Capgemini

Impact of AI for Customer Experience (CX)

AI: re-humanizing digital customer experience

Perform AI

Artificial Intelligence.
Real World Solutions.


Cafe
110
1154
231
Museum
570
2879
651

Infusing artificial intelligence (AI) into digital customer platforms makes customer experience (CX) more human at a scale previously unimaginable. It's improving the quality of life for the individual customer and employee, while creating a wealth of new opportunities for businesses to increase their operational efficiency, grow sales and loyalty, improve and speed up decision making and become more relevant and innovative in product and services.

Just a few years ago in 2015 a survey of 1,000 adults in the UK found that only 10% of respondents had knowledge of AI[1]. Fast forward to 2019 and this lack of awareness is inconceivable as AI-enabled consumer services and products proliferate. Indeed, a report detailing a 2018 global research project conducted by Capgemini's Research Institute (CRI) reveals that almost three-quarters (73%) of those surveyed were aware of having interactions enabled by artificial intelligence[2]. These included chatbots for customer service, facial recognition for consumer identification, and voice conversation via a smart speaker or smartphone.

This rise is mainly explained by the **exponential growth of AI-enabled consumer services and products**. "In 2017, Gartner estimated that smartphones with on-device artificial intelligence (AI) capabilities accounted for less than 10% of total shipments[3]." The clear winner in terms of applications for AI is customer experience, "with analyst research advising that customer engagement applications is the primary focus for AI implementations."

Our own interactions with clients have brought out that AI is increasingly **at the core of CIOs' strategies, with a key focus on customer experience** (bridging both customer expectations/satisfaction and employee efficiency). AI appears to be a powerful means to **rehumanize customer/brand interactions**, driving loyalty and growth but it is also a way to **facilitate employees' work**, leading to more operational efficiency.

This paper sets out to explore the impact of AI for customer experience (CX) strategies. It looks at what has fostered the sharp uptake in AI applications usage, provides four specific use cases and offers insights into how AI-infused customer platforms support personalized, proactive and frictionless customer journeys that are re-humanizing the customer experience.

1 Why aren't we more intelligent about artificial intelligence? http://www.onepoll.com/why-arent-we-more-intelligent-about-artificial-intelligence/

2 Capgemini Research Institute, "The Secret to Winning Customers' Hearts with AI: Add Human Intelligence", 2018.

3 Gartner Inc: "Report Highlight for Market Insight: 10 Use Smartphones" CK Lu, 17 September 2018.

The rise and rise of artificial intelligence for CX

Artificial intelligence (AI) is a booming market, but what is fostering this surge in interest and adoption? There are a number of factors, not least the exponential **volume of exploitable data** now readily available through digital channels. As AI depends on data, this is leading to greater accuracy in AI systems. **Cloud computing** is another factor due to its scalability and elasticity, supporting huge data volumes at lower cost. We have also seen several **processing hardware breakthroughs** enabling complex deep learning, which is central to AI. The development of new **Machine Learning / Deep Learning** (ML/DL) algorithms has also contributed to the booming AI market. These algorithms yield increasingly comprehensive AI, which is being adopted across diverse industries.

With these factors propelling the AI market forward, we are now seeing a range of AI-enabling technologies being used. Key amongst these are: robotics, evidence rules-based systems, text/knowledge mining, natural language processing, voice/speech recognition, predictive/prescriptive engines, sentiment/emotion recognition, computer vision and biometrics recognition.

Beyond a shadow of a doubt, the thriving emergence of AI is connected to its 'natural' applicability to CX – from both consumer and employee perspectives. AI will allow brands to talk to and listen to consumers on a personal, humanized, one-to-one basis, but at scale.

Certainly, as the Capgemini report 'The Secret to Winning Customers' Hearts with AI: Add Human Intelligence' report discovered, AI-aware consumers see significant benefits in their AI interactions, with 63% citing greater control and 63% citing 24/7 availability[4]. Consumers will get the intuitive and engaging experience they desire. For example, Conversational Commerce is progressively closer to the type of human interaction a consumer may experience instore – but allows the consumer the freedom to go about their normal lives. Brands can be human. They can express empathy, apply humor, show understanding and respect – in turn, building trust and creating loyalty.

For employees, AI offers different value; employees are fed intelligence enabling them to automate more simple tasks, apply judgement to predictions or recommendations and spend the needed time on more complex aspects.

4 Capgemini Research Institute, "The Secret to Winning Customers' Hearts with AI: Add Human Intelligence", 2018.

AI has the power to fundamentally transform interactions between consumers and brands

Paradoxically, when well employed, AI will allow brands to behave more like people – and brands that behave more like people will be those that thrive. Today, a brand exists in the experiences it enables – it's how it differentiates itself from its competitors and connects with its consumers. AI allows for a truly humanized experience, one that customers love, trust, and come back to. This will, in turn, provide the brand with real, tangible benefits. It is a powerful tool to **reach, understand and connect with the customer, in a more humanized way**. Therefore, we see AI becoming a vital weapon for reaching customers and increasing their level of engagement. Renowned digital analyst and author Brian Solis said about AI that it *"represents an opportunity to introduce intelligent, scalable engagement and more personalized experiences to help customers accomplish tasks or solve problems while also improving overall satisfaction"*[5]. According to Capgemini research, those organizations that have implemented AI, 73% had observed more than a 10%-point gain in terms of enhanced customer satisfaction (increased Net Promoter Score), closely followed by reduced customer complaints (72%) and reduced customer churn (66%)[6].

Indeed, AI-enabled technologies are able to **understand customer's feelings and express empathy, apply humor or/and show understanding and respect. Likewise, AI reproduces the online human interactions a consumer may experience instore: customer support, personalized recommendations, purchase…** the full shopping process can be handled by a chat or voicebot and becomes conversational (see Figure One). The customer experiences similar level of support they would receive in a physical store with a real salesperson – but wherever and whenever they want.

AI balances the rational (price competitiveness, promotion/offers, instant customer service, recommendations, loyalty programs, usability interface in mobile app/website etc.) with the emotional (honesty, integrity, trust, familiarity, belonging, gratitude, compassion, joy, surprise, security etc.) experiences consumers expect; building more meaningful, deep-rooted loyalty. These reinforced relationships will, in turn, provide the brand with real and tangible benefits.

