

Gartner Research

Over 100 Data and Analytics Predictions Through 2028

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24 April 2023

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Published 24 April 2023 - ID G00790199 - 29 min read

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Initiatives: Data and Analytics Programs and Practices; Drive Quantifiable Value With D&A Solutions for the Business

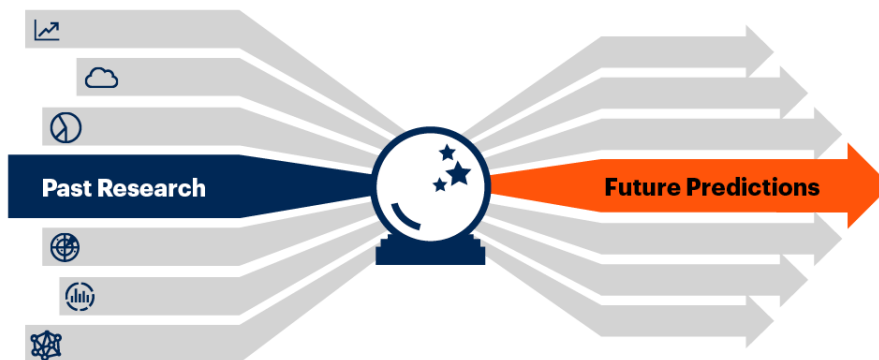
Our annual predictions highlight the importance of data and analytics across an ever-broadening range of business initiatives and the use of technology to support their delivery. Data and analytics leaders should use these predictions to enhance their strategic vision and delivery programs.

Analysis

Strategic planning assumptions (SPAs; aka “Gartner predictions”) are statements of Gartner’s positions and actionable advice about the future (see Figure 1):

Figure 1. Gartner’s Mainstream Predictions

Gartner’s Mainstream Predicts



Source: Gartner
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SPAs help our clients identify, understand and plan for technology-enabled change, and the business and human impacts arising. In particular, our data and analytics SPAs examine how such capabilities might change in the coming years and how you might use these to innovate and strengthen your capability.

Gartner clients have come to rely on our annual predictions both as input for their strategic plans and as alerts to potentially disruptive changes. For most enterprises, investments and other business decisions during the next few years are likely to be made by finding a point of balance between the old and the new. Anticipating change is more important than ever, and predicting the point of balance then becomes a critical part of any strategic plan.

As evidenced by its pervasiveness within Gartner's published Predicts 2023 research, data and analytics (D&A) remain critical elements across nearly all industries, business functions and IT disciplines in both the private and public sector. Most significantly, data and analytics are key to a successful digital business. This collection of more than 100 data-and-analytics-related strategic planning assumptions through 2028 summarizes predictions released at the end of 2022. Data and analytics leaders should include these in their planning for successful strategies.

Research Highlights

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Digital business provides organizations with nearly unlimited possibilities to create business value. Increasingly, data and analytics has become a primary driver of business strategy, and the potential for data-driven business strategies and information products is greater than ever, with further acceleration of digital transformation and data-driven business.

Yet, for many, data-centric thinking is still difficult.

The transition to data-driven business requires data and analytics leaders — such as chief data and analytics officers (CDAOs), CEOs and CIOs — to elevate data and analytics strategies, advancing a new vision of business problem solving. This transition also profoundly impacts the work of a data and analytics organization and the enterprise competencies that must be assembled. It potentially even changes the management ethos of the organization, leading to significant workforce change management impacts.

Note that:

- Planning for possible alternative future scenarios is a vital aspect of modern business leadership.
- The point of an SPA is not to be “right.” The point is to *provoke thinking* and provide direction.
- Use SPAs as a basis for defining, refining and stress-testing your data and analytics strategy and program planning.
- Evaluate any near-term flags that indicate whether a prediction is trending toward truth or away from it in order to prioritize investment in your data and analytics operating model.
- In general, predictions with longer time horizons have a lower probability of coming true than those with shorter time horizons.

Core Data and Analytics Predictions

Data and Analytics Leaders, Strategy and Innovation

CDAOs are the primary leaders for data and analytics and they are tasked to create measurable outcomes for their key business stakeholders. When successful, CDAOs can make a positive impact on the performance of the organization and strengthen their own position at the same time.

