

Creating Digital Value at Scale: A Gartner Trend Insight Report

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Enterprises must now scale up successful digital business initiatives to improve financial performance, and CIOs and IT leaders will have an opportunity to lead. Gartner offers research on how to tackle the scaling challenge.

Opportunities and Challenges

- Two-thirds of executive leaders believe that their companies must pick up the pace of digitalization to remain competitive, according to Gartner's Digital Enterprise 2020 survey.
- Value may be gained either through optimizing current business models or creating new ones (transformation). If the organization is not optimizing while creating new digital business models or new ways to engage constituents and customers, it is falling behind.
- Scale doesn't merely mean getting bigger, since it's not always the largest organizations that will win. In the emerging world of interconnected platforms and ecosystems, smaller organizations can effectively compete against much larger competitors. Enterprises must be able to innovate continually and improve digital offerings to win in the market.

What You Need to Know

- Developing a workforce that understands how to operate in a digital environment requires digital dexterity and a digital workplace.
- Scaling a digital business will require a new set of digitally oriented key performance indicators (KPIs) to measure performance and manage success.
- Building a digital platform robust enough to operate at scale, yet flexible enough to pivot, is essential for value creation.
- Executing on digital ambitions will likely require a transformation of the information and technology operating model, too.
- Advanced technologies are available today to automate the management of the digital business.

Insight From the Analyst

Digital Business Only Works If You Scale It



Don Scheibenreif

Digital projects alone don't count. Many enterprises have created successful digital innovations, including new business models and new products. But their march toward digital business success has run into the biggest obstacle they have faced so far: Enterprises need to scale their innovation to a point where it makes a material contribution to their financial performance.

The scaling challenge presents a golden opportunity to CIOs and IT leaders. Much of the solution lies in their area. Almost every facet of the solution requires technology or knowledge of how to use technology effectively. First, CIOs and IT leaders have to make sure that their own organization has the capability to work at scale in a digital environment. Then, they can start to help the rest of the enterprise get there, too.

We've pulled together a wide selection of research on the scaling challenge to elaborate on the ideas we laid out in the 2017 Symposium/ITxpo Keynote (see "Creating Digital Value at Scale: Key Insights From the 2017 Gartner Symposium/ITxpo Keynote"). You'll find answers to your piece of the puzzle in the links below.

Executive Overview

Definition

A digital product still needs to be designed, produced, marketed, sold and serviced like any other product. The enterprise will have to put many times the resources into these functions as it did into creating the innovation. Moreover, as the new business or product grows, the enterprise can't simply multiply the amount of resources that supported it when it first launched. The management challenge would soon become ponderous, and costs would start to spiral.

Enterprises that want to scale a digital business need to:

- Develop a workforce that understands how to operate in a digital environment.
- Define the factors that contribute to success and then measure performance.
- Build a digital platform robust enough and flexible enough to operate at scale.
- Redesign the information and technology operating model to accelerate digital business execution.

- Take advantage of advanced technologies to automate the management of the digital business.

CIOs and IT leaders can play a leading role in these efforts. IT platforms and some emerging technologies fall under their oversight. In addition, the skills and disciplines needed to run a digital business are themselves digital, and intimately connected to the use of technology. People in the business will have to think and act "digitally," not just rely on IT partners to take care of things. Thus, the IT organization will act as a true partner to the rest of the enterprise. IT will know about the business, and the business will know about IT as they collaborate to achieve their digital ambitions.

CIOs and IT leaders will be able to play that role only if they address six facets of the scaling challenge: scaling disciplines, digital dexterity, talent and culture, digital KPIs, the digital business platform, and network-effect technologies (see Figure 1). Our special report gathers extensive research on all of them to help leaders find solutions for their own enterprise.

Digital business is the creation of new business designs from the blurring of the physical and digital worlds.

Figure 1. Creating Digital Value at Scale



Source: Gartner (March 2018)

Research Highlights

Scaling Disciplines

Corporate functions such as finance and operations must support a digital business just as they do a conventional business. But those functions will have to work in a different way to permit the digital business to scale. For example, an agile digital business needs a more flexible budget process. A new digital business model will often require a new operating model. The same holds true for enterprises of all types, whether government or private sector, large, midsize or small. Everyone will have to learn new disciplines to support digital business, including greater levels of organizational alignment and synchronization of development cycles.

