the lowest scaled implementation across all industries. In the next section we look at the challenges faced by financial services firms to scale customer AI.

Figure 11. Very few banks and insurers have been able to deploy AI at scale in customer interactions

Level of scaling vs organizational benefits
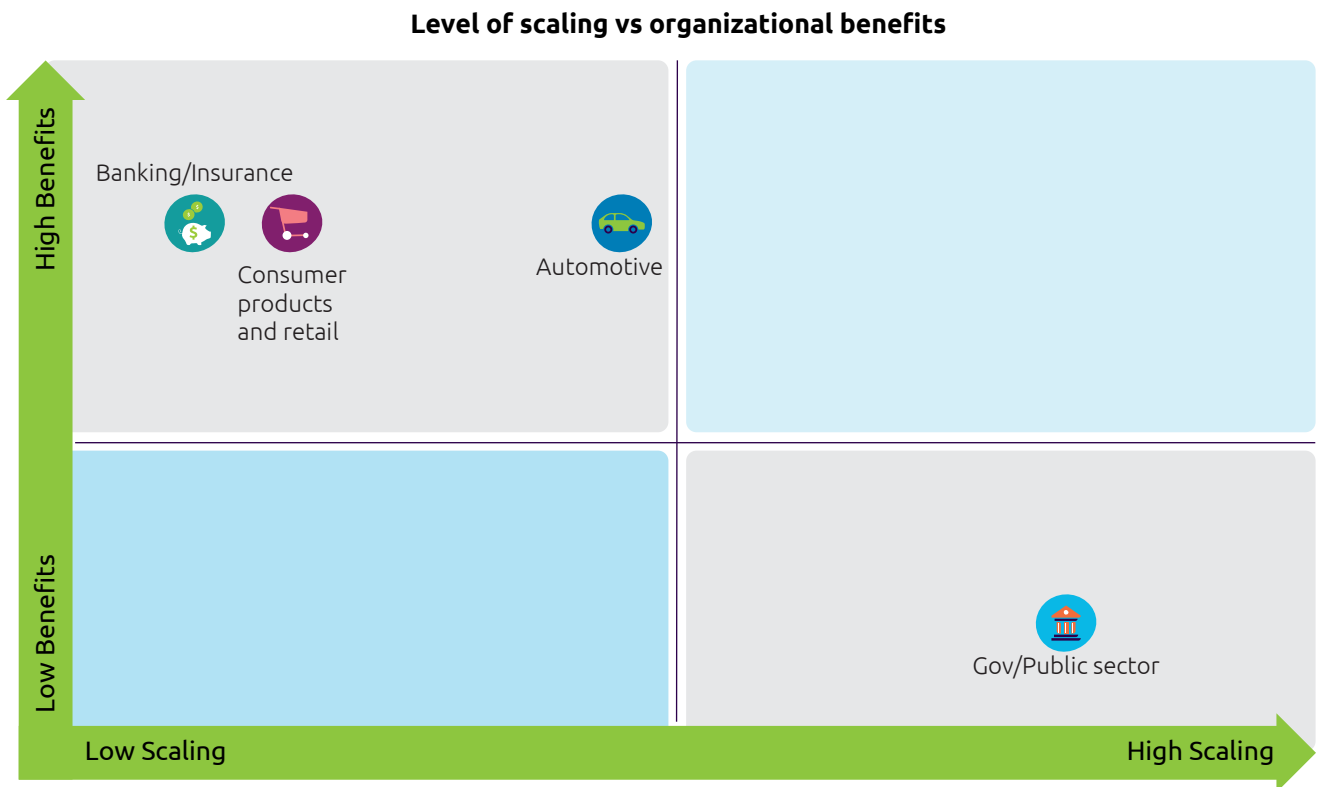
Source: Capgemini Research Institute Analysis.

Note: We created a 2*2 matrix based on the of level of scaling and benefits achieved by firms across sectors. The level of benefits was calculated based on executives response to the level of benefits achieved through AI-enabled customer interactions across five parameters: reduced cost of operations, increased revenue from side selling, personalization and new offerings, reduced response time to fulfill requests and improved productivity of workforce compared to traditional approaches. The degree of scaling is derived based on the level of use cases scaled regionally and globally. The benefits and the scaling are standardized to a scale of 0% to 100%.

Around **one in five** *in the industry (25% for banks and 19% for insurers) have seen a 20–40% increase in customer engagement with brands.*

FinTechs are redefining the financial services customer experience

FinTech firms deliver superior value to customers using technology to make financial services more efficient. Fintech firms are not bound by the challenges faced by traditional financial services firms, such as cumbersome legacy systems. Examples of where FinTechs are driving innovation in AI include:

Figure 12. FinTechs are driving innovation in AI

Lemonade

Lemonade, a US based Insurance Company, is turning the centuries-old business of property insurance into a Millennial-friendly consumer product. Automation also allows Lemonade to offer policies at a very low price: renters insurance starting at $5 a month and homeowners starting at $25. On the review site Clearsurance, Lemonade ranks second in customer satisfaction for renters insurance, behind only USAA. [1]

Zaggle

Tapping onto increased customer demand of digital payment transaction, Zaggle an Indian Fintech offering prepaid card services found its sweet spot in this COVID-19 outbreak. Also, it has tied-up with multiple banks where the revenue sharing happens where a certain percentage of its income goes to them. [4]

Ant Financial

Ant Financial Services Group, an affiliated of Chinese e-commerce giant Alibaba Group, is the highest valued fintech company in the world, and the world's most valuable unicorn company. It has "intelligent assistant", a voice-recognition system that allows users on the Alipay platform to buy airline tickets and book hotels by using their voice, making travel booking more convenient and user friendly for millions of its customers. [2]
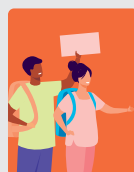
Lufax

Lufax, a Chinese Internet-based lending and wealth management platform, originally set up by Ping An Group. It introduced a Know Your Intention (KYI) module built upon Natural Language Understanding (NLU) and look-alike algorithmic modelling, mapping out the entire customer journey on a platform, with more than 100,000 touch points. This gives them the ability to make educated predictions about customer needs, anticipate potential difficulties they may run into, and actively provide help to ensure customer satisfaction. [5]
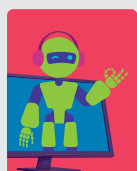
Betterview

US-based InsurTech and AI start-up utilizes computer vision and AI, to capture and analyze imagery of data for buildings and properties throughout the US to be used by the property insurance industry in underwriting. [3]

Sentifi

Swiss Fintech company, uses AI and ML to enable investors and other financial market stakeholders to tap into the online available financial intelligence of millions of persons and organizations. [6]

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What are the challenges faced by financial services firms on their path to AI-driven CX?

