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100 Data & Analytics Predictions Through 2026



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Alan Duncan

Distinguished VP Analyst



Basis for today's discussion...

- [Tool: Over 100 Data and Analytics Predictions Through 2026](#)

Our annual predictions highlight the importance of data and analytics across an ever-broadening range of business initiatives and the use of technology to support their delivery. Data and analytics leaders must consider these predictions to enhance their strategic vision and delivery programs.

Published: 11 Mar 2022

[Alan D. Duncan](#)

Strategic planning assumptions (SPAs, aka “Gartner predictions”)...



Source: Gartner
739555_C

**...are statements of Gartner’s positions
and actionable advice about the future.**

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What are “**Gartner Predictions**”?

(a.k.a. *Strategic Planning Assumptions* / SPAs)

In general: *Leading indicator* viewpoints by Analysts in response to an emerging trend. To help our clients identify, understand and plan for **technology-enabled change**, and the **business and human impacts** arising.

In particular for today: how *data and analytics* capabilities might change in the coming years and how you might use these to innovate

Tips:

- The point of an SPA is not to be right! The **point is to provoke thinking...**
- Use SPAs as a basis for testing your **Data & Analytics Strategy**
- Evaluate any near-term flags that indicate whether a prediction is trending toward truth or away from it, to prioritise your **Data & Analytics Operating Model**
- (NB: predictions with longer time horizons as having a lower probability of coming true than those with shorter time horizons)

Context: Data & Analytics Strategy

Polling Question 1 of 2

Currently, how formally defined is your organization’s Data & Analytics Strategy?

- A. Fully defined, business oriented and aligned with *SMART* goals.
- B. Defined and separate from / complementary to the IT Strategy. Some reference to measurable business outcomes.
- C. Data & analytics strategy is defined, as a subset of IT Strategy and is technology-oriented.
- D. We have a portfolio of data & analytics projects, but not formally defined as a “strategy”.
- E. We do not really have any form of data & analytics strategy.

How to participate in our polling

If you are in full screen mode – click Esc
The poll question is on the “Vote” tab.
Please click the box to make your selection.
Upon voting you will see the results.

Thank you!

Ask a question

Attachments

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Q. Polling Question

(please choose 1 answer)

A. Answer

☐

B. Answer

☐

C. Answer

☐

D. Answer

☐

E. Answer

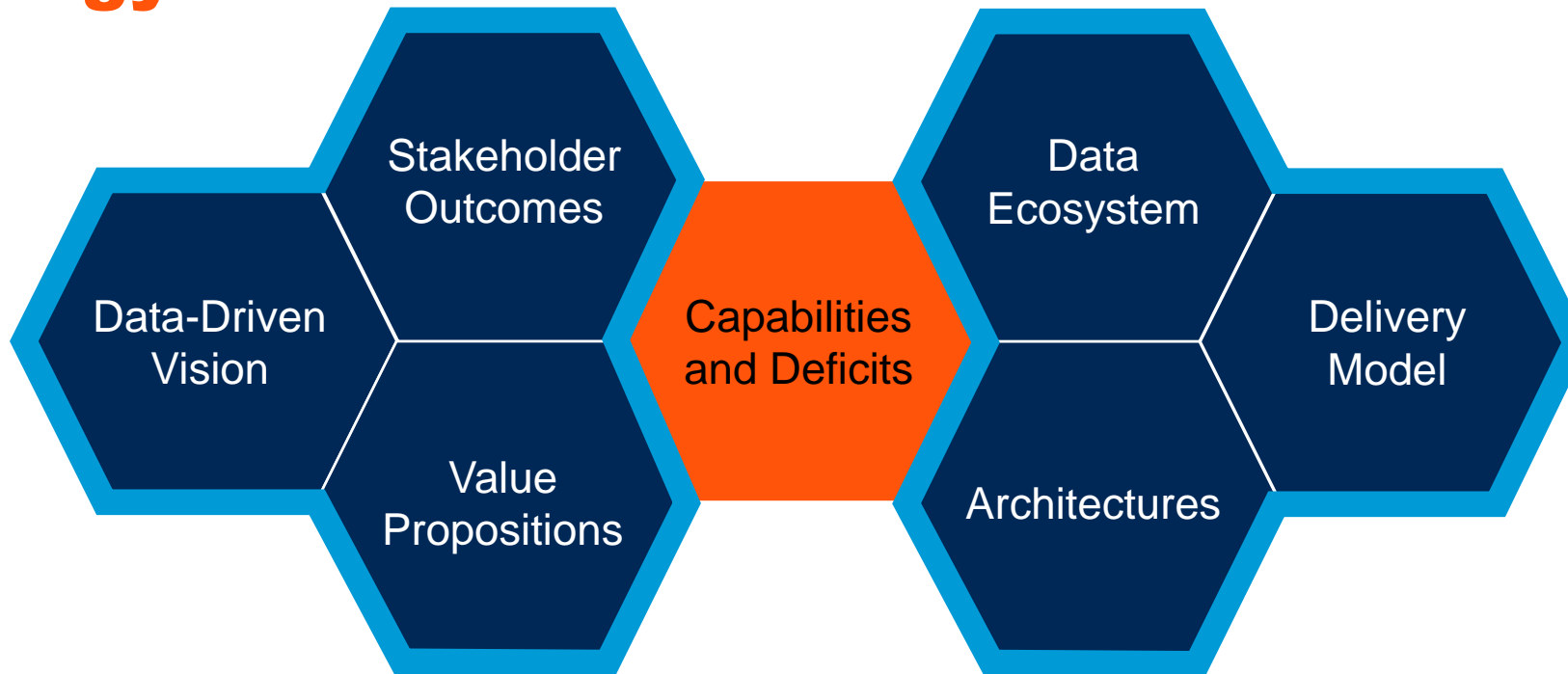
☐

Summary: Foundational Excellence

Data *Practices* in support of Business *Purposes*

Strategy

**Operating
Model**



The predictions...
... the provocations.

Polling Question 2 of 2

To what extent do you use Gartner's Strategic Planning Assumptions* in your scenario planning? (Choose best-fit)

* SPAs, aka “predictions”

- A. Active and regular use as provocations for innovation thinking and scenario planning**
- B. Significant use to test our initiatives and validate our roadmaps**
- C. Some ad hoc reference within our planning, but not really in a structured way**
- D. As “quotable quotes” to add credibility to a business case for a specific project. (“Gartner says...”)**
- E. We don't refer to them at all currently.**

How to participate in our polling

If you are in full screen mode – click Esc

The poll question is on the “Vote” tab.