An operating model represents how an organization orchestrates its capabilities to achieve the enterprise's strategic objectives. An information and technology (I&T) operating model defines how the I&T capabilities across the enterprise are coordinated to support the enterprise's strategic objectives. The I&T operating model for digital business no longer has IT as service provider. Instead, IT is a true partner with the business, jointly accountable for business outcomes. I&T is fully integrated into the leadership and operational culture of the enterprise. IT "is" the business. This partnership changes not only the I&T operating model, but the business operating model as well.

"Creating Digital Value at Scale: Key Insights From the 2017 Gartner Symposium/ITxpo Keynote"

CIOs can accelerate digital transformation by adopting three approaches to delivering digital value at scale. This acceleration will address CEOs' urgent desire to grow digital business initiatives and overcome setbacks and disillusionment.

"The 2018 CIO Agenda: Mastering the New Job of the CIO"

As digitalization shifts IT's focus from technology to information, the CIO is changing from a delivery executive to a business executive — from controlling costs and improving processes, to exploiting data, driving revenue and scaling digital business. This report describes the new CIO role.

"A CIO's Guide to Gartner's Digital Business Research"

An organization's digital business journey unfolds in five phases, and each phase has different requirements. Gartner's engagement plan will show CIOs the right resources to consult before they enter each phase.

The New I&T Operating Model

"Designing and Implementing the I&T Operating Model: Components and Interdependencies"

CIOs adopting one of Gartner's I&T operating model patterns must ensure each component is designed to work with the others to deliver their desired results. This research describes the content of each component and the dependencies that CIOs must address in their design of the I&T operating model.

"Drive Disruptive Innovation by Reinventing the I&T Operating Model Pattern"

The digital era is transforming the marketplace and enabling profound, radically new value propositions. CIOs seeking to exploit these emerging opportunities must reinvent the I&T operating model to empower the enterprise to realize new, disrupting, sustainable sources of revenue and market value.

"Monetize Your Business by Adopting the Value-Optimizing I&T Operating Model Pattern"

CIOs should adopt the Gartner value-optimizing I&T operating model pattern to play a proactive and essential role in achieving the enterprise's growth ambitions. Central to success is breaking down I&T and business silos, unlocking new value and resulting in a shift to business-outcome-derived KPIs.

"Run IT Like a Business by Applying the Service-Optimizing I&T Operating Model Pattern"

Digital demands have left IT departments that are run as cost centers disconnected from the business. CIOs should use the service-optimizing I&T operating model to run IT like a business, becoming a trusted partner with the credibility and influence to take on a proactive, consultative role.

"What Is an I&T Operating Model, and How Do You Accelerate Its Design Process?"

This research introduces Gartner's I&T operating model framework and a set of operating model patterns. CIOs can use this framework to accelerate the design process and provide a narrative for communicating the change.

"Why Traditional I&T Operating Models Are Under Stress, and How to Plan a Response"

Evolving enterprise goals and strategy and external stresses have rendered many I&T operating models no longer fit for purpose. We identify the causes of this stress, and introduce a framework to help CIOs optimize the I&T operating model by adjusting its components as one integrated system.

"Toolkit: Board-Ready Presentation — How to Persuade the C-Suite of Your I&T Operating Model Transformation"

This Toolkit helps CIOs present the concept of the I&T operating model to senior executive peers and boards of directors in order to engage them more fully in digital transformation.

"Governance and Culture Are the Fabric of Your I&T Operating Model"

Governance and culture convey context from the business model to frame the requirements of the underlying I&T operating model. CIOs must understand how governance and culture influence, and are influenced by, the design of an I&T operating model, which delivers on desired business outcomes.

Market and Business Strategy

"How to Scale Funding for Digital Business"

CIOs must help to scale digital business, but the investments required extend far beyond the IT organization's budget and resources. CIOs need to reprioritize investments, optimize costs for the business and work with third parties.

"Tech Go-to-Market: Invest in Seven Areas to Successfully Scale Selling Large Deals"

Selling large deals, particularly in the enterprise segment, requires significant skills, time and resources. To successfully win large deals repeatedly and profitably, technology business unit leaders need to make strategic investments and operational changes in seven key areas.

"Survey Analysis: Critical IT Issues Inhibiting Competitiveness in Latin American Midsize Enterprises"

Only 36% of midsize enterprises in Latin America have delivered digital initiatives, lagging behind the rest of the world in the adoption of digital business. In order to stay competitive, CIOs in Latin America must lead efforts to increase digitalization in their enterprises during 2018.