Overall, executives rated lack of customer awareness on how AI could help them as a key challenge (69% for banking and 74% for insurance). There is a lack of initiatives from financial services firms to increase awareness: 53% of customers state that even if companies are using AI to enhance experience, they are not making them aware about how it could help them.

Against this backdrop, we identified multiple issues that contribute to low levels of scale:

Figure 13. Challenges faced by financial services firms on their path to AI-driven CX

Leadership and organizational resistance

- Internal resistance is a major challenge in deploying customer AI at scale (52% of banking and 53% of insurance executives).
- Leadership awareness and buy-in is another challenge for the insurance sector, with 53% pointing to lack of leadership awareness as a block to scaled adoption.

Identifying the right use cases

- Difficulty in demonstrating ROI at pilot stage was cited by 44% of banking and insurance executives.
- Difficulty in defining the criteria and selecting which use cases to scale (cited by 43% of banks and 36% of insurers)

Lack of incentives and lack of trust for high-value interactions

- Lack of adequate incentives for customers to use AI-enabled applications is a barrier for 69% of banking and 77% of insurance executives.
- Lack of customer trust in using technology for high-value interactions is another big barrier (73% of banking and 76% of insurance executives).

Long gestation period for implementation and data management weaknesses

- 54% banking and 59% insurance executives cite that the time taken for deployment of AI use cases is very long

- Lack of a data management approach is another key challenge for 58% of banking and 55% of insurance executives.

- Abhinav Gupta, Vice President Product Management for State Street India, says, *"The banking and financial industry generally is very tightly governed by regulations and so need to take a conservative approach in terms of the data protection to safeguard customer PII information. Banking and financial Services are usually late adaptors in terms of technology compared to the other industries. One of the primary reasons is the majority of banks have their own data centers or hold the data on private cloud".* [1]

Growing regulatory scrutiny in financial services

- Regulatory focus on the use of AI in the sector continues to grow due to possible misuse of systems and the risk to society.

- 42% of banks and 39% of insurers say that ensuring customer safety standards and related regulatory requirements are met is a challenge

- Christopher Woolard, executive director of strategy and competition at the Financial Conduct Authority, says *"Algorithmic decision-making needs to be 'explainable',". But what level does that explainability need to be? Explainable to an informed expert, to the CEO of the firm or to the consumer themselves? It's possible to 'build in' an explanation by using a more interpretable algorithm in the first place, but this may dull the predictive edge of the technology. So what takes precedence - the accuracy of the prediction or the ability to explain it?"* [2]

[1] Capgemini Research Institute Interview
[2] FCA to explore the "explainability" of AI in consumer finance," July 2019.

Source: Capgemini Research Institute Analysis.

How to accelerate the implementation of AI-driven CX

We believe that organizations should follow six key guidelines to drive AI use cases at scale and increase customer satisfaction:

Figure 14. Roadmap to accelerate implementation of AI in customer interactions for financial services firms

1	2	3	4	5	6
Invest in value-driven AI to transform the customer experience	Create trust-based and ethical AI governance approaches to drive broad-based consumer adoption	Deliver an AI experience that takes into account "signature moments" that require empathy and emotion	Set up the technology foundation required for an AI-enabled customer engagement	Add senior leadership roles for AI to accelerate adoption	Educate customers on what AI can do for them and make AI systems explainable and transparent

Source: Capgemini Research Institute analysis

Invest in value-driven AI to transform the customer experience

We analyzed multiple use cases and found that the ones that have reached scale are convenience-driven or challenge-solving, but fall short of providing a customer with a transformational experience (Figure 15). A narrow focus on improving operational efficiency for customer interactions is not enough. AI should be used for more complex customer interactions, such as creating customer personas to understand needs and create a relationship. These solutions deliver the greatest benefit but are rare in the industry when it comes to scaled adoption. In order to deliver the true power of AI, organizations must identify new ways of personalizing the customer experience and not just replace existing processes with AI.

Identifying the right use cases for implementation is extremely important as this will be key to drive customer adoption and faster scaling. Abhinav Gupta, Vice President Product Management for State Street India, says *"AI and ML and RPA really need to be very use-case centric to extract the* *best out of the tools, products and programs otherwise the ROI of these products and programs would not be positive. As lot of AI/ML models and technologies still has to mature to yield the real customer benefit."*

Figure 15. Use cases based on different levers of AI in customer interaction

Convenience driven use cases which are an alternate medium for existing customer interaction use cases

Customer Query resolution

Authentication using facial and voice recognition

Internal process automation of repetitive processes using AI

AI interactions which use intelligence and analyze data to solve a problem using AI and ML

Automated loan approval using credit history

Automatic setting of insurance premium by analysis of past behaviour

In branch experience

Detection of fraud

Trading, brokerage, investment decisions based on AI

Risk mitigation and analysis in investments and credit supply

AI interactions which can utilize customer's data to create a persona, proactively analyze potential customer pain points and solve them

