



Brave new worlds

AI and the opportunity for customer-centric leadership

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Part of Outwith's *Beyond* series on the emergent trends that are most impacting today's customer-centric leaders.

In summary

The term Artificial Intelligence (AI) is surrounded by a haze of buzz words and hype, making it hard to pin down for business leaders. It can be even harder to understand how best to remain customer-centric – to keep the ‘human touch’ so to speak – while adapting to the seismic technological changes that AI is signposting.

So, **what does AI offer** to leaders focused on customer-centric growth? And **what role** can these leaders best play as AI impacts more of what their customers experience and more of their internal organisation?

In this paper, we reveal the opportunity for customer-centric leaders to become the vanguard collaborators in the appropriate use of AI technology. We do this in three steps:

1. We clarify the opportunity AI presents by first **busting some myths**, the lessons from which are that:
 - AI needs quality data to be of real value
 - AI is not one thing, but rather a collective term for diverse methods
 - AI is still learning how to learn (just like us).
2. With an understanding of how AI might best apply to your business, we highlight the **three key roles** a customer-centric leader can play to help it embrace and navigate adoption of AI:
 - Promote fluency in AI’s raw material – customer data – and help translate data science into the business context
 - Create a learning and adaptable organisation, responding with speed to new insights in shorter planning cycles
 - Grow and retain trust in your disrupted brand in order to overcome, for example, the risk of customers rejecting non-human intelligence or the threat to your employees of AI displacing the workforce.
3. As our final call to action, we then highlight the **dynamic loop** that we believe is key to maximising AI’s success – one that has at its centre the **customer journey**. It provides the business with a common language to frame both the opportunity to create value for customers, and the opportunity to capture value from customers through new experiences – thanks to the data trail they leave behind at each and every touchpoint. Finally, we flag a number of **common limiting factors** – for leaders to watch out for as they now look to exploit this exciting value creation-capture dynamic.

Outwith’s paper is part of its *Beyond* series on the emergent trends that are most impacting today’s customer-centric leaders.

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1. Introduction: The insights paradox

Even if you have not read Aldous Huxley's 1932 novel, *Brave New World*, you may be aware that it is based on Huxley's fear that consumers would be given so much information, enabled by technology, that we would be reduced to passivity and egotism. A 'negative utopia' would ensue.

Still a work of fiction? Fortunately, yes – but it is important to hear Huxley's voice echoing in today's debate about AI, which offers extraordinary opportunities to customers and businesses alike.

At its heart, AI is a synthesis of algorithmic developments and the emergence of 'big data', enabled by increases in computation power and storage. We can imagine the development of AI as moving along a curve which has been evolving for decades. On this curve sit the fields of business analytics, computer science and statistics which have been manually dealing with similar issues to those that AI promises to address. As such, the questions being asked are not wholly new. AI is still about accessing insight, in order to make sense of the world around us.

What is new is what we call the 'insights paradox'. AI both feeds and feeds off all this information. We appear to be at a tipping point where organisations are operating with exponentially higher volumes of data, at such speed and of such rich complexity – which in turn feeds demand and ever-growing expectations to find insight. Businesses are at risk of information overload and the proverbial 'paralysis by analysis'.

Worse still, in response, brands risk further dehumanising their relationship with their customers – as it becomes one based primarily on data points that feed an artificially intelligent capability. Depending on which report you read, as many as 4 out of every 5 businesses now incorporate some form of AI into their organisation, with customer service being the most popular application. How well are these interactions working for consumers to date? The jury remains out. A recent survey of online consumers¹ found that nearly two-thirds of those surveyed didn't realise that they're already using AI technologies. The research also found that these consumers were open to trying services enabled by AI, with only 17% in the UK and Ireland expressing no such interest. Ultimately, consumers will be the judge of which interactions they believe can be better delivered by AI, and which can be better delivered by humans.

AI has been pervasive in the media because we are seeing change occur at unprecedented speed, on issues which are exponentially more complex. This fuels uncertainty about the degree to which dissection of the customer relationship into ever smaller forms of data eventually destroys our 'sense of the whole'.

2. Busting some AI myths

AI is both a disruptor and an enabler of new worlds for customers. If we choose to regard that as a 'negative utopia' (or even a 'positive dystopia'), we ignore it at our peril. In order to help leaders embrace both the opportunity and the uncertainty that AI is bringing about, we can first bust some myths.

