

Setting a New Course: How To Unlock More Value From Data and AI Investments



Being **data-driven** is a rallying cry for modern business, yet too few organizations are consistently leveraging the mantra to achieve measurable outcomes.

The challenge isn't lack of data or dexterity with advanced analytics. It's that many leadership teams are still struggling to build and maintain robust yet flexible data management foundations—which is significantly impeding efforts to unlock value from emerging data and AI initiatives.

Across industries and in companies of all sizes, investment in big data and AI initiatives is surging, fueled by a desire to drive innovation and deliver more compelling customer and partner experiences. IT and business leaders see powerful potential in the combination of data and AI to drive

operational efficiencies, lower costs, and create a foundation for new business models. The [2021 NewVantage Partners Big Data and AI Exec survey](#) found investment in big data and AI to be ubiquitous, cited by 99% of respondents, while 92% of respondents said the pace of investment is accelerating.

Despite the focus and investment, however, many organizations still struggle to wring more value out of their data, AI, and analytics initiatives. Leadership teams may find themselves at a crossroads, grappling with how to align data strategies to core business objectives, spin insights into action, and shift organizational culture. The 2021 NewVantage

Partners survey illustrates several lagging efforts to create sustainable business advantage using data:

- 24% have created a data-driven organization, a decline from 38%
- 24% have forged a data culture, down from 27%
- 39% are managing data as a business asset, a decrease from 50%
- 42% are competing on data and analytics, a decline from 45%

- 48.5% are driving innovation with data, a fall from 59%
- 29% are achieving transformational business outcomes
- 30% have developed well-articulated data strategies for their companies

Why can't more organizations unlock the value of data and AI?

What's driving the disconnect between AI and data investments and tangible results? Like many transformation imperatives, it comes down to a confluence of factors, from the sheer complexity of the data landscape and IT infrastructure to the reluctance of organizations to methodically embrace change.

“Compared to infrastructure or applications, data is a more complex environment to manage because it's constantly changing,” explains [Naveen Kamat](#), Executive Director, Data and AI Services at Kyndryl. “It's not like

deploying a monitoring or performance management tool and then you're done. Data is more dynamic and complex, and requires an end-to-end view as well as management on an ongoing basis.”



The Reality of Today's Enterprise Data Estate



Consider the contributors to a challenging enterprise data estate:

Data silos and sprawl: Data is locked in legacy systems and information silos, many of which are difficult to modernize. As a result, critical data remains out of reach of many advanced data analytics and AI-enabled initiatives. There also is no single source of “truth,” since data is distributed across different, disconnected data platforms.

With the landscape littered with unorganized data swamps and tool sprawl, the ability to automate the data pipeline, operationalize analytics and decision support workflows, and unlock value from analytics and AI is seriously impaired. “Companies have investments in data platforms, tools, and applications, and are inclined to keep things the way they’re currently structured,” Kamat says. “That stickiness causes a lot of concern about the impact of moving to a different architecture or a more modern data platform.”

Increased complexity: The rise of hybrid and multi-cloud infrastructure has created new layers of IT complexity that make it costly and time-consuming to manage end-to-end data management and AI workflows. With data proliferating across data warehouses and data lakes, and from the cloud to the edge, there is a lack of data lineage and consistent data quality standards across the distributed data estate. This makes it difficult to channel the right data to solve specific business problems.

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In addition to the sprawl of structured data, there is unprecedented growth of unstructured data from audio, video, clickstreams, and social media, further

clouding visibility and increasing the data management burden. “Without a clear inventory of data assets, any data and AI initiatives start on shaky ground,” says [Satya Prakash Chinnam](#), Lead Offering Manager, Data and AI Services at Kyndryl.

Integration in the spotlight: The legacy data estate raises a host of integration challenges, with issues such as “data gravity” making it difficult to easily move information from one platform to another. IT teams need to define an integration blueprint for bridging diverse data platforms and sources while ensuring those connections are forged with the proper security, privacy, and data access controls to remain in compliance and mitigate risks.

Lack of governance: A central tenet for data modernization is governance, and many organizations lack the tools, structure, management commitment, and know-how to establish, evolve, and enforce a formal data governance framework. Without consistent policies, processes, and an organizational structure to support enterprise data

management, teams can struggle to scale data initiatives and groom data so it's actionable for driving analytics initiatives and accelerating growth.

Example: A [Deloitte study](#) of AI adopters found that businesses struggle with data management basics, including preparing and cleaning data, integrating data from diverse sources, training AI models, and tackling data governance. The survey found 40% of organizations reported a “low” or “medium” level of sophistication across critical data practices, while close to one-third of executives identified data-related challenges as a top-three inhibitor to AI initiatives.

