

### The Data Imperative

How data management unlocks value in the Generative AI age

As companies massively ramp up their AI spending, this study examines how the very advances they're investing in – such as multimodal capabilities and human-like reasoning – are simultaneously creating new challenges. Enterprises have ambitious hopes for how Generative AI (GenAI) can improve their processes, performance and profitability. However, while access to the underlying technology has become ubiquitous to the point of commoditization, data curation and management is the main sticking point for many.

Drawing on a survey of 150 data and AI executives, the paper asks incisive questions to which executives quickly need answers. Strategies (and processes) for harnessing unstructured data – especially proprietary unstructured data – are a vital key to transforming GenAI from essentially a vanity project to a true competitive advantage. Data management practices before and since the advent of GenAI are contrasted, revealing a sizable gap between where companies stand today and what needs to change regarding data accessibility, quality and integration.

The paper concludes by spelling out four essential "pillars of data-centric AI" that, together, give enterprises a workable implementation path with the goal of unleashing the full transformative potential of GenAI.

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## 1/ The state of enterprise AI: Reality vs. hype

**¬** he year 2024 marked a watershed moment for Generative AI, with enterprise spending projected to reach USD 13.8 billion - a sixfold increase from the previous year's USD 2.3 billion. This dramatic surge reflects a fundamental shift as organizations move beyond experimental pilot projects and begin integrating AI in their core business strategies. In everything from AIpowered code assistants and round-the-clock support chatbots to enhanced enterprise search capabilities, companies are deploying AI for all kinds of use cases. The next frontier appears to be autonomous agents, although our comprehensive survey of 150 executives indicates that significant challenges remain along this path.

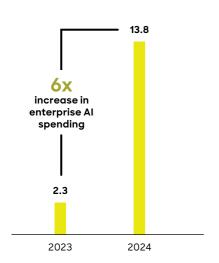
The adoption landscape reveals a clear gap between ambition and execution: Only 27% of organizations say they have fully integrated Generative AI in their operations and workflows. For them, data accessibility emerges as a critical bottleneck, with 71% of respondents reporting frequent or occasional difficulties in accessing reliable data. Perhaps most tellingly, merely 25% of organizations feel their data infrastructure is adequately prepared to support Generative AI use cases.

Consumer adoption of Generative AI has been unprecedented, with ChatGPT alone reaching 300 million weekly users<sup>2</sup> – approximately 7% of global mobile phone owners. Enterprises, however, struggle to translate this

#### A Enterprise AI spending vs. deployment

Enterprise spending skyrocketed sixfold in 2024 compared to 2023

#### Enterprise Al spending [USD bn]



A comprehensive survey of 150 executives and IT decision makers reveals challenges to value realization:

of enterprises say that Generative Al is fully integrated in their operations and workflows

say they sometimes or often face difficulties in accessing reliable data

25%

say their data infrastructure is set up very well to support Generative AI

Source: Roland Berger

widespread enthusiasm into tangible business outcomes. Why the discrepancy? Our research reveals that competitive advantages come not from using general-purpose AI models, but from building unique applications powered by proprietary data.

In this study, we will draw on detailed analyses and practical insights to examine how organizations can transform their data assets into competitive advantages in the age of Generative AI.

In Chapter 2, we explore the accelerating evolution of Generative AI capabilities, explaining why competitive advantages increasingly derive from data strategy rather than model ownership.

Chapter 3 examines the fundamental shift that large language models represent in enterprise computing, analyzing how organizations can leverage their unique data assets and domain expertise to create sustainable competitive advantages.

The survey findings in Chapter 4 - based on responses from 150 data and AI executives - reveal critical gaps in data readiness across industries. While technology firms lead the way, sectors such as healthcare and retail face significant challenges.

Lastly, Chapter 5 presents a practical roadmap for building data-first AI systems, outlining the essential elements for capturing both immediate value and long-term competitive advantages in the Generative AI era.

 "The adoption landscape reveals a clear gap between ambition and execution: Only 27% of organizations say they have fully integrated Generative AI in their operations and workflows."

