



How can your  
organisation achieve data  
leadership to navigate the  
challenges of and succeed  
in the digital era?

**An imperative for success**

# Table of contents

Connected content series

**03** Foreword

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**04** Discovering your data

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**06** Activating your workforce

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**07** Activating your data governance

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## Foreword

The world is undergoing a massive digital transformation in virtually every industry, driven by the exponential growth of data and the emergence of powerful technologies such as GenAI that creates new business models and generating unprecedented value. Data serves as the lifeblood of these technologies, empowering businesses to gain insights, optimise processes, generate new revenue streams, and drive innovation. Nevertheless, data also poses significant challenges and risks, such as data quality, security, privacy, compliance and ethics. To harness the full potential of data and leverage it as a strategic asset, businesses need to adopt a data leadership mindset.

Data leadership signifies that the board and executive team are resolutely committed to managing digitised business information/data with the highest degree of care and consideration. This includes not only the data itself but also its context, utility, security, and outcomes, acknowledging that trusted data forms the bedrock of modern business operations. Furthermore, data leadership entails empowering the entire data workforce—encompassing data professionals, as well as data consumers and producers throughout the organisation—to access, comprehend, trust, and utilise data both effectively and responsibly. This leadership demands a holistic and integrated approach, one that encompasses data strategy, culture, governance, literacy, and technology.

In this whitepaper, we will share our point of view on data leadership and how it can be achieved and sustained in practice. We will discuss the following topics:

 1	Discovering your data	
 2	Activating your workforce	
 3	Activating your data governance	



# 1. Discovering your data

Most companies grapple with a significant vulnerability: they lack a clear understanding of their data inventory, its intended use, and the extent to which decision makers can rely on it. Alarmingly, based on research published in PwC's 'In data we trust' whitepaper, 60% are not even sure that they have identified their most valuable and sensitive digital assets. In an era where consumer trust in data is not rising but waning, the initial step towards improvement is to meticulously catalogue your data assets.

**However, discovering your data is no easy feat.**

**Common challenges faced by companies in creating data inventory include:**

## 1. Sheer volume and variety of data that exists across different sources, systems and formats

Data is often siloed, duplicated, inconsistent, or incomplete, complicating efforts to identify, access, and integrate. Moreover, data is constantly changing and evolving, requiring regular updates and maintenance of the inventory.

An artificial intelligence (AI)-assisted tool can significantly shorten the time for data discovery, yet expert intervention remains crucial to train these AI tools to operate contextually, thereby ensuring the reliability of the output. For example, an AI engine can first discover the data based on out-of-box data patterns to reduce the heavy lifting of data platform curation. Subsequently, it can leverage behaviour analysis and learn from user selections to enhance its ability to create better data context or metadata.

Advanced tools powered by AI engage users effectively from day one and continue to improve with increased usage, bridging the gap and going the extra mile in data discovery the more it is used.

It is also noteworthy that many of our clients are embracing a more advanced approach to proactive data labelling. By enforcing additional machine-readable tags on published data or data structures as part of metadata creation, they significantly enhance the efficacy of their tools. This innovative practice, akin to other best practices in software development, plays a crucial role in the successful implementation of effective data governance.

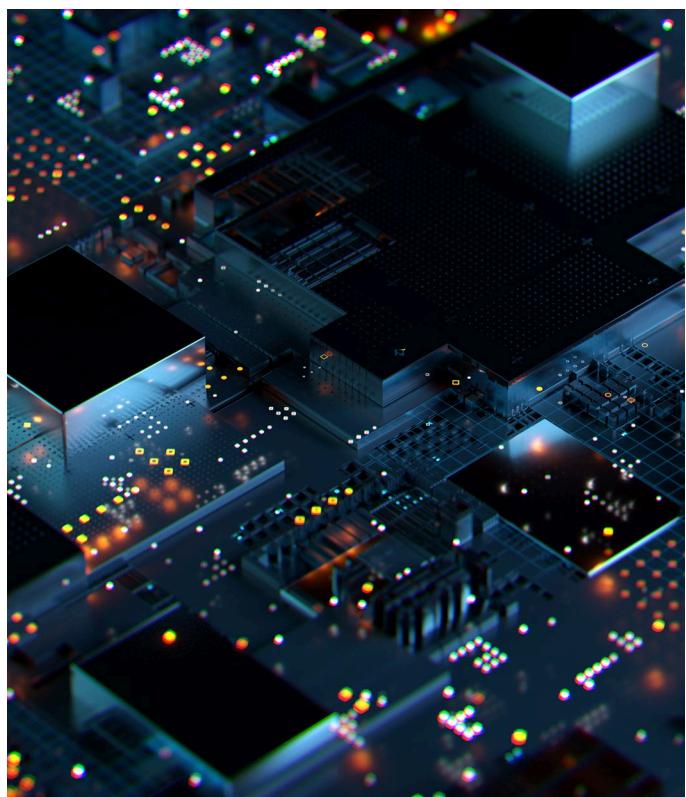
## 2. Lack of clear ownership and accountability for data quality and governance