"The Need to Execute Digital Strategy Will Drive the Transformation of the EPMO"

The rise of the digital economy is creating demand for a new type of strategic enterprise program management office (EPMO). Program and portfolio management (PPM) leaders and CIOs will find the strategy realization office (SRO) uniquely tailored to be more adaptive and agile in response to the accelerated need for value and results across an enterprise's portfolio of initiatives.

"CIO Strategies for Scaling Digital Care Delivery"

A new era of digitization in healthcare will realize mass personalization and shift business models toward a highly integrated network of service providers. This research explores CIO strategies for success when scaling out consumer-centric digital care services.

"Five Ways of Dealing With Dualities in the #DigitalSociety"

Many technology choices have societal impacts, such as big data on privacy and AI on jobs. CIOs should make their "big picture" story, describing their contribution to society, part of developing their innovative business models.

"CIOs Can Transform Government Services by Scaling Digital Up, Across and Out"

Scaling digital within and across government and out through ecosystems of partners requires vision, strategy and resources. To scale the impact of digital, government, CIOs must start small, deliver business benefits quickly, build cross-government alliances and engage the executive leadership.

Technology Strategy

"Leverage Technologies That Enhance Digital Trust to Boost Digital Value at Scale"

Creating digital value at scale requires mechanisms that build and manage digital trust. CIOs must understand how to leverage new disruptive technologies such as blockchain, bring-your-own-identity, smart contracts and artificial intelligence to establish trust in digital interactions.

"The Key Fundamentals Required to Scale Mobile App Development"

Gartner surveys have found that organizations are developing far fewer apps than the projected demand. Application leaders need a better understanding of tools and techniques to drive effective and scalable mobile application strategies that meet the ubiquitous nature of mobility in the enterprise.

"Use Gartner's Connectivity Strategy to Optimize Cloud Performance and Cost"

Infrastructure and operations leaders often fail to select the best match between WAN connectivity and public cloud services, causing poor performance at scale. This research guides clients in selecting the optimal match for their needs, based on key performance, cost and connectivity requirements.

"Market Guide for Simulation and Modeling Software for Advanced Scale Analytics"

Simulation and modeling software are used to predict what may happen in the future given the analytic techniques employed. As enterprise architecture and technology innovation leaders seek to understand the impact of scale on the business model, software is required to understand complex interdependencies and uncertainty as change unfolds.

"Market Guide for Augmented Reality"

Augmented reality (AR) solutions are poised for rapid growth, empowered by the Internet of Things (IoT), digital business and next-generation smartphones. Enterprise architecture and technology innovation leaders must carefully evaluate providers as the market consolidates around platforms.

"Competitive Landscape: Augmented Reality Tools for Enterprise, 2018"

Enterprise-class AR technology is emerging from the early-adopter phase as a productivity accelerator. Technology business unit leaders investing in immersive technology must have a roadmap for optimized solutions while choosing between unscalable custom deployments and immature off-the-shelf tools.

"Market Insight: Mixed-Reality Immersive Solutions Are the Ultimate User Experience for Everyone"

Mixed reality (MR) is disrupting business operations through its intrinsic value, enabling a new class of more personal and useful computing experiences. Technology strategic planners should evaluate, integrate and deploy MR to improve how businesses interface visually with customers, partners and employees.

Digital Dexterity and Digital Workplace

Digital business models and platforms are fundamentally restructuring how business is conducted. Cloud services — and, in particular, SaaS applications — are increasing the velocity of technology change at a rate unthinkable with on-premises deployment. At the same time, the nature of work is being transformed with new work patterns (the gig economy, flatter org models, work anywhere/anytime, the empowerment of frontline workers) with artificial intelligence (AI) waiting in the wings to transform how work is done. Those organizations that excel at delivering a digital workplace — and therefore fueling workforce digital dexterity — will gain significant competitive advantage as digital transformations accelerate. When properly implemented, a digital workplace strategy will help make employees more mobile, analytical, creative, collaborative and innovative through the use of tools, training and encouragement.

Digital Dexterity

"The Secret to Digital Transformations Is Analog: Why a Digitally Dexterous Workforce Is the Key"

Application leaders have a unique opportunity to deliver significant business value by growing a culture of workforce digital dexterity. In other words, help employees improve their ability and desire to use existing and emerging technology for better business outcomes.