**Manuel Schieler** Partner

<sup>1</sup> https://menlovc.com/2024-the-state-of-generative-ai-in-the-

<sup>2</sup> https://techcrunch.com/2025/04/21/ chatapt-everything-to-know-about-the-ai-chatbot/

## 2/ Paradigm shift: The accelerating age of Generative Al

he evolution of large language models (LLMs) marks a fundamental shift in artificial intelligence. Once and for all, LLMs have moved beyond what critics once dismissed as "stochastic parrots". Rather than simply mimicking patterns, these systems now demonstrate sophisticated reasoning capabilities by learning from humanity's collective knowledge and "making it talk back to us". This transformation carries deep implications for organizations across industries, particularly in how they harness and deploy AI capabilities.

At the heart of modern AI lies the transformer architecture, initially celebrated for its natural language processing capabilities but now enabling breakthroughs across multiple modalities. The architecture's self-attention mechanism provides a remarkably elegant way to extract patterns from various inputs – be they text, images or sound – and thus makes it a truly versatile foundation for AI applications. This versatility explains why Generative AI has emerged as a general-purpose technology, comparable to historical innovations such as electricity or the steam engine. For more details, check our previous study "The new productivity booster: How companies can harness the potential of generative AI".

#### THE FRONTIER IS MOVING EXPONENTIALLY

The Generative AI landscape has undergone a remarkable transformation in just one year, expanding from a single dominant player to a rich ecosystem of competitive models. In early 2023, OpenAI's GPT-4 stood virtually alone at the frontier of large language models. Today, the field has rapidly diversified with numerous competitors and an accelerating pace. OpenAI recently released its agentic o3 model and cost-efficient o4-mini. Google's Gemini 2.5 models excel in long-context tasks, while Anthropic continues advancing Claude's capabilities. China remains competitive with models from companies like DeepSeek, whose R1 model delivers strong results with lower computational demands. The industry is also shifting

toward inference-optimized models from labs like DeepMind and NVIDIA, designed to run efficiently on consumer hardware.

## FROM REASONING TO AGENTS: KEY BREAKTHROUGHS

AI is advancing rapidly in a dynamic and unpredictable market. While the future trajectory remains uncertain, three key breakthroughs are emerging that could reshape industries and unlock new business applications:

First, modern AI systems have developed sophisticated reasoning capabilities that mirror human cognitive processes. This advancement is exemplified by OpenAI's O3 model, which pioneered the "thinking before responding" approach based on test-time compute (TTC). This methodology has elevated AI from simple pattern matching to complex problem-solving, as demonstrated by the model's ability to identify errors in peer-reviewed research and tackle even PhD-level problems.

Second, the integration of multiple modalities represents a quantum leap in AI capabilities. Contemporary systems now seamlessly blend text, voice and visual processing, paving the way to unprecedented applications. For instance, recent developments allow AI to generate explorable 3D environments from single images and create sophisticated physical world simulations. The latest iterations of major AI models such as ChatGPT and Gemini can now process live video while simultaneously engaging in voice interactions, representing a major step toward more natural and comprehensive human-AI interaction.

Third, the emergence of autonomous AI agents constitutes perhaps the most transformative development in the AI landscape. Unlike traditional systems, these agents operate independently across platforms, learn from interactions and adapt dynamically to deliver personalized solutions. Their impact is already visible: Unlearn AI leverages 'digital twins' to accelerate clinical trials.

DoNotPay automates legal tasks. Numerai crowdsources AI-driven investment strategies. Although reliability is currently hovering at only around 50%, these agents signal a future where AI functions as a network of specialized, multimodal entities that all collaborate seamlessly.

#### THREE DRIVERS OF AI ADVANCES

The AI market is evolving in unpredictable directions. Aside from fierce competition, three underlying forces are driving current breakthroughs:

**Data evolution:** AI is reaching the limits of internet-scale text data, prompting shifts toward synthetic data and multimodal inputs like video and voice, vastly expanding usable datasets.

**Computing hardware:** As models grow, power efficiency becomes a strategic challenge. While NVIDIA dominates, new semiconductor players are reshaping the landscape and supply chains.

**Algorithmic innovation:** AI is moving beyond brute-force scaling as models learn more efficiently from smaller datasets. Advances in inference speed and energy optimization are unlocking real-time, sustainable applications.

