



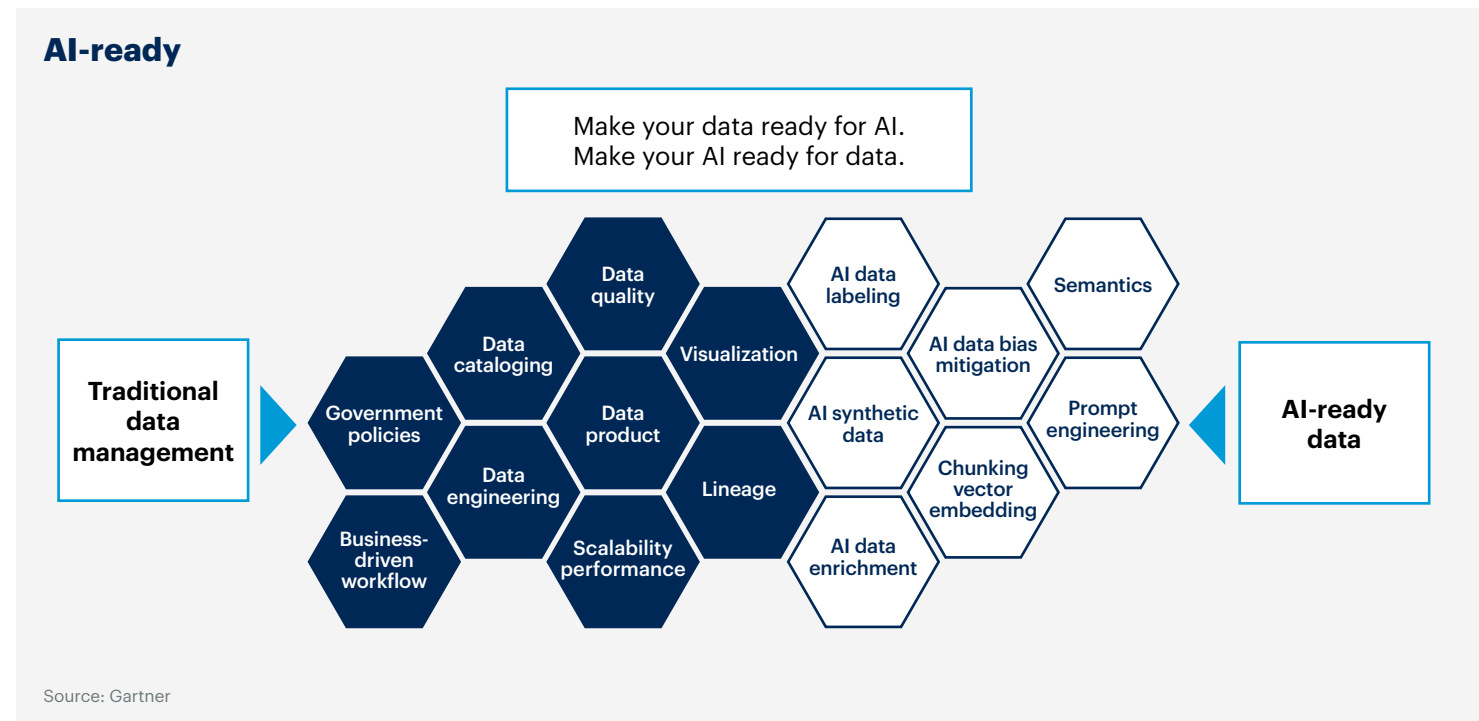
Roadmap

# AI-Ready Data Essentials

How to govern, qualify and align data to deliver value with AI

# What is AI-ready data? Why is it important now?

Organizations that fail to realize the vast differences between AI-ready data requirements and traditional data management will endanger the success of their AI efforts. Without AI-ready data, the promise of AI will fail to materialize. Robust data management and governance are essential for success and can themselves be enhanced through AI-driven approaches. Learn the critical steps and strategies for preparing data to harness the power of AI.



Through 2025,

# 30%

**of generative AI (GenAI) projects will be abandoned** after proof of concept due to poor data quality, inadequate risk controls, escalating costs or unclear business value.

# What makes data AI-ready?

AI-ready data means that your data must be representative of the use case, of every pattern, errors, outliers and unexpected emergence that is needed to train or run the AI model for the specific use. Data readiness for AI is not something you can build once and for all, nor that you can build ahead of time for all your data. It is a process and a practice based on availability of metadata to align, qualify and govern the data.

