



Uncovering data's hidden insights

Transforming your business with
AI/ML and analytics

Get started [>](#)



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Uncover insights in your data with data-first modernization

Data is the life force and fuel driving modern businesses, where those adept at uncovering insights from their data have an advantage over those who are not. And for those falling behind, catching up is becoming even more challenging because the sheer amount of data businesses generate has begun to proliferate, spanning across the edge, core, and cloud. But it is also because of the complexity of transforming a business that simply has an abundance of data into a data-first business that has a single, unified data source to fuel predictive analytics and AI/ML initiatives. Combined with the ability to enable its data users, those who use data insights to advance the business, with the tools and resources to get the most from the data.

The right strategy is needed to encompass everything from bringing about data unification to building capabilities in data analytics and AI/ML initiatives to empowering data users. That's why you need a strategic path to create a single, unified data source for your organization, which can fuel analytics insights and AI/ML initiatives at scale.

To help businesses uncover the insights they need, Hewlett Packard Enterprise has developed a data-first modernization strategy. It elevates data as the preeminent organizing principle for the business, where they focus on applying the right resources to cultivate, connect, manage, analyze, and act on data wherever it lives to uncover hidden insights. A data-first strategy lays the groundwork for your business to derive both analytics insights and support for your AI/ML-driven insights and initiatives.



98%

of organizations say they are using AI/ML in some capacity.¹

¹ [The AI journey—Going from practical to transformative](#), HPE and Emerald Research Group, 2022



Accelerate your data-first journey

Analytics tools and AI/ML can use the same data differently to support business and business processes. Remember, analytics tools examine data sets to identify patterns and relationships, and then present the patterns in dashboards. Analytics help companies learn what has happened. AI/ML, by contrast, facilitates business processes in an autonomous and automated manner, without human intervention. It creates actionable insights by prescribing the best course of action, going beyond predictions of what could happen. The technology to use depends in part on the business outcomes you need and on the skills and experience of your team.

Regardless of where you are in your transformation journey, HPE Advisory and Processional Services experts can guide you through complex decisions and help you succeed in data-first initiatives. The experts help you understand the data, people, process, and technology challenges along the way—in particular, HPE helps you through two critical landmarks on the path to becoming a data-first business:

Establishing a unified data analytics source and platform strategy

Scaling AI/ML from pilot to production with flexible consumption options

Start with a tailored workshop to make the case and align your key stakeholders, quickly pilot your AI/ML, develop analytics use cases, assess your data capabilities, or design your data platform solution along with your consumption options.



Create a single, unified data source for analytics

Implementing a unified analytics strategy presents a common set of challenges. Data siloes strewn across data estates impede data access and slow down time to insights, prompting organizations to look for a simplified approach to data access. Moreover, if data engineers and scientists face too many restrictions on the tools they can use, they will not be as productive. And data teams looking to migrate from their existing solution to something more cloud-native may find themselves moving from one proprietary platform to another. Additionally, they may see significant value in the flexibility of using open-source tools but are concerned about the complexity associated with using open-source systems.

The HPE data-first modernization approach addresses these concerns with a unified analytics solution. For example, HPE delivers a simple, unified, and secure data experience built on automation and orchestration that enables you to deploy and move applications to any platform. This is not about placing all your data on a single platform. Rather, it means that access patterns are unified, simplified, and automated so that your experience is consistent across any environment. In this solution, connectivity to backend systems is automated for each user, and each user can securely access the data they need without violating data locality, governance, or compliance regulations.

HPE can also help you accelerate development for data analytics, engineering, data science, and business intelligence (BI) teams with a solution that can provide direct access to different data types, as well as their preferred set of open-source tools, frameworks, and apps.

And when it comes to the proprietary solutions trap, the HPE advisors help you make technology choices that won't lock you in or increase technical debt. The advisors also help ensure you retain the freedom to move any app or workload to another infrastructure or cloud without reformatting or rewriting apps. Establishing an agile, open-source environment improves data science and analytic teams' productivity in multiple ways, such as by accelerating app development with self-service access to the tools that data teams prefer to use. By eliminating the need to learn a new tool, they can work faster, which makes insights available to the business faster.

By unifying analytics, HPE provides freedom and flexibility to address the needs of business and analytics users through a simple, cloud-like user experience without the trade-offs that come with proprietary solutions. What's more, the unified data source you create for analytics also serves to enable AI/ML-driven insights.

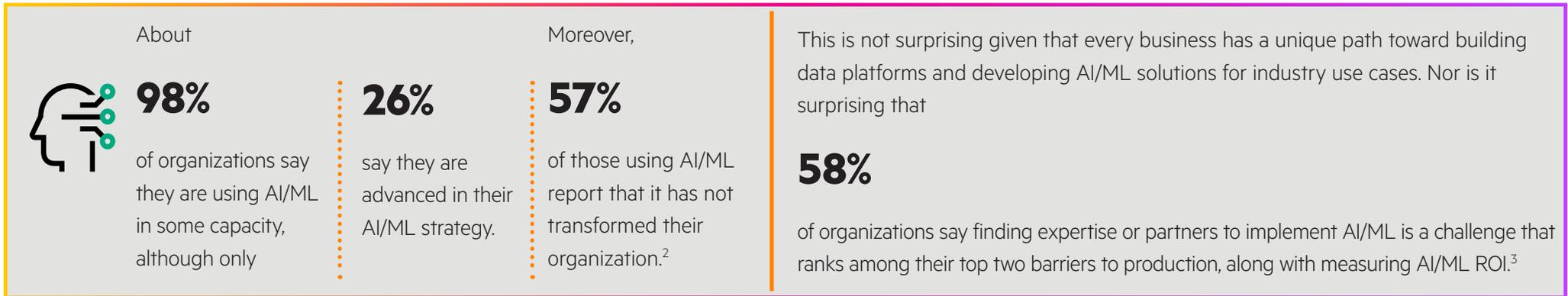
Key benefits of creating a single, unified data source for analytics

- **Unify global data**—Unifies global data sets and decision-making processes to get you to your end goal faster.
- **Freedom of choice**—Choose from curated open-source stacks pre-built into Jupyter notebooks, download from HPE GreenLake Marketplace or bring your own tools.
- **Hybrid security made simple**—Centralized management across data, storage, security at the application level reduces the need for separate infrastructure for each tenant.