These forces have ripple effects across industries and create both opportunities and strategic challenges for businesses. ▶ B

# IMPLICATIONS FOR BUSINESSES: DATA AT THE HEART OF AI

As basic AI models become commoditized, access to the technology is no longer a competitive advantage – unlike how companies leverage their data. While AI applications such as code copilots, support chatbots and enterprise search are widespread, genuine differentiation comes from

fusing AI with proprietary data to create unique value. Key strategic questions to which executives must find answers include:

- How can Generative AI enhance our business model, both internally and in customer-facing activities?
- What data assets set us apart and enable deeper personalization?
- How do we ensure that our data is accessible, integrated and fit for purpose?

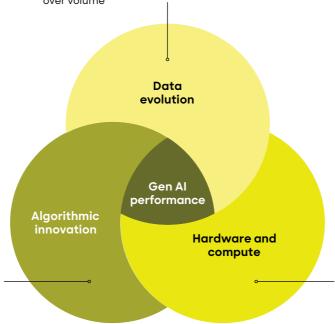
The next chapter explores why a strong data strategy is essential if enterprises are to succeed in the Generative AI era.

#### B The advance of AI capabilities relies on three interconnected drivers

**Synthetic data:** Al is creating high-quality training data and reducing reliance on raw data

**Habsburg effect:** Over-reliance on synthetic data risks reinforcing biases and drifting away from real-world diversity

**Multimodal integration:** Diverse modalities such as video and voice are expanding data variety over volume



**Data efficiency:** Models learn more effectively with less data

#### **Energy optimization:**

Techniques such as sparse computing and adaptive computation are reducing Al's environmental impact

#### Real-time capabilities:

Faster inference enables practical, real-time applications

#### Power optimization:

Energy consumption remains a key challenge as models grow

Market dynamics: NVIDIA leads, but new players are driving innovation in semiconductors

#### Resource allocation:

Strategic compute investments now balance cost and sustainability

Source: Roland Berger

## 3/ The future of data: How AI redefines data management

enerative AI models may seem highly intelligent, but they process information in a different way to humans. While they excel at recognizing patterns and generating text or images, they operate primarily at the level of language or images and command a less nuanced picture of the world. Humans, on the other hand, process vast amounts of unconscious data that adds context and richness to our understanding. High-quality, current data is crucial if AI is to deliver accurate representations, especially if it is working with limited proprietary data. Robust data curation and management practices are thus key to unlocking the full potential of Generative AI.

# THE DATA IMPERATIVE: BUILDING COMPETITIVE ADVANTAGE

Perhaps the most critical aspect of AI success does not lie in the actual algorithms, but in how organizations leverage their unique data assets. One particularly promising approach lies in capturing and utilizing organizational tacit knowledge – the intuitive understanding that experts develop through experience but struggle to formalize. This potential is already being realized in various industries. For instance, one Fortune 500 company boosted productivity by 34% by systematically analyzing and learning from its top performers' conversation patterns in the company's call centers.<sup>3</sup> In another case, a major corporation increased its sales success rates by 7.4% by using infrastructure that captured and operationalized top salespeople's behaviors.<sup>4</sup>

## BEYOND SPREADSHEETS: REPRESENTING UNSTRUCTURED DATA

Modern AI is revolutionizing data utilization by merging the processing of structured and unstructured information. Traditional systems excel at handling structured data such as spreadsheets, but contemporary AI architectures require more sophisticated approaches. Structured data naturally remains crucial for operational excellence: Telecommunications companies, for instance, rely on precise database queries to track customer usage and service performance. Similarly, internal bank controlling and external reporting data are vital for financial analysis and compliance, depending heavily on structured data.

However, modern AI introduces advanced techniques that capture information outside of rigid database structures. Vector databases and knowledge graphs are two of these transformative approaches. Vector embeddings mathematically transform unstructured data into processable formats, which enables nuanced understanding. For instance, an enterprise search system can recognize that "remote work policies" and "hybrid workplace guidelines" are contextually related, even without explicit keyword matching.  $\triangleright C$ 

"As AI models become commoditized, the ability to capture and use tacit knowledge across an organization will be the differentiator in the competitive landscape."

