

Executive Insights

Man and the Machine: Using AI to Enhance Customer Experiences and Build Competitive Edge

Hype about the transformational impact artificial intelligence (AI) will have on humanity is reaching new levels as the technology reaches the mainstream across multiple B2C and B2B industries. With its arrival, significant new opportunities to create better customer experiences and build competitive edge are being unlocked.

Despite this, many companies and their customers remain concerned about AI's power and the problems that may arise from machine-led decision-making in business operations — and are consequently hesitant to make use of the technology. Deploying AI effectively is certainly challenging, but exercising too much caution and ignoring advances could threaten a business's sustainability, particularly as bolder peers leverage AI to secure competitive advantage.

In this *Executive Insights*, L.E.K. Consulting and Loop Horizon examine the transformational impact of AI as a strategic tool, and provide guidelines for organisations looking to build their AI strategy.

AI is becoming a strategic tool for more organisations

The development and commercial use of AI, especially deep learning, was pioneered by big tech in the early part of the 2010s, following dramatic increases in computer storage and processing capability. Initial use cases were in consumer-centric digital businesses, typically around customer behaviour prediction to enhance, or influence, experiences. Today, AI comprises approximately five key technologies centred on machine learning, which enables and complements AI subsets such as natural language processing, computer vision and speech recognition.

Big tech is now competing in an AI arms race, focused on using the technology to drive increased consumer engagement (e.g., Facebook, Google), and on the provision of AI as a service on their cloud platforms (e.g., Amazon Web Services, Google Cloud Platform, Microsoft Azure) for customer functions such as translation, image recognition, natural language processing and forecasting.

This democratisation of access through the cloud is accelerating the use of AI across industries and applications. Of particular value to many companies are emerging off-the-shelf tools, which are designed to reduce upfront development costs and have been productised to reduce the size of the internal teams required to deploy them (e.g., AutoML). Amidst the hype, it is evident there is significant opportunity for many businesses to usefully deploy AI technology.

From its beginnings in consumer sectors, AI use has spread across a broad range of areas, from predictive maintenance for complex, high-value equipment such as jet engines in aviation and gas turbines in power generation, to diagnosing diseases in healthcare, fraud detection in financial services and enabling autonomous vehicles (see Figure 1). While consumer-facing use cases are highly visible, AI creates many opportunities to automate and reduce support function costs. One of the most advanced examples is Amazon's 'hands off' initiative to automate product demand forecasting, inventory ordering and price negotiation with suppliers, and to minimise human intervention¹.

The importance of the human touch

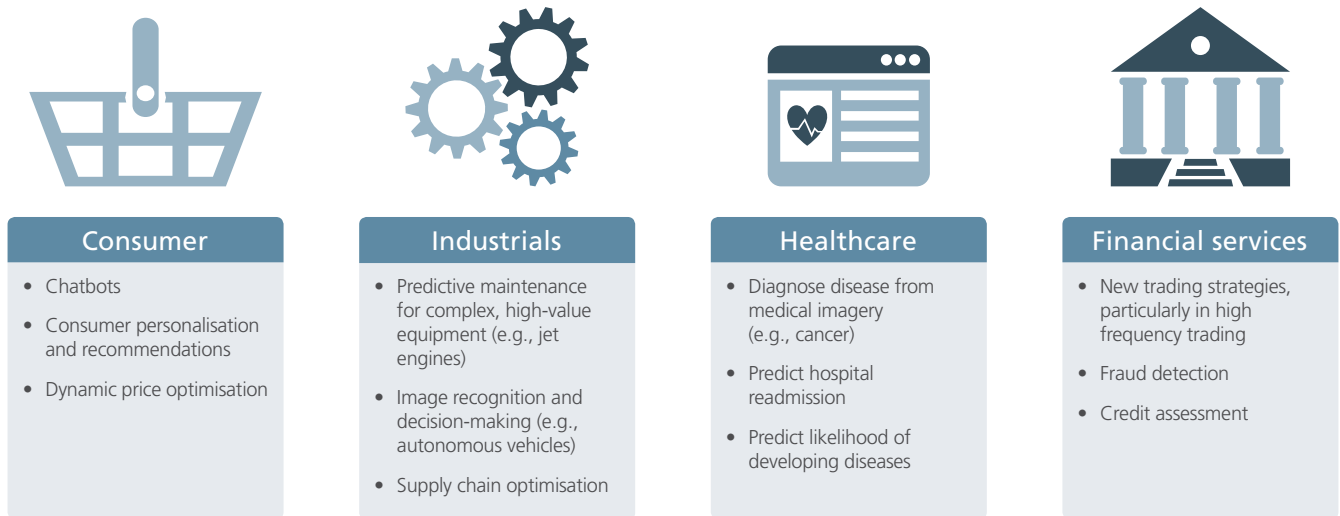
Establishing where AI can be deployed to create better and more compelling services is difficult, and there have been a number of high-profile cases where AI technology has backfired, even for big tech. For example, it was widely reported that Microsoft shut down

¹ [Bloomberg](#)

Man and the Machine: Using AI to Enhance Customer Experiences and Build Competitive Edge was written by **James Alexander** and **Rob McLaughlin**, Co-Founders of Loop Horizon, **Geoff Parkin**, Partner, **Jon Weber**, Managing Director and Partner and **Philip Meier**, Director of Data & Analytics at L.E.K. Consulting. James, Rob, Geoff and Philip are based in London, Jon is based in Boston.