"Four Ways for CIOs to Cultivate Digital Dexterity in Leadership and the Workforce"

To thrive in the digital era, enterprises need digital dexterity as an organizationwide competency. CIOs can boost their value by developing people and growing a culture with digital dexterity.

"Drive Digital Dexterity Using the IT Operating Model"

Workforce digital dexterity is crucial to thriving in the digital era. CIOs need to change their management practices as part of the operating model to exploit digital technologies to win in the marketplace. This research will help CIOs embed digital dexterity into the business fabric and culture.

"How We Will Work in 2028"

Intelligent software and AI-powered robots will join humans at work by 2028. CIOs must anticipate how trends in business, society, technology and information will converge to change where, when, why and with whom we will work in a digital business.

"Anticipate and Exploit the Top 12 Future Work Trends"

Fast-evolving work patterns are forcing application leaders — along with HR and business executives — to develop competencies in understanding and exploiting future work trends, allowing them to better align technology strategies with the overall employee experience.

"How to Cultivate Effective 'Remote Work' Programs"

In an effort to reduce the cost of office space, application leaders often encourage employees to work remotely. However, if the emphasis is only on freeing up space, then these efforts will fail. This research describes the essential first steps of creating remote work programs.

"Use the Internet of Things in Smart Buildings to Achieve Work-Life Ambience"

Smart buildings have gained the attention of real-estate and facilities management leaders under pressure to reduce operational cost, meet sustainability goals and improve the employee experience. CIOs can use this research to plan how to work with their colleagues to achieve all three.

"Help Employees Select the Right Office 365 Productivity Tools"

Microsoft Office 365 provides a wide variety of collaboration tools, but user adoption can suffer as capabilities in them overlap. Application leaders responsible for digital workplace programs should provide guidance on how to match tools to use cases, to help drive workforce digital dexterity.

"Building Digital Dexterity Across the Enterprise: Succeeding in the Skills Migration Plan"

Organizations can accelerate the value of disruptive technologies by embracing four interrelated approaches to better deliver digital value at scale. Successfully navigating the skills migration plan helps CIOs mitigate potential setbacks as they deliver on CEOs' aggressive digital business goals.

Digital Workplace

"Introducing the Digital Workplace Strategic IT Services Portfolio"

Establishing a connection between specific capabilities and business outcomes is an essential element of a successful digital workplace program. Application leaders can use five digital workplace services, along with business value statements and relevant capabilities, to establish this connection.

"Use Digital Workplace Programs to Augment, Not Replace, Humans With AI"

AI, robotics and automation require employees to build new competencies and to embrace new ways of working. Application leaders responsible for digital workplace should amplify the digital dexterity of the workforce through the combination of human abilities and artificial intelligence.

"Checklist to Align Technical Architecture With Digital Workplace Goals"

Organizations must regain control of the architecture that supports the digital workplace. Enterprise architecture and technology innovation leaders supporting the digital workplace must work with architects to ensure their technical architecture advances digital workplace goals.

"A Maturity Framework to Advance Digital Workplace Programs"

A digital workplace program that delivers tangible, measurable value involves more than the prioritization of technology deployments. Application leaders should use this maturity framework to align their business, people and technology in pursuit of their program's full potential.

"Toolkit: A Metrics Framework to Guide Digital Workplace Program Success"

IT application leaders responsible for digital workplace programs need metrics to track the progress and determine the success of their efforts. They should use this Toolkit as a template for selecting, tracking and communicating relevant metrics to the executive leadership and other stakeholders.

"Digital Workplace Employees Need Enterprise Communications to Be More Harmonized Than Unified"

The concept of unified communications is being deconstructed for the digital workplace. Application leaders should lead their enterprise's approach to redesigning employees' requirements for communications and collaboration technologies.

"Recipe for Digital Workplace Execution: Transform the Employee Experience"

To boost their workforce's agility and engagement, digital workplace leaders must understand employees' needs in order to create processes that integrate those needs into IT service strategy, design and operations. Gartner offers best practices informed by a real-world digital workplace program.

Talent and Culture

Culture represent the biggest barrier to scaling digital business, according to Gartner's 2018 CIO Agenda survey (see "The 2018 CIO Agenda: Mastering the New Job of the CIO"). Organizational culture consists of ingrained behaviors and attitudes that employees absorb often without realizing it. They take a long time to change, yet digital business success depends on doing so. Culture change requires attracting and keeping people with the right skills and attitudes. Usually, that means more diversity and a greater comfort with the uncertainty that digital business creates.