**Edeltraud Leibrock** Managing Director

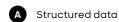
<sup>3</sup> https://www.bls.gov/opub/mlr/2024/beyond-bls/ ai-improved-the-productivity-of-a-fortune-500-softwarecompany.htm

<sup>4</sup> https://www.gong.io/fr/case\_studies/ how-gong\_became\_diligents\_mvp\_by\_increasing\_close\_rates/

# C Modern AI systems require a sophisticated data architecture that combines structured data, semantic relationships and neural embeddings

#### **Data representation**

#### Traditional analytics





Supports precise queries with explicit schemas for reliable reporting and transactions

**Example:** Telecoms track data overages or service outages by region

#### Al-ready data representation



Vector databases



Learn implicit patterns and similarities through embeddings

**Example:** Customer service routes inquiries via learned patterns



Knowledge graphs



Map explicit relationships for reasoning and auditability

**Example:** Compliance systems link subsidiaries to regulations; manufacturers map supply chain dependencies





Source: Roland Berger

Knowledge graphs complement this approach by encoding complex business relationships and expert knowledge. Unlike AI models that learn patterns implicitly, these graphs explicitly map causal relationships, dependencies and business rules. A financial institution, for example, might use a knowledge graph to trace the impact of market events on risk exposure, allowing AI systems to provide transparent and readily explainable recommendations. Knowledge graphs can also be used to map and integrate both structured and unstructured

data, creating more reliable, context-aware solutions. By integrating vector embeddings and knowledge graphs in this way, organizations can develop AI systems that combine pattern recognition with subject area expertise. This approach enables AI to identify nuanced insights and business constraints that are often missed by purely data-driven models.

# DATA MANAGEMENT IN THE ERA OF GENERATIVE AI

Source: Roland Berger

Besides the shift from tables to unstructured data, there are other notable differences between traditional analytics and Generative AI – differences that require varying approaches to data management. These distinctions span multiple dimensions, including data sources, integration methods, quality control processes, privacy considerations and architectural requirements.  $\triangleright D$ 

Having discussed how the advent of AI is redefining the whole issue of data management, the chapter that follows examines how organizations are currently positioned in terms of data readiness, the state of Generative AI deployment, the challenges they encounter and emerging trends at the intersection of data management and Generative AI.

#### Data management before and after Generative AI

Traditional analytics	Data management aspect		
Favors structured data, primarily from internal databases	Data sources	Devours diverse data types - text, images, audio, video - from both internal and external sources	
Relies on established methods such as data modeling and master data management	Integration	Requires sophisticated techniques, such as knowledge graphs, to weave together disparate data sources	
Emphasizes predefined metrics and controls to ensure accuracy and completeness	Quality control	Requires dynamic, AI-powered solutions to assess quality and identify relevant themes in unstructured data	
Focuses on access control to protect sensitive information	Privacy	Raises new challenges, as models trained on massive datasets can inadvertently reveal private details	
Prioritizes centralized data warehouses and lakes for efficient storage and retrieval	Architecture	Needs scalable, decentralized systems to handle the volume and variety of data	
		Generative Al	

## 4/ The data readiness gap: Insights from 150 executives

ur survey reveals a significant disconnect between AI ambitions and actual implementation. Only 27% of organizations have fully integrated Generative AI in their operations. The main barriers are data issues (28%), integration challenges (25%), and talent scarcity (15%) - highlighting data readiness as the essential foundation for successful AI adoption.

Industry-specific differences are telling: Healthcare/pharmaceuticals and retail/CPG struggle with data accessibility, while technology firms report substantially better data quality (43% experience only rare issues). Organizational structure proves decisive: While 49% integrate data management in broader roles, companies with dedicated data teams (41%) show higher AI readiness and greater implementation success.

Notably, 93% of executives believe AI implementation improves data management practices, suggesting a reinforcing relationship rather than a one-way progression. The path to AI success requires building solid data foundations while simultaneously adopting AI technologies: A parallel approach yields better results than sequential implementation. ▶ ■

#### INTRODUCTION

Conducted in December 2024, this Roland Berger study draws insights from a comprehensive survey of 150 executives responsible for data and AI initiatives at large enterprises. The sample was designed to be representative, with 30 participants from each of five European countries (Germany, the UK, France, Italy and Switzerland) and 30 participants from each of five industries (technology/IT services, healthcare/pharmaceuticals, retail/CPG, financial services and manufacturing).