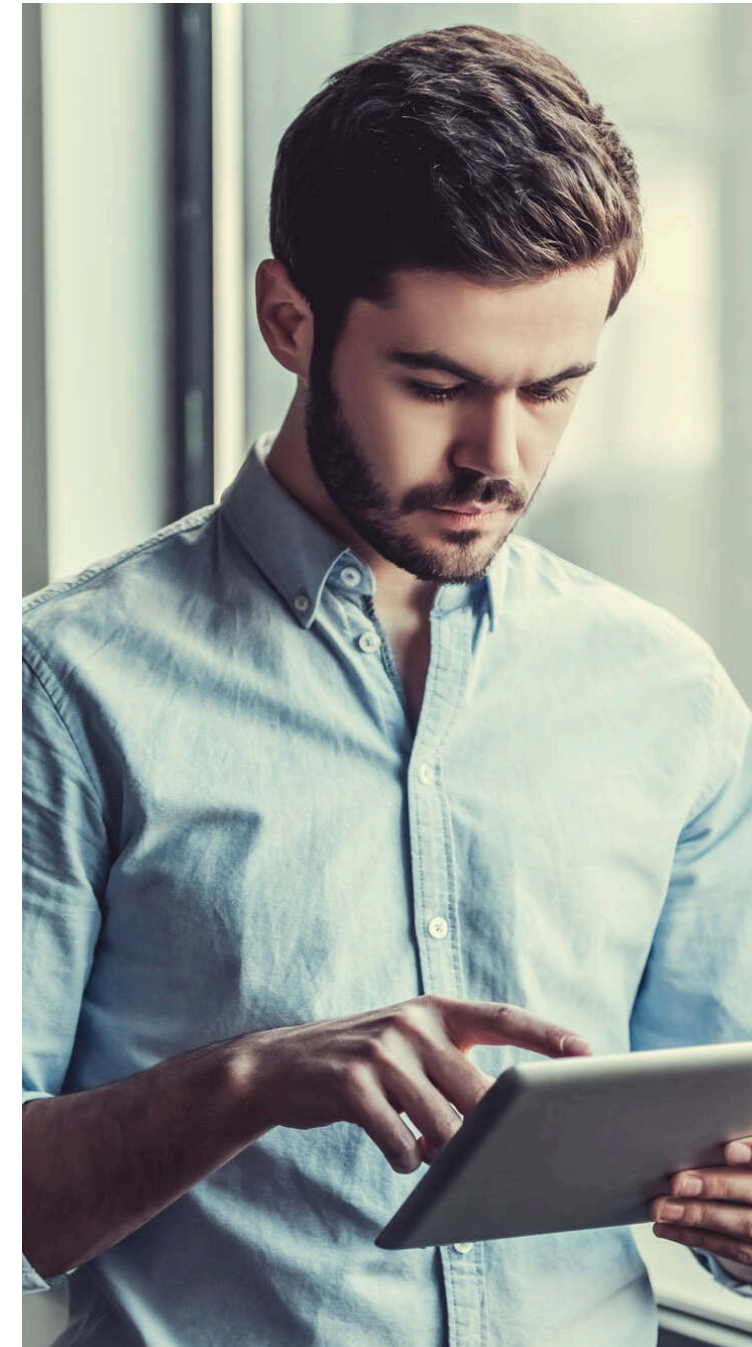
Last-mile speedbumps: Last-mile delivery in the data supply chain varies for each application, but in many cases, it's questionable whether the right data is available to the right users at the right time. Without a single version of the truth, formal data lineage, and role-based access, there is no standardized way to prepare and curate data for consumption by applications and

users. Poor data quality leads to poor quality of AI models, which in turn erodes the success of data-driven business.

Immature AI workflows: Too often, AI is treated as a one-off use case disconnected from an end-to-end process that operationalizes the AI lifecycle. “A lot of AI models don't get deployed into production—they are developed and built for a particular purpose and by the time they're complete, the original business need is delayed, or the model is no longer relevant,” Kamat says.

In contrast, organizations successfully executing AI-enabled business have taken the time to establish processes to continuously optimize model performance and to deploy AI in repeatable and sustainable ways. “There needs to be a level of automation, simplicity, and a curated data set that AI applications and data scientists can use for rapid model development and deployment,” Kamat says.

Organizational alignment: Delivering sustained value throughout a mature data and



AI lifecycle requires commitment by multiple teams—not just IT, but across the entire business. Without synchronized strategy and commitment between IT and lines of business (LOB)—i.e., a coordinated change management campaign—data modernization and management efforts can remain unfocused and adrift. “There are typically different LOBs within a large organization, and individually, they don’t see the magnitude of fragmentation within the organization,” explains Chinnam.