Predicts 2023: Chief Data and Analytics Officers Need to Create Value and Make an Impact Now

- By 2025, CDAOs will have adopted data fabric as a driving factor in successfully addressing data management complexity, thereby enabling them to focus on value-adding digital business priorities.
- By 2026, more than a quarter of Fortune 500 CDAOs will have become responsible for at least one top-earning product that is based on data and analytics.
- Through 2025, 90% of organizations that trade globally will have struggled to mitigate risks from sovereign data strategies and policies and incur costs that limit mission success.

- By 2025, at least 25% of commercial organizations that have appointed a CDAO with business-facing KPIs and reporting lines will have demonstrated proportionally higher market valuations than those that did not.
- By 2026, CDAOs that become trusted advisors to, and partners with, the CFO in delivering business value will have elevated data and analytics to a strategic growth driver for the organization.

Current data and analytics governance practices are insensitive to business context, making them inadequate for responding quickly to opportunities. Data and analytics leaders must modernize existing governance practices to materialize return on investment.

Predicts 2023: Distributed Business Decisions Need Balanced Governance Approaches

- By 2026, 15% of large enterprises will have evaluated connected governance to effectively manage complex cross-organizational challenges with governance programs.
- By 2026, 80% of organizations will have deployed multiple data hubs within their data fabric to drive mission-critical data and analytics sharing and governance.
- By 2026, 20% of large enterprises will use a single data and analytics governance platform to unify and automate discrete governance programs.

Analytics, Business Intelligence and Data Science

Analytics, BI, data science and ML continue to collide, driving ABI and DSML platform consolidation. To foster personalized consumption of insights and data stories, data and analytics leaders must pivot to a composable platform featuring autonomous analytics, metadata, governance and data quality.

Predicts 2023: Analytics, BI and Data Science Composability and Consolidation

- By 2026, 50% of organizations will have to evaluate ABI and DSML platforms as an all-in-one, composable platform due to market convergence.
- By 2026, enterprise data catalogs will extend metadata scraping of analytics tools to provide end-to-end lineage, reducing analytics catalog adoption by at least 20%.

- By 2026, 50% of BI tools will activate their users' metadata, offering insights and data stories with recommended contextualized journeys and actions.
- By 2027, outlier detection and other augmented analytics capabilities will evolve into autonomous analytics platforms that fully manage and execute 20% of business processes.

Artificial Intelligence

With artificial intelligence (AI) becoming mainstream in enterprises, IT leaders must differentiate by implementing simulation platforms that integrate advanced analytics and realign their teams with a cognitive science focus. IT leaders who modernize AI practices will capture more value from AI investments.

Predicts 2023: Simulation Combined With Advanced AI Techniques Will Drive Future AI Investments

- By 2027, data science organizations will cut AI technical debt by 70% by using simulation platforms and technologies to manage complexity of AI systems.
- By 2026, 20% of top data science teams will have rebranded as Cognitive Science or Science consultancies, increasing diversity in staff skills by 800%.
- By 2026, organizations that do not build AI model observability capability will see a 20% decrease in the number of models running in production due to maintenance overheads.
- By 2026, Foundation models will form part of the pipeline for 50% of NLP use cases, up from less than 10% in 2022.

Artificial intelligence will have a profound impact on technology products and all aspects of product management. It is crucial for product and offering managers to take an in-depth look at how AI can help them take big steps toward improving their value proposition now.

Predicts 2023: AI's Profound Impact on Products and Services

- Through 2026, more than \$10 billion will have been invested in AI startups that rely on foundation models (large AI models trained on huge amounts of data).

- By 2026, 30% of new applications will use AI to drive personalized adaptive user interfaces, up from under 5% today.
- By 2026, AI-driven product and customer experience (CX) analytics tools will be the primary source of insight for 40% of digital product enhancements, up from 10% today.
- By 2027, over 35% of software will use AI-based digital twins as user personas for user experience (UX) development through the product life cycle, up from less than 5% today.
- By 2027, nearly 15% of new applications will be automatically generated by AI without a human in the loop, up from zero percent today.

Data Management and Infrastructure

The continued emergence of data ecosystems built on active metadata and data fabrics will enable efficiency, automation, augmentation, financial governance and sustainability. Data and analytics leaders should use these predictions to plan for and invest in an ecosystem-driven future.