The archetypal myth that extends beyond AI is that technology can and will make sense of the 'chaos of humanity' – that AI has a super-intelligence that can exceed human intelligence (even in the most meaningful ways) and therefore will be a solution in of itself. This myth appears to be breeding a mixture of both fear and unrealistic optimism regarding the power of technology and AI in particular.

We can quickly bust this myth by clarifying three important points, which together bring nuance to the understanding of how AI might impact customer-centric leadership:

Clarification 1 - AI needs quality data to be of real value

Leaders already know that the quality of data used for analysis is critical – as the phrase goes: ‘rubbish in, rubbish out’. With AI this issue is augmented as AI is fundamentally concerned with using large amounts of data (typically labelled, at great effort) in order to teach machines to learn.

The sheer volume of data being used by AI means that there is a real risk of bias being present in the data itself, even if it is not present (or audit-able) in the models or algorithms being employed. This can be very difficult to assess. Some areas of the business will be rich with high quality data, for example customer usage of the website, whereas other data sources may need more careful examination.

Data is the fuel for AI, so data quality and accessibility of this data are important drivers of the success of AI. **Improvements to these areas may take time and consistent effort from your leadership, but they will be needed if you are to utilise AI for developing your next generation of products and services.**

Clarification 2 - AI is not one thing, but rather a collective term for diverse methods

There are many types of AI with fundamentally different operating assumptions, as well as some poorly defined terminology used to describe them. Combine this with the fact that the field is changing rapidly, and it is easy to see why some leaders may feel confused. Part of the excitement and uncertainty around AI is that different methods of learning are being researched and used in practice. There is an intellectual ‘gold rush’ under way to find methods that can outperform others in the marketplace for their specific use cases.

The glossary at the end of this paper sheds more light on the main types of AI that we see being considered at the moment. All these methods fall under the term AI, but they perform very differently.

Most of the time we are dealing in practice with AI that has a problem-specific functionality – as opposed to Artificial General Intelligence (AGI), which is the form commonly illustrated in the media. AI with specific functionality – such as natural language processing, image recognition or AI that powers a ‘bot’ – has its focus on a clearly defined task. Therefore, when it comes to defining where AI will have most impact, we can see how ‘use case specific’ it is. **Leaders should dig deeper into these diverse methods in order to understand the most relevant applications for AI to their business, based on the outcome they want to achieve.**

Clarification 3 - AI is still learning how to learn (just like us)

What unites all types of AI, and the field itself, is the focus on learning – leading to the ability to sense-make on a much larger scale than a team of analysts would be using manual methods. However, there are limits to the power of this analysis.

AI will remain unable to provide answers to some of the toughest strategic questions – such as articulating a compelling brand promise, translating this into a joined-up customer experience, then delivering on that intent across the organisation and managing changes in company culture that enable this delivery. This level of judgement and human interface is beyond the current reality of AI – which currently makes predictions and then hands these off to a human to use their judgment to determine what to do with those predictions.

Nor at the more tactical level will AI be able to figure out what problems to solve; rather, it explores how they could be solved². Therefore, the organisations that will benefit most from AI will be those that are able to clearly and accurately specify their objectives³.

Leaders should explore where to focus the energies of AI and consider, given the collective learning now underway, how effective its business will be at identifying the AI applications with the shortest time-to-value for their customers and their employees.

3. Implications for leadership

With an understanding of how AI might best apply to their business, we highlight next the three key roles a customer-centric leader can play to help it embrace and navigate adoption of AI:

Role 1 – Promote fluency in AI’s raw material: customer data

Leaders should develop fluency in the nuances of the data used to fuel AI. The AI models themselves may be difficult to understand or even opaque, but more transparency may be found in understanding how the input data has been collected. Bias and blind-spots exist in many datasets (for example, those used to train image recognition algorithms) and there is room for improvement in dataset collection and algorithm evaluation⁴. We believe that any customer-centric leader should be informed enough to query these issues.