Skills and resource challenges: Data modernization and AI initiatives call for new skills and knowledge of diverse platforms and technologies on a scale that tests in-house resources, especially for organizations already grappling with talent shortfalls and limited IT budgets. Many organizations don’t have clear accountings of their current environments, creating gaps in formal plans or visions for modernizing the data estate—and the talent supporting it.



5 Ways To Wring More Value Out of Data and AI



Considering these challenges, **modernizing data management platforms and practices** is a tall order. A successful journey will likely require these key elements:

- A rigorous and in-depth evaluation of the current landscape, including an assessment of the current data estate and an inventory of all internal data assets and external data sources. It's important to account for all homegrown applications and corresponding data sources, as well as those that are derivative of the current ecosystem of partners.
- Develop a clear assessment of the business drivers for change and appetite for investment. Understanding what senior leadership is and is not willing to invest in modernizing data infrastructure—including greenlighting new data platforms, AI initiatives, and related services—has a direct correlation to intelligently planning, scoping, and prioritizing a data modernization strategy.
- Realistic blueprints for transforming legacy platforms and mapping on-premises-to-cloud and edge-to-cloud integrations. This includes determining the right approach to migrating existing applications and workloads to the cloud. “A hybrid strategy is the best path forward,” says Kamat. “Companies can do the transition in phases, not as a ‘big bang’ approach.” Organizations also need to ground the data strategy in realistic and desired business outcomes, not a lofty set of aspirations that will be difficult to achieve and measure.
- A composable data fabric comprising a set of architecture blueprints and best practices designed to solve complex data management problems across a diverse data landscape and throughout the entire lifecycle. A data fabric should cover data security and compliance basics, including data lineage and data catalogs. It should also include fundamental data integration and preparation processes, from virtualization and transformation to cleansing and model preparation, all the way through orchestration and curation of data to make it fit for purpose. A data fabric

framework should be open and secure by design, be driven by automation, and be supported through a metadata ecosystem bolstered by a healthy infusion of AI and machine learning. In that vein, a data fabric should be modular and extensible, and supported by a large and vibrant partner ecosystem.

- A scalable AI services framework that is based on the following:
 - A robust data foundation that brings in good quality of data through the hundreds and thousands of pipelines within the enterprise
 - Pre-built AI models and assets
 - AutoML, scalable models, transfer learning, synthetic data generation, containerization for accelerating time to value with reuse and automation in AI model development

- Using MLOps to sustain value generation dynamically and over longer periods of time with CI/CD integration to downstream applications and business workflows
- FinOps support to manage costs and provide financial governance

A modern data platform must evolve with the goal of creating a single version of the truth for all data management activities, including AI-infused data operations and AI model management. A single, unified view of the data estate and all data management activities delivers centralized controls and

monitoring while improving reliability and resiliency. Key to the success of large-scale AI programs are governance and trust policies and practices that ensure AI models are not opaque, but explainable, and are continuously monitored for performance as well as for model decay and drift.

“You need to follow best practices around machine learning lifecycle engineering to continuously deliver value to the end consumers of insights,” Kamat explains. “It’s not a one-time thing for data to provide value at scale or for models to be employed for industrial consumption.”



5 ways to boost the value of data and AI



1.

Conduct a rigorous and in-depth evaluation of your current landscape



2.

Develop a clear assessment of the business drivers for change and appetite for investment



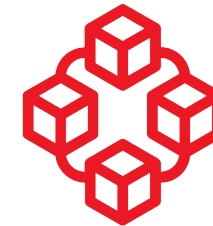
3.

Create realistic blueprints for transforming legacy platforms and mapping on-premises-to-cloud and edge-to-cloud integrations



4.

Deploy a composable data fabric comprising a set of architecture blueprints and best practices



5.

Utilize a scalable AI services framework



Choosing the Right Partner for the Journey

Getting a **data management** house in order is a highly complex endeavor, and few organizations have the bandwidth, full scope of expertise, and resources to modernize, maintain, and manage a data infrastructure.

Enlisting a trusted partner to work in concert with internal IT organizations can jumpstart data modernization initiatives and ensure the environment is continuously updated and managed as business needs change and the data estate evolves.

[Kyndryl](#) steps into this trusted partner role with an end-to-end approach that spans data modernization, data platform management, and enterprise AI services. Kyndryl is focused on delivering value across three vectors:

- Enabling automation and new business cases using AI and analytics
- Lowering total cost of ownership (TCO) for data infrastructure and business operations
- Increasing transparency while lowering compliance and data security risks

Kyndryl's portfolio of [Data and AI services](#) covers:

- **Data modernization:** Data lake and data warehouse transformation; modernization

services for legacy platforms and on-premises infrastructure; data architecture modernization; on-prem-to-cloud and edge-to-cloud integration; and DataOps enablement.

