LUMO INSIGHTS

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Bottlenecks & breakthroughs: Data emerges as AI’s key differentiator

Executive Summary

A wave of new reports, major deals, and even an unprecedented AI-driven cyberattack all underscore one lesson: in 2023’s AI race, data architecture and governance have become the deciding factors. Enterprises are realising that without a strong data foundation, even the most advanced AI initiatives will stumble - and regulators are taking notice.

Foundations first: closing the Data readiness gap

A new global data management benchmark has delivered a blunt wake-up call on AI readiness (www.efficientlyconnected.com [1]). After surveying 435 organisations across 50+ countries, the EDM Council found that only about 31% have achieved an “advanced” data strategy capability - meaning nearly 70% of enterprises lack the consistent, well-governed data foundations needed to support AI at meaningful scale (www.efficientlyconnected.com [2]).

This gap between AI ambition and data reality is not about any single technology - it’s structural (www.efficientlyconnected.com [3]). Consider analytics: 77% of organisations have installed modern analytics tools, yet only 19% report using them in a mature, well-educated way (www.efficientlyconnected.com [4]). That 58-point chasm between putting tools in place and fully leveraging them highlights a core issue (www.efficientlyconnected.com [5]): simply buying AI/analytics solutions isn’t the same as extracting value. Running them effectively requires clean, consistent data, cross-functional processes, and people with the right skills - areas where many companies are still playing catch-up (www.efficientlyconnected.com [6]).

Even appointing Chief Data Officers hasn’t been a silver bullet. Over 70% of enterprises now have a CDO role, but high turnover and unclear authority often leave these leaders unable to enact real change (www.efficientlyconnected.com [7]). A CDO without budget control or clear data ownership rules can end up as a figurehead rather than a catalyst. In contrast, the organisations pulling ahead in AI are typically not those with the flashiest algorithms, but those that treat data as a strategic, shared asset across the business (www.efficientlyconnected.com [8]). By breaking down silos and enforcing strong data governance, these leaders ensure their AI initiatives rest on a solid, enterprise-wide data foundation - and it shows in superior AI results.

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Big moves to modernise Data architecture

The growing recognition that data infrastructure is mission-critical for AI is driving major strategic moves. Case in point: Salesforce just announced an $8 /billion agreement to acquire data management pioneer Informatica (www.akm.ru [1]). Salesforce plans to integrate Informatica's data catalogue and governance tools into its AI-driven Customer 360 platform (known as Agentforce) (www.akm.ru [2]). This hefty investment underscores that even the largest enterprise software players see unified data architecture and quality as key to delivering AI value - and are willing to spend big to get it.

This shift in strategy reflects a broader industry trend: companies are racing to eliminate data silos and strengthen their data "plumbing" to gain an AI edge. Siloed, brittle data pipelines have caused analytics and AI disruptions at 97% of enterprises, wasting time and money on maintenance and outages (www.dbta.com [3]). Vendors have responded by pushing towards "lakehouse" architectures that combine the flexibility of data lakes with the performance and governance features of data warehouses. However, even the leading cloud data platforms have limitations - they typically run on just the big three U.S. clouds, without full support for growing regional providers (finance.yahoo.com [4]). That leaves multinational firms juggling fragmented systems or stuck with vendor lock-in when expanding to new markets.

New solutions are emerging to close this gap. This week, startup Singdata unveiled a fully managed lakehouse platform designed for true data portability (finance.yahoo.com [5]). It runs natively across eight different cloud environments - from AWS, Azure, and Google to Alibaba, Tencent, and Huawei - and supports Intel, AMD, and ARM-based systems (finance.yahoo.com [6]). The platform aims to give enterprises a unified data layer with "single engine" architecture that provides open-data flexibility alongside the ease of a cloud service, so companies can avoid cloud lock-in and access governed, high-performance data analytics in any region (finance.yahoo.com [7]). One early adopter, a global content discovery firm, reportedly used this approach to cut data processing latencies and infrastructure costs drastically, all while reducing the operational burden on its teams (ohsem.me [8]). The takeaway: whether through big acquisitions or innovative new technologies, leading enterprises are doubling down on data architecture. Their goal is to ensure that data - in the right format, right location, and right quality - flows wherever it's needed, so AI and analytics can deliver results faster and more reliably.