AI has become a powerful tool to drive loyalty, increase growth and improve efficiency

Today's brands are under increased pressure to ensure they deliver extraordinary end-to-end humanized customer experiences. AI is the key enabler in taking up this challenge.

Let's take conversational interfaces as an example – consumers, when given the right degree of contextual relevance, will respond better to conversational interfaces with human-like interactions than with other digital interfaces like websites or apps. These differentiating experiences increase the level of customer satisfaction and **drive loyalty**. According to a 2017 Capgemini Research Institute survey, 73% of organizations that implemented AI observed more than a 10%-point gain in terms of enhanced customer satisfaction (increased Net Promoter Score), closely followed by reduced customer complaints (72%) and reduced customer churn (66%)[7]. Thus, AI builds a truly humanized experience, one that customers love, trust and come back to.

Customer loyalty results in the **increase of growth**. Further Capgemini research showed direct correlation between companies' customer engagement orientation and their financial performance. It exposed that 10 companies with the highest customer engagement capability outperformed the bottom 10 in valuation growth[8]. Correspondingly, Forrester research tells us "**CX leaders outperformed CX laggards on both stock price growth and total returns.** The price of the portfolio of top publicly-traded brands in the CX Index grew 32%, compared to 3% for the portfolio of lagging brands[9]." As you can see, getting AI right will be essential to a brand's success.

At the same time, AI also yields considerable benefits on the employee side. A Capgemini study[6] highlighted the true benefits of AI implementation within companies. **It told of an enhancement in their productivity and efficiency, consequently leading to reduced operational costs.**

5 The future of AI in customer experience www.mycustomer.com/experience/engagement/the-past-present-and-future-of-ai-in-customer-experience

6 Capgemini Research Institute, "The Secret to Winning Customers' Hearts with AI: Add Human Intelligence", 2018.

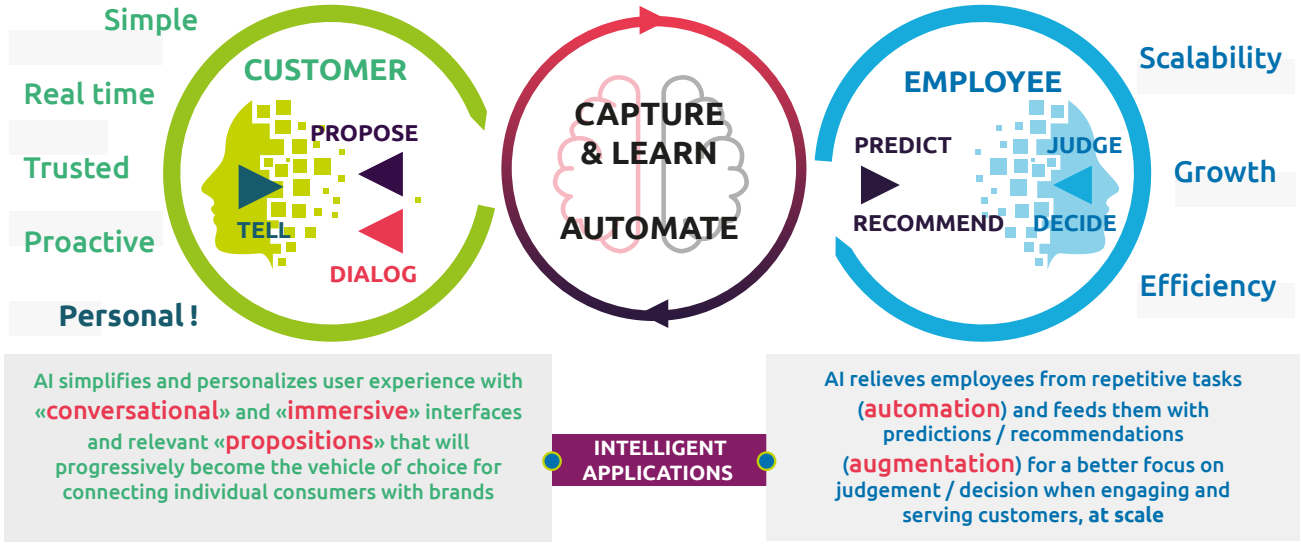
7 Capgemini Research Institute, "The Secret to Winning Customers' Hearts with AI: Add Human Intelligence", 2018.

8 Capgemini Research Institute, "The Disconnected Customer: What digital customer experience leaders teach us about reconnecting with customers", 2017.

9 "Does CX Quality Affect Stock Performance? Yes, But…," Forrester Research Inc., Rick Parrish, Feb 28 2018.

So, while AI is humanizing users' experience, it also allows enterprise to scale up employee connection and customer engagement (Figure One). On one side, AI simplifies and personalizes user experience with conversational and immersive interfaces that will progressively become the vehicle of choice for connecting individual consumers with brands. On the other, AI relieves employees from repetitive tasks (automation) and feeds them with predictions / recommendations (augmentation) for a better focus on judgement / decision when engaging and serving customers, at scale.

Figure One: How infusing AI builds such relationship



With a clear correlation between a great customer experience and increased customer advocacy, frequency of spending and the amount spent, it makes good business sense to look at how and where AI can influence benefits for both the customer and the organization. For years AI has been "just around the corner" but now it is here. What's more it is transforming how organizations do business, manage customer relationships and stimulate the ideas and creativity that fuel groundbreaking innovation (see Figure Two)[10].

Figure Two: How AI is driving benefits across the organization

10 Capgemini Research Institute, "Turning AI into concrete value: the successful implementers toolkit," 2018.

The Gartner report "AI Use Cases, Tales From the Trenches: A Gartner Trend Insight Report" states that "For IT leaders involved in developing a strategy for AI, focus on leveraging AI techniques to deliver business value as the primary success criteria. Gartner clients that are most serious about deploying real-world AI techniques are highly disciplined about defining, measuring and assessing business value outcomes for high-priority AI projects"[11].