To be included in the survey, companies had to at least have experimented with Generative AI and have more than 250 employees. This approach ensured that the insights gained reflect the perspectives of medium and large enterprises that are seriously grappling with data and

#### E Key insights from the survey

- Only 27% of organizations report having fully integrated Generative AI in their operations and workflows, highlighting a significant gap between ambition and execution
- Key challenges relating to widespread adoption include data issues (28%), integration complexity

  (25%) and talent scarcity (15%) Bridging the data readiness gap is fundamental to deploying Generative AI effectively
- Healthcare/pharmaceuticals and retail & CPG face the most significant hurdles in accessing reliable data, while technology and IT services report better data quality (43% experience rare issues)
- Organization setup matters: While 49% integrate data management in broader roles, companies with dedicated data teams (41%) show higher AI readiness and greater implementation success
  - 93% of executives believe AI implementation improves data management practices, suggesting that the path to AI success requires both data foundation building and AI adoption

Source: Roland Berger

AI transformation. Our research focused on understanding organizations' data readiness with a view to implementing Generative AI, alongside current challenges and future trajectories. The interviews were conducted by phone to allow for more nuanced responses.

#### Challenges in adopting Generative AI

Several key challenges stand in the way of progress toward deploying Generative AI. They include data challenges (28%), integration complexity (25%), talent scarcity (15%), ethical concerns (12%), financial constraints (10%) and building trust (10%). Organizations frequently face difficulties in accessing and managing high-quality data, which involves ensuring data accuracy, addressing privacy concerns and mitigating biases within datasets. Integration challenges arise from compatibility issues with existing systems, difficulties in adapting workflows and the need for substantial infrastructure upgrades. Talent scarcity reflects difficulties in finding and retaining skilled professionals in AI, machine learning and data science. Ethical concerns focus on bias mitigation, transparency and responsible AI usage. Financial constraints stem from the high cost of AI implementation, including infrastructure investments, data management and the need for skilled personnel. Lastly, building trust focuses on privacy and security considerations associated with Generative AI. ▶ F

#### F Challenges in adopting Generative AI

**Data challenges** 

Source: Roland Berger

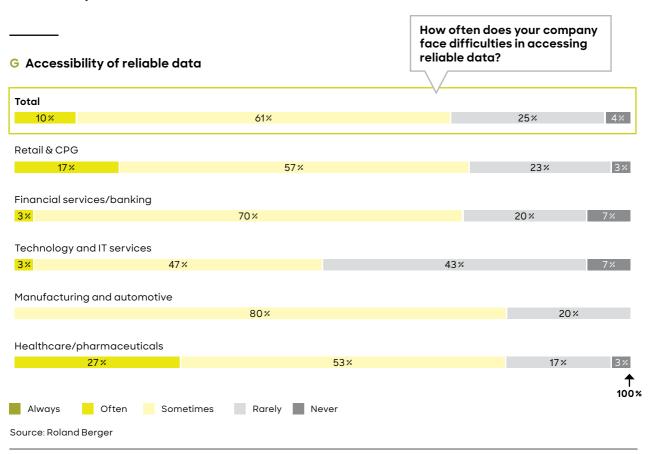
# Issues with accessing and managing high-quality data, including accuracy, privacy and bias

28% Integration complexity Difficulty integrating AI models with existing systems and workflows 25% Talent scarcity Shortage of skilled AI professionals in machine learning and data science 15% **Ethical concerns** Bias mitigation, transparency and responsible Al usage What are the 12% main challenges when deploying **Financial constraints Generative AI?** High cost of AI implementation, infrastructure and skilled personnel 10% **Building trust** Privacy, security and trust challenges relating to customers and stakeholders