The availability of data for each company will vary and depend on at least two major factors: the extent of any digital transformation (which paves the way for AI through the vast quantities of data that it creates), as well as how much historically the industry has collected data. Let us consider, for example, back-end banking data for regulatory purposes. If you are a tech firm which has grown up with digital from ‘day one’ you are likely to have a rich customer data ecosystem which can easily feed AI technologies. We can see that both the quality and volume of data in the company will be highly variable, but leaders with an understanding of the issues around data collection will have the advantage when it comes to ensuring that quality exists in their data.

It is also important to be able to anticipate how customers will react to the AI that has been applied, and what impact this has on data in turn. The customers’ response may reveal new opportunities – challenging the business to rethink what customer needs it is meeting and where growth is to be found. By contrast, customers may take issue with the decisions made by AI which at times provide unwelcome ‘hyper-real reflections’ of themselves. As one observer recently noted: “I look at my algorithm-generated ‘Recommendations for...’, and I don’t like that person – or the control involved in the process.”⁵ Here again, listening and learning are key.

Similarly, because AI applications are often dynamic and in real time, this may lead to a self-reinforcing cycle, where customers impact the outcomes of AI by becoming more conscious of their actions. For example, the web page you viewed before Amazon, or the trailer you watched last time on Netflix, will impact your recommendations. When customers ‘wise up’ to this they may behave differently, by ‘gaming’ or even hiding from the system.

Symptomatic of these data nuances, there is a growing need for a new breed of specialist that is able to translate ‘data science’ into business sense⁶. Data science can practically be thought of as the dual skillset, in the same individual, of statistical thinking (which now harnesses the power of computation) and the ability to use ‘code’ to manipulate ‘big data’. This should be a skillset that leaders develop as a priority, be that personally or within their immediate team. Understanding data and how it can be interpreted is not a technical specialism any longer; it is of great strategic relevance. In the same way that explorers of the past valued their maps and their ability to read them, so now leaders have their data. How useful is an explorer who can’t interpret a map with confidence to see how closely it matches reality?

Role 2 – Create a learning and adaptable organisation

As we have already indicated, AI could be viewed as being fundamentally about learning. The theoretical idea of ‘learning organisations’ uses ideas from ‘systems thinking’ which places individuals and ideas as part of wider systems that impact organisational behaviour. The idea being that if you want to understand and change the behaviour being shown, you need to address the system as a whole.

Practically, most customer-centric leaders are already heavily invested in some form of voice-of-customer insights capability – but AI forces leaders to take listening to another level. It widens the scope of who is being listened to and, as well as looking at issues holistically, enables organisations to apply learning quickly in practice – and then to learn rapidly from operational applications in the field. Having great data scientists, algorithms or ‘data lakes’ is just the start – the organisation then needs to adapt to the changes that are created by insights.

Part of the challenge in doing this is that data agility may often be high, but an organisation’s operational agility can be much lower. This stands to reason, when data and ideas come to change more rapidly – the operational toll of these changes inevitably gets heavier.

Combining real-time updates and the interaction of customers with these updates, we expect to see an escalation of the need for speedy insight. Analysis is now moving from a dependency on human time and intellect to the factors which brought AI into being (computation power, big data, algorithmic developments). These may in turn become the new limiting resource. By way of illustration, Microsoft’s recent strategy on AI highlighted that there are infrastructure questions (such as chips customised for machine learning) that leaders may need to make decisions on now that could determine the flexibility of their AI’s ability to learn. The technology is moving so fast at the moment that this may turn out to be a very material decision for those who aspire to be (or remain) at the cutting edge of AI⁷.

In this increasingly data-rich environment powered by AI, we may also see more rapid changes in society and the economy at the macro level. In this scenario, long-term forecasts become less reliable, leading to shorter planning cycles and ‘adaptability’ being the new competitive advantage⁸. To develop this adaptability, companies will have to respond to signals rapidly, experiment with new ideas and offerings, and widen their horizons to include those who are in their ecosystem to increase their sensitivity to change⁹.

The relationship explored so far with AI’s use in insight gathering, digital operations (such as recommendation engines) and its links to physical operational concerns show the complexity of the issues. Leaders helping their firms to think like a ‘learning organisation’ have an opportunity to add meaningful and lasting value even in the face of such complexity and change.

