

AI Decisions Move to the C Suite: What to Know About AI

You don't have to look long to find an article or post with claims of the life changing impact of AI. From robots that work in factories to analytics used for contact tracing to fight pandemic diseases, machine analytics and assisted human analytics is changing how we live and work.

As a business leader and IT executive you may be fielding regular requests for investment in AI and analytics. There are no shortcuts - the journey from data to insight to action requires a strategy, action plan with a large dose of patience and perseverance.

This quick primer on AI is just a starting point. It might be a good way to educate your stakeholders on AI as you make decisions to implement a new way of working. Making your team and peers more aware of AI will make it easier for everyone to understand and accept budget decisions that enable AI in your workplace.

Simple first question: Where to begin?

Businesses implementing AI based applications are experiencing benefits in five areas. Leaders should choose to focus on an area where they can be successful. Choosing visible and actionable applications for AI will encourage more investment. Boston Consulting Group, Accenture and MIT, to name a few institutions contributed to the following list of Key Benefits:

- **Improved customer service** - accelerates and personalizes customer services with big payoffs
- **Improved monitoring** - near instantaneous monitoring of factor floors, quality control and technology infrastructure
- **Faster product development** - shortens development cycles, reducing time between design and commercialization - better ROI on development dollars
- **Better quality** - reduces errors and standardizes tasks done manually also reduces cost

What is AI - artificial intelligence and how does it impact work?

At its most basic, artificial intelligence (AI) is used to make decisions: if 'this' then 'that'; if 'that' - then 'do this'. Using this over simplified explanation, it's easy to see the relationship between AI and automation. Humans write algorithms (instructions) to mirror complex decision trees and this machine assisted decision support is made possible by the speed of powerful processors or machines - faster than the human brain. However, it's still the brilliant combination of human insight and machine speed that is artificial intelligence.

The effectiveness of implementing AI powered solutions is dependent on the availability of data - diverse data constantly refreshed and stored in multiple interconnected repositories or data lakes. And, its easy to understand how the cloud has enabled AI by keeping huge volumes of data available to AI applications.

Serious academic research began in the 1950s, with computers learning, among other things, how to play checkers. In the 1960s, government research kicked in with funding by the US Department of Defense. Commercial ventures began to take hold in the 1980s, when an industry of “expert systems” grew out from numerous startups.

What moved AI back into popularity in the late 1990s was the increasing power and sophistication of parallel-processing computers and the software to run them. Today enterprise leaders are starting to understand how AI technologies can be used in their businesses. The domain of AI is changing rapidly as more companies, research institutions and governments conduct major research globally.

Four types of AI

There are many types of AI, but from a business perspective most of the work being done by AI involves reactive and limited memory machine AI.

Reactive AI – an early type of AI where AI lacks memory and is purely reactive meaning that given a specific input, the output is always the same. Machine learning models use this type of AI.

Limited Memory Machines – this type of AI is based on the understanding of how the human brain works and imitates the way neurons connect. This type of AI handles deep classification tasks using historical data to make predictions.

Theory of Mind – this type of AI is unrealized and would be capable of understanding human motives and reasoning. Often referred to as AGI (artificial general intelligence), it learns with fewer examples than limited memory machines and can contextualize and generalized information to extrapolate knowledge to a broader set of problems.

Self-aware AI – referred to as artificial superintelligence is aware of the mental state of others and itself. This is a machine on par with human intelligence

Cognitive Technologies

Professional services firm Deloitte views AI as a growing set of [cognitive technologies](#), including Robotic Process Automation bots that replicate human actions and judgments. They can free up workers from performing repetitive, mundane tasks, while promoting process consistency and quality. The other prominent type of cognitive technologies is cognitive insights - similar to limited memory machines using machine learning and natural language processing. This type of cognitive technology derives patterns from large, complex data sets. Used with embedded sensors and cameras, these technologies can provide tracking and reporting of information in real time.

Businesses Using AI

Deloitte, the professional services and consulting firm, sees many companies learning about AI how to solve problems using AI related technology. For example, they site telecom companies using AI to improve the user experience and manage churn. [Deloitte also points out that telecom companies are finding themselves on the cutting edge of AI implementation](#), because they are “dealing with users who are increasingly willing to change suppliers, intensifying familiar problems such as engaging customers and managing churn. They also face vexing infrastructure management problems as new networks, both wired and wireless, increase in complexity.”

All of this is true, but that’s not stopping leading telecoms from putting AI to use for competitive differentiation. Customer service chatbots and voice-recognition services are becoming commonplace, as is the use of predictive maintenance to forestall potential outages. [According to AI authority TechEmergence](#), these services are in play by AT&T, Verizon and others, as well as, for instance, the analysis of drone-captured video data for infrastructure maintenance and voice-activated television navigation.

Verizon offers an “out of the box” AI platform to B2B customers that can be used for personalized marketing campaigns and other advertising and sales functions. One research team at Comcast uses machine-vision analysis to find what types of content appeal most to customers. And DISH Network announced a collaboration with Amazon to let customers control their DVRs through Amazon’s Echo or Echo Dot Alexa devices.

Educators, manufacturers, retail marketers, customer service centers are all using AI to improve work processes and speed workflows. Every operational flow and process can be improved by introducing applications with integrated AI. The possibilities are endless.

Needed: Technology, Skills and DATA

All experts agree that applications available today are nothing more than starting points on the journey to fuller maturation of AI. Experts agree, too, that success won’t come from technology alone, but will require applications of human skills, not just at the data scientist level, but in executives as well. And these skills can be hard to find. Only humans understand the problem the machine is trying to solve.

“Communications service providers (CSPs) need technically trained people who know how to handle data, create data models and algorithms, and implement and maintain AI and machine learning applications. However, finding these people is not easy, especially when data scientists and AI/ML specialists are in such high demand and there are so few workers available with the necessary skills,” [says Aaron Boasman-Patel, writing in TM Forum Inform.](#)

“C-level executives likewise called out training the leadership team on AI as a top priority-47 percent of business leaders put leadership training in their top three priorities compared to 40 percent who put employee training in their top three priorities.”

At the core of an AI strategy is DATA. Data plays a key role in 21st century business. Clean, quality data managed as an asset and accessible to applications across functions is core to effective implementation of AI driven solutions. There is no question that AI is strategic because the scale, scope complexity and dynamism in business of data today is so extreme. Humans can’t manage it alone.

Take advantage of VIA’s AI experts to assess your readiness for AI and identify ways you can realize the value of implementing AI applications



Sign Up For An Assessment
www.vitria.com/aiops-readiness-assessment

About Vitria

Move from Analyzing Data to Automating Actions. Learn how VIA AIOps enables reliable automation across all layers of service delivery to improve the customer experience and optimize operations. VIA AIOps provides total ecosystem observability and explanatory AI to increase confidence in automation. Automation minimizes the number of incidents that impact service by correlating data across operational silos. Using VIA AIOps, you can offer your external customers experience assurance - know and act on problems before your customers report service interruption.