Data may be owned by different business units, functions, or teams, with varying levels of awareness and responsibility for data standards, policies, and best practices. Data may also be subject to different regulations and compliance requirements, depending on its nature and use. Without a clear and consistent

framework for data stewardship and oversight, data inventory may become inaccurate, outdated, or unreliable.

The most effective way to address this issue is to curate data as it is being created, this involves adopting a data platform tool that captures data ownership and maintains it moving forward in accordance with data policies, alongside the generic data quality standards and custom business rules. Preventing data creation without context and ownership is the best way forward for a cost-effective data operation.

This approach will enable you to distinguish high-value data from the low-value data that clutters your systems. You will also be able to map data flow and lineage, and classify and tag data, making it more accessible and trustworthy for use with AI and other emerging technologies.



# 1. Discovering your data, cont'd

## 3. Aligning data inventory with business goals and priorities

Data inventory is not an end state, but a means to facilitate data-driven decision making and innovation. However, many companies lack a clear vision and strategy for how they want to leverage their data assets, and what value they expect to derive from them. Data inventory should be driven by business needs and outcomes, not by technical capabilities or availability.

The fundamental requirement is to enable data-driven business operations and associated reporting. Beyond this, the next tier involves facilitating advanced analytics and informed decision-making, providing deeper insights to decision-makers. In the age of AI, it is imperative to recognise the data dividends obtained from innovative applications of data, such as training models that can disrupt traditional business models—use cases that may not have been envisioned at the time of data creation but are crucial for maintaining a company's inventiveness and competitiveness in the future.

Finally, data inventory should also resonate with the company's culture and values, ensuring the ethical and responsible use of data. In other words, what data is collected, how it is collected, and who uses it (and for what purpose) reflects a company's culture, mission, and values.

### Action

Discovering all your data to bridge these gaps is a time-consuming endeavour that necessitates a comprehensive suite of tools and skills. This includes the establishment of consistent taxonomies, standards, and controls, all supported by experts in risk management, privacy, and compliance. By leveraging digital command and control centres, you can gradually develop a unified source of reference for your data inventory.

This approach will enable you to distinguish high-value data from the low-value data that clutters your systems. You will also be able to map data flow and lineage, and classify and tag data, making it more accessible and trustworthy for use with AI and other emerging technologies.



## 2. Activating your workforce

Despite decades of digitisation efforts, the criteria by which businesses are evaluated for performance have remained largely unchanged. This necessitates quarterly submissions from frontline workers to chief executive officers (CEOs), each tier striving to meet hierarchical targets to justify their performance to both internal and external stakeholders, with increased scrutiny for those closer to the C-suite. Consequently, while digitisation efforts are strategically relevant, data management itself remains a means to an end, rather than an independent benchmark of success.

Although frameworks such as the Data Management Capability Assessment Model (DCAM) and the Certified Data Management Professional (CDMP) exist to gauge data management maturity, there is no formal recognition or accolade for excelling in this domain. Thus, while these frameworks provide valuable guidance, they do not confer a "badge of honour" for outstanding data management.