Predicts 2023: Data Management Solutions Finally Leverage Foundational Concepts

- By 2026, organizations adopting active metadata practices will increase to 30% across data and analytics to accelerate automation, insight discovery and recommendations.
- By 2025, 80% of data mesh early adopters will fail to meet their planned SLAs around data engineering productivity, augmentation and federated governance.
- By 2025, 55% of IT will adopt data ecosystems, consolidating the vendor landscape by 40%, thereby reducing cost while reducing choice.
- By 2026, environmental sustainability (asset utilization and GHG emissions) will be a key criterion in over 60% of data management initiatives, supported by financial governance practices.

IT Leadership Predictions

Uncertainty carries as much opportunity as it does risk. The key to uncovering the best opportunities is to reimagine our initial assumptions about success. This research offers insights for executive leaders into understanding how predictions shape our thinking.

Gartner's Top Strategic Predictions for 2023 and Beyond – Seizing Uncertainty

- By 2025, without sustainable AI practices, AI will consume more energy than the human workforce, significantly offsetting carbon-zero gains.
- By 2027, social media platform models will shift from “customer as product” to “platform as customer” of decentralized identity, sold through data markets.

Cloud Computing

Cloud computing has evolved beyond its purpose as an application infrastructure and platform play to the foundation for core initiatives that infrastructure and operations leaders are charged with instituting, such as sustainability, digital transformation and business applications.

Predicts 2023: The Continuous Rising Tide of Cloud Lifts All Boats

- By 2026, 75% of organizations will adopt a digital transformation model predicated on cloud as the fundamental underlying platform.

Data Security and Privacy Predictions

Organizations in the past have developed their cybersecurity program to address the ebbs and flows of regulatory changes, business decisions, and customer demands and threats. Modern cybersecurity leaders will use a human-centric design to strengthen their program and optimize human potential.

Predicts 2023: Cybersecurity Industry Focuses on the Human Deal

- By 2025, the consumerization of AI-enabled fraud will fundamentally change enterprise attack surface driving more outsourcing of enterprise trust and focus on security education and awareness.

Threat exposure management is a nascent initiative combining attackers' and defenders' views to minimize enterprises' exposure to present and future threats. Gartner predicts that threat exposure management will enable security and risk management leaders to build evidence-based security.

Predicts 2023: Enterprises Must Expand From Threat to Exposure Management

- By 2027, the likelihood of breaches will increase threefold for organizations that fail to continuously manage remote access architecture and processes.
- Through 2026, more than 60% of threat detection, investigation and response (TDIR) capabilities will leverage exposure management data to validate and prioritize detected threats, up from less than 5% today.

Traditional identity and access management frameworks are no longer scalable, and commercial systems are at a breaking point for users. Decentralized identity solutions give control back to identity subjects. Application leaders must learn how to support Web2 IAM processes from new Web3 DCI frameworks.

Predicts 2023: Users Take Back Control of Their Identities With Web3 Blockchain

- By 2027, social media platform models will shift from “customer as product” to “platform as customer” of decentralized identity sold through data markets.

Enterprise Architecture

A postdigital executive will set new expectations of enterprise architecture, beyond management of the internal IT department and IT estate. Enterprise architecture and technology innovation leaders must determine how to change the EA practice to meet these expectations.

Predicts 2023: Enterprise Architecture Charts NewPath for Postdigital Era

- By 2027, 50% of extra-large organizations will use business architecture to advance strategic planning in the face of volatility, uncertainty, complexity and ambiguity.
- By 2026, business-outcome-focused EA teams supporting ESG initiatives will outnumber those focused on technology management alone.

IT Infrastructure and Operations

The XaaS model is transforming data center infrastructure by improving sustainability through relocating data center capacity and potentially lowering capital expenditure as applications move into the cloud. I&O leaders should use this research to help them navigate this changing landscape.

Predicts 2023: XaaS Is Transforming Data Center Infrastructure

- By 2027, 75% of organizations will implement a data center infrastructure sustainability program driven by both cost optimization and in response to stakeholder pressures, up from less than 5% in 2022.
- By 2027, migration to XaaS-based application offerings will result in a 35% decline in enterprise-owned data center capacity when compared to 2022 levels.
- By 2027, 35% of data center infrastructure will be managed through a cloud-based control plane, up from less than 10% in 2022.
- By 2026, only 60% of data center infrastructure teams will have relevant automation and cloud skills, up from 30% in 2022.

