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# *Autonomous intelligence in customer experience: The new competitive advantage*



## Introduction to autonomous intelligence

Customer experience is the interaction between a customer and a company as perceived by the customer. This interaction could be across any interface at any time and under different circumstances. A good, coherent and consistent customer experience considers all these factors and leads to higher customer value and, subsequently, to an increase in business value either by increasing conversions and hence revenue, or by reducing the cost to convert and serve.

Since management of customer experience has a direct impact on the revenues, its alignment with the interaction model is a key CEO agenda item. Ongoing innovation in context, products and channels continually challenges the relevance of interaction models. For instance, messenger service applications have disrupted customer-to-customer interactions. This would also have an impact on B2C as newer features are developed. It is hence important for organisations to be at the forefront of interaction models and aware of what customers are thinking and how are they behaving. This will help organisations to build the right frontline process.

Artificial intelligence (AI) is a system with the ability to learn, process information and produce outcomes similar to those

of humans. Broadly, AI has three stages of maturity: 'assisted intelligence', which has to do with automation; 'augmented intelligence', which helps humans through analytics; and finally, 'autonomous intelligence', where the system self-learns and takes decisions.

Organisations strive to make the customer interaction model relevant to sustain themselves. From a customer experience perspective, embedding a CRM tool is the first wave, followed by the advocacy wave. The advocacy wave looks at optimising the benefits of the CRM system. In the second wave, there is increased emphasis on building the right organisation structure and processes for further alignment with the customer and to leverage the latent capabilities of CRM. In this wave, it is realised that the CRM tool is not an end and that it is more important to understand the customer experience and reflect the same in decision making. The third wave, which is the one we are concerned with, goes beyond convenience and accessibility. In this wave, customer experience will be defined by not only **intuitive experiences** but also the **delivery speed** with which these experiences are presented at **moments of truth** to the customer.



<sup>1</sup> <https://www.cebglobal.com/content/dam/cebglobal/us/EN/best-practices-decision-support/marketing-communications/pdfs/CEB-Mktg-B2B-Digital-Evolution.pdf>

## *The what and how of interaction of autonomous intelligence with customer experience*

Customer experience is the interaction between a customer and a company as perceived by the customer.



- The interaction process could be intended towards creating delight. The firm is able to charge a premium for this.
- Interaction processes could also be related to improving the table stake processes. The firm cannot charge a premium for these, but their absence will hamper customer satisfaction/value.

Management of customer experience by rightly aligning the interaction model is a key CEO agenda item.



- Ongoing innovation in context, products and channels continually challenges the relevance of interaction models.
- It is important for an organisation to be at the forefront and aware of what the customer is thinking and how s/he is behaving with the organisation's frontline processes.

AI is a system with the ability to learn, process information and produce outcomes similar to those of humans.



- AI is moving from assisted intelligence to augmented intelligence. As humans gain trust in AI systems, they might become autonomously intelligent.
- AI could contribute up to 15.7 trillion USD to the global economy in 2030. Of this, 9.1 trillion USD is likely to come from the consumption side.\*

Organisations strive to make the customer interaction model relevant to sustain themselves.



- The initial focus is on embedding the CRM tool.
- The CRM wave is followed by the customer advocacy wave. Tools alone are not sufficient; it is necessary to understand the customer experience and reflect on decision making.
- The third wave, which is the intersection of Autonomous Intelligence and customer experience, is being reimagined.

\*PwC. (2017). Sizing the price: What's the real value of AI for your business and how can you capitalise

## Use cases of autonomous intelligence

The case of a business-to-consumer (B2C) player in the hospitality sector and of a business-to-business (B2B) player in the pharma sector are considered to understand how technology can be leveraged to improve customer experience. Specifically, we discuss the Autonomous Intelligence use cases that are applicable.

For the hospitality client, the focus is on the sales processes, while for the pharma machinery client, it is on marketing. Thus, the two examples may serve as representative summaries of sales and marketing use cases. For the hospitality client, one of the key concerns was that they wanted to give their customers a best price guarantee when a booking is made on their website. This was an interesting problem as the client had sold its inventory to aggregators, and it had literally no control over the price at which the aggregators sold. In the given case, an Autonomous Intelligence based web scraper could log in the time, month, event, location and other attributes and ensure that at any point in time the cost on the hospitality client's website is lower. The Autonomous Intelligence system has to constantly update its metadata and provide a near perfect value so that the client can make a commitment to its customer.