10%

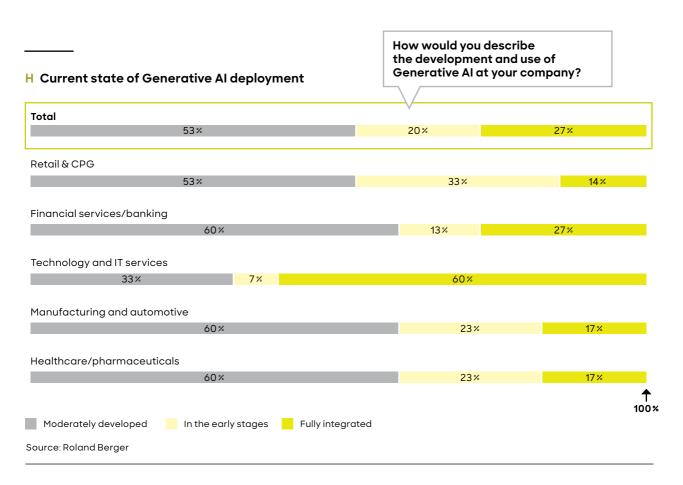
#### Accessibility of reliable data

Access to reliable data remains a significant challenge, particularly in healthcare and pharmaceuticals, where 27% of respondents report frequent issues. They are followed by retail and consumer packaged goods (CPG) at 17%. In contrast, technology and IT services companies fare better, with 43% reporting only rare data quality concerns. Addressing these disparities is critical – especially in heavily regulated sectors such as healthcare and pharmaceuticals, but also in consumer-driven industries such as retail & CPG – in order to drive AI adoption and unlock its full potential.  $\triangleright$  G



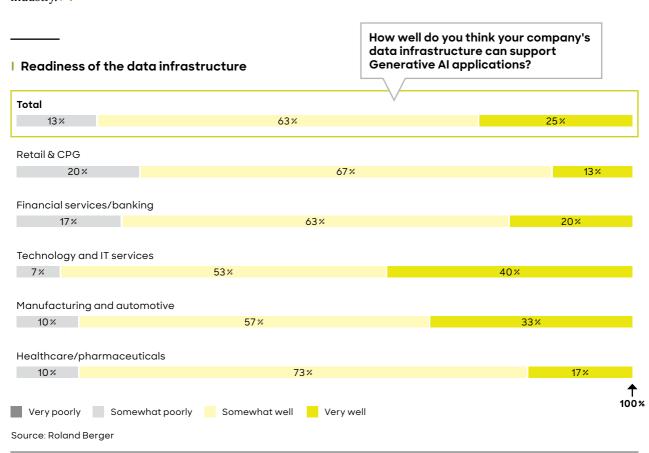
#### **Current state of Generative AI deployment**

Adoption of Generative AI remains limited, with only 27% of the organizations surveyed having fully integrated it in their operations and workflows. The survey results highlight the significant gap between ambition and execution. Technology companies are leading the transformation, benefiting from good data quality and technical capabilities. These findings again support the hypothesis that data quality is a critical enabler of successful Generative AI adoption, emphasizing the need for robust data practices.  $\triangleright$ H



#### Readiness of the data infrastructure

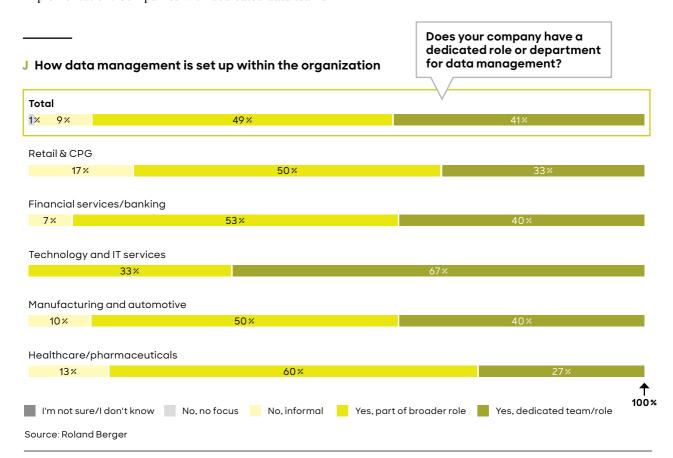
Different industries vary significantly in their readiness to support advanced AI technologies. Overall, only 25% of companies feel that their data infrastructure is "very well" prepared for Generative AI applications. The disparities are shaped by unique regulatory, security and processing needs in each sector. For example, healthcare/pharmaceutical executives are more confident (73% "somewhat well") than retail & CPG executives (67% "somewhat well"). This likely reflects the stringent data governance requirements and existing investments in data management in the healthcare industry.



#### Organizational setup

The preferred approach to data management varies significantly across industries. While 49% of organizations have so far integrated data management in broader roles, 41% have established dedicated teams or roles. Technology and IT services are leading the way with the most structured approaches, while retail & CPG and healthcare/pharmaceuticals rely more heavily on informal approaches.

This variance in organizational structures correlates strongly with data readiness and the success of AI implementation: Companies with dedicated data teams generally demonstrate superior capabilities in managing complex data requirements and implementing AI solutions effectively. > J



#### IMPACT AND OPPORTUNITIES

#### Growing importance of data management

The feeling among executives is clear: As the AI revolution progresses, data management will grow in importance over the coming years.