Growing Talent Skills

"Digital Business Requires a New Mindset, Not Just New Technology"

Application leaders' core beliefs frame their attitudes and behaviors when building technology that underpins a digital business. This note provides steps for them to develop the right mindset for themselves and their teams.

"Leading Through Uncertainty for CIOs"

Uncertainty is a daily challenge for CIOs and those they lead. Many of the traditional change management techniques do not work as well as CIOs might prefer. This research recommends alternate approaches CIOs can use to help their enterprises through uncertainty.

"Get, Give, Grow: A Conversational Model for Improving Employee Engagement"

Employee engagement is low in many organizations. Especially in times of business disruption, low employee engagement can be a barrier to success. This research shows how three simple questions can help shape ongoing conversations with your employees that help improve their engagement and motivation.

"Don't Let Your Culture Derail Your Diversity Efforts"

A culture of homogeneity will quash diversity and inclusion programs. This research provides insights so application leaders can spot the cultural antibodies that crush inclusive ways of working and identifies actions they can take to let diverse talent bloom.

"Put LEARNING in the Enterprise Strategy to Thrive in Digital Business"

Helping the workforce acquire and improve knowledge, skills and abilities continuously is a critical success factor for digital business. CIOs must create a LEARNING organization that creates and applies learning, and transfers that knowledge to improve the digital dexterity and other key digital workplace competencies needed in today's digital business environment.

"Build I&O Staff Talent to Support Bimodal, DevOps and Cloud"

Digital business initiatives, such as bimodal, DevOps and cloud, require new staff capabilities that few possess. I&O leaders must use targeted professional development opportunities to create, retain and recruit I&O versatilists.

"Digital Business Redefines Talent Management Applications"

As organizations embark on digital transformation, they must move beyond standardization and digitization of talent management processes. Application leaders must support HR through the right technology selection for talent acquisition, learning and performance management.

"How to Establish a Product Management Practice to Drive Digital Business Success"

Application leaders are in a unique position to speed up their firms' transition from a focus on projects to products, yet face key challenges in establishing a product management practice. Use Gartner's guide to nine essential elements to ensure successful deployment of digital product management.

"Reimagine Apprenticeships to Develop Talent to Scale Digital Business"

Digital business exacerbates the need for critical skills. A reimagined form of apprenticeships can groom new and existing employees in these critical skills and competencies. CIOs should build an apprenticeship program tailored to I&T needs that unleashes the abilities of the organization.

Building an Agile Culture

"How to Find, Develop and Manage Transformative DevOps Leaders"

DevOps initiatives are transformative because they require people to work in fundamentally new and different ways. Infrastructure and operations (I&O) leaders must identify transformative leaders to head up DevOps efforts, develop their abilities and apply a management approach that will position these leaders for success.

"The First Step in Delivering an Agile I&O Culture Is Knowing Your Target State"

Many organizations want to use DevOps practices to deliver agile IT service management capabilities; however, this will require difficult cultural transformations. To lead such changes, which will encourage DevOps success, I&O leaders must define the values and behaviors their teams should practice.

"DevOps — Eight Simple Steps to Get It Right"

DevOps can deliver compelling business advantages, but many organizations struggle to start, or restart, an initiative due to uncertainty about how to approach the transformation. This research discusses eight foundational steps that I&O leaders must take to establish a successful DevOps initiative.

"The 6-Principle Framework for Mastering a Business Agile Mindset"

Program and portfolio management leaders are finding that being more agile and increasing focus on strategic business value are now critical for PMO transformation. We offer a six-principle framework for achieving agility beyond software development.

"PMOs Can Deliver Faster Results With Business Agile"

Traditional practices impede PMOs from delivering results that meet customers' expectations in a timely manner. Program and portfolio management leaders must help the business adopt agile to deliver strategic outcomes rapidly in the digital ecosystem.

"Digital Business Requires High-Performing App Dev Teams With These Culture and Mindset Traits"

Any developer could be a high-performing, high-achieving asset, but misaligned personalities and skill sets within teams derail efforts to modernize application development. Application leaders must foster a company culture that will attract and retain the best combination of talent available.