Please click the box to make your selection.

Upon voting you will see the results.

Thank you!

Ask a question	Attachments	Vote	Rate this	Details
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Q. Polling Question

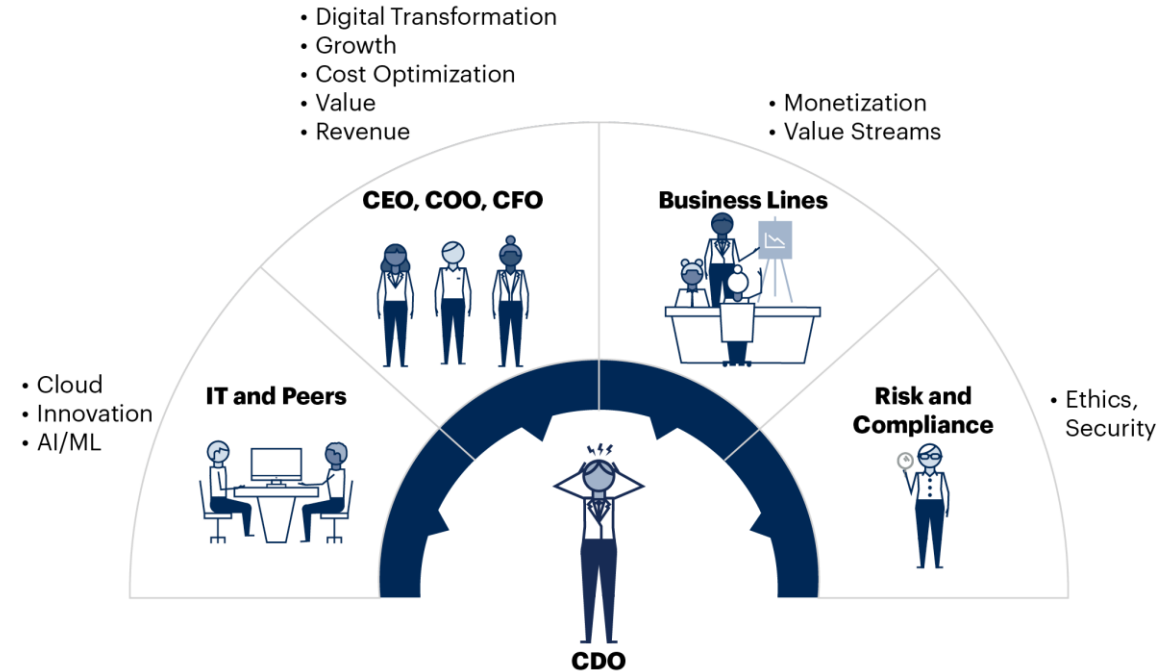
(please choose 1 answer)

A. Answer	<input type="checkbox"/>
B. Answer	<input type="checkbox"/>
C. Answer	<input type="checkbox"/>
D. Answer	<input type="checkbox"/>
E. Answer	<input type="checkbox"/>

Data and Analytics Leaders

- By 2026, augmented financial operations (FinOps) will have improved cloud cost optimization and reduced budget planning efforts by up to 40%.
- By 2024, ethical reviews will be as common as privacy reviews, eliminating all excuses for irresponsible use of data and technology.
- By 2026, over 50% of commercial organizations will have established initial efforts for formal data monetization.
- By 2025, chief data officers (CDOs) who establish value-stream-based collaboration will significantly outperform their peers in driving cross-functional collaboration and value creation.

CDOs Face Increasing Pressures and Demands



Source: Gartner
757919_C

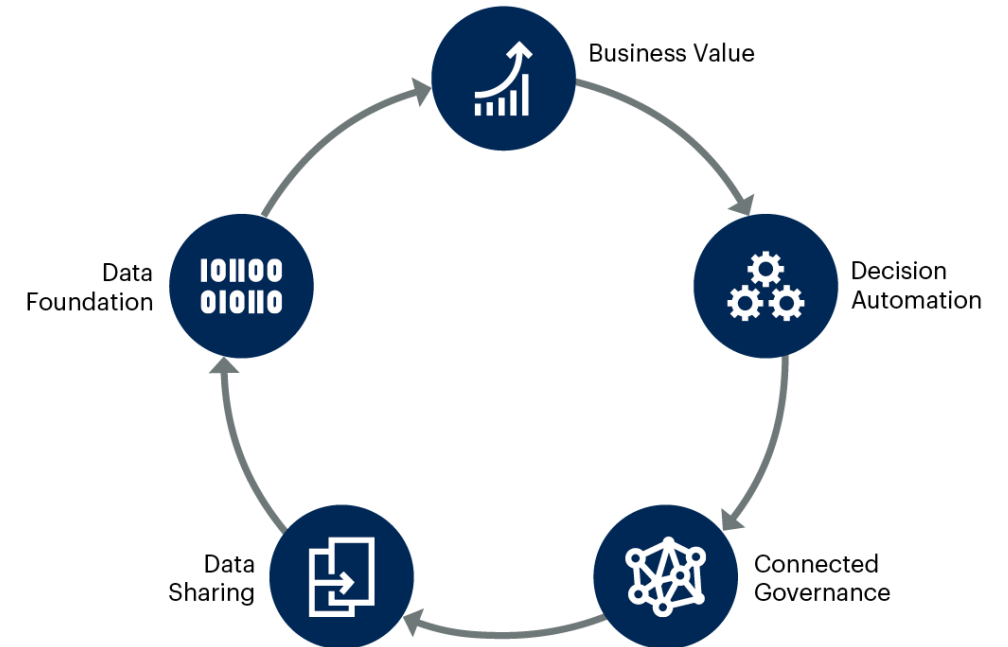
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[Predicts 2022: Data and Analytics Leaders Must Expand Value While Managing Cost and Risk](#)

Data & Analytics Programs and Practices

- By 2025, 70% of public companies that outperform competitors on key financial metrics will also report being data and analytics centric.
- By 2025, 95% of decisions that currently use data will be at least partially automated.
- By 2026, 20% of high-performing organizations will use connected governance to scale and execute on their digital ambitions.
- By 2026, applying automated trust metrics across internal and external data ecosystems will replace most outside intermediaries, reducing data sharing risk by 50%.
- By 2025, 80% of organizations will have deployed multiple data hubs as part of their data fabric to drive mission-critical data and analytics sharing and governance.