Unleashing the full potential of AI for CX – defining essential use cases

We believe that the impact of AI for customer experience will be significantly felt in two ways:

1. **New ways of interacting,** such as conversational interfaces and immersive experiences.
2. **Improving the performance of existing methods,** such as employee intelligence augmentation, better analysis of the data that customers provide and/or greater personalization through better understanding and better anticipation.

The customer benefits range from simplification and speed to reliability and value of interactions with the brand – leading to more satisfied and loyal customers.

Organizations are using AI technology to achieve a range of business goals, such as: influencing sales, boosting operations, improving efficiency and cost optimization, driving customer engagement and generating insights.[12] Identifying and choosing the right use cases to deliver business value in a particular domain is essential for seizing new artificial intelligence opportunities, and Capgemini feels a key first step is to **identify relevant use cases aligned to business priorities** for customer experience.

To this end, we have identified four interconnected application domains to enable the deployment and humanization of customer experiences:

4 DOMAINS IN WHICH TO APPLY AI FOR CUSTOMER EXPERIENCE
Customer understanding – Use AI to continuously enrich and provide a holistic view of the customer with additional actionable insights (social personality traits, tone and sentiment towards the brand, behavior patterns, propensity to purchase / lifetime value) for increased individual and proactive engagement.
Customer engagement augmentation – A combination of repetitive tasks automation and machine learning based predictions / recommendations aiming at augmenting employees during their customer facing activities, as well as communicating relevant (individualized, customized and real time) proposition to customers.
Conversational interfaces – Beyond focusing on natural language processing for basic dialog or Q&A, think about extending the user experience towards rich, contextual and individualized conversations: deep connection with enterprise systems, data and knowledge, consumer sentiment and emotion detection, tone and gender adaptation, face or object recognition and seamless employee participation in conversations when needed.
Immersive experience – A combination of vision, voice and natural language AI enablers with immersive usages (augmented, virtual and mixed reality) aimed at enriching the user experience and interactions with products and services, all along the customer life cycle.

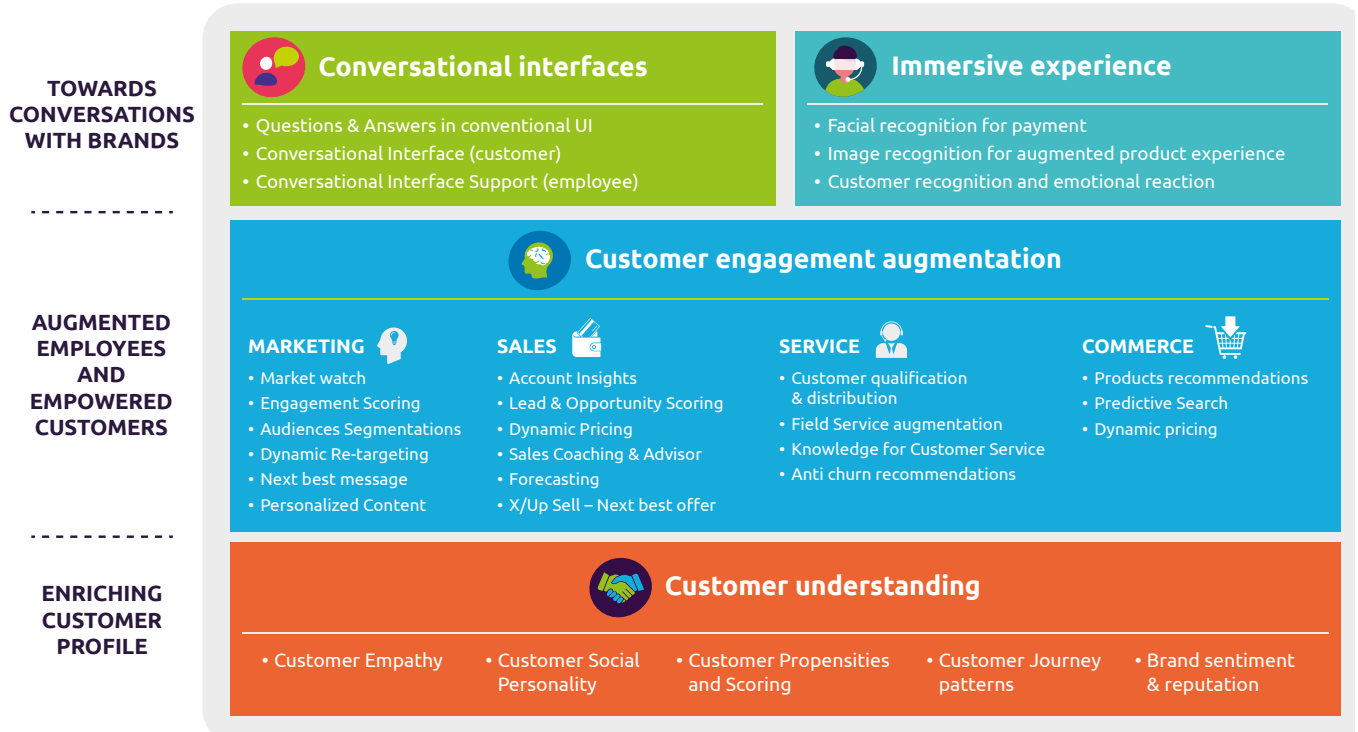
11 Gartner Inc: "AI Use Cases, Tales From the Trenches: A Gartner Trend Insight Report," Erick Brethenoux, 11 October 2018.

12 Capgemini Research Institute, "Turning AI into concrete value: the successful implementers toolkit," 2017.

With these four application domains in mind (see Figure Three), the objective must be to fuel AI with individual customer learning and understanding so that it becomes possible to **continuously translate customer interactions into actionable insights.** This will enable employees and enterprise systems to better predict and address customer needs for a differentiating customer experience.

Every company needs to find the right use cases as a function of the relationships they have with consumers and the level of augmentation and automation they wish to provide to their employees; the "Signature Moments", the value exchange, etc. The right application of AI will vary from industry to industry, client to client and relationship to relationship.