## AI-ready data



Source: Gartner

Alignment	Qualification	Governance
<ul style="list-style-type: none"><li>• Quantification</li><li>• Semantics</li><li>• Quality</li><li>• Trust and fairness</li><li>• Diversity</li><li>• Lineage</li></ul>	<ul style="list-style-type: none"><li>• Consistency assessment</li><li>• Validation and verification</li><li>• Operational SLAs</li><li>• Versioning</li><li>• Continuous regression testing</li><li>• Observability metrics</li></ul>	<ul style="list-style-type: none"><li>• Data stewardship</li><li>• Inference and derivation</li><li>• Regulatory and compliance</li><li>• AI standards support</li><li>• Data sharing</li></ul>

## 3 key questions to ask as you develop and prioritize your AI-ready data initiatives

- 1 Does your organization's data align with use-case requirements?
- 2 How do you qualify data use to meet AI-expected confidence requirements?
- 3 How do you govern AI-ready data in the context of the use case?

## What are the key stages?

This roadmap shows the sequence of objectives and desired outcomes and is useful for aligning all stakeholders. It is distilled from interactions with clients who have successfully implemented AI-ready data initiatives. A few key milestones and associated Gartner resources are highlighted, but our full roadmap includes complete details of all milestones and resources for each stage of the initiative.



**Assess data  
management  
readiness**

**Gain buy-in from  
the board**

**Evolve data  
management  
practices**

**Extend the data  
management  
ecosystem**

**Scale and govern**



## Stage 1

Assess your data needs depending on the AI use cases.

### Actions to take



Ensure your data meets AI use-case expectations, such as quantification, semantics, quality, and trust and diversity.



Ensure that the data meets expected confidence requirements for AI use cases, such as validation and verification, performance, cost, and nonfunctional requirements.



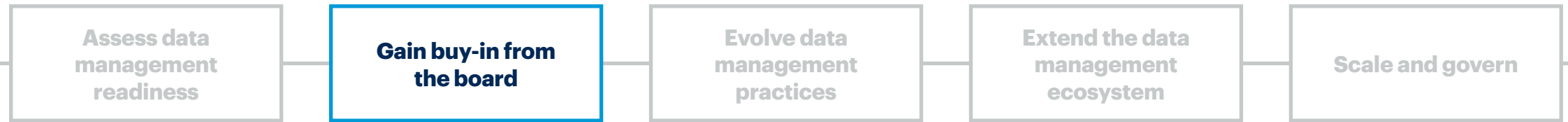
Define ongoing data governance requirements the data must meet in support of the AI use case, such as data stewardship, and data and AI standards and regulations.

### Sample resources available to Gartner clients

- **Checklist:** Assess Your Data Management Readiness for AI Initiatives
- **Quick Answer:** What Makes Data AI-Ready?
- **Research:** A Generative AI Playbook for CDAOs
- **Video:** How AI-Ready Data Drives Generative AI Innovation



Learn more: [Download your guide to defining AI ambitions with the AI Opportunity Radar.](#)



## Stage 2

Present requirements for the evolving data management practice, and gain buy-in and support from the board.

### Actions to take



Educate the board on the importance of investing in AI-ready data and mapping the use cases it enables to business goals.



Be specific about the value of AI-ready data to overall AI success and what is required; present an outside-in perspective.



Define clear goals and provide multiple ways to reach them.

### Sample resources available to Gartner clients

- **Research:** Gartner's Executive Leader Board Presentation Library
- **Research:** How CDAOs Should Present Their D&A Initiative to the Board
- **Expert Inquiry:** Engage with an expert on Gartner's Framework for AI-Ready Data
- **Executive Partner Inquiry:** Engage with your Executive Partner to benefit from their past experiences

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### Stage 3

Evolve data management practices.

#### Actions to take



Focus the scope: Center the unique capabilities of retrieval-augmented generation (RAG) around a specific use case and demonstrate success by providing business value.



Assess the knowledge source: Categorizing the underlying data as structured, semistructured or unstructured will enable you to assess handling procedures or identify potential risks.



Ensure enrichment: Metadata provides critical context for your current RAG deployment and will underpin the enabling technologies.

#### Sample resources available to Gartner clients

- **Quick Answer:** Options for Using Your Data With Generative AI Models
- **Research:** Successful Generative AI Projects Require Better Metadata Management
- **Research:** Explore Data-Centric AI Solutions to Streamline AI Development
- **Data and Analytics conferences:** Discover the Data Management track

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## Stage 4

Extend the data management ecosystem.

### Actions to take



Build a strong metadata practice, including rich semantics, to improve the accuracy of GenAI on top of enterprise data.



Build data literacy and GenAI skills to safely use these emerging data management technologies and detect potential pitfalls.



Evaluate and test the GenAI-enabled data management capabilities provided by vendors, and only deploy if the levels of accuracy, quality, security and privacy are sufficient.

### Sample resources available to Gartner clients

- **Research:** How to Boost GenAI Impact on Data Quality Initiatives
- **Research:** How Will LLMs Impact Data Quality Initiatives?
- **Research:** Choosing the Optimal Vector Database for Your GenAI Product
- **Innovation Insight:** How Generative AI Is Transforming Data Management Solutions
- **Phone consultation:** Discuss methods, tools and characteristics of a data management ecosystem
- **Tool:** Gartner BuySmart™ capabilities for data management ecosystems



## Stage 5

Scale and govern.