Build Trust and Accelerate Decision Making



Source: Gartner
757755_C

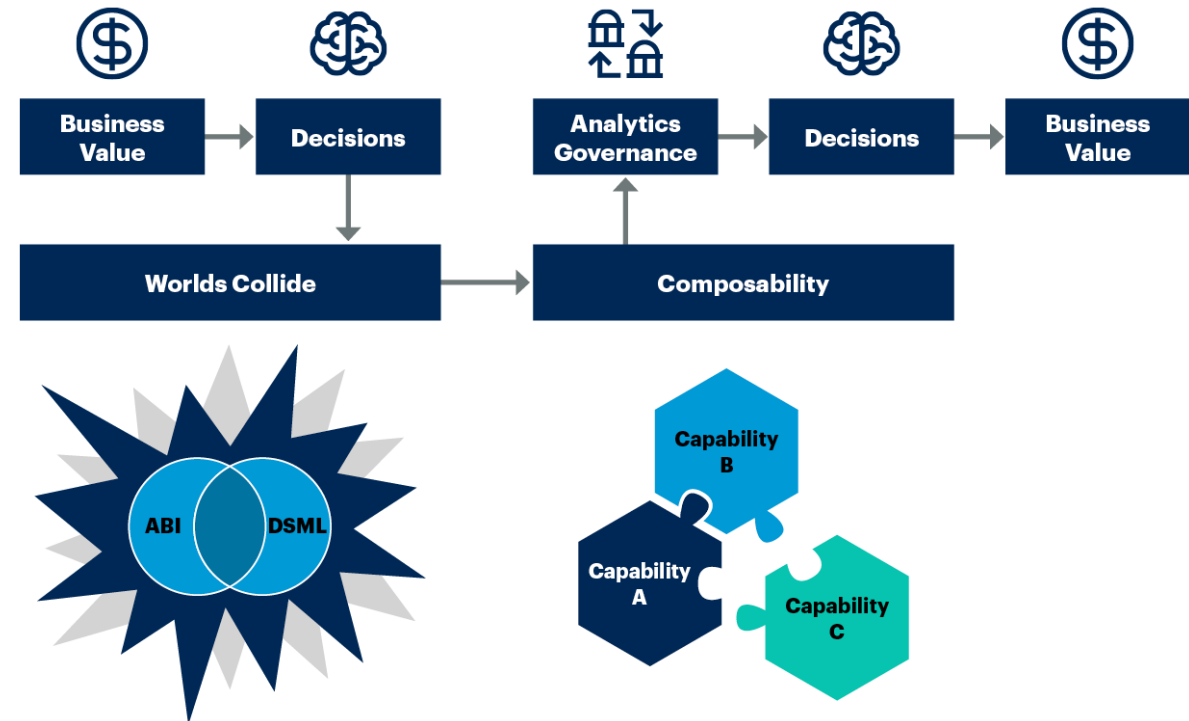
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[Predicts 2022: Data and Analytics Strategies Build Trust and Accelerate Decision Making](#)

Analytics, BI and Data Science Solutions

- By 2023, ease of migration, interoperability and coherence will be deciding factors in 90% of data science, machine learning and AI platform buying decisions.
- By 2024, 60% of organizations will have adopted a distributed delivery model resulting in 5x lower D&A operations costs than those that do not.
- By 2024, organizations that lack a sustainable data and analytics operationalization framework will have their initiatives set back by up to two years.
- By 2024, enterprises that primarily build applications leveraging a data and analytics ecosystem from a single cloud service provider will outperform competitors, despite vendor lock-in.
- By 2025, 60% of analytics activities will be initiated and 30% will be completed entirely within digital workplace applications.

The Analytics, BI and Data Science Story



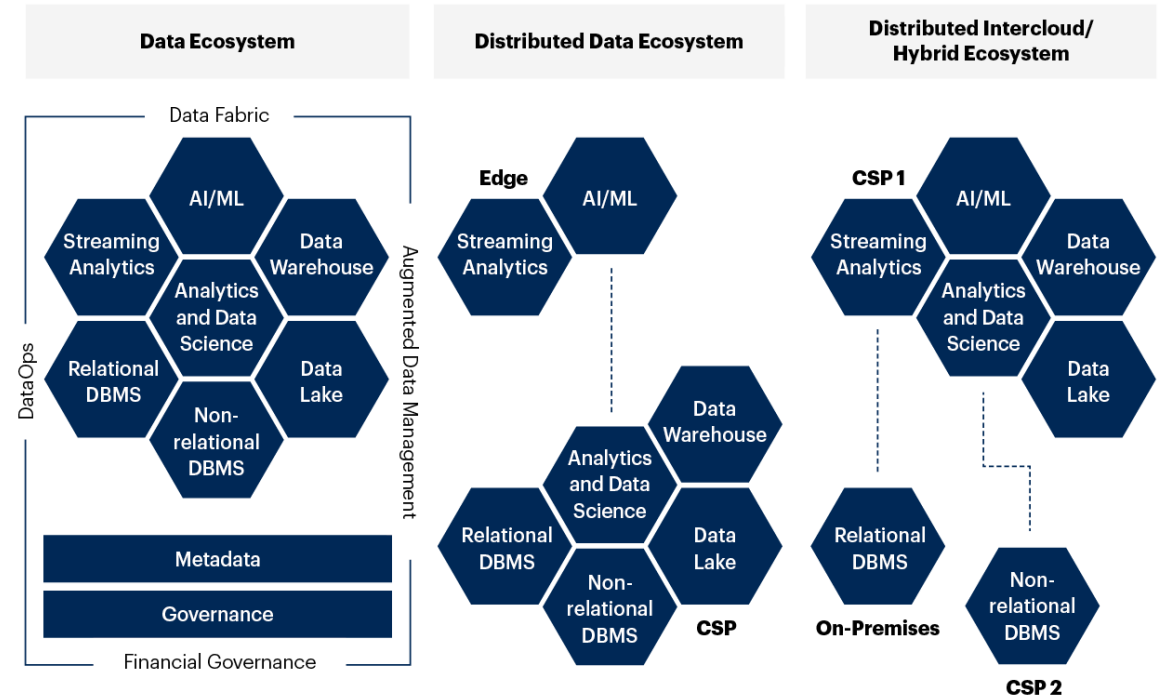
Source: Gartner
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[Predicts 2022: Analytics, BI and Data Science Ecosystems Drive New Perspectives](#)

Data Management Solutions

- Through 2026, 90% of data management tools and platforms that fail to support multicloud and hybrid capabilities will be set for decommissioning within three years.
- By 2025, data fabric designs that utilize active metadata will reduce human-driven data management and metadata management tasks by at least 50%.
- By 2026, 20% of large enterprises will use a single data and analytics governance platform to unify and automate discrete governance programs.
- By 2025, 90% of new data and analytics deployments will be through an established data ecosystem, causing consolidation across the data and analytics market.