I&O leaders deliver stable services built upon changing technology platforms; however, business conditions are changing as rapidly as technology. This research examines four predictions that illustrate ways to stabilize operations as organizations further adapt to the changing conditions.

Predicts 2023: Observing and Optimizing the Adaptive Organization

- By 2026, organizations performing real-time cost or performance optimization of cloud-based workloads will rise from less than 20% in 2022 to 50%.
- By 2026, 40% of log telemetry will be processed through a telemetry pipeline product, a rise from less than 10% in 2022.

New development methods and control options lead edge computing evolution. I&O leaders must get their timing right to maximize business value from these ongoing changes.

Predicts 2023: Edge Computing Delivery and Control Options Extend Functionality

- By the close of 2027, nearly 10% of industrial control systems across North America, Europe and China will combine IoT and ML-deep learning at the edge as a feedback mechanism to closed loop control systems to automate processes and asset performance, up from less than 1% in 2022.
- By 2026, consumption-based storage pricing initiatives will replace most of traditional IT budgeting, sourcing and hardware administration activities at the data center edge.

Project, Program and Portfolio Management

Geopolitical and economic turbulence, coupled with a talent crisis, is framing our next normal. Strategic portfolio leaders can use Gartner Predicts to inform their future planning and identify areas where they must adopt new approaches or think differently.

Predicts 2023: Strategic Portfolio Leaders Must Navigate Trade-Offs to Address Opposing Pressures

- By 2027, organizations investing in AI will process 60% of IT and digital initiatives to the approval stage without human intervention.
- By 2025, 60% of PMO and EPMO staff will be required to have and apply greater financial acumen to drive business outcomes.

Software Engineering

Software engineering leaders must develop a keen eye on innovation to outmaneuver competition and create an attractive technology landscape for the experiences of their end users and developers. This research focuses on powerful innovation across the software development life cycle.

Predicts 2023: How Innovation Will Transform the Software Engineering Life Cycle

- By 2027, generative design AI tools will automate 70% of the design effort for new web and mobile apps.
- By 2027, 50% of enterprise software engineers will use ML-powered coding tools, up from less than 5% today.
- By 2027, adoption of autoML will increase in usage by enterprise's software engineering teams from 25% in 2021 to 75%.

Digital Business Function Predictions

CRM Sales and Digital Commerce

Leading organizations that are facing economic uncertainty are challenged to simultaneously increase their revenue focus while also improving cost-effectiveness. Application leaders must choose wisely and make strategic, cost-effective technology investments that transform digital selling functions.

Predicts 2023: Digital Selling Excellence Protects the Bottom Line During Economic Uncertainty

- By 2026, the speed of digital innovation will improve by 60%, relative to 2022, for organizations that have established mechanisms to reuse composable digital commerce modules.

Digital Workplace

Technology has assumed an outsize role in day-to-day employee experience. Digital workplace application leaders should use our 2023 predictions to guide strategic investments in digital employee experience and ensure the digital day of tomorrow doesn't become a digital nightmare.

Predicts 2023: Build the Digital Day of Tomorrow

- By 2027, organizations that promote digital dexterity enablement for both managers and employees will have stronger revenue growth year over year than those that have not.

Finance

Finance leaders' consensus vision for the future of finance in 2025 is scalable and digital, rich in data and supported by new competencies. To achieve ambitious plans for autonomous finance, CFOs must reshape their organization structure, roles, skills and mission.

Predicts 2023: Organizing Roles for Autonomous Finance

- Through 2025, more than 40% of finance roles will be either new or significantly reshaped due to finance technology.
- By 2025, over 80% of finance headcount growth will be in new subfunctions rather than traditional accounting and finance planning and analysis (FP&A), requiring new roles and team structures.
- Through 2025, over 30% of finance roles will be aligned "horizontally" out of traditional silos, enabling finance to support agile and composable business operations.

- Through 2026, investments made in 2023 that shift cost from transactional to analytical outcomes in finance will drive 2.5 times the incremental return on invested capital (ROIC).