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Governance & security: New pressures on Data controls

As organisations rush ahead with AI, many are learning the hard way that oversight and governance haven't kept pace. An Ernst & Young survey of 202 senior AI executives (from firms $1B+ in revenue) reveals that 98% have formal AI governance policies on paper, yet 47% admitted their teams sometimes bypass those policies to speed up urgent AI deployments (www.ey.com [1]). It's a risky trade-off: already, over one-third (36%) of these companies have experienced an AI-related incident or failure that caused material harm - from data breaches and financial losses to major operational disruptions (www.ey.com [2]).

This "AI governance gap" is now squarely on regulators' radar (aigovernance.com [3]). The EY report's authors call the problem structural: AI adoption is outrunning the oversight frameworks meant to control it, and that gap is what compliance teams need to address (aigovernance.com [4]). A 36% incident rate provides a credible baseline for regulators and courts, who increasingly view AI mishaps as foreseeable and preventable events rather than freak accidents (aigovernance.com [5]). In other words, boards and C-suites can no longer treat AI failures as a distant or purely technical issue - they carry real legal, financial, and reputational risk. When AI failures hit important systems, they can trigger regulatory disclosures, lawsuits, and governance inquiries if firms can't demonstrate proper controls (aigovernance.com [6]).

Meanwhile, a real-world cautionary tale unfolded in Europe that underscores these warnings. Spain's data protection authority (AEPD) this week reported what appears to be the first known data breach perpetrated autonomously by an AI agent (www.securityweek.com [7]). In this incident, a malicious "agentic" AI system successfully chained together a login, searched for software vulnerabilities, and accessed personal customer files - all without direct human involvement (www.securityweek.com [8]). The Spanish regulator called the attack a qualitative shift in cyber risk, since an AI could execute multi-step intrusions at machine speed (aigovernance.com [9]). In response, the AEPD urgently advised organisations to update their risk models and incident response plans to account for AI-driven threats, strengthen identity and credential protections, and deploy automated monitoring and containment tools to support human security teams (www.securityweek.com [10]) (www.securityweek.com [11]). In short, defending data in the age of AI will require agile governance and AI-augmented security measures - a message no data leader can afford to ignore.

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Key Statistics

- Only ~31% of organisations have achieved advanced data strategy capability, leaving the rest without the 'operational bedrock AI requires' ([www.efficientlyconnected.com](https://www.efficientlyconnected.com/ai-data-readiness-gap-edm-association-2026-benchmark/#:~:text=The%20EDM%20Association%20has%20released,Repository%20and%20Dashboard%2C%20built%20with)).
- 77% of firms have analytics tools in place, but only 19% have matured their use of analytics - a 58-point gap between installation and effective utilisation ([www.efficientlyconnected.com](https://www.efficientlyconnected.com/ai-data-readiness-gap-edm-association-2026-benchmark/#:~:text=scale,and%20a%20technology%20problem%20second)).
- 36% of large enterprises in an EY survey report an AI incident or failure that caused material harm (data loss, financial or operational damage) in the past year ([www.ey.com](https://www.ey.com/en_us/newsroom/2026/09/ey-survey-finds-that-autonomous-ai-implementation-outpaces-oversight-yielding-an-ai-governance-gap#:~:text=that%20their%20organization%20cannot%20detect,including%20board)).
- Despite 98% of companies having formal AI governance policies, 47% admitted to bypassing those processes for urgent AI deployments ([www.ey.com](https://www.ey.com/en_us/newsroom/2026/09/ey-survey-finds-that-autonomous-ai-implementation-outpaces-oversight-yielding-an-ai-governance-gap#:~:text=New%20survey%20of%20senior%20AI,adoption%20is%20creating%20new%20governance)).

KEY TAKEAWAY

AI’s cutting edge now depends more on data readiness than on model breakthroughs. This week’s deals and warnings show that executives must invest in data integration, quality, and governance to safely turn AI hype into real business value.

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