Five ways the use of AI can transform your businesses

By Pierre Fouche
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Every 25 years or so, a new technology architecture emerges, which changes the way businesses operate and can often transform entire industries. For example, mainframes were the first technology architecture when they were introduced in the 1950s.

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They enabled industries, such as manufacturing and financial services, to automate processes, which continues today. The technology architecture changed the business architecture because mainframes enabled organisations to use shared services and grow from local to global operations.

The production of microprocessors beginning in the early 1970s enabled the invention of the personal computer about a decade later, which provided computing power at the fingertips of business people, changing the way they worked.

In the 1990s, the World Wide Web led to the invention of new ways of selling and doing business over the internet.

Watching a new technology architecture evolve

What we call cloud computing today started out as network-centric computing two decades ago. Now smart devices attached through the internet to massive cloud data centres have spurred digital businesses in many industries. We're watching a new technology architecture evolve that will result in new business architectures.

As organisations now deal with massive amounts of data, the combination with artificial, or augmented intelligence (AI), is creating the next technology architecture, which is once again changing the way business is conducted.
The combination is creating businesses that operate based on intelligence, not just information, and such intelligence can grow exponentially.

Companies of all sizes and across all industries are seizing this opportunity. In fact, global spending on AI-related hardware and software is expected to exceed $57.6 billion in 2021, as compared with the $12 billion that was spent in 2017, according to IDC.

> *Insights from AI workloads require new hardware and software paradigms and the infrastructure to deliver data-driven workloads. If the amount of data in the world was considered "big" before, the volume of data required to train a deep learning model is almost unfathomable.*

Tapping into unstructured data
The processing power required to operate high-performance analytics that lead to insights dwarfs anything that has come before. While 20% of all the data in the world is searchable, 80% is not and may be comprised of videos, pictures, or even social media. AI is helping organisations tap into the 80% - or what's called unstructured data - and combine it with the searchable data to create competitive advantages.

Once again, the technology architecture is changing along with the business architecture and creating a new system of platforms for not only how work gets done, but how separate organisations' platforms interact in an ecosystem of platforms.

> *Companies that have not started their AI journey should consider doing so quickly or they risk being left behind.*

Six strategies
Here are six key technology strategies for organisations to consider when transforming their businesses through the use of AI:

1. **Determine the organisation's core expertise** and what factors will differentiate it from its competition.
2. **Learn to curate the organisation's own data -** and data from other sources - that will help differentiate its technical architecture and business platforms.
3. **Recognise that technical architectures matter** when designing an organisation's platform for the future.
4. **Become an agile organisation,** which means blurring the boundaries between business and technology architectures and employees, business partners and others in the organisation's ecosystem.
5. **Be secure to the core of a business** because the security of data can fundamentally differentiate an organisation from its competitors.

The era of AI not only demands more than tremendous processing power and unprecedented speed, but also requires an open ecosystem of innovative companies to deliver technologies and tools. We believe this new technology architecture will help to fuel industry transformation and generate even more discoveries that benefit the world.

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