Advance with AI/ML

AI and ML are no longer new to the IT, developer, or data teams.



As such, achieving success when it is time to scale your ML models from idea to impact requires the right expertise and a system purpose-built for AI/ML.

HPE provides options including a turnkey solution that combines model training and development software with high-performance computing (HPC) in an optimized AI/ML infrastructure. The solution includes accelerators backed by expert installation and support services and is performant out of the box, ready for model training and development on Day 1. Features such as distributed training help perform ML across GPU clusters without rewriting code or restructuring infrastructure while automated hyperparameter optimization lets you automatically find and train more accurate models faster. This massively flexible architecture is the foundation to increase accuracy, reduce bias, and scale AI/ML models while remaining agile with the needs of the business. Ultimately, performing AI/ML at super computing speed in a flexible consumption model.

In short, it allows you to link your data-first modernization strategy and implementation with AI/ML model development to help achieve your business outcomes.

^{2, 3} [The AI journey—Going from practical to transformative](#), HPE and Emerald Research Group, 2022



Scale AI/ML from pilot to production

Increase accuracy and reduce bias in AI/ML models

There is limited value in moving your AI/ML model past the proof-of-concept (POC) stage until you have maximized its accuracy. The quality of the training and data that the model works on influences the degree of AI/ML model accuracy. At times, you may not be able to use high-quality data because of challenges in data privacy and data ownership rules, regulations, policies, and constraints.

HPE helps you increase accuracy and reduce bias in AI/ML models with a decentralized, privacy-preserving approach that enables ML model training at the data source, where it is generated. This approach enables you to access distributed and siloed data without violating data privacy or ownership regulations. Additionally, performing the model training in the original place (where the data resides) ensures that only data learnings are shared, not the raw data, reducing data transfer or duplication and improving efficiencies, which becomes increasingly important as you scale.

Scale AI/ML and remain agile with the needs of the business

As your AI/ML model development and training scale to meet the needs of the business, you may find that you need access to HPC and supercomputing. This presents a distinctive set of challenges, such as integrating HPC or supercomputing AI/ML with existing infrastructure.

HPE can help you overcome these challenges with approaches such as deploying a collaborative AI/ML experiment tracking platform for data science teams and running AI/ML workloads alongside traditional HPC/supercomputing workloads on heterogeneous HPC infrastructure to reduce the complexity of that integration. This in turn can help you overcome difficulties that often hinder AI/ML growth and training because you can more rapidly scale your AI/ML model with minimal code rewrites or infrastructure changes. You will be positioned to focus on driving innovation and uncovering insights rather than managing infrastructure.

Next-generation AI/ML at supercomputing speed, with flexible consumption

As AI/ML models get larger and organizations move their models from POC to production, opportunities arise to bring AI/ML and supercomputing teams and infrastructure together for a better system and workload management. Against this backdrop, the supercomputing technology transfer from exascale public/private partnerships to enterprises is accelerating. This acceleration is being spurred on by improved, economically viable supercomputing flexible consumption models and the need for an infrastructure to support the explosive data growth resulting in billions of parameters needed for AI/ML models.

Running mixed workloads consisting of supercomputing applications like simulation combined with AI/ML model development and training, therefore, need not be a challenge. HPE has AI/ML and supercomputing experts who can help you address issues ranging from cost, workload monitoring, application interaction, and application scheduling to the management of the operating system, containers, and accelerators. In other words, the data-first modernization strategy from HPE can show you the path to consuming supercomputing infrastructure in a flexible consumption model that can make even the most compute-intensive AI insights cost-effective.



Uncover insights in your data with data-first modernization

Accelerate your data-first journey

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Advance with AI/ML

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Let data-first modernization help you uncover hidden insights

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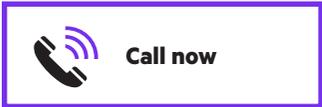
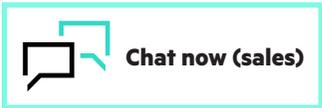
Deriving insights hidden in your data isn't easy. Businesses today generate unprecedented amounts of data across edge to cloud, hindering efforts to use that data to fuel analytics and AI insights. Data users often lack the tools and resources they need to drive innovation. And IT organizations often lack the internal resources and skills to manage the complex and evolving analytics and AI/ML ecosystem and infrastructure that would enable them to successfully meet business outcomes.

HPE has developed a data-first strategy that can bring about the data-first transformation your business needs. The HPE data and AI experts help you make strategic decisions relating to the data, people, process, and technology challenges that are keeping insights locked in your data while helping you consume your data, AI/ML, and analytics workloads in a hybrid cloud. Our solutions can help you arrive at key waypoints on your journey to becoming a data-first business, such as creating a unified data analytics source and scaling AI/ML from pilot to production. With the HPE data-first modernization strategy, your business can unlock both the analytics insights and AI/ML driven insights and initiatives used to propel your business forward.

Learn more at

Creating a single, unified data source for analytics with [HPE Ezmeral unified analytics](#)
Move AI/ML from pilot to production with [HPE Machine Learning Development System](#) and [HPE Swarm Learning](#)

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