Digital acceleration is disrupting legacy processes owned by FP&A leaders and controllers. These leaders must plan for the growth of autonomous technologies in their functions. They should consider four trends that will provide opportunities to drive functional innovation beyond technology.

Predicts 2023: The Impact of Autonomous Technologies on FP&A and Controller Processes

- By 2025, 70% of organizations will use data-lineage-enabling technologies such as graph analytics, machine learning, artificial intelligence and blockchain as critical components of their semantic modeling.
- By 2027, 50% of controllership functions will exploit digitally driven, process-level capacity gains to define a clear scope of judgment-based, balance-sheet-focused support activities.
- By 2027, 90% of descriptive (“what happened”) and diagnostic (“how or why it happened”) analytics in finance will be fully automated.
- By 2028, 50% of organizations will have replaced time-consuming bottom-up forecasting approaches with AI, resulting in autonomous operational, demand and other types of planning.

Finance digital solutions and transformation services now account for more than half of finance outsourcing contracts. CFOs should use these strategic predictions to take advantage of a new era of digital opportunity for finance transactional and accounting operations.

Predicts 2023: Outsource Finance Operations and Seize the Opportunity to Digitally Transform

- By 2025, 80% of finance outsourcing will be contracted for digital transformation (primarily for technology implementation and management services), up from 55% in 2021.

- By 2025, two-thirds of CFOs will focus business process outsourcing (BPO) pricing negotiations on digital outcomes as the use of labor-based pricing rapidly loses value.

Human Resources and Talent Management

New waves of innovation, market consolidation and ongoing cyberthreats are making the management of HR technology portfolios more difficult. HR technology leaders should use this research to prepare for the next set of HCM capabilities that will challenge the status quo.

Predicts 2023: HCM Technology Transformation

- By 2026, a new AI-native core HR application will emerge to challenge incumbent cloud HCM suites.

Legal and Compliance

Legal and compliance leaders are turning to technology solutions to boost efficiency in a volatile economic environment. This research guides leaders through an increasingly mature and convergent technology market toward new solutions to support department workflows.

Predicts 2023: Increasing Corporate Legal and Compliance Technology Investments Amid Economic Volatility

- By 2026, 25% of first draft contracts and other written documents in corporate legal departments will be generated entirely by artificial intelligence tools.

Marketing

Against a backdrop of unrelenting social and economic pressures, marketing leaders look toward a future where smarter marketing leads to deeper, more valuable connections between customers and brands.

Predicts 2023: AI, Social Toxicity and Disappearing Customers Forge the Future of Marketing

- By 2025, organizations that use AI across the marketing function will shift 75% of their staff's operations from production to more strategic activities.

- One in three businesses without a loyalty program today will establish one by 2027 to shore up first-party data collection and retain high-priority customers.
- By 2025, 70% of enterprise CMOs will identify accountability for ethical AI in marketing among their top concerns.

Supply Chain Planning and Operations

Growing complexity and volatility are forcing supply chain organizations to adjust their technology investments to align with their needs for resiliency, agility and intelligent operations. Supply chain technology leaders can use this research to find where future risks and opportunities lie.

Predicts 2023: Supply Chain Technology

- By 2026, over 50% of companies deploying intralogistics robots will have a multiagent orchestration platform.
- Through 2026, there will be no dominant approach to delivering a true digital supply chain twin (DSCT), either through broader business networks, planning applications or intelligent data lakes.
- By 2026, over 65% of short-term decisions within supply chain planning (SCP) will be automated or autonomous.

Increasingly accessible technology has changed how people work for and interact with companies. Customer service and support leaders must prepare for their customers and employees to use technology in new and unconventional ways.

Predicts 2023: Customer Service and Support Strategy and Leadership

- By 2026, 20% of inbound contact volume will come from machine customers.
- By 2026, 30% of customer service reps will automate portions of their workflows and tasks.

Economic indicators point to varying periods of slow economic growth, or even recession. As a result, many shippers will initially benefit from tumbling transportation rates. Logistics leaders must use these five strategic planning assumptions to balance short-term gains with long-term preparedness.

Predicts 2023: Logistics Must Prepare for Tomorrow by Not Procrastinating Today

- By 2027, over 75% of last-mile deliveries to end consumers in North America and Europe will have near-real-time visibility with delivery windows and ETAs.