Product suggestions based on past purchase analysis

Portfolio solutions using robotic intelligent financial assistants

Product cross selling based on customer usage analysis and profile

Relevant suggestions by analysis of spending history

Understanding of voice of customers using tools like social media analytics

Targeted advertisement via analysis of customer behaviour

High Scaling

Low Scaling

Low Benefits

High Benefits

Source: Capgemini Research Institute

Figure 16. Examples of financial firms deploying transformational use cases for exceptional customer experience

Use case	Examples
Product suggestions based on analysis of customer's past purchases	HSBC has been using AI to give US credit card customers a personalized shopping experience. It's working on a rewards program that processes customer data to predict how clients will redeem their credit card points so it can better market offerings such as travel, merchandise, gift cards and cash. The technology recommends a redemption category for each credit card holder. HSBC has sent out emails based on these recommendations, while also emailed a random category to a control group. In the former batch, about 70% opted for the rewards and the number of opened emails rose by 40%. [1]
Portfolio and financial solutions using robotic intelligent financial assistants	Bank of America's digital assistant Erica helps the bank's customers make better financial decisions by offering financial advice based on the customer's banking habits using cognitive messaging, artificial intelligence and predictive analytics. The bot can suggest what the customer can save to reach a specified financial goal, such as saving $100 towards paying down a credit card. The bot also provides suggestions to determine the spending and saving habits of the retail banking customer. By May 2019, just one year after it was launched, Erica had been used by seven million customers and had handled more than 50 million client interactions. [2]
Product cross selling based on customer usage analysis and profile	Tata AIG uses AI platforms to create analytic models to improve cross sell and upsell for existing customers. As a result, AIG has seen encouraging growth in additional policy purchase in the last financial year. [3]
Relevant suggestions while analysis of your spending history	ICICI's iMobile app has feature which gives personalized recommendations for all banking needs using customer's persona employing machine learning techniques. [4]
Understanding voice of customers using tools like AI, social listening	MetLife uses AI to help call center agents understand the mood of callers. The AI can help call agents detect a heightened emotional state on the part of the customers- be it positive or negative. As a result of this, the call center agents are able to be involved in more informed conversations with customers and get things done much faster. [5]
Targeted advertisement doing analysis of customer behavior	American Expresses redefined their marketing strategy by incorporating AI. As a result of AI driven campaigns, Amex was able to identify B2B customers outside of their existing field of vision or targeting capabilities, in other words, rediscovering prospects they had not considered targeting before and the AI system could also predict which of these new prospects (and existing prospects) were most likely to convert, via a grading system powered by machine learning. [6]

Source:
1. W.UP, "A personal preference: 5 use cases of personalization in digital banking," November 2019.
2. The Financial Brand, "BofA's Surging Digital Assistant Signals a Turning Point in Retail Banking," June 2019.
3. ET CIO.com, "Tata AIA Life makes 80% transactions self-serviced," March 2020.
4. ICICI Bank, "Analyst Day," December 2019.
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6. Growth Intelligence, "A Radical Boost to Amex's competitive advantage," September 2019

Identify "context-aware" use cases to provide more value to customers from their AI interactions

Nearly one-in-two financial services customers say that the value they get from their AI interactions is nonexistent or less than what they expected. Providing more incentives to customers will be key. As we have seen, 57% of customers believe that they are not incentivized by organizations enough for allowing AI to use their personal data.

In related research we carried out, we found that context-aware AI use cases are shown to deliver more benefits to customers. "Context-aware" AI use cases are those that customers find effortless to use and which offer them greater personalization, control, and consistency. Detection of fraudulent transactions and authentication using facial and voice recognition are the top "context-aware" use cases in the sector. Organizations must identify the services that will create value and which customers will appreciate.

Overall, we found that these "context-aware" use cases are not highly scaled, though a number of leading organizations are getting ahead of the game:

- CaixaBank is offering customers the opportunity to use facial recognition technology rather than PIN codes to withdraw cash from ATMs. In the trials conducted, 66% of respondents highlighted the sense of security that comes with facial recognition.[20]

- India's Kotak Mahindra Bank has an AI-powered bot, "Keya," which understands a caller's intent, verifies it, and then offers relevant solutions in English as well as the national language, Hindi. Customers who would otherwise get lost in a traditional IVR menu can give a simple voice command to Keya to reach their destination. The bank claims that the AI has been able to independently conclude up to 11% of all calls without any human intervention – a 5X increase over the earlier self-service rate.[21]

Create trust-based and ethical AI governance approaches to drive broad-based customer adoption

Financial services organizations must take all measures necessary to make sure that their AI systems are ethical. While one-in-two financial services organizations said that they have a confidential hotline/ombudsman to raise ethical issues concerning their AI systems, only 33% have a dedicated team to monitor the use and implementation of AI from an ethics perspective. Also, only one-in-two financial services organizations say that they run an independent audit of the ethical implications of those AI systems that they have in production.

Independent audits of AI systems – coupled with constant monitoring – are essential for ethical AI. As Boon-Hiong Chan – global head of market advocacy, securities services, Deutsche Bank – says: *"As AI develops further, we need to have a continuous dialogue with regulators, across the industry, and with clients on how it can be applied ethically and responsibly across the board. This will help mitigate the potential complexity that would arise from multiple standards and interpretation globally and ultimately lead to better outcomes for clients."*[22]

Ensure people understand how AI algorithms make decisions

Capgemini's recent research on "Ethics in AI" found that 64% of customers are not comfortable with the fact that important decisions are being made only by AI algorithms. Helping people understand how a decision has been reached with help address this concern, and 68% of customers prefer to deal with companies that help them understand their AI output.[23] The European Commission's seven dimensions for ethical AI provides a helpful framework for organizations looking to establish an approach (Figure 17).[24,25]

Only **33%**
of firms have a dedicated team to monitor the use and implementation of AI from an ethics perspective

The 7 Principles
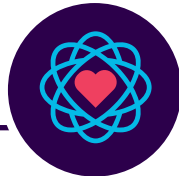
● **1. Human agency and oversight**

AI systems should support human autonomy and decision-making. AI systems should both act as enablers to a democratic, flourishing and equitable society by supporting the user's agency, foster fundamental rights and allow for human oversight.