Role 3 – Grow and retain trust in your disrupted brand

Sergey Brin, President of Alphabet, concisely outlined some of the root issues that might impact customer and employee trust in his 2017 letter to investors:

“...such powerful [AI] tools also bring with them new questions and responsibilities. How will they affect employment across different sectors? How can we understand what they are doing under the hood? What about measures of fairness? How might they manipulate people? Are they safe?”¹⁰

We predict that leaders who help customers and employees grow trust in the brand – by demonstrating that it still cares about them ‘despite’ tech disruption – will be of huge value in the age of AI.

Let's first consider **trust for customers**:

- AI should foster personalisation, which in itself may build trust by giving customers a feeling of being better understood. Doing this could be a very quantitative way of becoming 'customer centric' – helping you understand your customers better, enabling your customer-facing staff to build empathy and rapport over a longer-term relationship. Taking this one step further – AI could actually see brands interacting with their customers less¹¹. The thinking here is that companies can drive the detailed insights from AI tools back into products and services. Once this works better, there will be less need for time and money spent on outbound engagement – by sending unsolicited emails for example. Consider the scenario that, rather than waiting for you to shop and buy before shipping a product, Amazon trusts the prediction accuracy of its recommendation engine so much that it simply ships the product pre-emptively – with the expectation that you'll probably choose to accept it on arrival¹².
- But what if there is little or no longer any human-to-human contact with your customers: can you still say you are customer-centric? Amazon would say yes. But even for customers who are benefiting through AI from increased personalisation and lower cost, trust can be eroded when people interact with a company and ask the question: 'Am I talking to a machine or a human?'. For example, fin-tech companies such as Monzo make a big play on using AI in their customer service department to bring economies of scale and a quicker response rate¹³. They are relying on their target audience accepting this, which seems reasonable for as long as there is little compromise on the quality of their experience.
- We also live in an era when awareness of and concerns about data ownership and misuse have never been higher. New regulations such as GDPR are making personal data control a pre-requisite for most businesses, and this legislation should help leaders navigate trust and data ownership better, improving the quality of the customer data they already have.
- However, this does not negate the need for leaders to have customer trust at the front and centre of plans to develop AI technologies, as there may be a journey to go on before this level of personalisation is truly possible and accepted by customers. When Samsung declares it is aware of the need for AI to "build an ecosystem that is user-centric rather than device-centric", this is another way of saying they want to focus on making consumers' lives better rather than build tech-led, feature-heavy products that fail to overcome the hurdle of trust¹⁴.
- This presents leaders with a balancing act: the need to manage the relationship between risk reduction through the loss of consumer reputation or trust, and of being a technological leader with innovative and at times disruptive AI technologies.

Let us turn now to the **employees' perspective on trust**:

- It can feel like every week employees witness another dire prediction of AI displacing the human labour force. This is not all sensationalist – we need only look at the legal sector to appreciate how even highly skilled knowledge workers could be usurped by AI technologies. UK-based Riverview Law¹⁵ was previously a managed services firm, with no legal expertise. They have employed innovative applications of AI to analyse highly complex contract situations and are now providing certain legal services to their clients at a fixed and predictable price. They have been able to replace expensive para-legals trawling through contracts with computational power.

- With certain specific use cases, if the data is available, there will be no competition with AI on both cost and quality grounds. As Richard Susskind notes, the challenge for lawyers, as for all professions is to reinvent themselves¹⁶. And beyond law, as a rough rule of thumb, experience to date indicates that 'routine' and 'repetitive' tasks will be the most suitable candidates for AI in other sectors¹⁷.
- For any leader, this has a number of implications:
 - They will still need to get the best out of those employees who cannot be replicated by AI, and to nurture their company culture. However, the increasing power of AI to make decisions that humans would have previously made will almost certainly change the distribution of power between people in organisations. Monitoring of performance will need to be rethought, and trust will need to be renewed in a social contract that includes AI – changing the dynamic in the organisation, often in unpredictable ways.
 - Leaders who are skilled in sensing and managing this dynamic will be at great advantage in harnessing both the motivation of their employees and the power of the technologies being employed. In Sweden, Nordea have 'named' their AI assistants to make them part of the team – a small touch which may denote a new type of collaboration between AI and humans in the organisational structure¹⁸.
 - But is employing powerful AI still effective if it is at the cost of employee morale? Some historians believe we shouldn't be too pessimistic about AI taking our jobs, and that instead it may raise the value of the tasks that can be done only by humans. This change may also demand that leaders and employees are encouraged to learn faster¹⁹.
 - Management teams will not always be able to audit the performance of others, or how complex human and AI systems have arrived at a conclusion. The 'black box' nature of certain AI methods means leaders need to find other ways of gaining personal assurance, so that trust can be built for customers and employees alike. Research has found that the more complex the application of AI, the less easy it can be to validate the effectiveness of models used via traditional management methods²⁰. Other methods for gaining assurance now need developing.