Figure Three: AI four application domains and an illustrative list of use cases



Capgemini has completed some early thinking into the concrete benefits and impact of AI implementation across the above-mentioned application domains (see Figure Four). For example, combining Conversational Interfaces and Immersive Experiences with Customer Engagement Augmentation use cases for AI-infused customer service significantly increases customer satisfaction. This is due to the reduction in friction for consumers and improved efficiency for employees, enabling the brand to enter an additional revenue and operational effectiveness virtuous circle. Implementing an AI-infused recommendation engine will also contribute to additional revenues by pushing individualized and contextualized propositions in real time to consumers when they interact with contact centers and digital channels.

Figure Four: Concretely measurable impact

		Customer understanding	Customer engagement augmentation	Conversational interface	Immersive experience
Improve customer experience	Customer retention	x	x		
	Customer satisfaction	x	x	x	x
	Customer engagement (NPS)	x	x	x	x
	Seamless Customer Experience (effort score, drop out rate)			x	x
	First call resolution	x	x	x	
Improve efficiency & optimize costs	Product marketing (Time to Market for launching new offering)		x		x
	Employee productivity/efficiency		x		
	Average handle time (AHT)		x	x	
	Employee satisfaction		x	x	
	Deflection (use of digital channels, vocal assistants...)			x	
	Forecast accuracy	x	x		
	Marketing efficiency	x	x		
Increase revenue	Upsell/cross sell (average basket)	x	x		x
	Lead conversion rate		x		

Multiple challenges when implementing AI application domains at scale

Yet despite the clear benefits of AI, most companies are still at the beginner stage in terms of AI maturity. An internal 2018 Capgemini benchmark survey found that 60% of companies did not view AI as a priority, with **only 10% viewing AI as a strategic asset.** So, what will persuade the "beginners" to increase their AI maturity and see it as a key enabler?

Evolving AI from exploration to large scale deployments requires organizations to think holistically and inclusively. It also requires complex preparation with several fundamentals that must not only be considered, but tackled as well:

- **AI-infused customer platforms:** considering AI's application to CX from a whole customer platform perspective, along the full customer life cycle centricity and with both business and technology scalability and agility as a guideline;
- **Customer data:** connecting the customer platform with a state-of-the-art customer data ecosystem;
- **AI technology portfolio:** selecting the set of AI technologies that is the most relevant to the enterprise and its customer platform context;
- **Compliance and ethics:** anticipating regulation and ethics requirements and managing them as business opportunities rather than constraints;
- **People and talent:** acquiring the new required talents and skills, planning, executing and monitoring adoption management across AI deployments.

Each point is detailed more in this paper.

As part of our CRI research into AI for CX[13] we asked consumers about their comfort levels associated with industry specific AI-enabled interactions. Here's what they said:

Automotive: You are planning to buy a new car but not sure how to finance your purchase. You have been provided with an online option to look through a host of cars and the corresponding financing options that could be right for you, based on your unique credit history, income and other variables. You will have to share your personal information with an online virtual agent.

Overall comfort in buying a new car: 44%

Consumer Products & Retail Grocery: You have signed up to your grocer's subscription service and have been satisfied with the enhanced convenience this provides you. The latest feature allows you to let a virtual assistant place your orders, predicting your changing needs through the year.

Overall comfort with Grocer's Virtual Assistant: 49%

Energy & Utilities: There has been a sudden breakdown of your central heating/cooling system and you urgently log onto your utility provider's app and activate its remote assistant to check for the cause. You are informed that your bill was due (you had forgotten about it despite reminders) and you make the payment on the app with a one touch fingerprint and voice authentication process.

Overall comfort with Utility Bot: 52%

Financial Services Banking: Based on your social media updates for the last few weeks, your banker (more precisely – your banker bot) is aware that you are planning for your parents' anniversary celebration. On the day of the event, the banker delivers a complimentary gift card to their address (you have added their details with the bank earlier) with a personalized note wishing them.

Overall comfort with Banker Bot: 41%

Financial Services Insurance: You are looking to purchase an insurance product. You have a rough view of your requirements, but you aren't particularly inclined to one provider over the other. You'd like to get this done quickly and with minimal hassle. While you are conducting this search, you receive an email from a well reputed insurance provider who shares with you the following information:

- It is aware of your requirements and gives you an option suited to your needs
- It gives you access to their chat/voice bot to complete the onboarding process
- It also gives you an insurers' comparison docket to simplify your research process
- Lastly, it tells you that x% of your social network are already customers with them

Overall comfort in purchasing Insurance product: 48%

Alter ego: Imagine there is a virtual assistant on your mobile app, which you can customize to have similar likes and dislikes as you, an alter-ego so to speak. You can feed in whether you want the assistant to be male or female, your choices with respect to clothes, things that make you happy, your personality traits, etc. This virtual assistant then negotiates the price of various products on your behalf and on an ongoing basis makes routine purchase decisions on your behalf, using your preferences.

Overall comfort with Delegation to a Virtual Assistant: 45%

Source: Capgemini Research Institute, AI in CX Consumer Survey, May 2018, N=10,000 consumers, 7,256 AI-aware consumers, 2,744 AI-unaware consumers.

