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by informa tech targets

Exploring the enterprise data readiness gap

Effective data management is essential for success, but few have the right foundation to create an advantage.

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It's now clear that a great part of any organization's success is predicated on an effective data foundation. In a world where the efficient capture and application of all data—from structured to unstructured—create differentiation and time to value, managing data has become a strategic and technical imperative.

However, even as more organizations recognize the central role of data to their business and AI initiatives, research shows that IT leaders face multiple challenges in governing and managing their data estate. While these struggles are not entirely new, AI and frontier models have only exacerbated the traditional challenges of data management, driving up costs and slowing time to value, while also increasing security and regulatory risks.

Recognizing this "data readiness gap," IT and business leaders are increasingly prioritizing efforts to better see, understand, and govern their data by adopting a new, "data primacy" mindset that emphasizes the importance of good data management practices and deploying innovative new technologies that extract contextual meaning.

Why is data management so difficult?

For many enterprises, data challenges are rooted in infrastructure and architectures built to serve specific compute, analytics, and application needs. Years of explosive data growth and data sprawl, as well as data fragmentation across application silos, mean that the typical organization now operates a patchwork of infrastructure silos spanning multiple technology types, locations, and suppliers.

AI demands that data is the center of gravity, yet most architectures still revolve around applications or analytics, making it increasingly difficult to control and manage data without the slow and costly processes to extract and transform it. The old approach threatens modern businesses with technical debt as they grapple to implement AI projects that maximize the value of all data in real time, everywhere it is located.

"Dark data" compounds data management and governance challenges

To successfully implement an effective enterprise data strategy, organizations need a good starting point. Ideally, this should begin with an effective and holistic understanding of the data they already have, its value, and where and how it is stored, protected, and managed. Unfortunately, most organizations struggle with this fundamental prerequisite: Research shows that many have very little understanding or insight into some, most, or even all of their data For half of all organizations surveyed, at least half of their total stored data is "dark." This is not only a source of substantial cost but also a significant business risk and, in the AI era, a substantial missed opportunity. Possible business risks include: major financial cost due to storing multiple copies of data across different silos; compliance and security vulnerabilities; and missed opportunities for innovation. While a lot of dark data could be Redundant, Obsolete, and Trivial (ROT) data, some of it is highly likely to contain valuable historic information. Without context for the data, it's impossible to discover.

"Dark data" – a definition:

Dark data refers to the enormous amounts of information that organizations collect, process, and store during regular business activities but rarely use for other purposes. It can include ROT data such as outdated information, multiple identical copies, and non-essential data. This data is often unstructured (e.g., old emails, video recordings, and social media posts), making it difficult to analyze, yet it can pose significant risks, escalate storage costs, and be a source of untapped potential (e.g., used to train AI models).

» Approximately how much dark data does your organization store as a proportion of its total data?
(Percent of responses, n=600)

In the modern era, bringing insight to all enterprise data moves from desirable to critical

IT leaders are increasingly aware that gaining a better understanding of this data is a critical step in ensuring successful, effective enterprise data outcomes. Bringing light to data that IT leaders do not fully understand is an essential first step as part of a broader effort to achieve visibility and control of their data across the entire enterprise estate.

76%
of IT leaders agreed dark data represents a potentially significant business risk that they are making efforts to manage.

0% 100%

75%
agreed that extracting insight from dark data is critical and are making efforts to better understand and manage it.

0% 100%

The AI data deployment gap

Enterprise IT leaders have been given a huge remit when designing AI programs and are being tasked to build agents and AI workflows, maintain security and governance, reduce cost, and scale at speed, seamlessly. Research suggests that they have clear ideas about what an AI solution needs to deliver to be "enterprise-ready." Top of the list are attributes that ensure any AI capability adheres to an organization's data governance, ethics, and other responsibilities, followed by the ability to provide consistent and accurate results, as well as ensuring data sovereignty, privacy, and compliance.