Cloud Data Ecosystems Will Be Implemented in Multiple Environments



Source: Gartner (September 2021)
754951_C



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Artificial Intelligence

- By 2025, 80% of the largest global organizations will have participated at least once in federated ML to create more accurate, secure and environmentally sustainable models.
- By 2026, transformer models will revolutionize AI, forming the foundation for 50% of NLP use cases, up from less than 5% in 2021.
- By 2024, 70% of organizations relying solely on ML for AI initiatives will spend more money per model than those leveraging composite AI techniques.
- By 2025, 20% of AI-automated decisions in an organization will leverage active metadata to drive data and analytics automation.

Top Predictions in Artificial Intelligence 2022

 Core Technologies	 Impact on Consumers and Workers
<ul style="list-style-type: none">• Federated machine learning• Transformer models• Active metadata• Composite AI	<ul style="list-style-type: none">• AI regulations• Digital literacy• Compliance and security• Synthetic data

Source: Gartner
757842_C

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[Predicts 2022: Artificial Intelligence Core Technologies](#)

Artificial Intelligence

- By 2025, regulations will necessitate focus on AI ethics, transparency and privacy, which will stimulate — instead of stifle — trust, growth and better functioning of AI around the world.
- By 2024, 40% of all organizations will offer or sponsor specialized data science education to accelerate upskilling initiatives, up from 5% in 2021.
- By 2026, 5% of workers will routinely use AI against their employer's wishes to complete tasks.
- By 2025, synthetic data will reduce personal customer data collection, avoiding 70% of privacy violation sanctions.

Top Predictions in Artificial Intelligence 2022



Core Technologies

- Federated machine learning
- Transformer models
- Active metadata
- Composite AI



Impact on Consumers and Workers

- AI regulations
- Digital literacy
- Compliance and security
- Synthetic data

Source: Gartner
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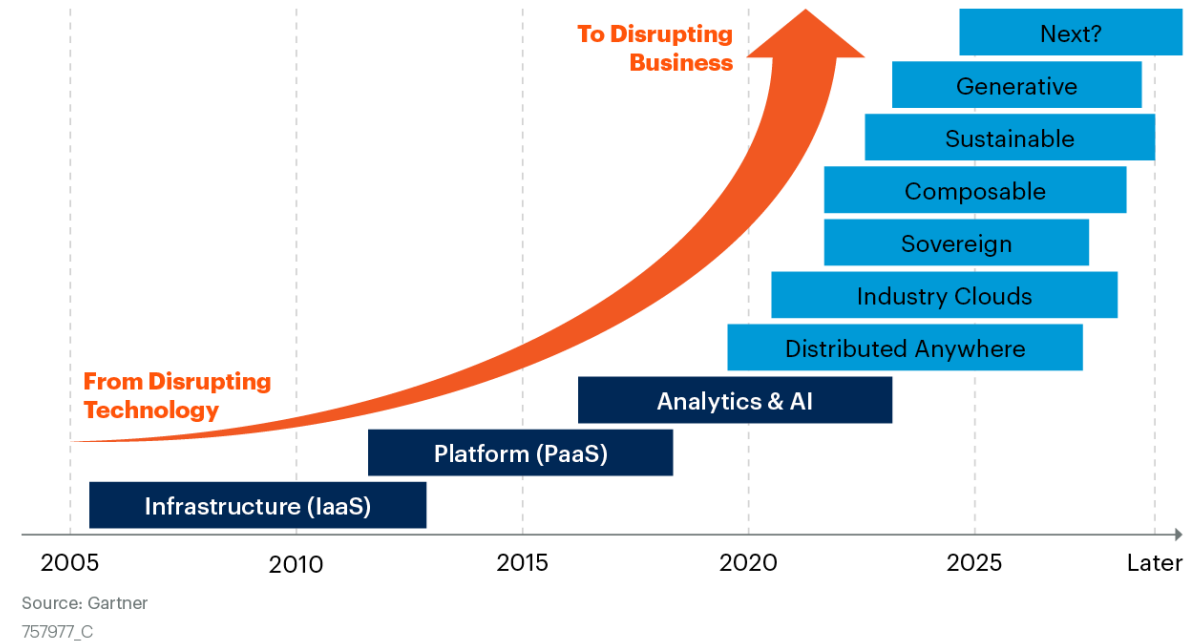
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[Predicts 2022: Artificial Intelligence and Its Impact on Consumers and Workers](#)

Cloud & Infrastructure

- By 2025, sovereign clouds will address specific compliance demands of highly regulated public-sector workloads, but won't be mandated for most enterprise workloads.
- By 2025, more than 50% of enterprise-managed data will be created and processed outside the data center or cloud.
- By 2027, machine learning (ML) in the form of deep learning (DL) will be included in over 65% of edge use cases, up from less than 10% in 2021.
- By 2025, 30% of enterprises will have implemented an AI-augmented development and testing strategy, up from 5% in 2021.