Although the idea of building trust is not new to leaders, we expect leadership skills to be tested by the combination of 'black box' AI (which can't always be fully transparent) and new management thinking on how best to leverage AI to the benefit of customers and employees alike.

4. Get in the loop

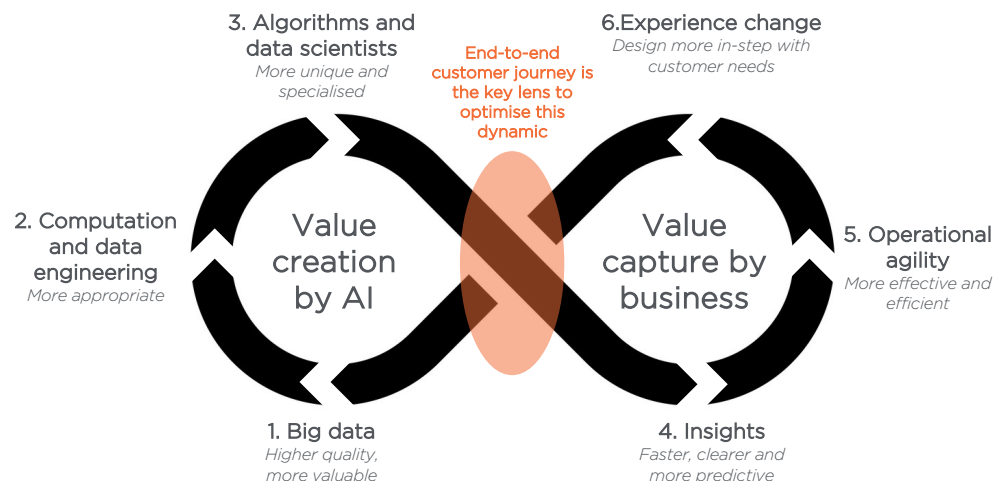
So, what is the call to action?

Having better understood what AI really is and what new worlds it is most likely to open up in the near term, a customer-centric leader is faced with the fundamental question: how can I now best help my business to exploit these opportunities?

We illustrate below the dynamic 'loop' that we believe is key to enabling AI's success – a loop which necessarily brings together the opportunity to create more value for customers (through better AI) with the opportunity to capture more value from customers (through better experience outcomes).

At the centre of this loop is the customer journey. We've heard how AI feeds and feeds off customer data – and the customer journey can be regarded as the key lens through which the business can work out how to best optimise this dynamic.

The dynamic 'loop' of value creation and capture



Clearly, acceleration of this dynamic provides a competitive advantage. But in doing so, leaders will need to work even harder to **anticipate what is changing before it changes**. Let's briefly illustrate what we mean by this:

- We have heard how AI can make real-time improvements to your customers' experience. However, there is a risk that customer interactions are seen in purely technological and economic terms: a transaction to be optimised and automated.
- The customer-centric leader can assure their teams that any AI-enabled customer interaction is more likely than not to become an ever-more important part of the long-term relationship the business has with the customer. They will look at potentially valuable applications of AI (created in steps 1-3 of the loop) in the context of the wider, end-to-end customer journey: Whose customer journey is this? To what end? How well do we understand the upstream or downstream consequences to the customer of introducing an AI capability? Are these the changes we intend? Can we operationally deliver on them and ultimately capture the value (in steps 4-6 of the loop)?