Industry Predictions

Automotive and Smart Mobility

CIOs in the automotive industry must prepare for change as Chinese automakers and big tech companies gain ground. Efforts to monetize connected cars will begin to pay off for car companies, and lidar, an important sensor for autonomy, will get much less expensive.

Predicts 2023: Automotive and Smart Mobility

- By 2024, at least two of the global top ten automakers will be delivering monthly OTA code updates across their software-defined vehicle fleet.
- By 2027, average annual digital revenue per connected car will grow beyond \$400, up from \$40 today.

Banking and Investment Services

ESG efforts can impact banks in a variety of ways, but they lack the ability to effectively measure and demonstrate progress. Gartner predicts that banking CIOs who can quantify ESG outcomes will be able to prove to customers, regulators and themselves that they can affect change in a positive way.

Predicts 2023: Ability to Quantify ESG Initiatives Will Make or Break Banks' Success With Them

- By YE27, 75% of Tier 1 banks will have integrated some degree of carbon asset and liability calculations into their cost of capital.
- By YE27, 60% of banks with more than \$100 billion in assets will use nontraditional underwriting to give underserved small businesses greater access to capital.

Communications Service Providers (CSPs) and Telecommunications

Growth and digital transformation are leading reasons for enterprises to embrace emerging technologies. CSP product leaders should align changes to their portfolios with developments in communication services – including integration through advanced CPaaS, security and enterprise vertical use cases.

Predicts 2023: CSP Product Portfolios Respond to Enterprise Demand Shifts

- By 2026, 40% of enterprise CPaaS spend will involve a mix of advanced CPaaS tools, up from approximately 15% in 2022.
- By 2025, over 30% of enterprise-managed data will be processed and stored in edge locations, up from less than 10% in 2022.

The outlook for the short to medium term indicates that communications service provider CIOs must make a strategic choice – double down on digital acceleration or become risk-averse and revert to cost reduction only. This choice will directly impact the competitiveness of their organization.

Predicts 2023: CSP Technology and Operations Strategies

- By 2025, 15% of CSPs will have a fully functional digital marketplace platform with composability from a multitude of services, up from less than 5% today.

Education

Pandemic effects continue to drive education institutions to reset and refine long-term strategies. Education CIOs seeking to focus capacity to accelerate digital transformation and long-term institutional success should use these predictions to inform the evolution of business and operating models.

Predicts 2023: Education Will See Consolidation, Competition and Creativity

- By 2025, 80% of all K-12/primary-secondary education organizations will be leveraging some type of analytics applications designed specifically for K-12 to speed insight.

Environmental, Social and Governance (ESG)

Leading CFOs are updating internal processes to monitor, assess and invest in sustainable initiatives to ensure the organization's long-term financial stability. CFOs should use this research to learn how leading organizations are achieving financial returns through sustainability initiatives.

Predicts 2023: Achieving ROI With ESG

- By 2025, just 10% of enterprises will exclude information about their sustainability strategy, metrics and targets in their annual financial filings or equivalent.
- By 2026, 60% of public companies will update investment methodologies to account for sustainability metrics, in concert with financial metrics, to remain competitive.

Confronted with the challenge of achieving ambitious sustainability goals, enterprises will be forced to reframe their targets. However, executive leaders may find this task difficult due to a lack of quality scope 3 GHG emissions data and pressure to embrace emerging areas like biodiversity.

Predicts 2023: Sustainability – It's Complicated

- Through 2026, scope 3 emissions data availability and quality will continue to significantly constrain the effectiveness of supply chain emission reduction programs.

Government

Government Digital Transformation

Governments have increased digital investments in response to global turmoil. Upheavals will continue in 2023, requiring CIOs to help their organizations deliver enduring mission impact while dealing with technical debt, talent and resource shortages, and service delivery demands.

Predicts 2023: Governments Heighten Focus on Mission Impact Amid Global Uncertainties

- By 2026, over 75% of governments will gauge digital transformation success by measuring the enduring mission impact.

Government social programs and human services are challenging fields under considerable stress. This research will help CIOs to identify developments that may challenge or accelerate their ability to deliver enduring outcomes.