Where Next: Cloud Moves From Disrupting Technology to Disrupting Business



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[Predicts 2022: The Cloud Moves From Technology Disruption to Business Disruption](#)

[Predicts 2022: The Distributed Enterprise Drives Computing to the Edge](#)

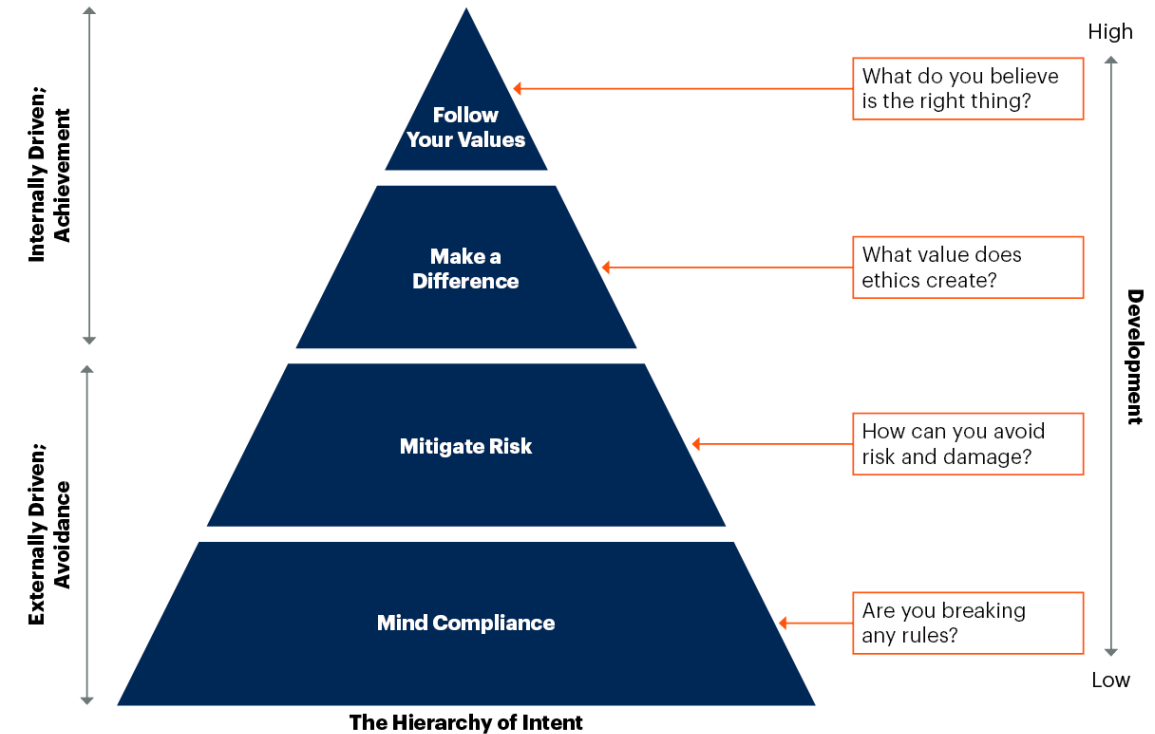
[Predicts 2022: Build Digital Platforms for Adaptive Resilience](#)

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Cybersecurity and IT Risk

- By 2024, large organizations' average annual budget for privacy will exceed \$2.5 million, allowing a shift from compliance ethics to competitive differentiation.
- By 2025, privacy lawsuits and claims related to biometric information processing and cyber-physical systems will have resulted in over \$8 billion in fines and settlements.
- Through 2026, organizations that mishandle personal data will suffer three times more financial damage from class actions and mass claims than from enforcement sanctions.
- By 2025, 50% of cybersecurity leaders will have tried, unsuccessfully, to use cyber risk quantification to drive enterprise decision-making.
- By 2025, 30% of enterprises will have adopted a data security platform (DSP), due to the pent-up demand for higher levels of data security and the rapid increase in product capabilities.

Hierarchy of Intent



Source: 2020 Gartner
713721_C

[Predicts 2022: Privacy Risk Expands](#)

[Predicts 2022: Cybersecurity Leaders Are Losing Control in a Distributed Ecosystem](#)

[Predicts 2022: Consolidated Security Platforms Are the Future](#)

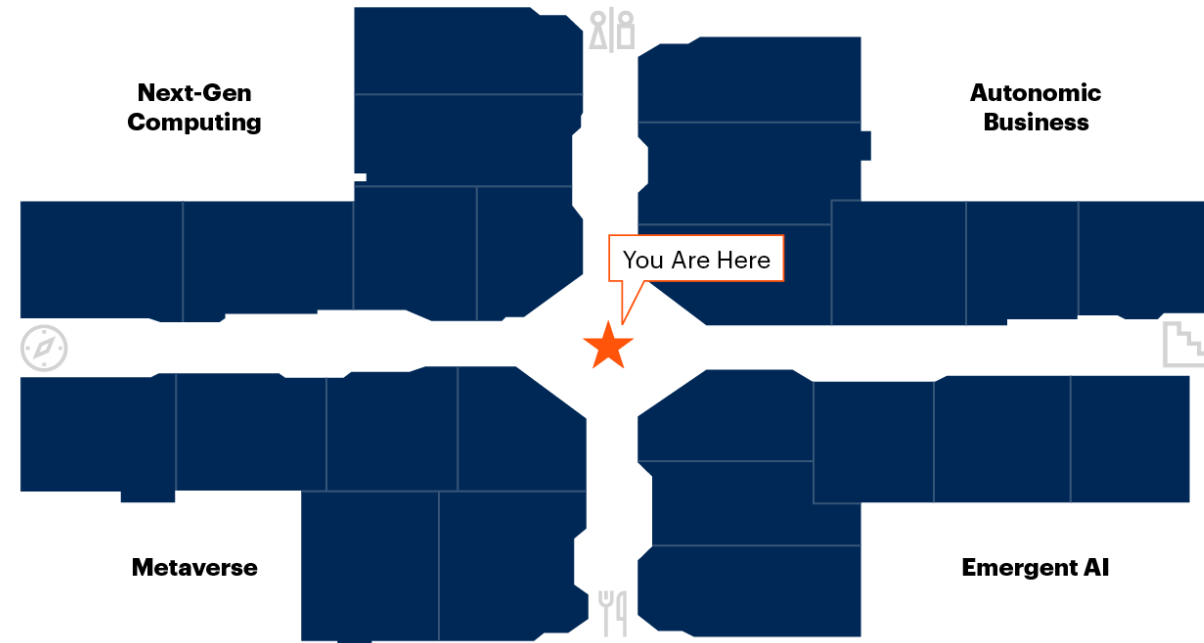
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Technology Innovation

- By 2026, the annual shipments of tiny IT tags and sensors will exceed 100 million units, enabling new real-time inventory and smart packaging opportunities.
- By 2026, 30% of global enterprises will use AI to accurately measure and analyze the impact of climate change on their business.
- By 2026, 25% of people will spend at least one hour a day in the metaverse for work, shopping, education, social and/or entertainment.
- By 2024, 25% of global enterprises will have embraced process mining as a step-up to autonomic business.
- By 2040, widespread participation in “metaverses” will triple healthcare costs and significantly decrease societal productivity, due to increases in personal and social disorders.
- Through forever, new technologies, such as AI, will first be used to automate every type of decision making, before people revert to making daily decisions themselves
- By 2030, half the world’s B2C businesses will stop retaining customer data, due to unmanageable compliance costs, and attempt to regain customers’ trust.