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Figure 1
Examples of existing applications



Source: L.E.K. analysis and research

its Tay Twitter chatbot only 16 hours after launch in March 2016 because of its offensive tweets². The AI technology was intended to learn from human interactions, but it is thought that Microsoft did not anticipate the negative consequences of internet ‘trolls’ feeding the chatbot offensive material — it appeared that human intervention was needed to manage the situation.

Historically, consumers have been forgiving of big tech, recognising that it provides a continued sequence of innovations and that most services are in (permanent) beta. Plus, many of big tech’s services are low cost (or even free) and considered so ‘super convenient’ that switching is unappealing.

However, for companies that place an emphasis on building deep and long-lasting relationships with their customers, and that operate in highly competitive environments, the stakes are much higher — a rival is only a click away if something goes wrong.

AI technology can lack judgement and context. Chatbots are useful at giving instructions on how to set up smart home hubs, but creating a chatbot that is able to navigate the myriad of potential reactions of an upset traveller who has had their flight cancelled is exceedingly difficult. Humans not only offer depth, but can also invest time in establishing rapport, resulting in more appropriate resolutions and higher customer satisfaction.

It is crucial to remember that AI is dependent on correct input from human operators to secure appropriate output. Misapplication and poor data are responsible for basic business mistakes, such as promoting seasonal products after the relevant event has passed, or recommending products that customers already have — respectively caused by promotions based solely on recent sales volumes or only using recent transaction data in the model.

² [BBC News](#)

Organisations must recognise that it is crucial to take care when using AI, as incorrect or irresponsible use can jeopardise customer relationships and lead to significant legal, reputational and financial consequences.

Optimising an AI strategy

The good news is that most organisations already have a good understanding of their customers — albeit many are still to realise the benefits of digital personalisation (see [Making It Personal: Five Steps to Maximising Customer Profitability](#)).

The key to optimising an AI strategy is identifying the activities that are best performed by AI and those where a human perspective may also be required. By following these guiding principles, organisations can create the optimal balance between man and machine:

Maximise serendipity. The consumer experience needs to feel personal and helpful, and create the sense of a problem solved. Recommended products and services do not have to be perfect, but they do need to be good enough for the customer to appreciate their value and want to return. Conversely, it is critical that the perceived knowledge of consumers’ preferences and behaviours doesn’t make them feel uncomfortable (for example, someone arrives at an airport and immediately receives a message from a payment company offering foreign currency).

Nudge. Subtly suggest options that may be attractive to customers — but don’t force them. This minimises downside when you get it wrong. The language and positioning used with customers are key.

Context. This really matters. Help AI replicate obvious human understandings and avoid failures, such as advertising presents for Mother’s Day after the event. Recognise that AI is great for regular information transactions but humans are better for

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many other scenarios. For example, customers thinking about moving to a competitor, or who are unable to pay for a monthly broadband or TV service, may prefer the human touch. AI can help indicate those customers suffering a temporary inability to pay and alert customer agents to step in and discuss next steps — and increase the chance of retention.

Remember. AI is an intelligent hammer. It is not possible to feed AI all the information it needs for it to always work perfectly. Use human judgement to make critical choices and challenge input data and assumptions (e.g., what data is genuinely relevant/appropriate) and outputs (e.g., what is genuinely good for the customer or your business).

Monitor. Define the bounds of normal operating outcomes/conditions, flag non-compliance and act rapidly if human inspection identifies a problem, e.g., video recommendations for kids that include inappropriate material.

Balance. As with all strategic business decisions, think about both the short and long term — what is the right task to optimise and when, and should the priority be immediate incremental revenue gain or building customer retention over time?

Developing a strategy to effectively deploy AI and solving the man versus machine conundrum is challenging, but it must be addressed for businesses to capitalise on the promise of AI. Over time, those that delay innovation will see gradual margin erosion and loss of customer engagement as their peers get on board with the AI opportunity. Wise players will not be put off by the complexities of AI and will embrace the chance to build competitive edge. Now is the time to start thinking about making those critical first steps.

About the Authors



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