HPE GreenLake

What is the true business value of AI?

Organizations can use artificial intelligence to streamline processes and supercharge profits — but only if they have the right data, skills, and business objectives.

The drive to build smarter artificial intelligence (AI) tools has become the new space race. The introduction of generative AI tools has captured the public's imagination and the attention of corporate boards. Every organization wants its AI to boldly go where no other AI has gone before.

The growth of generative AI has been explosive since its debut. According to a McKinsey report, 40% of C-suite executives said their organizations plan to increase their investment in AI because of advances in generative AI.[1]

As AI rapidly evolves, organizations across all industries realize the urgent need to stay ahead of the competition by harnessing its potential. But in a recent study that surveyed tech leaders on where they are in their AI journeys, 44% reported they were still in the technology's early pilot phases.[2] Clearly, many see a long road ahead in terms of speeding time to value for their early AI projects.

Despite all the hype and excitement over new generative tools, AI is not a new phenomenon, says Jordan Nanos, an AI architect at Hewlett Packard Enterprise. Rather, it's the natural evolution of high-performance computing, data analytics, and other technologies that have been in development for decades. And because AI excels at performing repetitive cognitive tasks, it's an ideal fit for automating business processes across every industry.

"Businesses care about three things: making money, saving money, and lowering risk," says Nanos. "Artificial intelligence can help by improving the quality of products and services, reducing the cost of producing the product or service, and greatly reducing human error."

[1] "The state of AI in 2023: Generative AI's breakout year," McKinsey & Company, August 2023

[2] "The artificial intelligence journey: Stories from the trenches," HPE, February 2024

How AI drives business processes

By applying AI to their proprietary data, organizations of all types are uncovering new ways to boost revenues, trim costs, and minimize risk.

For example:

- By feeding an AI model images of automobiles, lane markers, hazards, and the like, automakers have developed software that allows vehicles to recognize and react to changing road conditions faster than most humans.
- Industrial models analyze sensor data generated by manufacturing equipment. They can identify changes in the data that indicate impending failure and flag machines for predictive maintenance, avoiding unplanned and costly downtime.
- By analyzing billions of legitimate transactions, models in the financial services industry have learned how to identify and prevent fraudulent activities in real time.
- Biopharmaceuticals, energy, consumer packaged goods, and other companies that rely on scientific research are using audio transcription models to record conversations with internal experts, enabling them to preserve and share institutional knowledge.

In short, AI can be applied to an infinite number of common processes, but it needs to be done in a way that demonstrates immediate value to the organization. That requires project teams to work closely with decision-makers to clearly define desired business outcomes, acquire the data and skill sets required to make it happen, and show a tangible return on investment.

1. Establish a clear business goal

The first step is to establish a clearly defined, easily measured business goal for your machine learning project, says Jaideep Joshi, an AI architect at HPE. “For example, you may want to reduce waste in your manufacturing line or unplanned downtime,” he says. “You won’t be able to use AI to reduce waste by 100%, but you might be able to cut it in half. Now, you have a simple business goal and a way to measure your success.”

Early collaboration among data scientists, technology specialists, and business leaders is an essential ingredient to success. “The most common thing that goes wrong is when the AI team doesn’t talk to the businesspeople in enough depth to actually understand how they intend to use the predictions the model makes,” says Nanos. “You’ve got to match the prediction to an existing business process.”

2. Make sure you have access to high-quality data

"If AI is the rocket, then data is the fuel that propels it," says Nanos. "From stock tickers to sensor readings, clickstreams to weather measurements, the world is shifting from using historical data to real-time data sources, and nearly all of it is generated by machines, not humans."

One key to making sure your AI projects achieve launch velocity is to ensure you have access to the data needed to train and implement the model. According to the aforementioned HPE research, getting data infrastructure in order is one of the top challenges tech leaders face. The primary reasons cited were that data is too siloed and teams didn't have the right amount of data.

"Look at the data you have access to and see how it relates to the problem you're trying to solve," says Joshi. "Is it the right data? Is it high quality? Is it available in the correct format, or do you need to create a new mechanism to ingest it? Can you simply collect the data, or do you need to find someone who can give you access to it? These are all questions you need to answer before you can even begin."

Nanos emphasizes that data must be of sufficient quantity and quality, meaning it needs to meet the **four V** requirements:

- **Volume:** To accurately train the model, you need data in sufficient amounts.
- **Variety:** To increase predictability and reduce bias, the data needs to be collected from multiple reliable sources.
- **Velocity:** As the business world shifts to real-time decision-making, data sets need to contain the most current information possible.
- **Veracity:** The data needs to be trustworthy.

He advises organizations to identify proprietary data that gives them a competitive advantage and then look at common applications that have been developed using similar data. "Identify exactly how those applications can be applied to your business, then prioritize based on the quickest win," Nanos adds.