There are multiple opportunities for leveraging Autonomous Intelligence in the given scenario:

1. Customer enquiry: A customer may speak in a regional language. The interactive voice response enabled Autonomous Intelligence could predict the language and start a conversation.
2. The hospitality client could consider personalising website content. This could be broad demographic-level customisation or individual specific to increase the engagement span conversion rates.
3. The client could also build a recommender system for its customers which would help suggest an appropriate place based on certain inputs and past attributes/feedback captured.
4. The client could leverage a virtual personal assistant for various services like in-room service communication and information.
5. The client could consider image analytics for enabling keyless entry.
6. Foreign language assistance could be provided by machine translation.
7. A personalised experience could be provided during stay at hotels by enabling a deep learning system which is both individual and context aware.

In the case of the pharma machinery client, let's assume that the many B2B connects of the marketing team were not being used optimally to expand business. This creates scope for Autonomous Intelligence implementation:

1. Social network analytics could provide a broader understanding of the theme/attributes of connects and thus help in segregation. This insight could be then used for designing appropriate campaigns and focused targeting.
2. A qualified lead and nurturing programme could be planned with use of Autonomous Intelligence.
3. Robotic process automation could be leveraged for co-ordination with third parties for campaign roll-out and thus improving process efficiency.

Scenario	Autonomous Intelligence theme for use case
Customer enquiry	Natural language processing
Personalised website content	Knowledge representation
Theme holiday	Recommender system
Automated room service	Virtual personal assistants
Keyless entry	Image analytics
Foreign language assistance	Machine translation
Personalised experience	Deep learning

### Autonomous Intelligence use cases in sales and customer engagement for hospitality client

Scenario	Autonomous Intelligence theme for use case
Understand theme with connects	Social network analytics
Apply criteria and qualify leads	Planning
Co-ordinate with agency for campaign roll-outs	Robotic process automation with self-learning simulation paths

### Autonomous Intelligence use cases in marketing for pharma manufacturing client



## Challenges of adoption

While Autonomous Intelligence presents opportunities for improving customer experience, it also poses challenges which need to be managed:

1. Since autonomous intelligence is built by learning, the curation period is high. Hence, it is important for organisations to have the right skills on the table to conceptualise and then have the right amount of patience for the concept to be tested and nurtured so that the right process is evolved.
2. Since many of the concepts are evolving, it is important for organisations to de-risk any effect on the customer. It would be useful to develop a proof of concept before a full-scale launch.
3. The Autonomous Intelligence platforms may have a typical stereotypical image for customers as it's still early days; thus, there is a chance of increasing dissatisfaction. It is important to retain human control/the human element until the systems mature. As such, the metadata needs to be regularly analysed to ensure the learning of the Autonomous Intelligence system is on the right path.
4. Lack of broad-based expertise in research and application of Autonomous Intelligence, absence of enabling data ecosystems, availability of data, high resource cost, low awareness of Autonomous Intelligence adoption, privacy and security, lack of formal regulations around anonymisation of data, and absence of a collaborative approach towards adoption and application of Autonomous Intelligence are some of the key barriers to adoption of Autonomous Intelligence identified by NITI Aayog.<sup>1</sup>

<sup>1</sup> [http://niti.gov.in/writereaddata/files/document\\_publication/NationalStrategy-for-AI-Discussion-Paper.pdf](http://niti.gov.in/writereaddata/files/document_publication/NationalStrategy-for-AI-Discussion-Paper.pdf)

## *Key considerations for autonomous intelligence adoption*

Low power wide area (LPWA) differentiators:

1. Higher power efficiency, which will result in higher operating life for batteries
2. Higher scale – ability to connect to multiple devices
3. Low-cost communication infrastructure

