EPICOR

What Business Leaders Need to Know About AI

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Artificial Intelligence (AI) is fast becoming a critical component of business operations for manufacturers. As AI becomes more established, manufacturing executives need to keep pace by understanding its implications and potential benefits. At its core, AI is the simulation of human intelligence in machines that are programmed to think and learn.

At Epicor, we're developing more than just a chatbot. Epicor Prism is a network of vertical AI agents that utilize the power of large language model (LLM) services. Prism is already available in Epicor Kinetic, our global cloud ERP for manufacturers, and our long-term vision is for Epicor Prism to serve as the user interface for LLM-enabled processes across all Epicor ERP platforms.

What will this look like? The components or capabilities of Epicor Prism are called agents; these agents align to a specific task the user asks Prism to complete. A user prompt may activate a single agent or multiple agents to produce the desired outcome; the user does not have to know which agent to use or choose an agent. Prism takes care of the selection process, helping new users become proficient quickly while empowering superusers to get more done.

With this process in mind, let's look at how AI can be applied to your business and how to implement an AI strategy. With the right measures in place, you can help ensure a successful implementation of this revolutionary technology.

> **"To truly reap the benefits of artificial intelligence, executives need an understanding of how AI systems operate and what they do well."**
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> What executives need to know about AI, Kristin Burnham Oct 21, 2024, MIT Sloan School

Applying AI to Your Business

AI can help optimize operations with capabilities like analyzing supply chain data to predict demand fluctuations. This will enable you to anticipate and adjust fluctuating inventory levels appropriately. Manufacturers using AI will also be able to forecast equipment failures, reducing downtime and lowering maintenance costs.

With AI, your team can analyze large amounts of data to generate actionable insights. These AI-powered analytics will help your business forecast trends, assess risks, and make more informed decisions. Finally, AI can enhance customer interactions using chatbots and virtual assistants that provide instant support to your customers for frequently asked questions. At Epicor, we're moving beyond the chatbot. Instead, we're using AI to power an intelligent partner to help you find the relevant, context-driven information you need when using the ERP system.
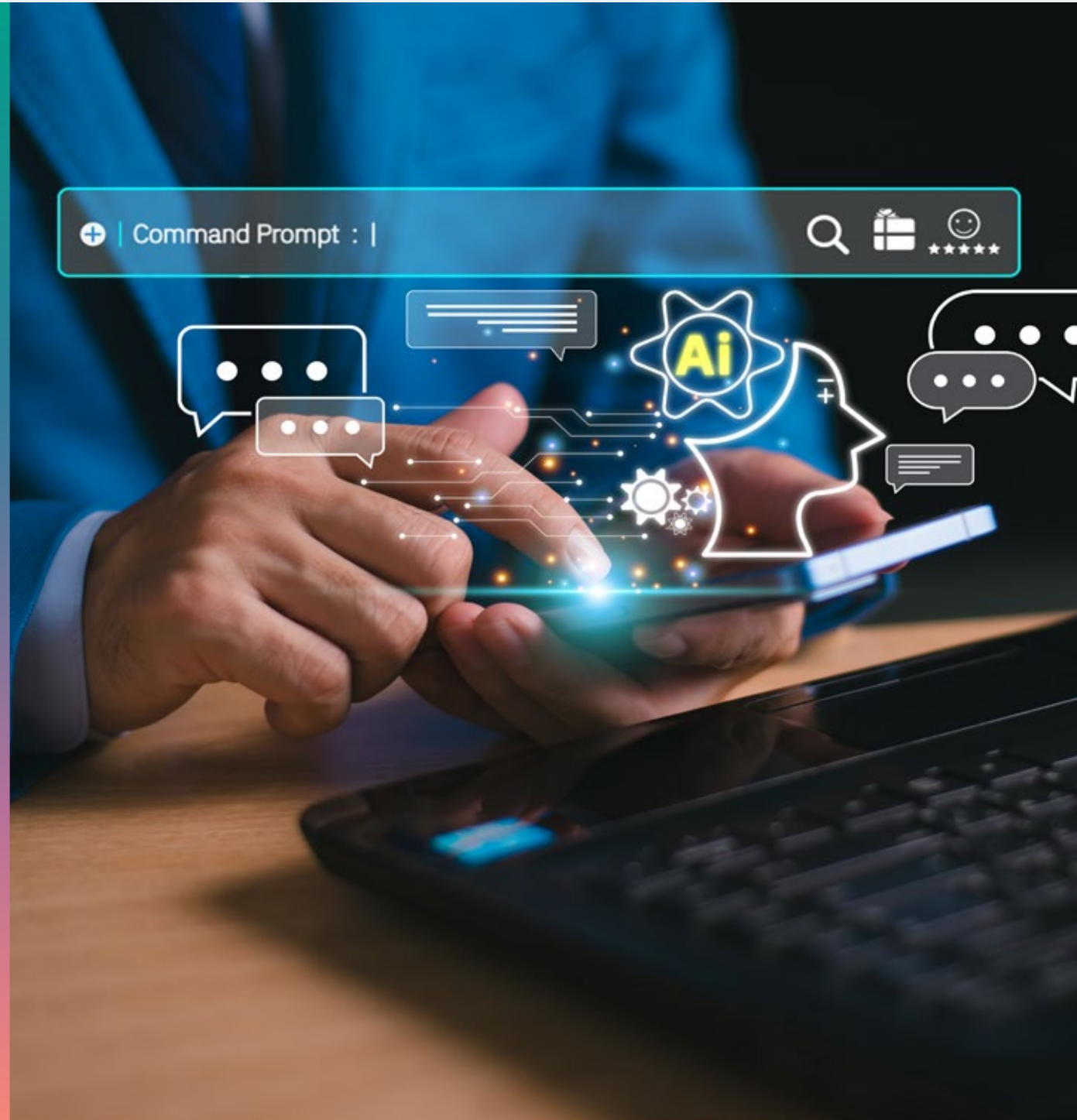
Implementing AI