Predicts 2023: Accelerating Transformation in Human Services

- By the end of 2025, around 30% of government public assistance programs will exploit parametric insurance models for immediate payouts to populations impacted by catastrophic events.
- By the end of 2025, over 40% of human services administrations will use an integrated planning, data management and analysis approach to systematically improve outcomes.

Smart Cities

Digital platform data in smart cities will empower CIOs to address complex urban planning and resilience issues. Using digital twins and multimodal simulations, CIOs will be able to identify unintended consequences derived from population density, economic development and climate change.

Predicts 2023: Sustainable Smart City Decision Making Using Urban Data

- By 2026, half of all smart city KPIs will include intelligence on the aging population.
- By 2027, at least four of the top 50 cities by population size will experiment with a digital citizen carbon credit and/or token.

Healthcare

Economic uncertainty, disruptive competitors and mounting pressure to deliver seamless digital experiences require U.S. healthcare payers to reimagine the way they do business. CIOs can use these predictions to defend against coming risks and capitalize on new business opportunities.

Predicts 2023: U.S. Healthcare Payers Entering Ecosystem-Centric Era

- By 2026, 60% of prior authorizations will be processed electronically — up from 26% in 2021 — saving \$2 billion in administrative costs.

Care is moving to new venues, and consumers and patients continue to be engaged in new ways, enabled by advancing technologies and innovative vendor solutions. Healthcare provider CIOs should use these predictions to prepare for continued healthcare access and affordability challenges.

Predicts 2023: Changing How Healthcare Provider Services and Operations Are Delivered

- By 2026, 20% of healthcare providers will have shifted away from patient portals tethered to the electronic health record (EHR) in favor of digital front door solutions for their primary method of digital patient engagement.
- By 2026, 20% of healthcare providers will adopt real-time health system supply chain platforms, driven by the need to more closely align supply chain logistics with clinical activity.

Insurance

Economic uncertainty creates opportunities for strategic investments. Insurance CIOs can forge a path forward through investments in product innovation, a focus on CX and organizational adaptability.

Predicts 2023: What's Next for Insurance CIOs Operating in an Era of Turbulence?

- By 2027, insurers who adopt a panoptic personalization approach will enjoy 20% higher retention rates.
- By 2025, insurers who leverage emotional intensity mapping to their customer-facing automation will find 50% improvement in customer satisfaction scores than those that do not.

Life Sciences

Economic pressures, outside disruptors challenging existing business models, and the convergence of advanced technology and scientific innovation dominate the new era for life sciences. CIOs can use these predictions to understand how these changes could shape the industry.

Predicts 2023: Digital Transformation of Healthcare Beckons NewEra for Life Sciences

- By 2026, drug discovery will reach an inflection point where “in silico” first strategies overtake traditional bench-based research at major pharmaceutical companies.

- By 2026, over 60% of retail pharmacies will conduct clinical research, helping to support life science trial diversity requirements.
- By 2026, a “blockbuster” therapy will bypass incumbent pharmaceutical manufacturers – and force them to partner on a digital disruptor’s terms.

Manufacturing

Faced by supply chain constraints, labor shortages and inflation, manufacturers need standardized, modular digital platforms that enable frictionless connectivity in composable work environments. Introducing them will make CIOs more visible to boards, business unit leaders and other decision makers.

Predicts 2023: The “Triple Squeeze” Will Require Manufacturing CIOs to Gain Visibility by 2026

- By 2025, three out of five smart factory initiatives will fail due to a lack of supply chain integration, resulting in significant cost constraints and customer service issues.

Consumer goods manufacturers are facing a triple squeeze: inflation, a talent shortage and supply-chain disruptions. Customer-centric growth strategies backed by data-driven innovation will help CIOs of consumer goods (CG) organizations successfully navigate and thrive amid these challenges.

Predicts 2023: Consumer Goods Manufacturers Must Adopt Data-Driven Innovation

- By 2027, 80% of the top 100 global consumer goods manufacturers will use at least one tokenized asset to drive rewards and loyalty programs, develop new business models, and earn digital revenue.
- By 2027, 50% of the top 10 consumer goods manufacturers by revenue will implement digital product passports for at least one of their product categories.
- By 2025, 75% of the top 10 revenue-generating consumer goods manufacturers will have data integrity as a formal, measured and reported business metric.