These highlight that leaders are highly sensitive to the potential risks inherent in any AI solution and the criticality of ensuring their data is managed effectively within any AI workflow. By contrast, the relatively low selection rate of factors, such as supporting multiple use cases and the broader business, highlights that many are still thinking about AI from a very tactical perspective. Unless managed carefully, this could result in implementations that compound existing data challenges, such as creating additional data copies and silos.

» Which of the following attributes does your organization consider essential for an AI solution to be "enterprise-ready"? (Percent of respondents, n=376, multiple responses accepted)

37% Ensures AI governance, ethics, responsibility

36% Provides consistent, accurate results

35% Ensures data sovereignty, privacy, compliance

25% Supports multiple use-cases

23% Supports the broader business

When it comes to the major challenges around actually implementing AI, it is clear that many organizations are grappling with how to meet these priorities. Again, data-related challenges feature prominently. In addition to high costs, organizations are struggling with a range of data issues. The high incidence of data management and data quality problems highlights the challenges organizations have in building effective data pipelines. Meanwhile, implementation issues around data privacy, security, and governance again indicate that the risks business and IT leaders most fear are, in fact, being realized.

» What are the top challenges your organization has encountered while implementing AI?
(Percent of respondents, n=376, three responses accepted)

32% High costs associated with implementation

28% Data management and/or data quality issues

27% Concerns over data privacy, protecting intellectual property, and security

For many, enterprise data is not ready for AI

In the AI era, data management challenges quickly become a fundamental barrier to success. AI workflows, and sophisticated agentic AI workflows in particular, require rapid access to trusted datasets that may exist anywhere in the organization—and they need this access in near-real time. IT leaders need to have total confidence that any and all data involved in the AI lifecycle is managed in accordance with their own company rules and industry laws and regulations. It's also vitally important to protect their own valuable IP and meet stringent security and, for many, fast-evolving data sovereignty requirements.

Unfortunately, using legacy approaches makes it virtually impossible to gain a holistic view of data assets across the entire environment, severely impacting an organization's ability to see, govern, and extract contextual meaning from its data.

97% of organizations have experienced challenges moving AI from development to production, including 62% that reported experiencing extensive or moderate challenges.

68% of IT leaders agreed data management is the most challenging aspect of a production AI implementation.

61% agreed data privacy and security issues are slowing down their rollout of production AI workloads.

71% agreed unstructured data is becoming more important as they evolve their AI strategies.

63% agreed storage silos and data sprawl are significant barriers to AI success.

58% agreed that a lack of visibility into their overall data environment is a substantial barrier to AI success.

Understanding your enterprise data – taking the first step

Understanding the entire corpus of enterprise data can seem overwhelming, but new technologies can play a significant role in controlling data and automating policy and governance. Organizations need to classify and contextualize data, tag it to ensure hygiene, and then automate processes. This will turn a scattered data estate into AI-ready, governed datasets, gaining control and unlocking the true value of data. A good starting point is to think about how your enterprise data might fit into one of the following categories:

Conclusion

Addressing the enterprise data readiness gap is rapidly emerging as a necessity in the modern era, requiring innovative approaches that provide IT and business leaders with visibility into and control over their data, not just within a specific application silo but enterprise-wide. For many organizations, this is a substantial challenge that involves overcoming years of siloed infrastructure and technical debt and will require both innovative technology and the strategic foresight and long-term approach to help IT leaders.

For many organizations, meeting this challenge will require a shift in mindset and understanding around what it means to build an intelligent, data-aware infrastructure that is fit for purpose for meeting data needs, including, but certainly not limited to, emerging AI workloads. However, the rewards for those organizations that do manage to overcome this challenge and successfully deploy operational AI at scale look to be significant. It seems that many organizations are giving it a go and hoping for the best. The successful companies have already enacted long-term strategic thinking and put data at the center of their business strategy. A data primacy architecture elevates data to put it first and to support organizations to run more efficiently, deploy AI better, and empower their teams.

Read Everpure's data primacy blog

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