AI systems rely on high-quality data to operate effectively. When data is inconsistent or incomplete, it can contribute to inaccurate predictions and flawed decision-making. Therefore, forward-looking organizations should prioritize data management and governance to help ensure the success of all AI initiatives.

Even ground-breaking technology can come with a side of initial reluctance from your workforce. After all, introducing AI will impact existing workflows and processes, which may lead to resistance from employees. To help boost employee confidence, manufacturing leaders should cultivate a culture of flexibility while also providing training to help staff understand and embrace the benefits of emerging technologies.

The deployment of AI also brings ethical considerations, particularly around data privacy and bias. Manufacturing leaders should address these challenges by establishing ethical guidelines and underscoring transparency in all AI-based decision-making processes. Understanding how AI will use your organization's data is another question business leaders will need to answer. Epicor implements a policy that governs what tools we use and how we use them for LLMs. This policy helps ensure that customer data is protected, is not used to train LLMs, and does not interface with other Epicor customer data.

AI Terms Explained

Artificial intelligence

Artificial Intelligence (AI) is a system capable of performing tasks that typically require human intelligence; these include learning, reasoning, problem-solving, perception, and language understanding. AI encompasses several branches, with Machine Learning (ML) being one of the most prominent. ML involves training algorithms on large datasets to recognize patterns and make predictions or decisions without explicit programming. Although AI is made up of a wide range of approaches like rule-based systems and expert systems, ML relies on statistical methods to enable machines to improve their performance over time without being explicitly programmed for each task. In essence, all ML is AI, but not all AI is ML.

Other key branches of AI include natural language processing (NLP), which enables machines to understand and generate human language; computer vision, which allows machines to interpret and process visual information; and robotics, which involves designing intelligent agents that can interact with the physical world. AI's applications span various industries, driving innovation and efficiency across vital sectors like healthcare, finance, manufacturing, and retail.

Agentic AI

Agentic AI refers to artificial intelligence systems that possess the ability to autonomously make decisions, plan, and execute tasks to achieve specific goals. Agentic AI networks use sophisticated reasoning and iterative planning to solve complex, multi-step problems without requiring constant human intervention.

This technology helps businesses gather and process data from various sources, analyze challenges, develop strategies, and take actions based on its analysis. This makes it highly valuable in applications such as supply chain optimization, cybersecurity, and personalized customer service. By continuously learning and adapting from its interactions, agentic AI improves over time, enhancing its effectiveness and efficiency.