Oil and Gas

Market volatility, geopolitical forces and the energy transition make the next few years risky and uncertain for oil and gas companies. To prepare, companies are investing in new, technology-enabled business capabilities. CIOs can use this research to align their technology strategies.

Predicts 2023: Oil and Gas – Navigating Constant Turbulence

- By 2024, 40% of oil and gas companies will have established clear roles and accountability for trustworthy gas emissions data and performance.
- By 2026, over 70% of investments in new oil and gas business assets will fully incorporate intelligent asset design features.

Retail

Current macroeconomic headwinds are forcing major shifts in retail operations. Retail CIOs can use Gartner's 2023 predictions to implement well-curated store merchandising, competitively differentiating frontline associates and immersive store experiences to optimize margin and drive profitability.

Predicts 2023: Immersive Stores Are a Critical Focal Point for Retail Profitability

- By 2027, immersive shopping technologies will expand to enable more than 7% of sales interactions in nonfood segments from less than 1% in 2022.

Technology and Service Providers (TSPs)

To support the accelerating pace of innovation and change, businesses will prioritize modular applications that deliver their functionality as API/event-first business components. Technology and service providers will modernize their offerings to support composable application architecture.

Predicts 2023: Composable Applications Accelerate Business Innovation

- By 2025, 60% of new SaaS designs will support both the UI-first and API-first access, making preparedness for composability a common cloud application trait.
- By 2026, all the top 20 cloud platform and SaaS providers will offer component marketplaces to enable customers' composable strategies, differentiating by quality, convenience and security.

- By 2024, 50% of industry cloud platform providers will use composability for creation of their vertical offerings as well as for enabling unique change-capable customer deployments.

Product marketers must extend strategic business impact while navigating dynamic, and often challenging, market conditions. To be successful, product marketers will need to shift focus to strategies and technologies that drive effective and efficient growth from new and existing sources of revenue.

Predicts 2023: Focus on Existing Customers and PLG to Drive Growth and Overcome Headwinds

- By 2026, 45% of product marketers will use product analytics tools for behavioral-data-driven segmentation and targeted messaging decisions.

Cloud computing innovations, connectivity and emerging technologies are combining to create new opportunities in OT, payments and industry cloud platforms. Product leaders can shape their vertical go-to-market strategy by understanding what the future holds.

Predicts 2023: Industry Trends Will Reshape Who Wins Vertical Modernization Deals

- Through 2024, industry cloud platform providers that take an exoskeleton approach will be three times as popular for strategic digital transformation initiatives than those who target replatforming deals.
- By 2025, 60% of enterprises adopting industry cloud platforms will pursue a holistic and composable approach to their use of SaaS, platform as a service (PaaS) and infrastructure as a service (IaaS).
- By 2025, vendors who can leverage continuous intelligence to harmonize action across organization silos will expand their revenue three times faster than their peers.
- By 2026, the ability to conduct over the air (OTA) will become an inclusion criteria for 50% of operational technology (OT) vendor selection processes.

Technology and service providers are turning to industry analysts for help navigating the opportunities and challenges of digital acceleration. Analyst relations leaders must develop operational rigor to become the strategic business advisors and commercial partners their stakeholders need.

Predicts 2023: Analyst Relations Steps Into the Strategic Spotlight

- By 2026, 70% of AR stakeholders will rebalance their focus from trying to influence analysts to seeking insights for enhanced decision making, up from 22% in 2022.
- Analyst relations' implementation of closed-loop, business impact metrics with sales and marketing will shift from 8% in 2022 to 40% by 2026.

Utilities

The energy transition demands digital investment by utilities to boost capability and create sustainable operating models. Utility CIOs must deliver technology and business performance. Gartner predictions cite the challenges and opportunities CIOs face in helping the utility become more resilient.

Predicts 2023: Adapting to the Energy Transition

- By 2026, at least two digital dragons will have entered the energy utility market with digital orchestration infrastructure offerings.
- By 2026, utility spend on customer-facing applications will exceed their spend in meter-to-cash applications.

Document Revision History

Tool: Over 100 Data and Analytics Predictions Through 2026 - 11 March 2022

Over 100 Data and Analytics Predictions Through 2025 - 18 March 2021 100

Data and Analytics Predictions Through 2024 - 20 March 2020

100 Data and Analytics Predictions Through 2023 - 8 January 2020

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