Furthermore, and somewhat counter-intuitively, amongst all this change leaders will do well to **reveal what remains constant**:

- Throughout the customer experience, there will be multiple data points – observations attributable to a specific touchpoint in the customer’s journey. Over the lifetime of a customer relationship, these data points can potentially sum up to an unimaginably big number – offering highly rich AI-enabled insights and change opportunities.
- However, this ‘holy grail’ of real-time, total personalisation for your customers brings with it the headache of a ‘no size fits all’ product and service delivery model for your organisation – one that remains forever in flux.
- But one thing does remain constant amongst this apparent chaos. All those data points relate to interactions that a customer had with a brand at a particular time and place. By aggregating those interactions up into sufficiently common and distinct journey stages, leaders are better able to purposefully manage and improve performance. Fundamentally this depends on your ability to see the outside-in perspective: a single view of the truth that is holistic and constant, yet dynamic and easily interrogated at lower levels of detail. Having the ability to simplify this complexity – in the form of scalable, data-rich customer journey maps – will be a valuable asset for customer-centric leaders looking to influence across the organisation.

There is one final word of warning for those ready to ‘get in the loop’ – and for this we return to recurring themes of this paper. In looking to best exploit the value creation-capture dynamic, leaders must also watch out for **common limiting factors**: On the AI side of the equation (steps 1-3), these include:

- Poor data quality e.g. data collection methods that are methodologically dubious and only build in bias to later analysis
- Low level of understanding of which AI methods are suitable for a given task, and applying these with a limited awareness of their impact (or as the saying goes, ‘for those with a hammer, every problem looks like a nail’)
- Data scientists not versed in customer-centric strategy – as well as business leaders needing to understand more about AI, the immersion of data analysts and technical experts in the importance of a customer-centric approach will be equally rewarding.

As to the rest of the business (steps 4-6 of the loop), leaders should watch out for:

- Weak learning culture that wastes insight e.g. limited listening and measurement; poor leadership through customer-centric storytelling
- Siloed working that constrains your organisation’s agility e.g. disjointed insights; absence of ecosystem thinking including the perspective of your third-party delivery partners; onerously rigorous and slow decision-making
- Unstable strategy that weakens long-term change e.g. lack of a clear and sustained brand promise; absence of a target experience design; unclear governance and KPI accountabilities.

Beyond the warnings and dire predictions nevertheless, these are exciting times. By continuing to go outside and beyond traditional ways of thinking, customer-centric leaders can now become the vanguard collaborators in the appropriate use of AI technology – to bravely retain the human touch as new worlds open up.

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Glossary of common AI categories

- At its simplest, AI can include **supervised machine learning**. This method is statistics-based and would be familiar to most business analysts who have used methods such as linear regression analysis. The term 'supervised' indicates that the parameters for analysis and objectives are predefined; the power of this analysis is in 'the machine' being able to learn which factors lead to outcomes most powerfully. According to the AI guru Andrew Ng, and contrary to popular perception, the most common forms of AI at the moment are based on such supervised learning methods²¹.
- At the other extreme of AI maturity is the commonly-used phrase **deep learning**. This uses learning processes such as 'neural nets', which is a computation method that seeks to mimic the way that neurones work in the brain. Some commentators think that developments in deep learning could lead to a revolution in robotics because it allows unsupervised learning on unlabelled data²². This type of AI can be opaque when it comes to understanding how a decision was made, which may make it challenging from a regulatory and audit perspective.
- Most forms of AI need extremely large data sets, but some don't. For example, **re-enforcement learning** takes its cue from feedback to outcomes in a similar way that a puppy might do with traditional training methods from a human. Prowler is one example of an AI research company that uses this method to inform its AI models²³.
- **Artificial General Intelligence (AGI)** is the 'science fiction' notion of computers that are fully autonomous on diverse tasks. The AGI society describe it as "an emerging field aiming at the building of 'thinking machines'; that is, general-purpose systems with intelligence comparable to that of the human mind (and perhaps ultimately well beyond human general intelligence). While this was the original goal of [AI], the mainstream of AI research has turned toward domain-dependent and problem-specific solutions; therefore, it has become necessary to use a new name to indicate research that still pursues the 'Grand AI Dream'."²⁴
- One of the barriers to AGI is that learning in one area is not easily transferable to other areas. This is something that humans generally excel at and is a key part of innovative thinking. In order to develop this way of teaching computers to learn, there is also work underway with **transfer learning** – for example in text classification algorithms²⁵.

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