### Actions to take



Set up governance initiatives with associated structure, roles, processes and practices driven by outcomes; expand existing D&A governance programs, including establishing an AI board.



Identify and track regulatory changes, assess impact on the enterprise and build plans to accelerate and align initiatives such as AI ethics and responsible use.



Assess current data and AI literacy levels, devise a curriculum and build a plan to develop staff as a critical part of change management to support governance and value realization goals.

### Sample resources available to Gartner clients

- **Research:** Artificial Intelligence Requires an Extended Governance Framework
- **Research:** How to Design an Effective Data and Analytics Governance Operating Model
- **Tool:** Identify and Mitigate Top GenAI Risks



Learn more: [Download your Customizable Roadmap for Data Governance.](#)

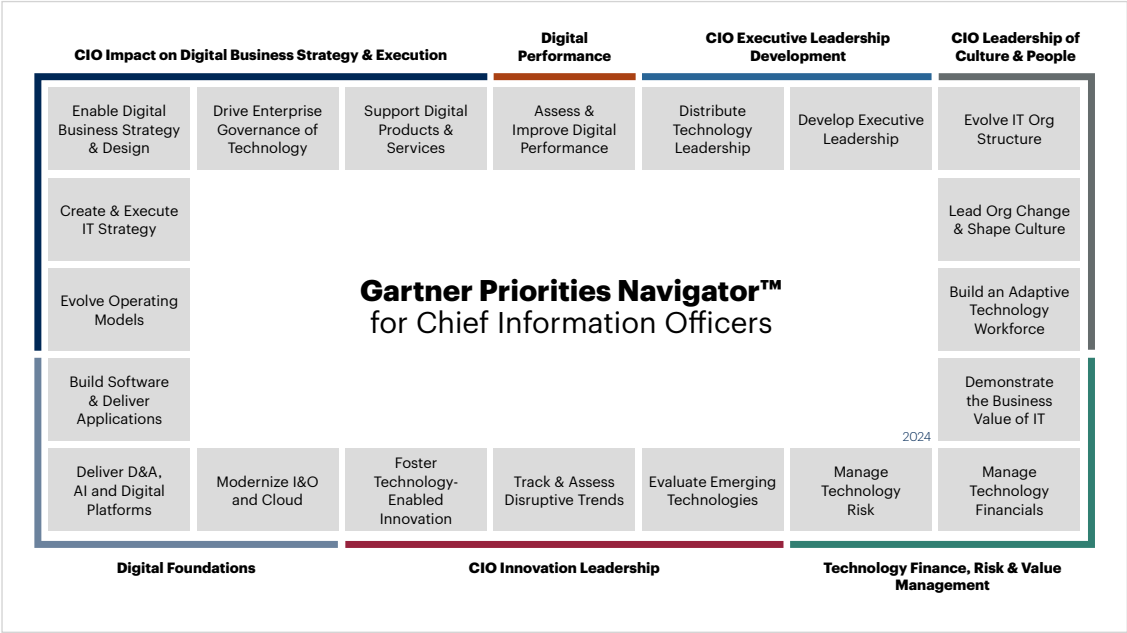
# Who needs to be involved?

The most successful companies establish cross-functional teams for their **AI-ready data initiatives**. We have outlined the recommended functions to involve and their roles to ensure the best success in hitting the milestones.

 Mission-critical team members				
<b>CIO</b> Creates a collaborative working structure with the CDAO with clear responsibilities for each. The CIO needs to partner on technology trends, architecture, infrastructure, platforms and tools.	<b>CDAO and Team</b> Build the foundation for the management, measurement and monetization of D&A assets for AI-driven innovation and business transformation. They ensure value realization by building a data-driven and data- and AI-literate culture and by leading data, analytics and AI governance initiatives to mitigate risk and ensure trust.	<b>CISO and Team</b> Engage with the CDAO and governance leaders to ensure that risk management and information security implications are understood and addressed in the data, analytics and AI governance initiative. The CISO also guides planning activities for data asset management and governance, and risk and compliance activities.	<b>CFO</b> Works with the CDAO to modernize value measurement and realization approaches and D&A budget processes to ensure optimal allocation of resources and impact on enterprise value.	<b>Data Management Leader</b> Creates business impact by investing in a modern D&A ecosystem to deliver reusable data products that address enterprisewide D&A requirements and data-driven innovation opportunities.
<b>Enterprise Application Leaders</b> Collaborate with the CDAO and enterprise architect to implement modern data management, analytical applications and composable solutions. They support and manage applications to achieve D&A strategy and governance objectives.	<b>Data Engineers</b> They work closely with the CDAO and their teams to deliver an AI-ready data foundation.	<b>Sourcing, Procurement and Vendor Management Leader</b> Works with the CDAO to identify, assess and select technology vendors and external service providers.	<b>Data Management Architects</b> Plan the D&A technical roadmap; design and implement master data management policies, data pipelines and data stores; select D&A tools and vendors; architect and implement D&A solutions that span application, infrastructure and security; and architect and design data governance tools and procedures.	<b>AI Team</b> They rely on the CDAO and their team to deliver the AI-ready data and governance necessary for AI applications.