Build the Digital Future



Source: Gartner
726304_C

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[Predicts 2022: 4 Technology Bets for Building the Digital Future](#)

[Maverick* Predicts 2022: The Future According to Gartner's Unconventional Thinking](#)

Industry-specific D&A Predictions

By 2027, 70% of the top 20 global consumer goods companies will design digital twins of their consumers as part of their customer experience (CX) strategy.	Manufacturing IT Optimization and Modernization	Predicts 2022: Consumer Goods Manufacturers
By 2025, 80% of the top 100 global consumer goods companies will add a digital experience to augment their physical product.	Manufacturing IT Optimization and Modernization	
By 2027, 80% of the top 20 global consumer goods companies will meet consumer demand for greater transparency by having complete transparent traceability for one or more product lines.	Manufacturing IT Optimization and Modernization	
By 2025, 75% of companies will “break up” with poor-fit customers as the cost of retaining them eclipses good-fit-customer acquisition costs.	Service and Support Strategy and Leadership	Predicts 2022: Customer Service and Support Strategy and Leadership
By 2025, more than 75% of organizations will have abandoned Net Promoter score (NPS) as a measure of success for CSS.	Service and Support Strategy and Leadership	
	Executive Leadership: Customer Experience Strategies	Predicts 2022: Executives Must Shift Greater Focus to Customers and Employees to Drive Growth
By 2025, 60% of organizations with VoC programs will supplement traditional surveys by analyzing voice and text interactions with customers.	Customer Service and Support Technology	Predicts 2022: Customer Service and Support — Paving the Way for Greater Ambition and Responsibility for the Customer Experience
By 2027, 45% of agent-assisted interactions will use real-time analytics to improve business and customer outcomes.		
By 2025, customer service organizations that use AI-enabled knowledge automation will achieve 90% first contact resolution, up from 50% in 2021.		
By 2025, 70% of new access management, governance, administration and privileged access deployments will be converged identity and access management platforms.	Identity and Access Management and Fraud Detection	Predicts 2022: Identity-First Security Demands Decentralized Enforcement and Centralized Control
By 2024, organizations adopting a cybersecurity mesh architecture will reduce the number and scope of security incidents and 90% of their financial impact.	Identity and Access Management and Fraud Detection	
By 2025 identity and access management leaders who foster interdisciplinary fusion teams will gain control of 50% more identity and access management decisions than those who do not.	Identity and Access Management and Fraud Detection	
By 2026, 50% of smartphone users will frequently use one or more verifiable claims stored in their decentralized identity wallet.	Identity and Access Management and Fraud Detection	
By 2025, one in five B2B companies will use machine learning to proactively slow down customers’ journeys by connecting customers with sales reps during digital commerce interactions.	Marketing and Communications Leadership and Strategy	Predicts 2022: Marketing Builds New Connections
By 2024, 70% of global organizations will report metrics to track realization in supply chain against corporate diversity, equity and inclusion objectives.	Supply Chain Strategy	Predicts 2022: Supply Chain Strategy
By 2026, more than 50% of supply chain organizations will use machine learning to augment decision-making capability.	Supply Chain Strategy	Predicts 2022: Supply Chain Technology
By 2026, more than 75% of commercial supply chain management (SCM) applications vendors will deliver embedded advanced analytics, artificial intelligence and data science.	Supply Chain Technology Strategy and Selection	
Through 2025, 25% of supply chain decisions will be made across intelligent edge ecosystems.	Supply Chain Technology Strategy and Selection	
Through 2026, 80% of companies will suffer significant value loss due to a failure to merge their digital supply chain twin and control tower initiatives.	Supply Chain Technology Strategy and Selection	
By 2024, at least 60% of government AI and data analytics investments will directly impact real-time operational decisions and outcomes.	Government Digital Transformation and Innovation	Predicts 2022: Governments Scaling Gains From Disruption
By 2024, at least 70% of large cities will use digital twins to assess the environmental readiness of infrastructure investments.	Government Digital Transformation and Innovation	Predicts 2022: Smart Cities IoT and Data Analytics for Sustainable Resilience
By 2025, over 60% of city data exchange programs that fail to operationalize third-party data will be abandoned.	Government Digital Transformation and Innovation	
By 2023, 30% of law enforcement and public safety organizations will leverage early intervention systems to improve personnel and organizational effectiveness and accountability.	Government Digital Transformation and Innovation	Predicts 2022: Decision Points Loom for Digital Innovation in Public Safety and Justice
By 2024, over 40% of public safety and justice organizations with more than 1,000 FTEs will establish an external AI ethics advisory panel.	Government Digital Transformation and Innovation	