Large Language Models (LLMs)

A large language model (LLM) is an advanced artificial intelligence system designed to understand and generate human-like text based on vast amounts of data. These models, such as OpenAI's GPT-4, are trained on diverse datasets, enabling them to perform a wide range of language tasks like translation, summarization, and conversation. They are valuable tools for manufacturers, as they can enhance customer service, automate content creation, and provide insights through their natural language processing capabilities.

Retrieval-Augmented Generation (RAG)

Retrieval-augmented generation (RAG) is a technique of searching for information and then handing it to a large language model, in order to help the LLM answer a question with the relevant contextual information at hand. Unlike traditional LLMs that rely solely on their training data, RAG retrieves relevant information from authoritative databases or knowledge bases, helping to ground its responses in accurate, up-to-date facts. This approach improves the reliability and relevance of the generated content, addressing common issues that can affect LLM queries like outdated information and hallucinations. By combining the generative capabilities of LLMs with precise retrieval mechanisms, RAG can produce more trustworthy and contextually appropriate outputs.

Executing for Success

Establishing how you will align your AI use with the values of your company, customers, and stakeholders is a vital step to take before introducing new AI tools into your business. These steps can help with a seamless transition:

1. Gain experience in your own work. By learning how to apply AI technology to your work, you can better guide your team in developing an AI strategy for the company.

2. Approach using AI for the first time as an experiment and an investment in the future of your business. AI can indeed be transformative, but it is also an innovation that requires critical thought. Start with an experimental phase, learn, implement a few ideas, and share feedback before moving on to the next phase.

3. Get others involved. Encourage people to start using AI in their work. Coordinate with your IT team on the technologies to use and their accompanying guidelines, but make sure your workforce is interacting with the AI and developing ideas on where and how it can help them do their jobs better. As you bring AI into your organization, it's vital that you put guardrails in place to guarantee the privacy of the company's data. Another option is to introduce a "pilot" cohort—designate a small group of first-time users that can be expanded over time.

4. High quality data is the foundation of AI—or, as some leaders see it, data is the new oil. It takes time to extract it, refine it, make it available, and learn how to best put it to use. And data is more accessible now than it ever has been in the past. In light of these developments, it's essential to develop a plan with your team for how you will bring in new sources of data, validate and refine it, and make it accessible to the appropriate departments. Your plan for data should follow your strategy and goals for the company. Does this strategy include objectives to expand operations into new regions, bring on new product lines, or improve customer satisfaction? If so, then look at acquiring new data sources that will align to your strategies.

Don't forget that one of the most valuable sources of data you have is your ERP system. In most companies, this system is the lifeblood of the organization and the most reliable source of data you have. AI applied to ERP data can open many new doors to decision making and market analysis.

5. AI will improve experiences for employees and customers. The ability to automate work can help reduce costs that are typically passed on to customers. AI will give you capabilities to automate mundane tasks, improving employee productivity and boosting job satisfaction. Ask your team to explore ways of automating those manual tasks that have traditionally slowed productivity and kept them from focusing on more strategic goals.

6. Establish the ethical policies around data oversight, security, and privacy that will govern the use of AI in your business. It's essential to develop clear policies on how AI will be deployed and used in a way that is fair, transparent, and accountable; for this reason, choosing AI providers with ethical and safety standards that align with your own is important. In many cases, you are not the one applying the alignment or the guardrails around the AI model.

The Future is Here

How you align your use of AI with the values of your organization, customers, and stakeholders will be important to establish before you get too far along in bringing AI into daily use in the company. AI will give you the competitive advantage of optimized operations, along with your team's ability to analyze large amounts of data that generate actionable insights. And with Epicor Prism, you'll also gain an insight advantage that amplifies the capabilities of your employees—creating long-lasting value for your business.

To learn more about Epicor Prism, visit our website at
Artificial Intelligence | Epicor U.S. and Canada.

Epicor Prism

We're here for the hard-working businesses that keep the world turning. You're the companies that make, move, and sell the things we all need. Trust Epicor to help you do business better. Your industry is our industry, and we understand you better than anyone. By working hand-in-hand, we get to know your business almost as well as you do. Our innovative industry solution sets are carefully built to fit your needs and respond flexibly to your fast-changing reality. We accelerate ambitions, whether you want to grow and transform, or simply become more productive and effective.

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