● **2. Technical robustness and safety**

AI systems need to be resilient and secure. They need to be safe, ensuring a fall back plan in case something goes wrong, as well as being accurate, reliable and reproducible.

● **3. Privacy & Data governance**

Besides ensuring full respect for privacy and data protection, adequate data governance mechanisms must also be ensured, considering the quality and integrity of the data, & ensuring legitimized access to data.

● **4. Transparency**

AI systems should be based upon the principle of explainability, encompass transparency and communication of the elements involved: the data, the system and business models

● **5. Diversity, non-discrimination and fairness**

Involves avoidance of unfair bias, encompassing accessibility, universal design and stakeholder participation throughout the lifecycle of AI systems apart from enabling diversity and inclusion.

● **6. Societal and environmental wellbeing**

AI systems should benefit all human beings, including future generations. It must hence be ensured that they are sustainable and environmentally friendly.

● **7. Accountability**

The requirement of accountability complements other requirements and is closely linked to the principle of fairness. It necessitates that mechanisms be put in place to ensure responsibility and accountability for AI systems and their outcomes, both before and after their development, deployment and use.

Source: European Commission "Ethics guidelines for trustworthy AI."

Capgemini's earlier report on the "State of AI" found that only 31% of financial services organizations have detailed knowledge of how and why their AI systems produce the output that they do.[26] This is a significant problem, given that customer complaints about AI are common: 52% of insurance executives say they regularly receive customer complaints about discriminatory pricing of insurance policies due to the customer's demographic profiles (around two to three times a year), with 16% receiving complaints more than once a month.[27] Explainability of AI is especially critical in financial services, as it is important for firms to know the data points that are being used to make loan decisions. Hari Gopalkrishnan, managing director, Bank of America, adds: *"We want to understand how the decision is made, so that we can stand behind it and say that we're not disfavoring someone."*[28]

This shows the industry still has some way to go as far as the interpretability of AI systems is concerned. Earlier research from Capgemini found that 53% of customers claimed their insurance claims were denied based on a decision taken by an AI algorithm and 45% of customers said they were denied credit (loan/overdraft limit, etc.) by an AI system.[29] Better interpretability not only supports the drive for scale but also more consistent and fair AI outputs for customers. It is paramount that financial services organizations create trust-based and ethical AI approaches to drive broad based customer adoption.

Implement robust internal governance measures to instill customer confidence

Only 47% of financial services firms said they have policies in place that define acceptable practices for the design and use of AI systems. It is important for AI output to be powered by data that is ethical: 52% of customers say that having trust in the transparency and fairness of an organization's AI system is among the top 3 factors for increasing AI interactions. All data exchanges between a financial institution and its customers should be permissioned explicitly, transparently and on a granular-use basis. Data exchange arrangements should be easily available for review, revision or revocation by customers. During our focus group discussion, a customer mentioned he does not want the banks to analyze his financial data and said: *"I don't want my bank to hink about what I'm doing with my money because I don't trust the bank enough to assume that this really happens completely anonymously."*

However, organizations are lagging when it comes to giving the right data control and transparency to customers. Only 45% said that they provide clear options for users to opt-out of AI systems upon request, according to the "State of AI" report.[30]

Close to two-thirds (63%) of financial services organizations say that a major challenge is the lack of strong governance models for achieving scale, while only 57% have a leader who is responsible and accountable for AI's ethical issues. It is paramount to have the right governance models in place for build trusted AI at scale.

52%

of customers say that having trust in the transparency and fairness of an organization's AI system is among the top 3 factors for increasing AI interactions.

Deliver an AI experience that takes into account "signature moments" that require empathy and emotion

AI needs to be augmented with humans during "signature moments" to win customer trust and loyalty. "Signature moments" are carefully crafted micro-interactions that support customers and offer them value in times of need, for example the loss of a family member or a fraud. Organizations need to offer support during this time by bringing empathy and emotion to bear.

Signature moments are of high importance to customers as they will remember how organizations interacted with them at such crucial times: 45% of customers say that their interaction with a smart system would have been much better if the AI had more human-like behavior and personality.

SEB, a major Swedish bank, uses an AI virtual assistant called Aida to interact with millions of customers. Able to handle natural-language conversations, Aida has access to vast stores of data and can answer many frequently asked questions, such as how to open an account or make cross-border

payments. She can also ask callers follow-up questions to solve their problems, and she's able to analyze a caller's tone of voice (frustrated versus appreciative, for instance) and use that information to provide better service later. Whenever the system cannot resolve an issue – which happens in about 30% of cases – it turns the caller over to a human customer-service representative and then monitors that interaction to learn how to resolve similar problems in future.[31] Metlife uses AI that can help call center agents detect a heightened emotional state on the part of the customer – be it positive or negative. This means the agents are better placed to have sensitive and informed conversations with customers and get things done much faster.[32]

It is important for financial services firms to identify the use cases that need human as well as AI intervention and segregate them from the use cases that only need AI.

Set up the technology foundation required for an AI-enabled customer engagement

One-in-two financial services firms say they lack a defined data management approach for data integrity, governance, and integration strategy (58% of banking and 55% of insurance executives). A customer engagement platform that is connected to a customer data hub is a prerequisite for creating a personalized and contextual customer experience. It does this by offering a "single source of truth" and a unified view of the customer. The customer engagement platform (via the data hub) allows multiple teams – from marketing to customer service – to run effective interactions via a variety of tools, from conversational interfaces to facial recognition.

AI must be infused into the customer platform and the data hubs through intelligent apps and AI services that are readily available or custom-built based on the customer requirements. Having this common technology foundation is key to mitigate the risk of individual initiatives and to avoid constant "reinvention of the wheel" (Figure 18).