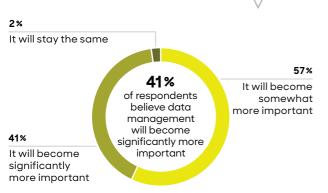
Fully 98% expect it to become an increasingly key factor. Specifically, 57% believe it will become somewhat more important, while 41% see it becoming significantly more important. Only 2% of decision makers expect the role of data management to remain unchanged. These findings encompass all aspects of data management, including data integration, quality and governance from both technical and organizational perspectives. • K

#### Generative AI enhances data management

The survey testifies to overwhelming confidence in the potential of Generative AI to transform existing data management practices. A striking 93% of executives believe AI implementation leads to improvements, with 67% somewhat agreeing and 26% strongly agreeing that it enhances data accuracy, governance and efficiency. The remaining 7% of respondents maintained a neutral stance, but not a single executive expressed disagreement. Such a strong consensus suggests a clear pathway forward: Organizations must focus on building robust data foundations while simultaneously embracing AI adoption.

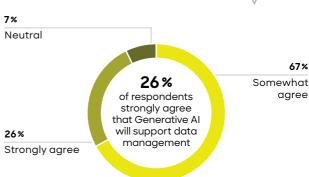
#### K The growing importance of data management

How do you think the importance of data management will evolve over the next 5 years?



# L The relevance of Generative AI for data management

Would you say the implementation of Generative AI has an impact on effective data management?



These findings make a compelling case for integrating Generative AI as a way to achieve more effective and efficient data management practices.

AI can automate tasks such as data classification, PII (Personally Identifiable Information) discovery and metadata creation. It can streamline workflows and enhance data governance. However, none of this happens automatically. Intentional effort is required to identify those data management tasks that have the greatest potential for AI enhancement. **L** 

# Trends at the intersection of Generative AI and data management

The key trends in Generative AI and data management identified by respondents can be clustered into four categories: automation and efficiency, governance and compliance, AI integration and adoption, and infrastructure.

#### **Automation and efficiency**

AI is driving greater automation by streamlining routine data management tasks, enhancing efficiency and reducing manual work. Generative AI is also helping to create synthetic data, boost model performance and overcome data limitations.

#### Governance and compliance

Bringing Generative AI and data management together requires stronger emphasis to be placed on ensuring that AI processes consistently adhere to governance standards and ethical practices. At the same time, there has to be a growing focus on safeguarding sensitive data and maintaining privacy in AI applications.

#### Al integration and adoption

More and more companies are using AI to process and analyze unstructured data such as text, images and video materials. As they do so, it is dovetailing with data analytics, generating real-time insights and thus driving faster, more informed decision making.

#### Infrastructure

Investment spending on infrastructure to support AIdriven data management is naturally on the rise. In tandem with this development, the adoption of cloud platforms for scalable, flexible and cost-effective data management is also becoming more widespread.

## 5/ The implementation path: Building data-centric AI systems

o harness the full potential of Generative AI, organizations must build their capabilities around four interconnected pillars that lay the foundation for a robust, scalable AI infrastructure. ▶ M

The first pillar, the data quality infrastructure, creates the bedrock for all AI initiatives. It encompasses comprehensive systems that ensure data integrity through a combination of automated quality monitoring, clear lineage tracking and robust governance frameworks. Going beyond basic data hygiene, these systems maintain data consistency and, crucially, preserve the contextual richness that makes data truly valuable for AI applications.

Integration and scaling capabilities form the second pillar, serving as the adaptive nervous system that connects disparate data sources and systems. This pillar focuses on creating unified data platforms that are capable of handling multiple data modalities – from text and images to audio and video. Thanks to real-time streaming capabilities, flexible infrastructure and well-designed APIs, it enables seamless communication between systems while supporting growth and ensuring that data flows efficiently throughout the organization, regardless of scale.