"Boost Resilience and Deliver Digital Dexterity With Cyber Ranges"

Talent cannot be outsourced — people need to be trained and skills need to be developed. Security and risk management leaders should consider the different use cases of a cyber range to foment new skills and competencies to increase the resilience of their organization and boast a digital dexterous workforce in a world of digital business.

Digital KPIs

Digital businesses that operate at scale will often require different success metrics than the enterprise has used before. The particular metrics chosen will depend on whether the enterprise pursues an optimization or a transformation strategy. In the long term, digital business will rapidly

adapt to changing market conditions. Digital business models will change more often than traditional ones. Leaders will have to look ahead more. Therefore, enterprises will need to focus more on defining leading indicators of performance rather than backward-looking measures of financial achievement.

"Digital Business KPIs: Defining and Measuring Success"

CIOs should develop metrics and set goals that lay out their digital business journey and sharpen expected business outcomes. This report describes the key performance indicators necessary to do so.

"Examples of Leading Indicators for the Digital Business Era"

The explosion of data, connections and technology is enabling the creation of new business and economic models. New metrics, key performance and leading indicators are necessary for CIOs working with business leaders to successfully manage, operate and monetize these initiatives.

"Propose a Digital Ambition Meeting to Jump-Start Your Digital Journey"

CIOs may not lead their organization's digital business transformation, but they can help the CEO and executive leadership team discuss the possibilities and define their ambition. In this research, we provide best practices on how to propose a digital ambition workshop to your CEO.

"Toolkit: Examples of Digital Business Optimization"

Most enterprises use digital business to optimize existing business models. Gartner has gathered 38 examples of enterprises that have already done so. CIOs can use them to inspire their organizations' optimization efforts.

"Exploiting Economic Architecture to Drive Digital Business"

To become more relevant to business leaders and earn a seat at the strategy formulation table, CIOs must help evolve their enterprise's economic architecture to support digital investments that drive business outcomes.

Industrializing the Digital Business Platform

A digital business platform will scale the technology that underpins the digital business itself. Underpinned by process-centric technology, a digital business platform combines customer-facing systems, the systems of ecosystem partners, the Internet of Things, and analytics and artificial intelligence as well as traditional IT systems. The enterprise already has many components, though it will have to build more. Most importantly, it will have to weld these various systems together with a hybrid integration layer — perhaps the most important technical undertaking in digital business.

Integration Strategies

"Design an API Mediation Layer to Underpin Your Digital Business Technology Platform"

Many strategies can be employed to mediate and protect APIs, for both internal and external consumption. Application leaders responsible for architecture and infrastructure must design an API mediation layer to underpin their digital business technology platforms and participate in the API economy.

"How to Achieve Digital Business Excellence by Mastering Pervasive Integration"

To make customer experience, the IoT, ecosystems, intelligence and IT systems work together, a digital business technology platform must effectively interconnect all these subplatforms at scale. Application leaders should implement a pervasive integration strategy to succeed in digital business.

"How to Implement a Hybrid Integration Platform to Tackle Pervasive Integration"

Addressing the pervasive integration requirements fostered by the digital revolution is urging IT leaders to move toward a bimodal, do-it-yourself integration approach. Implementing a hybrid integration platform on the basis of the best practices discussed in this research is a key success factor.

"How Pervasive Integration Enables Your API Initiatives (and Vice Versa)"

Contrary to the popular myth, even if everything has an API, you still need integration. APIs facilitate integration, and integration platforms are key for fast API delivery. To enable digital transformation, application leaders should encompass API support in their pervasive integration strategy.

"Innovation Insight for Hybrid Integration Platforms"

The "hybrid integration platform" is emerging as the capability framework of choice for the design of modern integration infrastructure. Application leaders responsible for integration should strategically pursue an HIP-inspired vision, but tactically select the optimal technical building blocks.

"Market Guide for HIP-Enabling Technologies"

Application leaders responsible for integration are looking to implement hybrid integration platforms to enable pervasive integration. This Market Guide provides insight into the different integration technologies that enable core capabilities when forming an HIP.

"Top Three Acts to Renew Your Data Integration Strategy for Digital Business"

Digital business has intensified the scale and complexity of data integration. Data and analytics leaders must implement three top acts — assess data integration needs, adopt a portfolio-based approach and explore emerging integration trends — when renewing their data integration strategies.