**This approach has two issues worth noting for data leaders:**

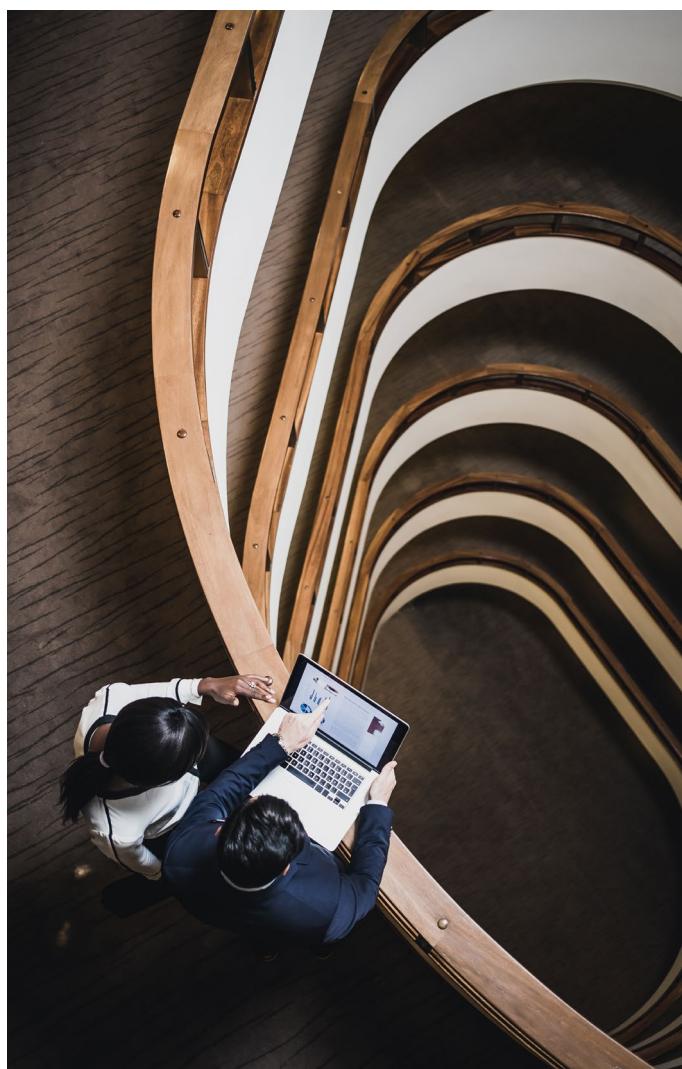
- 1. Existing data key performance indicators (KPIs) are often driven by a defensive data agenda**

The main reason for this is because a defensive data agenda is easier to initiate. However, this approach becomes ingrained in the organisational DNA, hindering the organisation from advancing to the next stage. With the help of data intelligence tools, an organisation can execute an offensive data agenda by aligning business outcomes with data quality KPIs, guiding the data team toward discovering, protecting, and governing the most valuable data. While this does not necessarily transform data governance into a profit centre, it is essential in an era where data assetisation is a prevailing trend and will help steer the organisation in a forward-looking direction.



- 2. The absence of an intrinsic feedback mechanism prevents active refining of the data management framework towards greater maturity**

Once again, data governance tools enable employees to simultaneously collaborate with other parts of the business to provide feedback as they carry out their day-to-day duties, hitting two birds with one stone. Annual reviews and checkpoints should transcend mere KPI tracking, serving instead as opportunities for course correction.



### Action

Data leaders must establish workflows or pathways that empower data citizens to actively question, comment on, and enhance current data management practices. This fosters a virtuous cycle where the programme can "heal" its deficiencies organically, without necessitating a rigid roadmap dictated by the data team, often with limited contextual understanding.

### 3. Activating your data governance

Once data leaders acknowledge the critical perspectives of identifying their data and engaging their workforce, they can then establish a directionally sound approach to activating data governance. Numerous well-regarded literatures offer tested data governance models to consider, and data architecture has evolved significantly, becoming increasingly machine-readable compared to the era of entirely on-premise, self-developed technology stacks. While there are various strategies for data leaders to safeguard the value of their data and their teams, the following activation principles may prove invaluable:



#### Define clear business outcomes

Ensure that the objectives of your data governance program are explicitly tied to specific business outcomes. This is not a one-size-fits-all endeavour or a mere checkbox exercise.



#### Balance controls and costs

While best-in-class data governance frameworks may appear ideal, they come with trade-offs. The more controls and processes you implement, the higher the associated costs of doing business. Adopt an approach that aligns with what is right for your organisation.



#### Select the appropriate tools

Choose tools that are tailored to your specific needs, whether for data discovery, tagging, privacy, or other purposes. By evaluating these tools based on the first two principles, data leaders can select solutions that offer the best fit and minimal friction for their organisation.

## How we can help

### PwC Singapore

At PwC, we assist our clients in attaining data leadership by delivering comprehensive, customised solutions tailored to their unique data challenges and opportunities. In collaboration with Alation, a premier provider of data intelligence solutions, we equip our clients with top-tier capabilities for data search and discovery, data literacy, and data governance.

### Alation

Alation's platform enables our clients to find, understand, trust, and govern data, while simultaneously streamlining and automating data governance processes and workflows. Designed to foster enterprise-wide data leadership, Alation's solutions support the maturation of data practices and provide mechanisms to measure and monitor data trust, maturity, and performance at every stage, helping clients achieve data leadership and unlock the full potential of their data assets.

### For more information, visit:

- <https://www.pwc.com/sg/en/services/risk/digital-solutions/data-trust.html>
- <https://marketplace.asiapacific.pwc.com/offering/pwc-and-alation>

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