13 Capgemini Research Institute, "The Secret to Winning Customers' Hearts with AI: Add Human Intelligence", 2018.

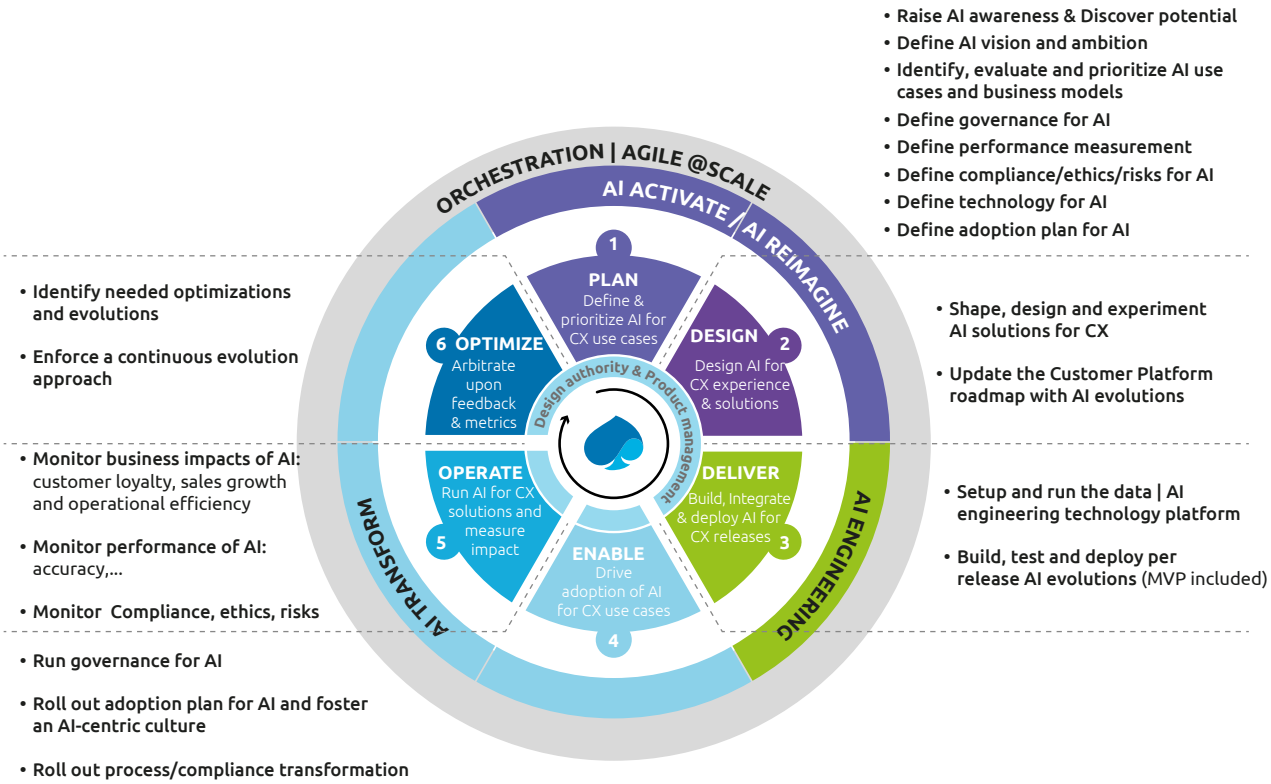
Orchestrating and operationalizing AI-enabled CX transformations

Implementing a business strategy enabled by an AI-infused customer platform will **involve multiple disciplines and teams,** each with different ways of working.

To ensure the achievement of business value, the planning should be thorough and continuous – first managing the **exploration stage,** where an organization identifies the first use cases and reviews the quality and relevance of data used for training, followed by the **development stage,** which focuses on use cases enrichment. Only then can **large scale deployment** happen successfully, albeit with continuous improvement built into the cycle.

Capgemini believes that orchestrating the different players is crucial, but the customer (both expectations and experience) must always remain at the center. That means bringing together and orchestrating all the AI-enabled customer touch points, customer data and insight, experience design, technology architecture and AI solutions. Importantly, this orchestration must also embrace the process that binds all these ingredients together. That's why we have adopted a six-step approach to scaling up AI adoption comprising **planning, design, delivery, enablement, operation and optimization.** Each step in the process includes clearly defined actions and decisions as well as a guide to timings (see Figure Five).

Figure Five: An approach for continuously scaling up AI into customer platform releases and securing its adoption



Infusing AI into customer platforms by connecting them with the required customer data ecosystem

Many brands have already started their digital transformation towards a single, consistent customer platform that supports the end-to-end customer life cycle – from initial contact, through the process of acquisition, engagement and into a long-term relationship. Their starting point has been to interconnect enterprise-wide sets of customer data and insights, customer engagement engines and enabling processes through a digital architecture. This next-generation digital platform not only connects the whole client ecosystem of business and technology partners, but also the ecosystem of internet platforms, social networks and devices favored by the consumer.

In the new customer experience era, most brands are now orienting their transformation journey towards re-humanization of interactions with consumers. How? By infusing AI into their customer platform, taking them towards conversational and immersive experiences, and customer engagement augmentation.

Inside this customer platform, **AI must be deeply connected with the data, engagement engines and enabling processes** required to deliver the frictionless, personalized and proactive experience that consumers expect.

AI technologies and solutions are increasingly becoming critical enablers for this transformation journey. By continuously learning from captured customer data, interactions and feedbacks, infused AI will support many new usages, such as natural language-based interfaces, in store or in branch immersive experience, customer understanding and customer engagement augmentation.

First and foremost on this journey, be aware that infusing AI into customer platforms should **start with Experience Design.** Once the enabling AI technology has been well studied, it is worth considering the impacts that will