"Converging Data and Application Integration: A Step Toward Pervasive Integration Using a Hybrid Integration Platform"

Application and data integration silos hinder the implementation of a hybrid integration platform. Application and information infrastructure leaders should apply approaches and tools that enable natural convergence, support the HIP framework and allow for a pervasive integration capability.

"Reimagine How to Simplify Integration Using Artificial Intelligence"

The use of AI in integration will mark the difference between conventional and modern integration infrastructure. Application leaders seeking simpler ways to integrate applications into the enterprise should gradually introduce integration platforms armed with machine-learning capabilities.

Platform Strategies

"Use Continuous Modernization to Build Digital Platforms From Legacy Applications"

Legacy application portfolios are often viewed as a problem and subjected to large-scale rip-and-replace efforts. Application leaders should instead manage their portfolio as an asset, removing impediments and executing continuous business-driven modernization to provide optimum value.

"Digital Platforms Need Programmable Infrastructure"

Digital business demands agility- and intelligence-driven automation across a hybrid infrastructure environment. This research describes how I&O leaders can create a programmable infrastructure that senses and responds quickly to customer requirements, allowing the organization to compete and grow.

"How to Provide Strong I&O Digital Platform Leadership"

As industries accelerate their journey to digital business platforms, I&O leaders must redesign their services around product lines and abandon any projects that are misaligned. I&O leaders should use this research to align and embed their services based on a redesigned IT operating model.

"Reinventing Applications as Products for the Digital World"

Delivering business value via applications is dying out as firms struggle to deliver next-generation experiences using innovative application architectures, APIs and machine learning. Application leaders must adopt a product-centric model to maximize the value they deliver on new digital platforms.

"Mastering the Role of Products in the Digital Era"

Application leaders must master the delivery of products for the digital era, linking the value streams delivered by agile teams with the customers and businesses they serve. IT and business leaders must agree on a common vision and roadmap for products in order to succeed with digital business.

"Toolkit: Digital Maturity Assessment for Life and P&C Insurers 3.0"

Digitalization is a top three strategic technology priority of life and P&C insurance CIOs. We provide insurance CIOs with an online digital maturity assessment tool and allow them to compare the digital maturity of their organization's business, platform and IT strategy with industry peers.

"Use a CARTA Strategic Approach to Embrace Digital Business Opportunities in an Era of Advanced Threats"

To securely enable digital business initiatives in a world of advanced, targeted attacks, security and risk management leaders must adopt a continuous adaptive risk and trust assessment strategic approach to allow real-time, risk- and trust-based decision making with adaptive responses.

"Develop a Pragmatic Vision and Strategy for Digital Business Security"

Digital business challenges the conventions of information risk and security management. Security and risk management leaders must develop a coherent digital security program based on a clear vision and strategy.

"Scaling Digital Commerce Into a Digital Platform Business"

Digital commerce is a flagship example of digital business that has existed for over a decade. Application leaders for digital commerce can lead their organizations' digital initiatives and drive new business and revenue by scaling digital commerce into digital platform businesses.

"Take These Five Steps to Prepare I&O for Digital Business Platforms"

Ecosystems enabled by digital business platforms are a new business focus, and supporting them requires new I&O capabilities. I&O leaders must prepare for digital business platforms by following the five steps in Gartner's Digital Platform Engagement Model for I&O.

"How to Govern a Digital Business Technology Platform"

Scaling a digital business will break conventional governance practices. CIOs can use methods for managing agile development as inspiration to create a governance framework for digital business. The goal is to distribute responsibility for governance to the various subplatforms required for digital business, while creating a framework to focus on the business outcomes needed for the digital business to succeed.

"Innovation Insight for Application Ecosystems"

Cloud technologies and digital business models have moved enterprise application ecosystems beyond the traditional megavendor-led model. Application leaders should take advantage of four emerging vendor ecosystems as part of their digital platform strategy.

"Digital Business Will Push Infrastructures to the Edge"

The IoT and immersive technologies are network-effect technologies that will help enterprises to accelerate the scaling of a digital business: more data, better and faster decisions, more interactions, and more business moments. But I&O leaders will need to expand their infrastructure to the edge to make that work.

Network-Effect Technologies

A digital business can attain a large scale much more rapidly than a conventional business. However, more of the management of a digital business must be automated. Three network-effect technologies enable the enterprise to scale management along with the digital business. The Internet of Things scales the management of the physical world. APIs scale relationships within the partner ecosystem. AI scales the power of workers.