- **Data platform management:** Data catalogs and observability; data tools management and integration; data governance, including privacy and data security management; data lifecycle management; and on-demand DataOps services.
- **Enterprise AI services:** End-to-end

advanced analytics and machine learning solutions; data storytelling and advanced visualization; ModelOps and AI scaling; and synthetic data generation.

One of Kyndryl's key differentiators is the size and scope of its global operation, including the depth of its talent bench, which boasts decades of proven experience in data management and AI operations across most industry verticals. In data management alone, Kyndryl commands a 350-member bench of certified professionals, including data engineers, data architects, and senior consultants.

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The Kyndryl team is fully trained and certified on the top hyperscaler platforms, including AWS, Google Cloud Platform, and Azure. As part of its enterprise AI group, Kyndryl staffs a team of 70 data scientists and AI experts. The group holds 18 patents in the data and AI space, providing a set of rich IP to differentiate AI initiatives and ensure success as efforts progress from pilot to production.

Kyndryl's client-first approach and commitment to meet customers wherever they are on the data modernization maturity curve is the best way to ensure success. Kyndryl's experts can augment an internal IT organization or take over day-to-day data management and operations, enabling IT to shift focus to higher-priority initiatives and higher-profile innovations.



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This is a vast space—there are so many platforms and technologies out there. If you invest in all the skill sets in-house, that will likely result in shadow IT and costs that are not viable. Rather than build up an organization internally, it makes sense to outsize to the right partner with knowledge of the dynamic space of data and AI.

—Satya Prakash Chinnam, Lead Offering Manager, Data and AI Services, Kyndryl

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Consider:

- A manufacturing company was looking to upgrade its data platform to handle Industry 4.0 use cases. By leveraging Kyndryl’s data fabric for a hybrid data and AI environment, the company was able to reduce maintenance costs and quality defects using sensory, audio, and video analytics, as well as increase machine availability and production yield due to proactive maintenance.
- A logistics firm tapped into Kyndryl’s AI-enabled optimization solution to improve delivery time across 19 locations.
- A telecommunications company tackled its massive storage bill via a Kyndryl-led Hadoop-based storage and log reporting solution that reduced costs along with reporting time while ensuring full compliance with regulatory data requests.

Kyndryl's Suite of Data and AI Solutions



Kyndryl delivers for their customers through its broad ecosystem of partners, which leverages the best-fit technologies to **solve specific business problems.**

Kyndryl's solutions support an open architecture and a growing partner ecosystem, enabling companies to select the platforms and technologies that best suit their security, compliance, and performance requirements.

In addition, Kyndryl frames up its services using reference architectures, blueprints, and best practices as opposed to building solutions that are tied to specific products or platforms, further enabling flexibility and customization.

[Kyndryl's end-to-end data and AI services](#) are delivered with automated workflows and built-in intelligence, and the entire portfolio is structured to be composable. As a result,

organizations can contract only for what they need and scale out accordingly as opposed to committing wholesale to a full range of services and technology platforms. The full range of services are architected for end-to-end data and AI transformation, including a variety of approaches to solve specific requirements, whether that involves standard visualization using BI reporting tools or advanced analytics and machine learning solutions.

Kyndryl also manages a portfolio of intellectual property to give its data fabric, reference architectures, and technology solutions a competitive edge. For example, the Augmented Data and Analytics Console—powered by a robust partner

ecosystem, supported by open-source technologies, and unique in the data and AI space—is proprietary technology that provides a unified view across the data estate and full data lifecycle. Using the console, stakeholders gain a unified view of their data estate, encompassing governance, observability, quality, compliance, and security, all the way through consumption and driving insights.

“The IT organization spends too much time figuring what data sources exist, how to access data, putting the right controls in place, and second-guessing data quality and lineage,” Kamat says. “This is how you can manage data pipelines in a way that minimizes incidents and down time, and ensures the highest level of data quality.”

In addition to the Augmented Data and Analytics Console, Kyndryl offers an array of other advanced technology differentiators, including composite AI, graph-based solutions, natural language processing (NLP), and synthetic data generation, used to create the right purpose-fit data when none is available, depending on the specific use case.

Data-driven business, fueled by AI and other advanced technologies, will be the hallmark of today's innovators and tomorrow's market-leading competitors. Yet without a well-architected roadmap for modernizing the data estate, companies may find themselves veering off-track and missing opportunities to leverage the full value of their data.

With a seasoned partner to help guide them, IT and business leaders can better navigate the twists and turns of data modernization to create competitive edge.

To know more about Kyndryl Data & AI services, please read the solution brief



Thank you for reading