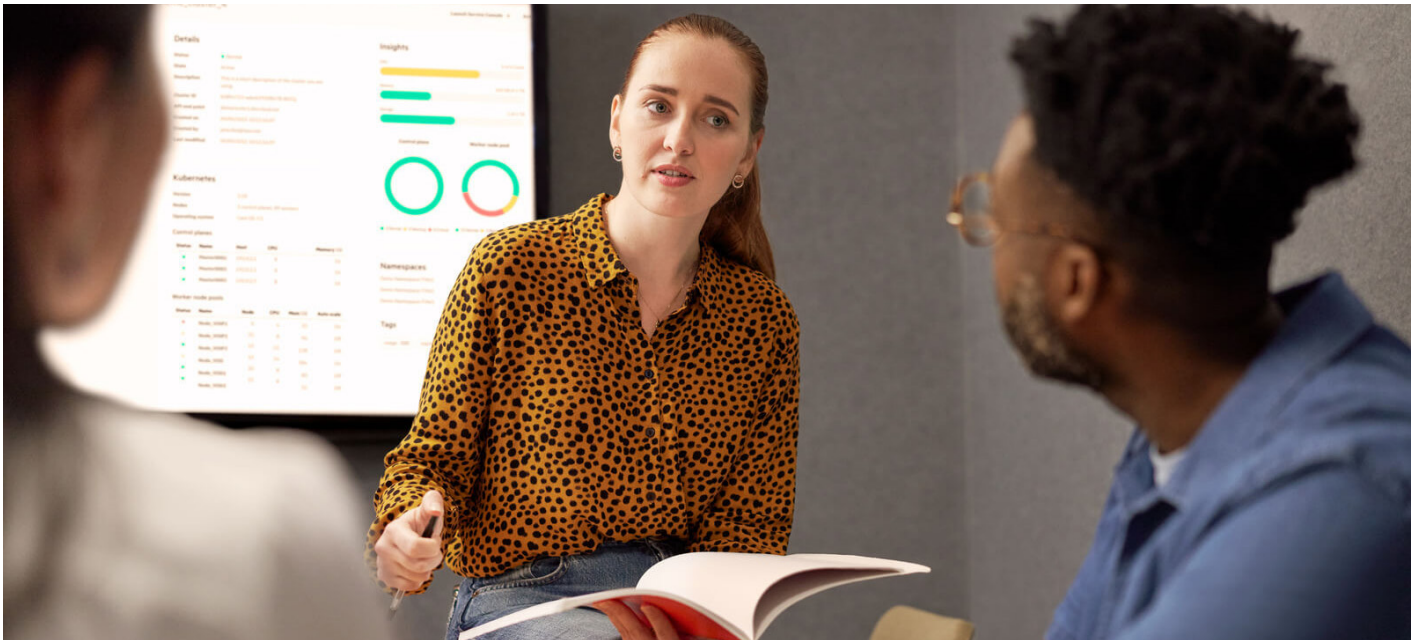
3. Seek out people with the necessary skills

One of the biggest challenges AI project teams face is a lack of appropriate skill sets within the organization. "People in an organization may possess a lot of knowledge about a manufacturing or processing system, but that doesn't necessarily translate into IT knowledge and skill sets," Joshi says. "There is often a gap, which may mean the company needs to acquire people with relevant skills or outsource some of the work."

He adds that enterprises can improve their ability to overcome the skills gap by leveraging legacy systems when possible and using open source tools, where the pool of people with appropriate expertise is likely to be larger.

However, the more advanced an organization is in its AI projects, the more likely it is to look at external partners for help in implementing them. Providers of artificial intelligence as a service (AIaaS) offer specialized solutions designed to meet the unique requirements of specific industries. The AIaaS market was valued at $9.7 billion in 2023 and is estimated to register a compound annual growth rate of over 33% between 2024 and 2032.[3]

[3] "Artificial Intelligence as a Service Market," McKinsey & Company, January 2024



4. Keep it simple, at first

Many projects never get off the ground because their sponsors are trying to tackle too much, too quickly, says Joshi. Organizations can be too ambitious in their goals and scope, which can lead to delays, political infighting, and a failure to demonstrate immediate value.

Taking a simpler approach to implementing AI workloads is the best way forward. "Anything that involves complex integration is not something you want to take on right off the bat," he says. "If a model requires you to tap into eight systems, that's too complicated and involves too many stakeholders. They may not see the same value in the project as you do, or they may have ethical, legal, or compliance impediments."

Joshi says it's better to start small, collaborating with one or two business units that are open to experimenting with new technologies. "Go for quick wins, but involve a smaller target team," he suggests. "If you try to involve HR, payroll, and other departments dealing with personal information, you may run into a quagmire."

Joshi also advises organizations to build on top of an ultra-scalable architecture that uses the most advanced GPU and data acceleration products, which will help to optimize the tuning and inference process.

5. Demonstrate value early and often

"A lot of AI projects fail because they don't return value within the first year," Nanos notes. Executives can lose confidence in the project. They may feel it's not producing reliable predictions or it's too risky to implement.

He says to measure the success of a project, you need to answer three questions:

- Did the business make more money by improving quality?
- Did it save money by reducing overhead?
- Was it able to reduce risk over time by making processes more predictable?

A well-planned, sufficiently advanced project should achieve all three objectives, according to Nanos.

Joshi adds, "Value is literally the realization of a business goal, whether that's reducing waste, improving productivity, or boosting revenue. Any AI project needs to translate into something tangible."

But adopting AI brings ancillary benefits to the business that go beyond ROI, Nanos says.

"The pursuit of an AI project brings technology people and businesspeople together in a meaningful way that's not always easy to measure," he says. "For example, if you go through the process of learning how a fraud model works in your existing business, the people involved learn about fraud at a much deeper level. They also learn a lot about how the business uses technology, which can improve many other things beyond the use of AI."

Consider a partner approach to speed time to value

AI requires a huge amount of compute power and not every company has the resources or desire to build these technologies themselves. Edge-to-cloud providers like HPE are increasingly offering AI-at-scale products that help organizations efficiently maximize their AI initiatives, optimize infrastructure costs, and ensure data is reliable and secure no matter where they are in their AI journey.

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