APIs Scale Relationships

"Align Your API Marketplace Strategy With Your Ecosystem Goals and Revenue Expectations"

Application leaders responsible for API strategy are faced with challenges in driving API usage. They should carefully leverage third-party API marketplaces or create their own in order to enable partners to develop a flourishing ecosystem around their APIs.

"Top 10 Things CIOs Need to Know About APIs and the API Economy"

Application programming interfaces open new business opportunities. However, too many CIOs make the mistake of seeing APIs as technology only, instead of basing their company's business models, digital strategies and ecosystems on them.

"Create the Role of API Product Manager as Part of Treating APIs as Products"

Application leaders responsible for APIs and integration must support project teams, but treating APIs as products with an accompanying product life cycle increases the chances of digital business success. Creating the role of API product manager is key to managing this project/product dichotomy.

"From APIs to Ecosystems: API Economy Best Practices for Building a Digital Platform"

Despite the escalating hype about digital platforms, application leaders must always remember that the most essential elements of digital business platforms are the APIs. When taking an API route to creating your digital platform, follow these essential best practices.

"Cost-Effectively Scale Your Digital Business by Negotiating API Pricing in Software and SaaS Contracts"

Organizations are increasingly reliant on third-party application programming interfaces. Sourcing and vendor management leaders unprepared for negotiating API consumption pricing are putting digital business growth plans at risk. Securing optimal contract terms are essential to contain cost and risk.

AI Scales People

"Seek Diversity of People, Data and Algorithms to Keep AI Honest"

Data and analytics leaders should seek diversity in artificial intelligence teams, data and algorithms to counteract bias-rooted errors in AI. Diversity in people, data sources and problem selection will be key aspects of your AI success.

"Embrace Your Bias to Enable Analytics Clarity"

Bias is inherent in the development of analytic models, data selection and the associated algorithms. The bias continuum provides data and analytics leaders with a discussion template for transparently exposing statistical bias so as to ensure real business impacts.

"Redefine Your Application Strategy to Exploit Conversational AI for Digital Business Success"

Application leaders have traditionally favored a mobile- or digital-first strategy for user experience, but conversational AI fundamentally redefines both. They should prepare to exploit "AI-first" in their application strategy for digital business in the new paradigm.

"A Framework for Applying AI in the Enterprise"

This document provides an overview of Gartner AI-related research and analyst resources. Enterprise architecture and technology innovation leaders should leverage this reference to optimize Gartner support when defining and developing enterprise strategies and plans.

"Predicts 2018: AI and the Future of Work"

Artificial intelligence will have a profound impact on how we will work — some jobs will become obsolete, others will be created, most will change. IT leaders must orchestrate changes in their enterprise's workforce as seriously as they seek to reap the business value of AI.

The IoT Scales the Physical World

"Business Benefits of the Internet of Things: A Gartner Trend Insight Report"

IoT rollouts continue to move from trials to full deployments. The IoT is providing business benefits, such as operational efficiency and workforce productivity. IoT solutions must demonstrate measurable benefits and business value for success.

"IoT: Think Big, Start Small, Move Fast"

CIOs must take the lead to incrementally deploy an Internet of Things framework that emphasizes business priorities across the enterprise, ensuring scalability, extensibility and flexibility.

Related Priorities

Table 1. Related Priorities

Priority	Focus
Cross-Industry Innovation and Disruption	This cross-industry research will show CIOs how to participate in the creation of business and customer value by combining innovations, processes and technologies from multiple industries.
CIO Leadership in Innovation and Strategic Business Change	In the digital era, the CIO serves as a business leader and an IT leader. This initiative focuses on the first job, showing how the CIO can contribute to the development of an enterprisewide strategy.
CIO Leadership in Governance, Strategic Execution and Operational Performance	Leadership in governance, strategic execution and operational performance targets establishing situational governance to drive strategic execution and operational performance excellence.

Source: Gartner

Gartner Analysts Supporting This Trend



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Related Resources

Webinars

["Creating Digital Value at Scale: A Gartner Special Report"](#)

["Scale Digital Business With an Effective Digital Technology Platform"](#)

["Develop a Strong Digital Leadership Pipeline"](#)

Articles

["How CIOs Achieve Digital Value at Scale"](#)

["The Secret to Digital Success: Talent"](#)

["3 Scale Accelerators Deliver Digital Transformation"](#)

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