

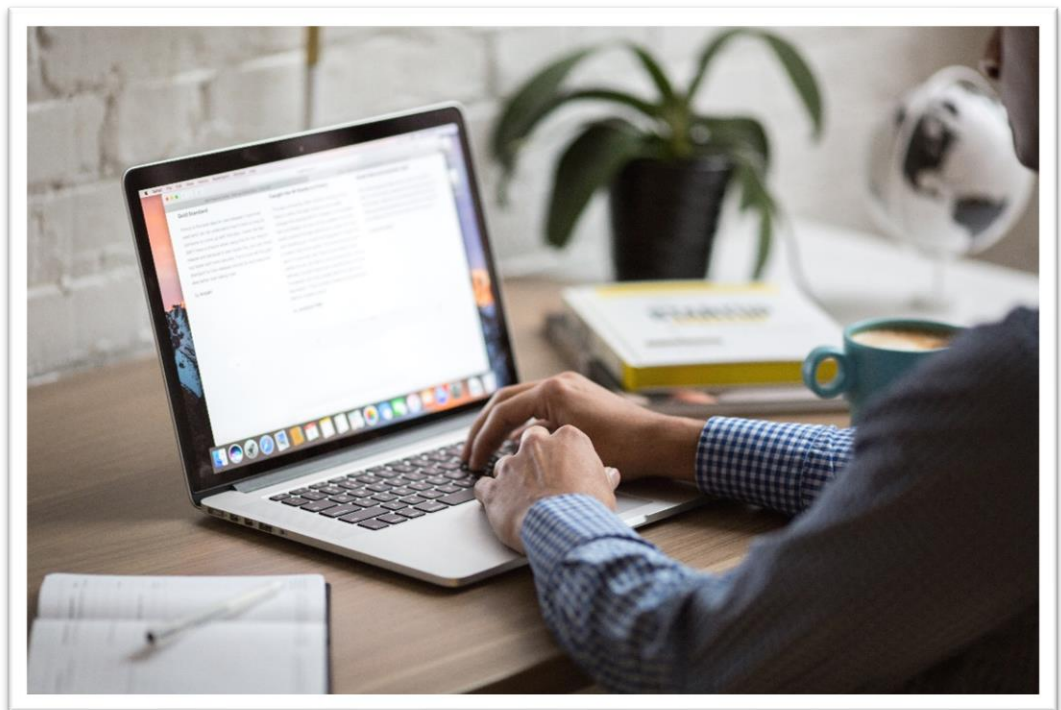
ARTIFICIAL INTELLIGENCE

Introduction to Business Value

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Artificial Intelligence (AI) should not be thought of as a specific “application” that is implemented in business. It is an enabler – much the way we now think of electricity, computers, automation, and process improvement. The business impact is developed by understanding all aspects of how AI is touching the business – internally and externally. This includes AI’s impact in product development, marketing, internal business processes, sales, delivery, support, as well as the application of AI impact on customers through the products.



AI is an extension to the individual's cognitive ability to evaluate the situation (data, visuals....). While each decision maker is limited to his/her own experiences, knowledge, intuition - AI has the benefit of significant (almost unlimited) sources of experiences. It makes "prediction and prescription" insights much more robust! Of course, the local decision maker, who is most intimate with the situation and influences, is best positioned for the final decision. Through predictive and prescriptive

capabilities, AI enables businesses to stay agile, make forward-looking decisions, and continuously improve outcomes.

Artificial Intelligence (AI) is a branch of technology that uses computer science, math, and engineering to create systems that can do tasks that normally need human thinking, like learning, solving problems, and making decisions. The following primary components may be applicable across the various business functions, processes, and products:

Component	Usage
<u>Machine Learning (ML)</u>	train models to predict or classify data, including pattern recognition and reinforcement
<u>Deep Learning</u>	neural networks and Generative Pre-trained Transformer (gpt)
<u>Natural Language Processing (NLP)</u>	text, sentiment, and language recognition
<u>Computer Vision</u>	image, facial, video recognition and analysis
<u>Robotics and Autonomous Systems</u>	programmable, sensor-based, mobile
<u>Expert Systems</u>	rule-based
<u>Speech Recognition and Processing</u>	text-to-speech, voice recognition
<u>Recommender Systems</u>	past behavior, similarities, collaborative
<u>Knowledge Representation and Reasoning (KR)</u>	concepts, relationships, graphic, inferences
<u>Fuzzy Logic and Probabilistic Reasoning</u>	approximation, probabilistic, uncertainty
<u>Evolutionary Algorithms</u>	optimization, collective behavior
<u>Explainable AI (XAI)</u>	understandable, unbiased, transparent
<u>AI Ethics and Policy</u>	fairness, privacy, security, protection

AI's contributes specific techniques and tools that together enable systems to solve complex, real-world problems. The value of AI is drawn from how the business defines value, whether it is top-line and/or bottom-line improvement, as well as asset effectiveness.



The impacts of AI are found within:

Organizational processes:

Operational Excellence, Performance Management, Continuous Improvement, Training

Business systems:

ERP, Supply Chain Management, CRM, Customer Success, Financials

Product Innovation:

Product Lifecycle Management, PBA, PPM



As discussed, AI is not a “solution” that you buy from one vendor. It is an evolution of business that enhances competitiveness through growth, innovation, efficiency, and effectiveness. Much the way mechanization, automation, and computers were progressive improvements in business, AI promises to take us to the next level.

For a deep dive into the quantified and strategic benefits across your business, and how you can achieve top-line and bottom-line growth, as well as optimize the effectiveness of your assets – fill out the form below to receive the full resource document “Artificial Intelligence Value Impact.”

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