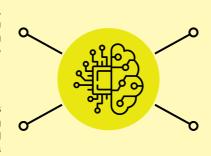
#### M Four pillars of data-centric AI

#### Data quality infrastructure

Establish systems to ensure clean, consistent and contextualized data feeds, automated quality monitoring and clear data lineage and governance

#### Integration & scaling capabilities

Develop real-time data streaming with a flexible infrastructure, unified platforms handling multiple modalities and robust APIs for seamless system communication and growth



#### Knowledge management

Systematically capture tacit knowledge, document business processes and create clear taxonomies and metadata frameworks

#### Agent-ready systems

Implement event-driven architectures that support autonomous platforms, feedback loops for continuous learning, safety mechanisms and monitoring systems

Source: Roland Berger

The third pillar, knowledge management, transforms raw data into organizational intelligence. This approach systematically captures the often elusive tacit knowledge that exists within organizations. It documents critical business processes and creates clear taxonomies and metadata frameworks. All these elements work together to make information not just accessible, but actionable and meaningful in the context of AI systems.

Agent-ready systems constitute the fourth pillar, preparing organizations for the next frontier of AI autonomy. These systems implement event-driven architectures that support autonomous platforms, establish feedback loops for continuous learning and maintain robust safety mechanisms. This infrastructure enables AI agents to operate independently while ensuring that their actions are consistently monitored and remain closely aligned with organizational objectives.

Together, these four pillars build a comprehensive framework that enables organizations to move beyond isolated AI experiments toward systematic, scalable AI deployment. Each pillar reinforces the impact and value of all the others.

# STRIKING A BALANCE BETWEEN EXPLORATION AND VALUE REALIZATION

Today's business environment is characterized by an unprecedented pace of change and technological advancement. The challenge to organizations is therefore to perform a critical balancing act. Even companies not traditionally on the leading edge of technology must remain vigilant and adaptive, as Generative AI rapidly transforms industry after industry. Knowledge workers are already independently embracing AI tools in their daily workflows. However, the true potential for value creation emerges when these technologies are systematically integrated at the level of teams and whole organizations. This kind of systematic approach facilitates collaborative innovation, shared learning and the development of

organizational capabilities that far exceed individual experimentation.

Succeeding in this dynamic landscape requires organizations to master the delicate balance between value realization and exploration. On the value realization side, companies must identify and scale proven use cases that deliver immediate value - from automating routine documentation to enhancing customer service interactions. These stable, well-defined applications lay the foundation for organizational learning and build confidence in AI capabilities. At the same time, organizations must maintain active exploration initiatives to stay ahead of rapid and relentless technological advances. This means creating dedicated spaces for experimentation, encouraging cross-functional teams to test new applications, and maintaining sufficient flexibility in technology infrastructure to quickly adopt emerging capabilities.

#### THE WAY FORWARD: FROM VISION TO VALUE

While the potential of Generative AI is unquestionably immense, our research – underpinned by the views of key executives – shows that successful implementation requires a systematic, data-first approach. Organizations must build robust foundations across data quality, integration architecture, scaling capabilities, knowledge management and agent-ready systems in order to realize this potential. Given the complexity of this transformation, an integrated approach that aligns both business and technical priorities is essential.

Drawing on our extensive experience in AI transformations, Roland Berger has developed a comprehensive suite of accelerators to guide organizations through this journey. Our proven *RB Use Case Navigator* helps organizations identify and prioritize AI initiatives that promise a high ROI, ensuring that resources are channeled into applications that deliver immediate business value. In addition, the *RB 360° Data Readiness Check* provides

a detailed assessment of your current data landscape, identifying gaps and opportunities in your AI readiness.

For organizations that are already ready to scale, our *RBAI Reference Architecture* offers a battle-tested framework to integrate business, IT and technical considerations. Rooted in extensive project experience, it includes detailed operating models and architectural patterns for building and scaling AI systems, with a particular focus on the emerging field of autonomous agents. Lastly, our *Performance Hub* enables seamless orchestration

of AI initiatives across functions and regions, ensuring consistent value delivery during the crucial scale-up phase.

The future of enterprise AI does not lie in isolated applications but in creating intelligent, data-driven organizations in which humans and AI agents work together seamlessly. By integrating our strategic frameworks with our clients' domain expertise and data assets, we walk them through this transformation, enabling them to capture and sustain a competitive edge in the emerging era of Generative AI.

"To thrive in the rapidly changing AI landscape, organizations must balance the realization of value from proven use cases with the exploration of new, emerging technologies."

Manuel Schieler
Partner

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#### **FURTHER READING**



Generative AI -A way out of the productivity crisis? How companies can harness the potential of Generative AI 2023





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