

Center for Digital Transformation

Lessons from AI-Savvy Companies

Businesses will need to be adaptive and engage in experimentation as they adopt and scale AI.

Though it may seem like artificial intelligence arrived overnight, many businesses have been working with the technology for years.

Companies like Boeing and Rivian are using machine learning to create autonomous flying and driving systems. Private equity giant Blackstone has developed a central machine learning and data science capability that it deploys across its many portfolio companies

Building Autonomous Systems

James Philbin's company is at the forefront of the AI boom. At the 2023 Center for Digital Transformation conference, the Vice President of Autonomy and AI at automaker Rivian discussed the different ways his company is deploying AI in its vehicles, including safety and highway assist features.

Highway assist is when the computer takes control of the car. Philbin described this as a "robotic agent" that perceives its surroundings using cameras and radars that it uses to predict the future, build a plan, and execute commands to move the machine through the world. This uses machine learning and AI.

He emphasized the importance of continuous learning. "There's a sort of performance decay if you're not updating these systems over time," said Philbin. "The quality will decline because the world is changing quickly and you're not adapting the system to the world. So I think you really have to embed this continual improvement mindset that the product isn't ever done."

Rivian is distinctive from other automotive companies in that it produces the software that goes in its vehicles. Philbin pointed out that it's difficult for other companies to quickly integrate AI and machine learning because they have a variety of suppliers that would need to get on the same page.

Aside from self-driving cars, AI is also being used in airborne vehicles.

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Lessons from AI-Savvy Companies (cont.)

Boeing, the world's largest aerospace company, is not new to machine learning. Mark Leiter, Chief Digital Strategy Officer for Boeing, said that the technology is threaded through a lot of the company's work including autonomous flight vehicles, factory automation, and enterprise systems.

Leiter described one of the more exceptional applications of AI as a completely autonomous electric flying vehicle that can seat up to four passengers. He also spoke about autonomous fighter jets that act as a force multiplier.

"This showcases where we are going," Leiter said. "Imagine you're a terrorist organization and all of the sudden 2,000 of these things fly over your head. That probably makes a big impression."

The sophisticated machinery is put together by a similarly sophisticated system. Leiter described the factory automation process where materials are carefully assembled by intelligent robotics.

The company also recently announced Boeing Conversational AI, which uses publicly available gen AI systems while safely handling proprietary data.

"This is a game changer for us," Leiter said. "We initially rolled it out to 12,000 executives and managers but we are going to roll it out more broadly over time. This is another way of giving people a very versatile tool with very high ROI."

Core Competence

With data being such a crucial component of AI, Blackstone is quickly growing a significant team of data scientists. Matt Katz, Senior Managing Director and Global Head of Data Science at Blackstone, said data scientists are crucial change agents within organizations.

"As we thought about building our team and our goals, you have to understand stats and be able to build models," Katz said. "But you also have to be really passionate about business and really drive a culture of influence."

Katz believes companies should strive to be proactive and intentional with their integration of AI. Blackstone's team is actively learning, which provides the company with an advantage over businesses that aren't accelerating the analytical and adoption process.

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Lessons from AI-Savvy Companies (cont.)

To aid companies with this goal, Katz said Blackstone is aiming to build intellectual property that businesses can rapidly deploy to drive improvement in the areas of pricing, forecasting, and sales.

While a lot of businesses use static pricing, Blackstone has had tremendous success with dynamic pricing strategies driven by machine learning models. Similarly, forecasting through a purely statistical approach can provide companies with an advantage over others that rely on a different “operating cadence.”

“We are really addressing what are the capabilities that we can build centrally so that companies can really accelerate growth,” Katz said.

AI at Scale

Hitachi has been significantly investing in AI and applying the technology across the company in factory automation, robotics, and predictive and proactive maintenance. The company has more than 4,500 AI and analytics patents and has invested over \$3 billion in research and development.

“It’s very much part and parcel of everything that we do as a company,” said Gajen Kandiah, CEO of Hitachi Vantara and President of Hitachi Digital.

The company is also experiencing productivity gains from generative AI. Hitachi leadership has mandated generative AI across the organization, which has led to a spirit of experimentation and curiosity in the new technology.

Hitachi has adopted an adaptive learning framework to educate employees about the ins and outs of generative AI. Within this system, employees learn competency in generative AI and how it can be applied in a given work area.

“We are looking at accelerating but doing so within an adaptive framework to be able to deploy it in a way that people can learn and understand it,” Kandiah said. “There’s people stepping up and following through, but it’s been a lot of heavy lifting.”