Industry-specific D&A Predictions

By 2026, RPA and AI will improve the student experience while reducing staff and faculty by over 20% per full-time student.	Education Digital Transformation and Innovation	Predicts 2022: Education — Review, Refocus, Rebuild
By 2026, over 70% of sanctioned investments for new upstream and alternative energy assets will be designed for comprehensive intelligent operations.	Energy and Utilities Digital Transformation and Innovation	Predicts 2022: Oil and Gas — The Last Golden Era
By 2024, 40% of oil and gas companies will provision analytics and decision support data through a data fabric, transforming access to enterprise information.	Energy and Utilities Digital Transformation and Innovation	
By YE25, 30% of G20 countries will drive flexibility markets with common process and data exchanges, in response to energy shortages.	Energy and Utilities Digital Transformation and Innovation	Predicts 2022: Galvanizing the Energy Transition
By YE25, 40% of utility field asset inspections will be performed by autonomous robotic systems automatically updating asset and maintenance conditions.	Energy and Utilities Digital Transformation and Innovation	
By 2026, 65% of B2B sales organizations will transition from intuition-based to data-driven decision making, using technology that unites workflow, data and analytics.	Sales Strategy and Leadership	Predicts 2022: The Digital Evolution of B2B Sales
By 2025, 75% of B2B sales organizations will augment traditional sales playbooks with AI-guided selling solutions.	Sales Strategy and Leadership	
Through 2024, finance outsourcing for AI process technologies will rise from 6% to 40%, primarily to digitally transform transactional operations.	Finance Function Strategy and Organization Design	Predicts 2022: Digital Finance Transformation via AI-Enabled Outsourcing
By 2024, finance organizations will encounter scaling problems with AI solutions, forcing 50% of deployments to be delayed or canceled.	Finance Function Strategy and Organization Design	
By 2026, one-third of finance and accounting (F&A) BPO vendors will include AI development and operationalization support for finance front-office processes to increase revenue.	Finance Function Strategy and Organization Design	
By 2024, AI adoption in banking, insurance, retail, government and healthcare will fall by 10% year over year due to the lack of common AI ethics frameworks.	Industry Product Planning and Strategy	Predicts 2022: Industry Success Will Demand Greater Composability and Collaboration Capabilities
By YE25, sales initiated through live commerce will account for more than 20% of global e-commerce sales for nonfood multichannel retailers.	Retail Digital Transformation and Innovation	Predicts 2022: Mastery of Inventory Is Critical to Drive Customer Trust for the Future of Retail
By YE26, at-home replenishment as a service will surge to at least 5% of multichannel grocery retailers' total revenue in developed economies.	Retail Digital Transformation and Innovation	
By YE25, all global multichannel fashion retailers will use AI and automation to create more targeted assortments, reducing item choices by up to 30%.	Retail Digital Transformation and Innovation	
Through YE25, 50% of new insurance products and services will result from customers sharing data for mutual benefit and convenience value.	Financial Services Digital Business Strategy and Innovation	Predicts 2022: Insurance — Advancing Digital Maturity Will Enable New Ways to Differentiate
By 2025, 40% of healthcare providers will shift 20% of hospital beds to the patient's home through digitally enabled hospital-at-home services, improving patient experience and outcomes and reducing the cost of care.	Healthcare and Life Science Digital Transformation and Innovation	Predicts 2022: Connections Drive Healthcare and Life Science Business Model Change
By 2025, a digital commerce platform and marketplace for healthcare services will connect 20% of all consumers, payers and providers.	Healthcare and Life Science Digital Transformation and Innovation	

Final thoughts: how to use Gartner Data & Analytics SPAs in your strategic planning process

- **Define/refine overall [data and analytics strategy](#)**, focusing on *measurable outcomes*
 - Ask: “*based on what we (think we) want to achieve, does prediction X/Y/Z in any way apply to us?*”
 - Data & analytics strategy acts as an immediate filter to identify which predictions *are* of relevance, and which *are not*.
 - Take into account any implications and recommendations that arise from each *prediction X/Y/Z* that does relate.
- **Assess & gap analysis of current capability** (e.g. using [IT Score for Data & Analytics](#)).
 - This will help to identify what you are currently able to do – as well as a reality check of what you’re currently *incapable* of.
- **Plan the delivery roadmap** – agile, bimodal approach, +3, +6 and +12 month horizons.

The further guiding question throughout: “**so what?**”

Recommended Gartner Research

- ▶ [Tool: Over 100 Data and Analytics Predictions Through 2026](#)
Alan D. Duncan (G00765705)
- ▶ [Over 100 Data and Analytics Predictions Through 2025](#)
Alan D. Duncan (G00744238)
- ▶ [CDO Agenda 2021: Influence and Impact of Successful CDOs in the Sixth Annual CDO Survey](#)
Debra Logan, Mike Rollings, Lydia Clougherty Jones, Alan D. Duncan, Carlie Idoine, Jitendra Subramanyam (G00744259)
- ▶ [Top Trends in Data and Analytics, 2022](#)
Rita Sallam et al (G00718161)
- ▶ [How to Craft a Modern, Actionable Data and Analytics Strategy That Delivers Business Outcomes](#)
Mike Rollings, Frank Buytendijk (G00378458)
- ▶ [Driving the Business Value of Data and Analytics: A Gartner Trend Insight Report](#)
Alan D. Duncan (G00751257)
- ▶ [Roadmap for Data Literacy and Data-Driven Business Transformation: A Gartner Trend Insight Report](#)
Alan D. Duncan (G00729278)

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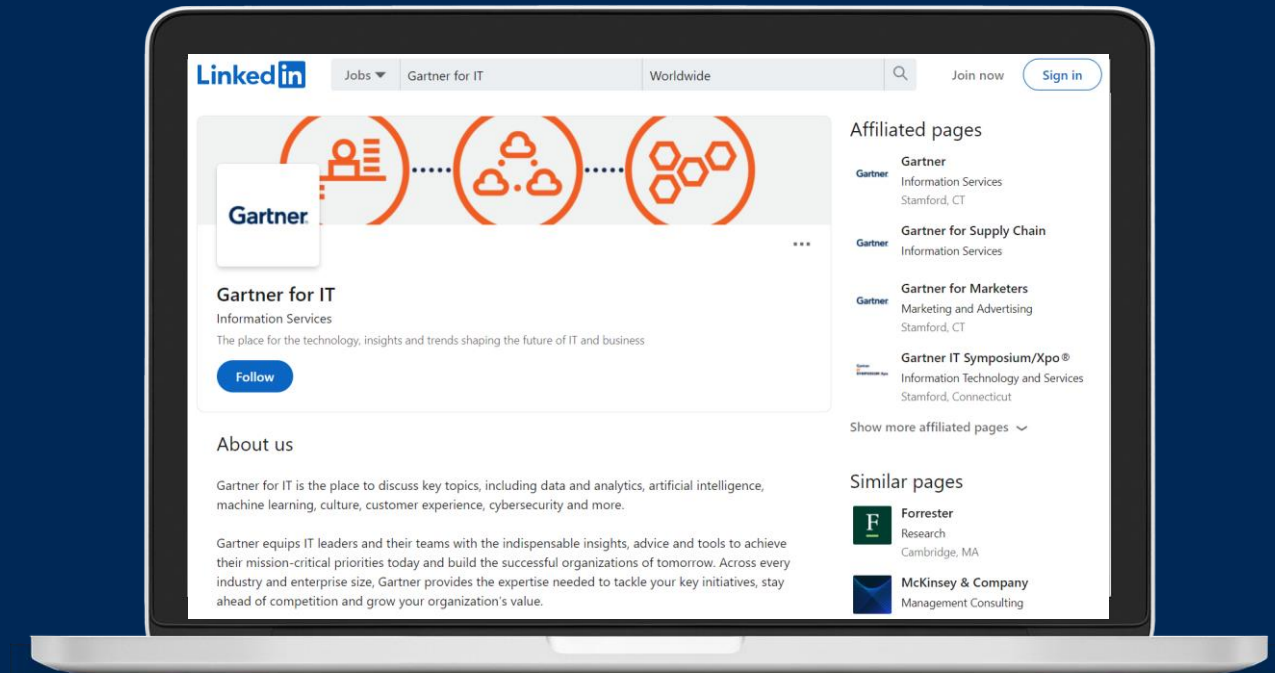
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Leverage the right innovative technologies for your organization