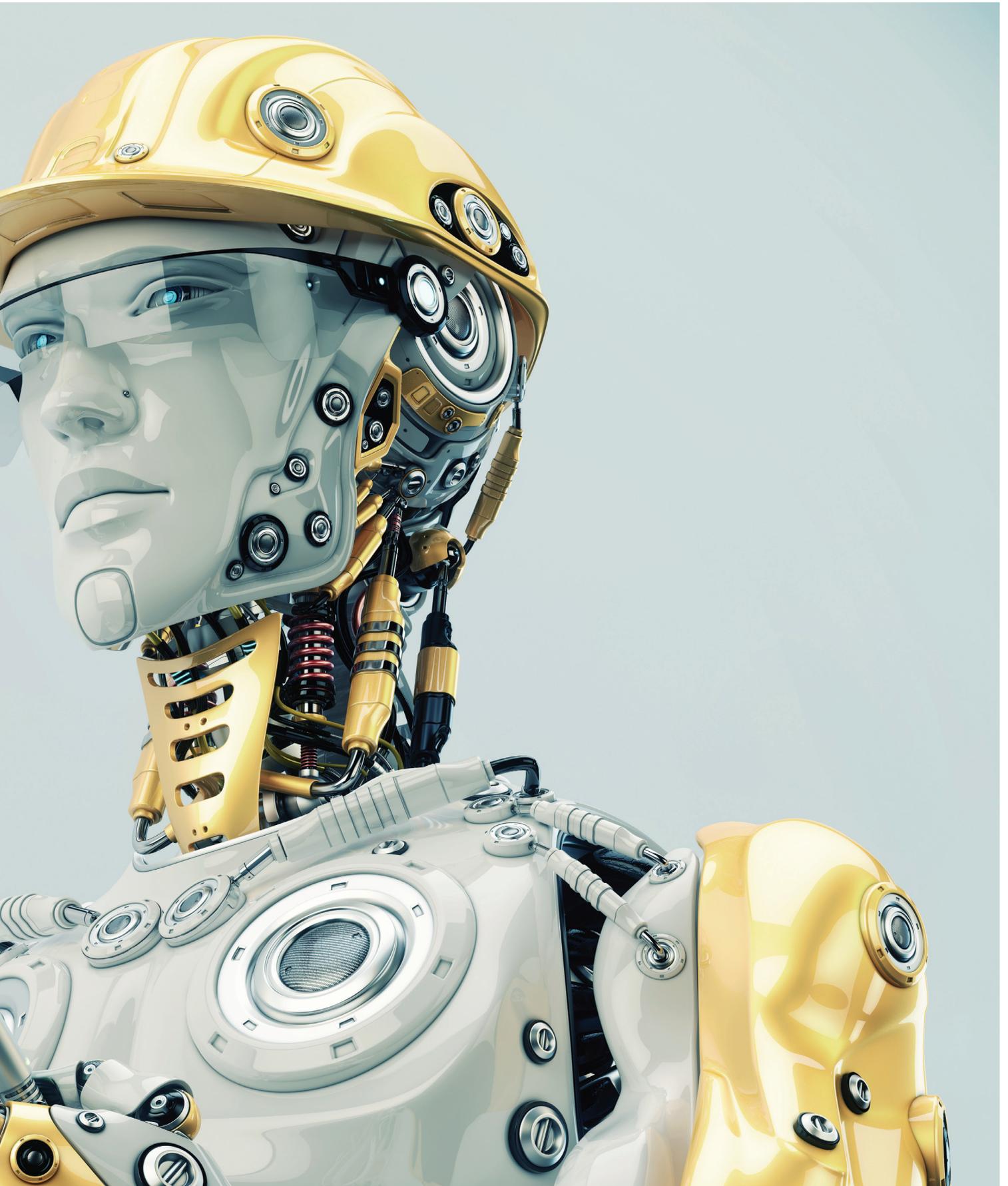
Nevertheless, several contextual factors are helping to promote the adoption of Autonomous Intelligence not only in the domain of customer experience but also in various other areas:

1. All major telecom players have either launched or are in the process of launching narrow band IoT network.<sup>2</sup> This LPWA will create pathways for machine-to-machine interaction which would in turn help in faster information processing.
2. Information accessibility cost is decreasing. A few years back, SMS charges for business would be about 0.1 INR. With messenger services for business set to be commercially launched, the accessibility cost will further reduce.<sup>3</sup>
3. Additionally, with greater availability of information, the customer expects a personalised product and is more discerning. Both these factors necessitate the use of technology to intuitively identify and service the need.

As we monitor the customer experience space, we will continue to share further sector-specific insights.

<sup>2</sup> <https://telecom.economictimes.indiatimes.com/news/reliance-jio-airtel-vodafone-key-for-nb-iot-deployment-in-india-counterpoint/64662875>

<sup>3</sup> <https://economictimes.indiatimes.com/tech/internet/whatsapp-launches-apis-for-businesses-to-integrate-and-interact-seamlessly-with-customers/articleshow/65234330.cms>



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