Zurich Insurance Group, for instance, uses AI to analyze a potential customer's individual driving data when they come to the organization for car insurance. This is then compared to a set of reference profiles created from more than a decade's-worth of collected data, allowing the company to customize the premium based on the individual customer's driving behavior.[33] Similarly, Danske Bank in Denmark is using ML-based predictive models to assess customer behavior and personal preferences as well as to predict customer needs. Based on online behavior, it identifies customers in a specific situation where financial advice is needed. For instance, when a person changes jobs with a new salary and pension plan. The bank can now reach out to customers proactively and has achieved 62% better results than in their traditional campaigns.[34]

Figure 18. Technology prerequisites for the AI-powered customer experience

Customer

Marketing

Distribution

Sales

Customer service

Channels and customer touchpoints

AI Infusion

Intelligent Apps
Off-the-shelf use cases

Off-the-shelf AI Services
Pre-trained models

Custom AI Services
Custom models training Data science, Data engineering, DataOps

Supports the development of apps for conversational interfaces, recommendation engines, chatbots, among others

Customer Engagement Platform

AI Infusion

Customer Data Hub

A single and complete source of customer data to deliver personalized and contextual experience to end-customers

Secure, trusted, and access-controlled data source for all enterprise data

Enterprise data & AI platform

Source: Capgemini Research Institute analysis.

Add senior leadership roles for AI to accelerate adoption

Currently, 71% say they lack mid- to senior-level AI talent and around half (50%) say they do not have an AI head/lead.[35] Hiring, training and reskilling of organizational talent through a structured and long-term talent strategy and plan will be critical. For the short term, lack of talent can be addressed by hiring AI consultants and ensuring knowledge and experience transfer. Another option is to outsource AI development, which is done by one-third of banking and insurance firms. This can lessen the impact of AI skill shortages.

DBS Bank, for instance, is looking to arm 3,000 of its employees with basic skillsets in artificial intelligence and machine learning. The tutorials and league will run on

Amazon Web Services' (AWS) cloud platform, and the training scheme is expected to see DBS staff, including its senior leadership team, equipped with AI and ML skills by end of this year. Siew Choo Soh – managing director and head of consumer banking and big data analytics technology at DBS Bank – says: *"We have inculcated a culture of continuous learning among employees through immersive training programs. This allows us to build a future-ready workforce, where every employee can thrive in the current and future world. In line with our commitment to fostering the continuous development of employees, we have rolled out a program called "Beta," which signifies that learning is a lifelong, ongoing process."*[36]

Educate customers on what AI can do for them and make AI systems explainable and transparent

Half of the customers (53%) we surveyed said that even if companies are using AI to enhance their experience, they are not making them aware about how it could help them. Organizations are aware of this: 69% of banks and 74% of insurers admit that customers are not aware about how AI could help them.

It becomes very important, therefore, to educate customers not only on how AI works but the positive impact it can have for the customer. The industry also needs to make sure that they explain to customers how they are using AI at every step

and how they are using their data. This means that executives themselves must accept the responsibility of understanding how an AI algorithms arrives at a decision. Bank of America, for instance, is experimenting with how artificial intelligence could help improve fraud detection, but executives want to first understand how the AI algorithms actually work. Hari Gopalkrishnan, MD at Bank of America, says: *"We're not fans of lack of transparency and black boxes, where the answer is just 'yes' or 'no"."*[37]

Conclusion

Financial services has seen widespread adoption of customer-facing AI and today's pandemic environment will only accelerate this trend. While organizations have benefited from AI, customers expect and want more. At the same time, the industry is behind the curve when it comes to achieving scale with AI-driven CX. There are a number of challenges the financial services firms need to tackle, from organizational resistance to lack of customer trust. The industry currently lags behind in the field in terms of how customers view its customer-facing AI, and it needs to accelerate progress if it does not want to be left even further behind.

Research methodology

Primary surveys:

Customer survey: In April and May 2020, we surveyed 5,300 customers across 12 countries.

Customers by country

Australia 4%
US 13%
Netherlands 6%
Spain 8%
France 9%
Italy 8%
Germany 9%
China 8%
UK 9%
Sweden 8%
India 9%
Brazil 9%

Customers by age

51-60 5%
61-70 2%
18-22 6%
41-50 12%
23-30 33%
31-40 42%
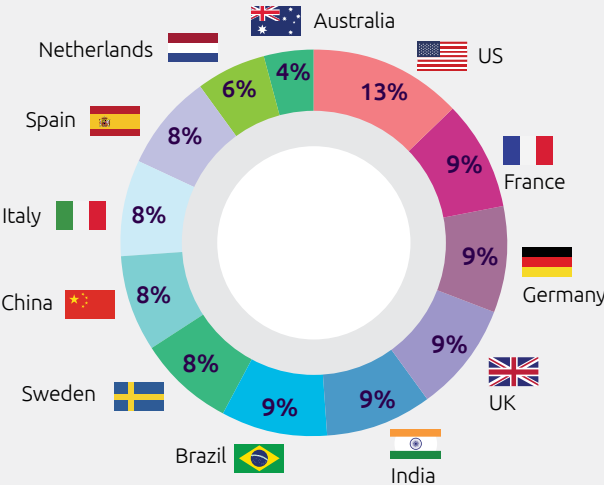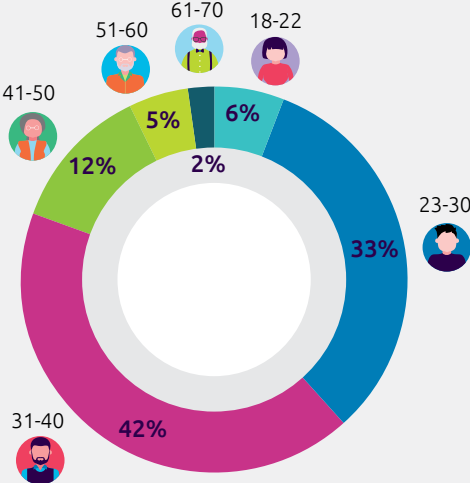
Customers by employment status