# How Gartner supports your priorities

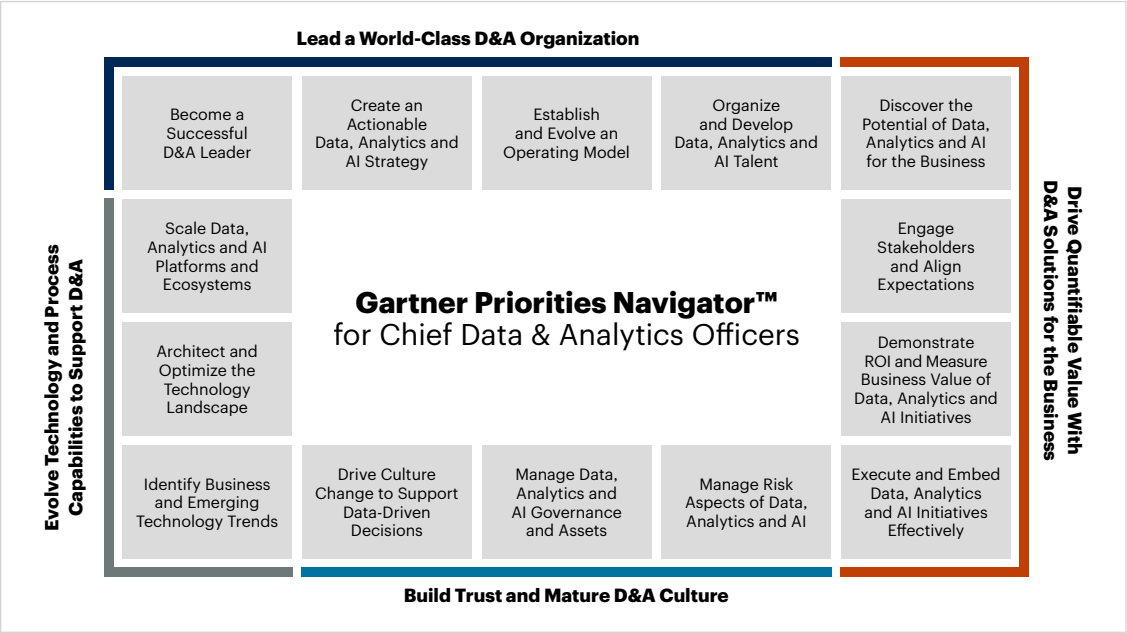
As you are working on getting your data AI ready, Gartner covers the depth and breadth of CIO and CDAO priorities.



## Gartner for Chief Information Officers

Gartner provides insight, tools and guidance to support initiatives from improving digital delivery and evolving IT organizational structure to modernizing I/O and cloud while upskilling and retaining talent. By working with Gartner, CIOs can measurably impact the bottom line, demonstrate the value of IT and drive organizational objectives.

Source: Gartner



## Gartner for Chief Data & Analytics Officers

Gartner offers insight, tools and guidance to help CDAOs address four essential needs: lead a world-class D&A organization, drive quantifiable value with D&A solutions for the business, build trust and mature D&A culture, and evolve technology and process capabilities to support D&A.

# Actionable, objective insight

Explore these additional complimentary resources and tools on data and analytics for CDAOs and other D&A leaders:

## Research

### [How Generative AI Is Transforming Data Management Solutions](#)

Transform the data management practice, ease data access and reduce the technical skills barrier.

## Webinar

### [Is Your Data AI Ready? Critical Questions You Must Ask Data Engineers](#)

Learn how AI processes metadata from synthetic data, labeling, enrichment and contextual processes.

## Tool

### [Gartner CDAO Effectiveness Diagnostic](#)

Design an operating model that deploys the right D&A skills and work in the right places.

## Tool

### [Gartner Data and Analytics Maturity Score for CDAOs](#)

Establish good governance practices to enable key business outcomes.

## Access other insights from Gartner:

[Enhance Your Roadmap for Data and Analytics Governance](#)

[Essential Guide to Data and Analytics Skills and Capabilities](#)

[How Data & Analytics Leaders Are Shaping Generative AI Initiatives](#)

[Get Stakeholder Buy-in on Your Next Initiative](#)

[Drive Business Outcomes by Measuring the Value of Data Literacy](#)

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