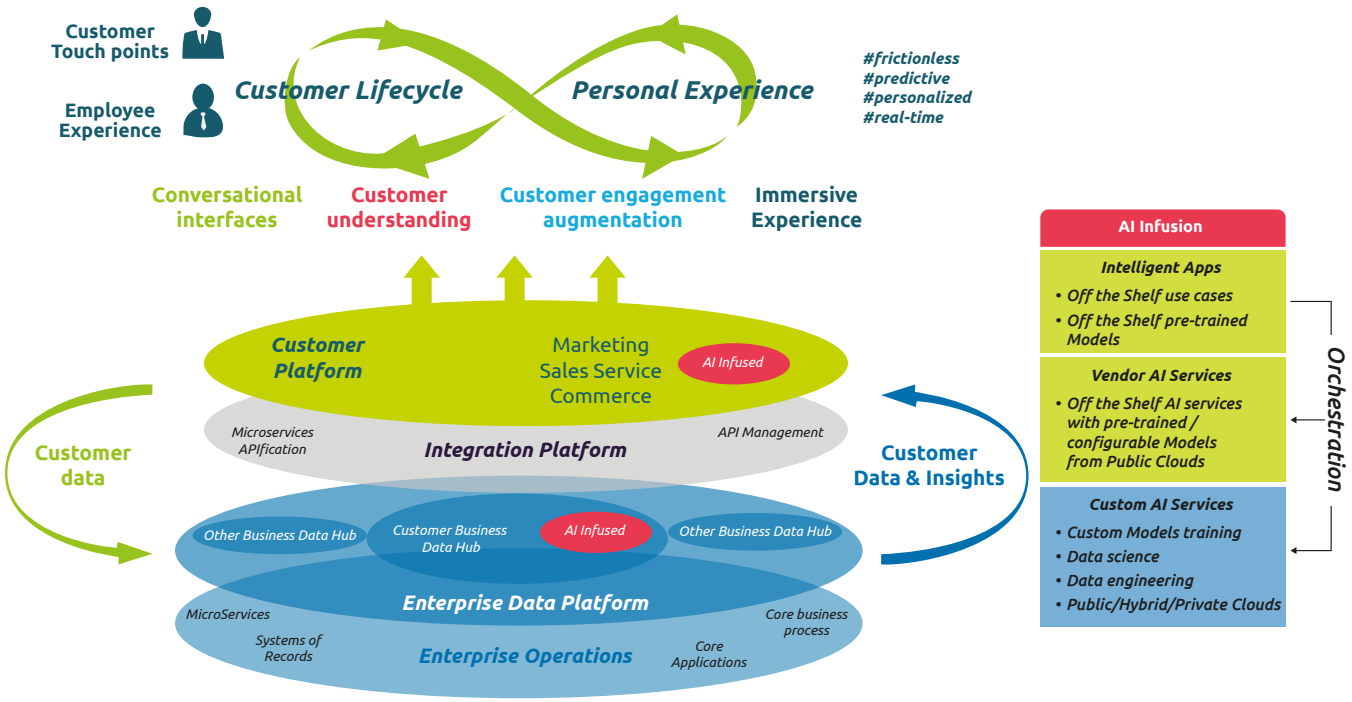
influence the platform conception. Consider, on the one hand, the impact on the business and experience from the whole customer life cycle perspective and, on the other hand, the impacts on the whole underlying customer platform architecture and integration.

As an accelerator, Capgemini has designed a holistic architecture blueprint connecting all customer platform technology solutions with data, analytics and AI enablers.

We stress the paramount importance of having **good data quality before infusing AI** into such platforms (see Figure Six). This requirement should be considered wherever the customer platform's need extends to support complex customer understanding by machine learning and deep learning. Connecting enterprise-wide customer data ecosystem (Data / Insights / Intelligence / Governance) enables the customer platform to **learn and predict** with the required **accuracy,** with the following outcomes:

- Delivering compelling and engaging experiences that are more human – at scale
- Increasing affiliation, loyalty and efficiency

Figure Six: Infusing AI into CX platforms and fueling its applications with the required quality of customer data



Understanding the AI technology landscape to select the most relevant partner(s)

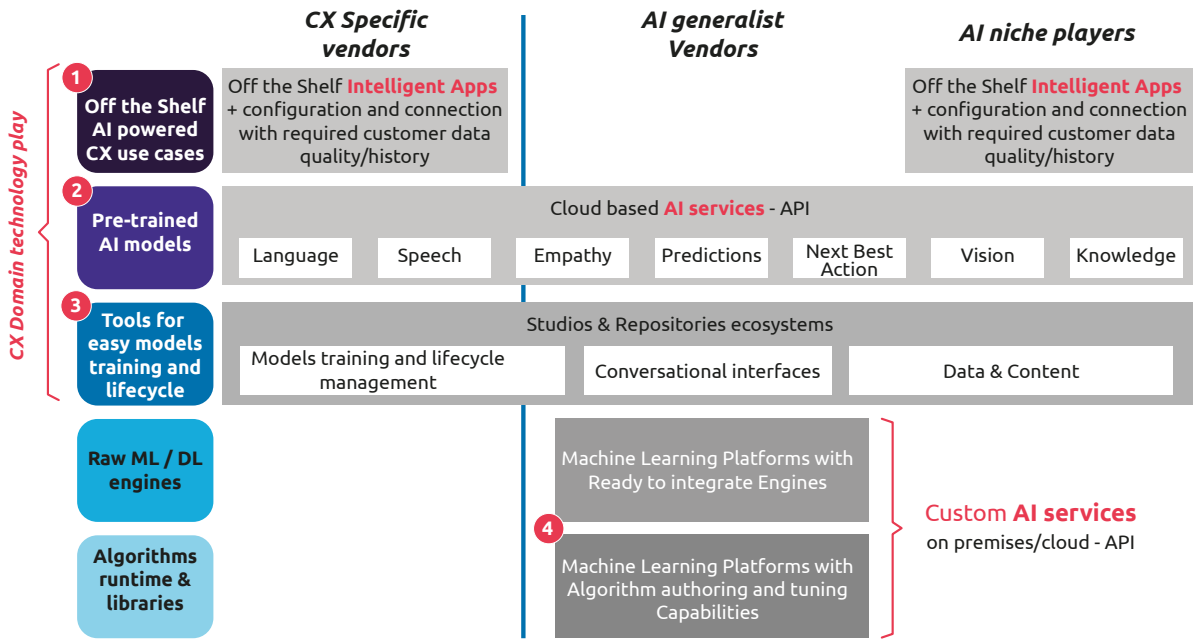
A key market trend is to enable brands to securely and quickly build their AI infused customer platform by connecting and orchestrating vendors' "AI Legos". These might include off the shelf AI-powered use cases and easy-to-integrate "pre-trained" AI services as well as using easy to access AI tools for conversational user experience design or domain-specific AI models training (See Figure Seven).

Technology platform vendors – such as Salesforce, Adobe, Microsoft, SAP, Pega etc. – are surfing this technology wave and have started to **incorporate AI capabilities into their solutions.** They are now embedding the required AI foundation technologies, such as machine learning, deep learning, tools for AI models training as well as pre-trained AI models, into the solutions they deliver to the market.