Full-time student 3%
Retired 3%
In the military 1%
Unemployed 4%
Self-employed, consultant, or freelancer 8%
Part-time employed 11%
Full-time employee 70%
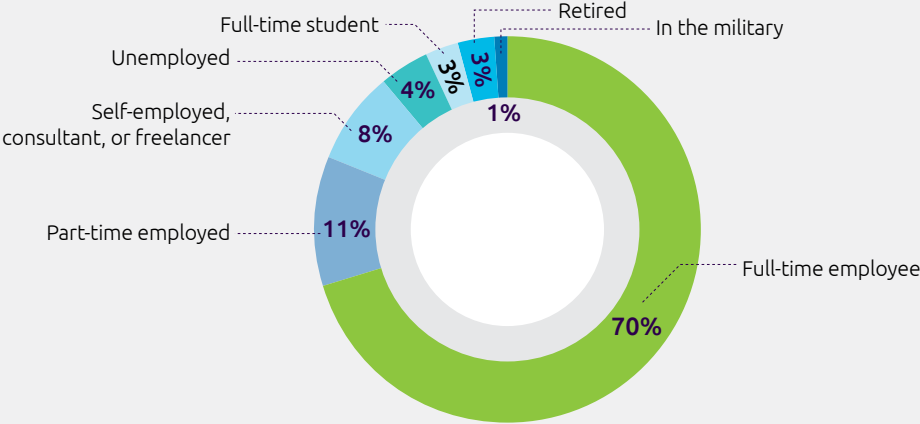
Executive survey:

We surveyed 318 business leaders from large financial services organizations with at least USD1 billion in 2019 annual revenue across a range of sectors and countries.

Executives by sectors

- 50% Insurance
- 50% Banking

Executives by country

- Australia 3%
- US 13%
- UK 9%
- India 9%
- France 9%
- Germany 9%
- Brazil 10%
- Sweden 8%
- China 8%
- Italy 8%
- Spain 8%
- Netherlands 6%
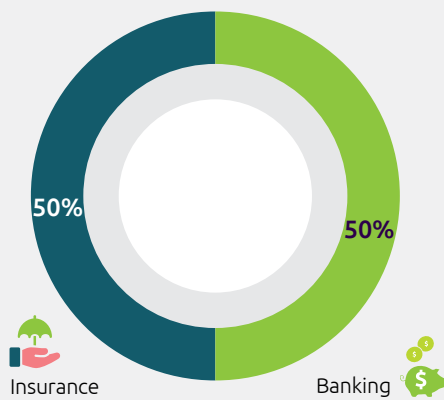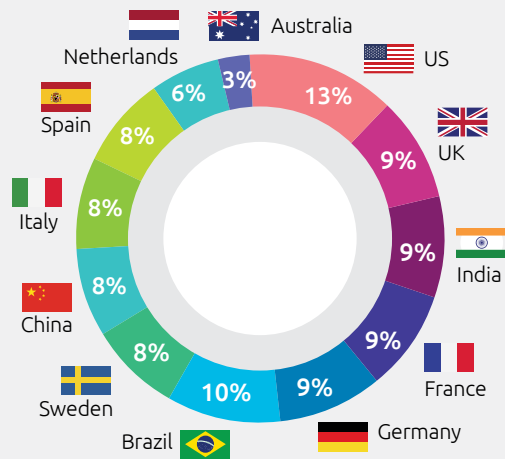
Executives by organisations' revenue

- Between $ 100 million and $ < 500 million 4%
- Between $ 500 million and $ <1 billion 11%
- More than $10 billion 19%
- Between $5 - 10 billion 28%
- Between $1 - <5 billion 38%
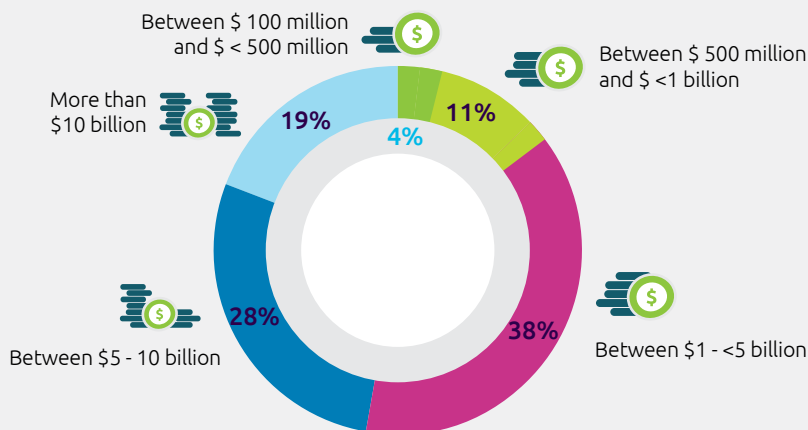
In-depth interviews:

We also conducted interviews with industry executives examining how the customer experiences with AI in CX have evolved, what organizations are doing to get more benefits, where they are implementing AI in CX, what the challenges are and how they are ensuring trust among customers with respect to their AI systems.

Focus group discussions:

The quantitative research was complemented with two virtual focus group discussions, with 8 to ten consumers per focus group, for Germany, and the US. The survey, as well as the focus group discussions, had a healthy mix of demographics and AI user and non-user respondents.