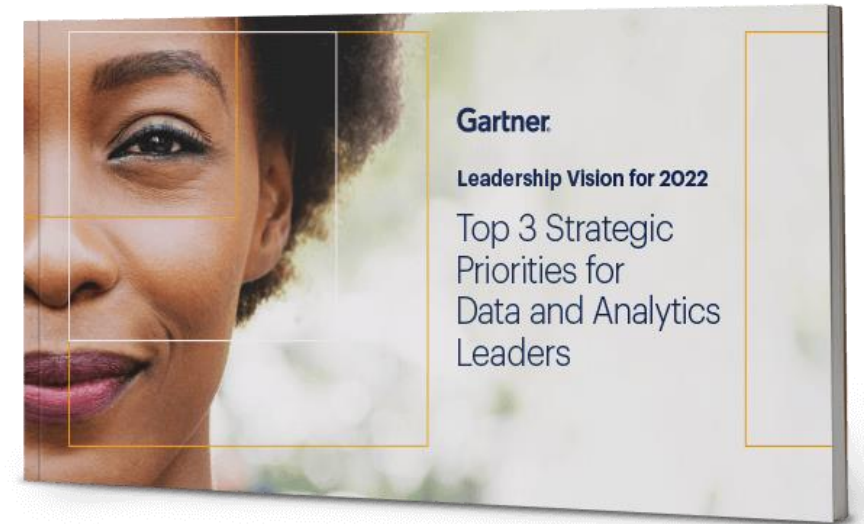


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2022 Leadership Vision Top 3 Strategic Priorities for Data and Analytics Leaders

Prioritize your time and energy with top-level guidance on where to focus — based on data-driven research.

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Over 100 Data and Analytics Predictions Through 2025

Data and analytics leaders must consider these strategic planning assumptions to enhance their vision and delivery.

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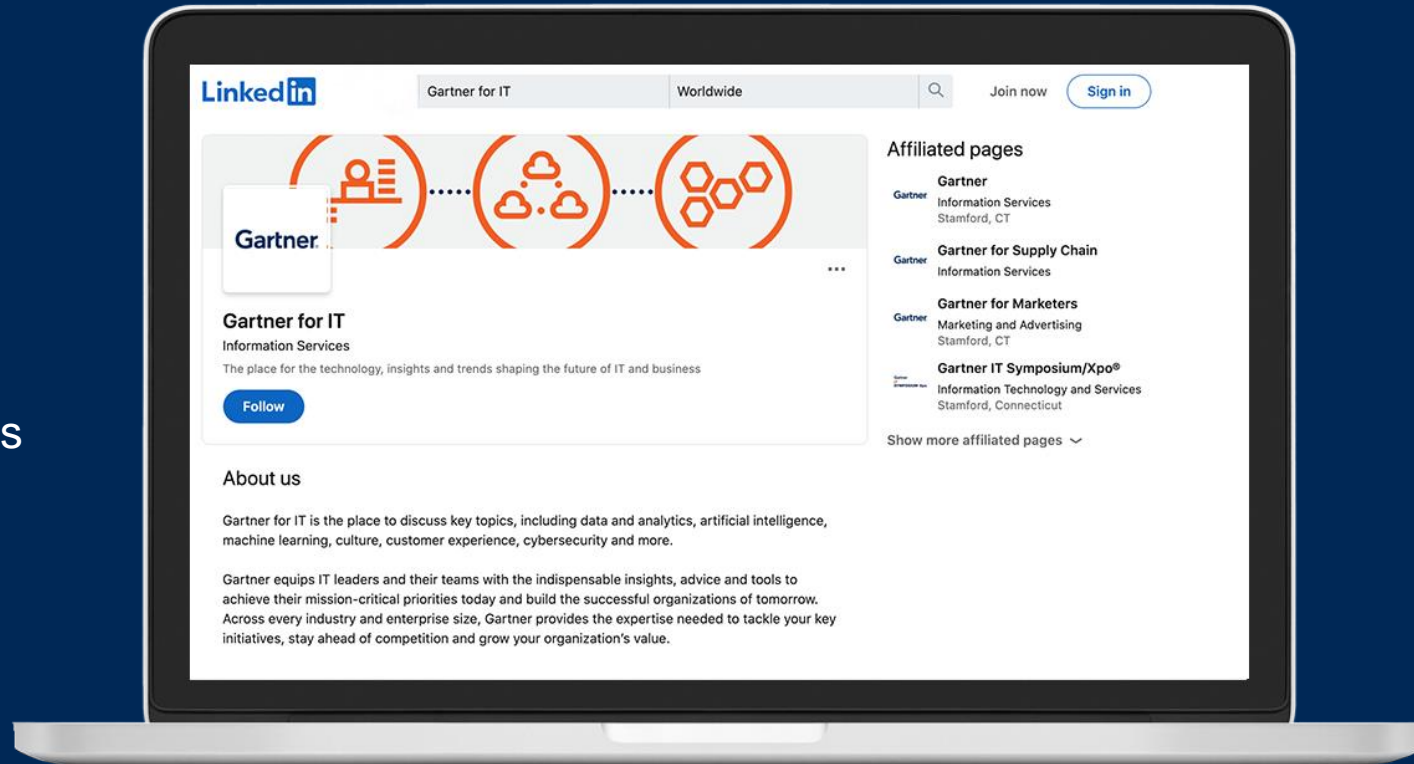
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