There is plenty of choice when considering the vendors of customer platforms to partner with. Broadly, they fit into three categories:

1. **CX-specific solution providers** (such as Salesforce, Microsoft, Pega, Adobe, SAP, Sitecore, Drupal, to name a few) are to be considered first when designing and implementing an AI-infused customer platform. Those vendors are heavily investing in AI by embedding "pre-trained" AI applications, services and technologies in their platform: conversational AI bots and frameworks, AI powered use cases for customer engagement augmentation in sales or service, AI powered marketing automation, recommendation engines for next best action, cognitive APIs for vision and natural language use cases. They also provide easy to access tools for configuring and connecting their AI capabilities with customer experience.
2. **AI cloud-native full stack providers** (such as Amazon, Microsoft, Google, IBM and others) provide "pre-trained" cognitive APIs for implementing use cases with vision, natural language, speech, knowledge, empathy, next best action and predictions services. They also provide the studios, repositories, tools, engines and algorithms enabling to train and manage "custom" AI models along their end to end lifecycle. This class should be considered as a complementary mix to the above and is a choice wherever additional capabilities are needed to address gaps or to differentiate.
3. **AI niche players** are emerging for very specific application domains or industry specific use cases.

Figure Seven: Understanding AI Technology landscape and selecting the most relevant technology partners portfolio



Before making any decisions, an organization should carefully assess each vendor's ability to facilitate AI applications domains against the intended use case domains (customer understanding, customer engagement augmentation, conversational interfaces, immersive experience).

Ensuring trust through compliance

While we have highlighted the potential of AI in terms of the opportunity for businesses to build loyalty and increase engagement, it is also important to talk about the risk implications for clients. These include:

- **Loss of control** (self-driving cars, smart house tools, discrimination/bias…)
- **Lack of transparency** (who/what is behind the screen – bots impersonating)
- **Absence of algorithm traceability and explicability** (e.g. neural networks / fake data)
- **Unsecured access to information** (leaks, fraud…)
- **Misuse of confidential information** (social anxiety, consent bypass)
- **Failure to perform** (who is responsible in the event of damage?)
- **Machine/deep learning models bias** potentially induced by the data sets used for training
- **Lack of regulations and guidance** (GDPR, Ethics, Intellectual Property…)

Consider the impact if these risks materialize as real-life instances. This ranges from damage to both consumer trust and brand reputation, to heavy penalties and legal sanctions for the organization.

According to our 2017 CRI survey – Loyalty Deciphered[14] – honesty, trust and integrity are the top three emotions that drive loyalty, so it is imperative that businesses manage this correctly. Brands can promote honesty, trust and integrity through the implementation of compliance operating models that enable to anticipate new regulations and ethical changes. We have summarized this in three main actions:

1. **Be transparent** – reassure your customer. For example, inform your customers about their GDPR rights (rights to be informed, to have access to information, to be forgotten); implement consent forms and specify the contact person
2. **Be ethical** – maximize efficiency whilst ensuring integrity. This might include ensuring your consumers' privacy and providing bias-free bots
3. **Be accountable** – comply with regulation. For example: define responsibility in legal contracts; appoint a Data Protection Officer (DPO); rely on accountable algorithms and processes (information access, encryption, use, transfer and scheduled deletion); implement cybersecurity tools and traceability processes and controls; and use EU approved data centers.

14 Capgemini Research Institute, "Loyalty Deciphered—How Emotions Drive Genuine Engagement", 2017

AI requires both adapted and new skills and jobs

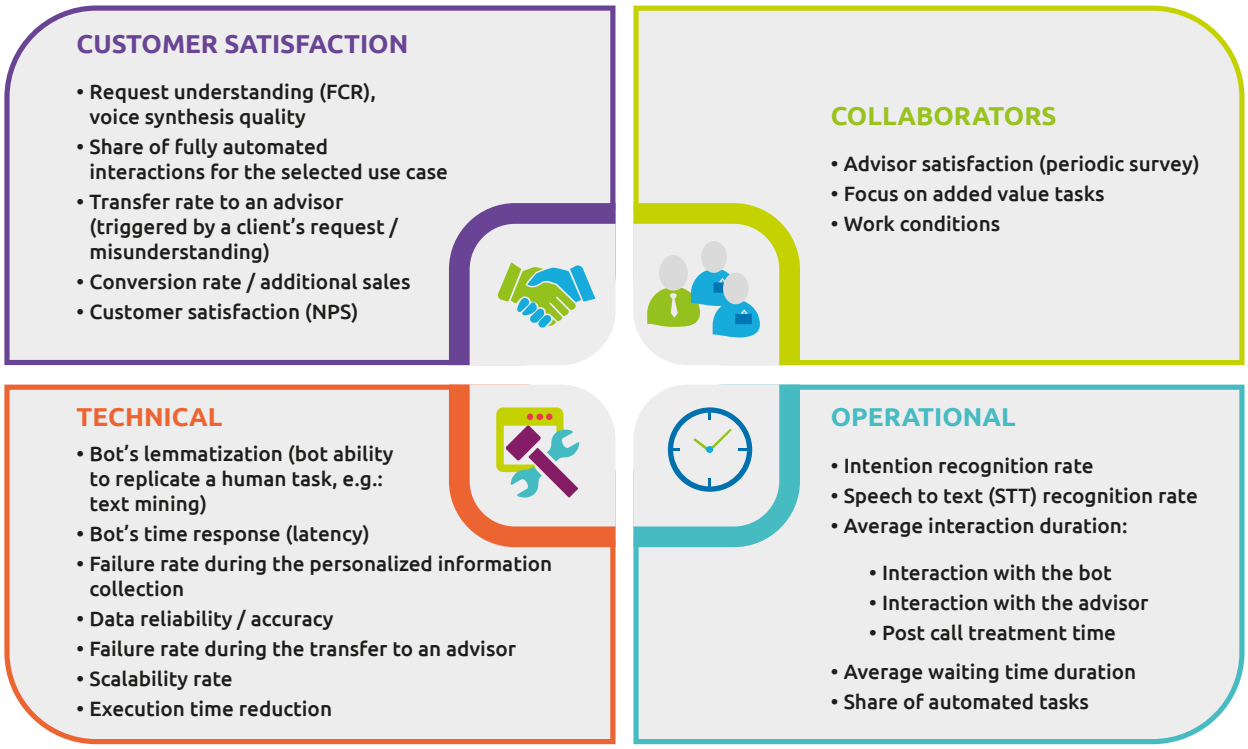
Earlier in this paper we talked about how shaping, designing and implementing customer platforms with applied artificial intelligence requires mobilizing diverse streams of expertise, assets and methods. Scaling AI raises some of the same challenges – particularly in the new and adapted skill-sets organizations need. This can be framed into three areas:

1. **Experience Design:** Many companies today have talent specialized in customer insights, customer journeys and business process design, but AI and the hype around conversational and immersive experiences means their skills will need to evolve. Similarly, there is a need for new skills, such as conversational experience design, experts versed in prediction strategies/models (next-best-action/next-best-experience) and specific machine learning/deep learning models training and management;
2. **Architecture / Technology:** Technology platforms and the architects that design them are key to any organization. We expect many of the existing roles to adapt to manage the increase in customer data, but also to the need to scale. We also think that there will be opportunities for new roles that concentrate on conversational bot implementation and connection, AI services orchestration, next-best-action engines and specific machine learning/deep learning model lifecycle toolchain;
3. **Legal / Compliance:** AI as a domain is currently not highly regulated, which may leave companies without guidance and put consumers at risk. To avoid impacts such as penalties and legal sanctions, endangering the brand reputation, etc. it is vital that organizations train or hire talent with the skills to understand and manage the new compliance rules and activities.

Anticipating the implementation and business value monitoring for success

Most organizations use metrics and set KPIs to help determine and measure successes. AI implementations should not be different – organizations should absolutely anticipate monitoring AI implementation progress and business value impact through a comprehensive set of focused success metrics. In Figure Eight, we provide an illustration of what this could look like for AI-enabled conversational interfaces.

Figure Eight: A comprehensive set of success metrics for monitoring the implementation progress and business value impact of Conversational Interfaces



However, new kinds of ROI metric may be needed and balanced against the more traditional measures, particularly as some of the strongest AI benefits are often implicit – for example improved human decision making.

Best practices for igniting an AI-infused CX roadmap

Capgemini recommends three interconnected steps to implementing successful AI-infused customer platforms:

1. Infuse AI into your experience design platform, then fuel its applications with the required quality of customer data
2. Design a holistic architecture connecting all CX platform technology solutions with data, analytics and AI enablers
3. Choose first and foremost out-of-the-box technologies and APIs to ensure the technology behind the AI can support it as a differentiator rather than it being a key inhibitor. Training and operationalizing proprietary custom machine/deep learning models should also be considered as an option for specific needs or strategic reasons.

It is easy to see why many organizations struggle with where to start their AI implementation. To address this, Capgemini has developed a set of nine best practices for beginning an AI-infused CX roadmap – see the pull out box.

These practices are grouped around three of the major components of our Perform AI portfolio of services, in which they progressively increases the value, the transformation and even the disruption to the organization:

- **Activate:** Experimenting and prioritizing impactful use cases with a focus on new technology and architecture
- **Transform:** Transforming towards humanized customer experiences
- **Reimagine:** Empowering organizations to deliver new customer-centric business models

Infusing AI in your CX roadmap: nine best practices for ignition

Experiment with new technology and architecture focus

- Evaluate AI technologies and their applications for CX, understand their potential and limits
- Experiment with use cases for CX by applying AI Technology, Platforms, Tools and Solutions
- Enable the organization to continuously experiment and apply AI to CX

Transform towards conversational customer experiences

- Amplify existing user experiences with natural language (Voice, text) and vision.
- Implement predictive solutions for next-best-action and connect with user experience
- Deliver and connect the customer data architecture that enables CX platform to learn and predict

Empower clients to deliver new customer centric business models

- Design and deliver AI-first CX platforms at scale to support newer business models
- Continuously revisit and apply AI innovations to adapt services and products portfolio
- Continuously learn from and connect with customers behaviors and emotions to adapt business models

Conclusion – Artificial Intelligence, Real World Solution

Customer experience is a strategic differentiator for companies and unquestionably drives business results, such as increased loyalty and revenue growth. The rise of AI has caused CX to take a giant leap forward and promises further progress and results.

As AI continuously "learns" from the captured customer data, interactions and feedbacks, it supports new usages, such as natural language-based interfaces, in-store/in-branch immersive experience, customer understanding and customer engagement augmentation. This allows for not only streamlined operations, but also immersive and highly personalized experiences – a re-humanization of the customer experience!

Shaping, designing and implementing customer platforms with infused AI requires mobilizing diverse streams of expertise, tools, assets and methods: use cases and business models for AI impact, enabling customer data platforms design, conversational experience design, technology and architecture for infusing AI into customer platforms, as well as new ways of working and collaborating for machine and deep learning models life cycle – from training to deployment. This must embrace both business and IT to ensure the AI-infused platform implementation aligns with business intent and delivers measurable value, at scale.

This will require the mobilization and orchestration of business and data consultants, conversational experience designers, digital architects, machine/deep learning experts and new ways of working. It's how to make a difference when designing and implementing next-generation conversational customer platforms at scale.

This is the Capgemini way of working with our clients on their journey towards large-scale conversational customer experience platforms. It's an approach that enables organizations to deliver the frictionless, personalized and proactive experiences that consumers demand – while ensuring predictable implementations in terms of quality, speed, cost-effectiveness, scalability and elasticity. It is a gamechanger.

Don't delay. Start the planning, designing, enabling, delivering and measuring of AI for business value, for a humanized and natural customer experience. Now is the time to exploit the real-world power of AI, at scale.

"Capgemini's Perform AI is a complete portfolio of AI services enabling clients to move beyond proof of concept to pragmatic delivery at scale, with real-world impact - enhancing operational excellence, growth, performance and business innovation. By responsibly and ethically infusing AI technologies across their business, organizations can achieve business transformation through greater operational efficiency, boost sales and loyalty through a human-centered customer experience, assist risk analysis, detect fraud, ensure regulatory compliance, and augment employee productivity. And ultimately Perform AI can help organizations reimagine their business in the "AI First" era.

Perform AI

Artificial Intelligence.
Real World Solutions.

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About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of over 200,000 team members in more than 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

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