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Appendix

Use case	Legend	Examples
Automated credit/loan approval based on credit history	1	Subprime auto lender Prestige Financial Services uses AI to suggest financing options to auto buyers. The AI helps the company analyze about 2,700 borrower characteristics, instead of the several dozen the lender had on its risk-assessment scorecard so as to find relationships between variables to determine creditworthiness. As a result of the AI, the company saw a 33% decline in credit losses and a 14% increase in approval ratings for borrowers.[38]
Automatic setting of insurance premium using analysis of past behavior	2	Zurich Insurance Group uses AI to allow it to analyze a potential customer's individual driving data compared to a set of reference profiles created from more than a decade's-worth of collected data, allowing the company to customize the premium based on the individual customer's driving behavior.[39]
Product suggestions based on analysis of customer's past purchases	3	HSBC has been using AI to give US credit card customers a personalized shopping experience. It's working on a rewards program that processes customer data to predict how clients will redeem their credit card points so it can better market offerings such as travel, merchandise, gift cards and cash. The technology recommends a redemption category for each credit card holder. HSBC has sent out emails based on these recommendations while emailing a random category to a control group. In the former batch, about 70% jumped at the rewards and the number of opened emails rose by 40%.[40]
In-branch experience	4	SBI is currently using an AI-based solution that essentially scans cameras installed in the bank's branches and captures the facial expressions of the customers and immediately reports whether the customer is happy or sad so that it can service them better.[41]
Customer query resolution	5	UBank has seen customer growth of 20%, which it claims is directly correlated to improving the digital experience for customers after adoption of Mia – the virtual assistant of National Australia Bank's digital arm. Mia communicates with customers face to face on their computers or smartphones and give on-the-spot answers to more than 300 home loan application questions, including "what's a variable rate?" or "what classifies as an expense?[42]
Portfolio and financial solutions using robotic intelligent financial assistants	6	Bank of America's digital assistant Erica helps customers make better financial decisions by offering financial advice based on the customer's banking habits using cognitive messaging, artificial intelligence, and predictive analytics. The bot can suggest what the customer can save to reach a specified financial goal, such as saving USD100 towards paying down a credit card. The bot also provides suggestions to determine the spending and saving habits of the retail banking customer. By May 2019, just one year after it was launched, Erica had been used by seven million customers and had handled more than 50 million client interactions.[43]

Use case	Legend	Examples
Authentication using facial and voice recognition	7	Citi has launched voice biometrics to verify the identities of customers contacting their call centers. It analyses unique characteristics in a person's vocal pattern and cross-checks them against a prerecorded voice print to verify their identity. This helps Citi cut out the cumbersome process of verifying a customer's identity through ID numbers and personal details, to provide meaningful help faster.[44]
Detection of fraudulent transactions	8	Citi's Payment Outlier Detection solution uses advanced analytics, artificial intelligence (AI) and machine learning (ML) to help proactively identify outlier payments that do not conform to customers' past patterns of payment activity – and allows customers to review and approve or reject such outlier payments via Citi's institutional electronic banking platforms.[45]
Relevant suggestions while analysis of your spending history	9	ICICI's iMobile app has feature which gives personalized recommendations for all banking needs using customer's persona employing machine learning techniques.[46]
Product cross-selling based on customer usage analysis and profiles	10	Tata AIG uses AI platforms to create analytic models to improve cross sell and upsell for existing customers. As a result, AIG has seen encouraging growth in additional policy purchase in the last financial year.[47]
Trading, brokerage and investment decisions based on AI/machine learning	11	ICICI Bank has launched "Money Coach," an AI powered investment advisory application on mobile. It also facilitates a paperless KYC and online registration process for mutual funds in a single click, which is a first among banks.[48]
Internal Process Automation of repetitive work processes using AI (underwriting/loan approval/claims/cheque)	12	Allstate's ABIe solution is an online, AI chatbot that provides 10,000 sales agents and 2,000 independent agents with guided access to an online knowledge base. The knowledge base supports them in finding immediate and accurate answers to customer enquiries while also streamlining the process of preparing sales quotations for small business insurance products.[49]
Risk mitigation and analysis in investments and credit supply	13	Experian uses AI to offer customers a gamut of financial services including deciding on which customers to offer credit who may be unbanked or underserved by major financial institutions.[50]
Understanding voice of customers using tools like AI, social listening	14	MetLife uses AI to help call center agents understand the mood of callers. The AI can help call agents detect a heightened emotional state on the part of the customers – be it positive or negative. As a result of this, the call center agents are able to be involved in more informed conversations with customers and get things done much faster.[51]
Targeted advertisement doing analysis of customer behavior	15	American Expresses redefined their marketing strategy by incorporating AI. As a result of AI driven campaigns, Amex was able to identify B2B customers outside of their existing field of vision or targeting capabilities, in other words, rediscovering prospects they had not considered targeting before and the AI system could also predict which of these new prospects (and existing prospects) were most likely to convert, via a grading system powered by machine learning.[52]

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The Capgemini Research Institute is Capgemini's in-house think tank on all things digital. The Institute publishes research on the impact of digital technologies on large traditional businesses. The team draws on the worldwide network of Capgemini specialists and works closely with academic and technology partners. The Institute has dedicated research centers in India, Singapore, the United Kingdom, and the United States. It was recently ranked number one in the world for the quality of its research by independent analysts.

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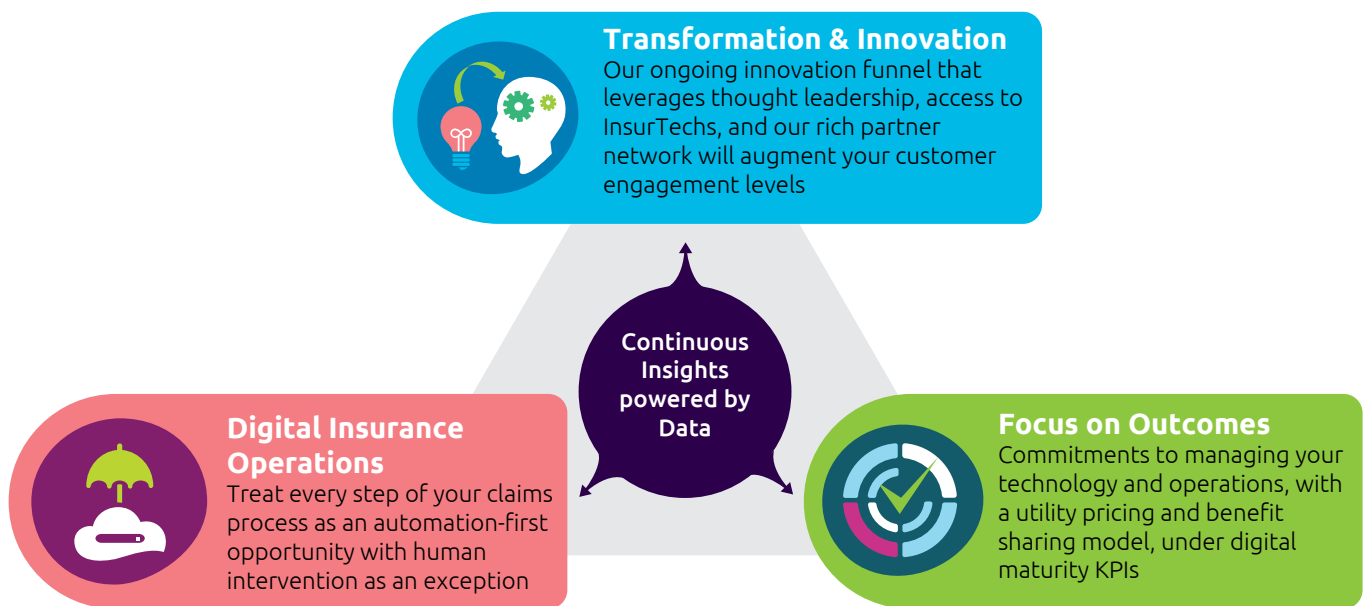sudhir.rokade@capgemini.com

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Capgemini Touchless Claims

As customers of all ages adopt a millennial mindset and increasingly use digital channels for conducting insurance transactions, insurers must leverage real-time data and new technologies to deliver an enhanced customer claims experiences during their moment of truth. With more and more customers attracted to agile, data-driven, customer-centric BigTechs and product manufacturers, now is the time for insurers to deliver seamless convenience across the claims value chain.

Customers are seeking exemplary service which includes omnichannel delivery via digital channels and self-service capabilities to accelerate claims settlement and payment. Capgemini's **Touchless Claims** offering transforms carriers into Inventive Insurers by leveraging technologies such as automation, and machine learning (ML), insights from data, and a rich ecosystem of partners in order to provide an exceptional customer experience while driving operational efficiency across the claims value chain.

Transformation & Innovation
Our ongoing innovation funnel that leverages thought leadership, access to InsurTechs, and our rich partner network will augment your customer engagement levels

Continuous Insights powered by Data

Digital Insurance Operations
Treat every step of your claims process as an automation-first opportunity with human intervention as an exception

Focus on Outcomes
Commitments to managing your technology and operations, with a utility pricing and benefit sharing model, under digital maturity KPIs

Touchless Claims is an umbrella offering that consists of Capgemini solutions as well as those developed in conjunction with industry partners that target and transform each stage of the claims value chain while focusing on improving three business outcomes – accuracy, efficiency and customer experience.

- **Digital FNOL** – leverages AI, ML, Robotic Process Automation and technology from InsurTech partners to help insurers initiate the claim intake process and capture extended data about the loss, which can help accelerate adjudication. AI-based Photo-based estimation, NL-IVR and fraud detection are examples of such features integrated into this solution.

- **Cognitive Document Processing** – automates claim intake process. Various forms arriving in multiple channels can be sorted and scanned before AI and ML are used to classify and extract data points. The data is then moved into downstream systems to enable straight through processing.

- **Claims Automation** – AI-based tool that determines the next best action based on the customer's policy parameters, supporting evidence for the claim and a range of historical and third-party data. With AI, we are able to predict workload, assign adjusters, find the next best provider and attorney to optimize a claims path towards settlement.
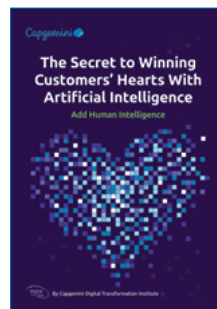
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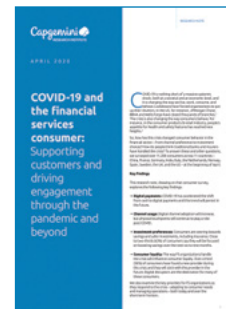
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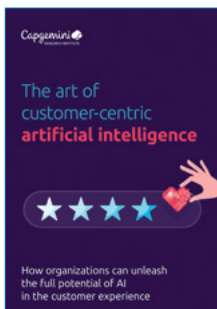
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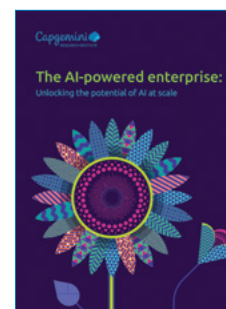**Turning AI into concrete value: the successful implementers' toolkit**

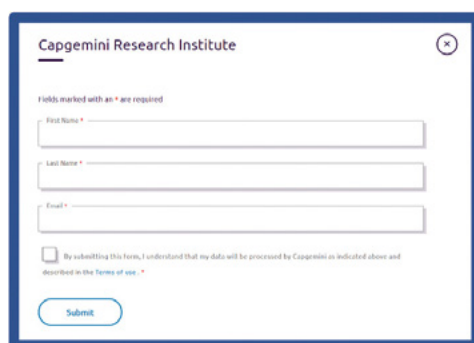**AI and the Ethical Conundrum**

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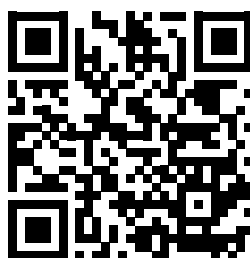
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