Scaling Bimodal — Fusing IT With the Business: A Gartner Trend Insight Report

Published: 28 July 2017 **ID:** G00331680

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Scaling bimodal enables organizations to transform their businesses by exploiting technology strategically. We offer research to help CIOs and IT leaders scale a bimodal approach to collaborate with the business, increase speed, agility and innovation; and deliver on digital business.

Opportunities and Challenges

- Scaling the bimodal capability in the organization transforms the enterprise to one that is both agile and innovative, enabling it to thrive in an increasingly digital world.
- When organizations scale bimodal, CIOs and their business executive peers partner together to realize a shared enterprise strategy. Thus, the arm's-length demand/supply relationship between IT and the other business units disappears quite quickly.
- Scaling bimodal alters the approach to service delivery to one that combines business and IT resources into multidisciplinary product teams with business ownership, and which have shared success performance metrics.
- Scaling bimodal places emphasis on continuous learning and change as well as increases the enterprise's risk appetite.

What You Need to Know

- When scaling bimodal, CIOs must focus on renovating the core and building the digital business platform, as key enablers of agility and innovation.
- To scale bimodal, CIOs and IT leaders must collaborate with and guide the key governance bodies, such as the PMO and IT investment committees, to sense, respond and adapt themselves to changes in the business environment or market condition.
- Scaling bimodal to the entire organization, requires an operating model based on joint business-IT accountability and shared responsibility for business outcomes.
- CIOs and their teams must move to a decentralized innovation approach while at the same time focusing enterprise architecture on the art-of-the-possible and economic trade-offs.

- As IT organizations shift toward the multidisciplinary product teams that are at the heart of the bimodal transformation, decisions must be pushed down the organization hierarchy, and staff must be more versatile, taking on a broader set of roles.

Insight From the Analyst

Feel the "Heat" of Bimodal


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We introduced the term "bimodal" in 2014. After three years, it's still a hot term. In 2016, the term bimodal ranked No. 6 out of 100 top search terms on gartner.com. And the search terms above bimodal are Gartner bread and butter research topics. They include Magic Quadrants and hot technologies, such as the Internet of Things (IoT) and big data. Clearly, there is a lot of interest in bimodal.

Why is it a hot term? Because it continues to cut to the heart of the challenge that every enterprise and IT organization faces today — to transform their businesses into digital businesses by exploiting technology strategically. Yet most IT organizations are mired in the day-to-day "run the business" activities, or at least they are finding it difficult to get a more appropriate balance of run, grow and transform activities. They don't have the operating model that is optimized for the agility and innovation needed to deliver on digital business.

What's really exciting is that after 35 years of talking about it, IT is finally fusing with the business as an equal partner rather than serving it as a service provider. This is a direct result of successful bimodal execution that enables the enterprise to thrive in an increasingly uncertain world. This is why we are producing an unprecedented third special report on bimodal. We've worked closely with our colleagues across Gartner research to bring you the drill-down you've requested on "how to" scale bimodal successfully.

Now here is some good news. In our 2017 CIO survey, we had clients profile themselves as average digital performers or top digital performers. About 7% said they were top performers. And you know what? 68% of the top performers had implemented bimodal, and 71% of them achieved greater innovation as a result.

> Bimodal is correlated with increasing innovation.

That's good news. But the better news is that we know how to do this. That is what scaling bimodal is all about. This special report explores what it means to scale bimodal beyond the IT organization to the entire enterprise — and the benefits you should expect.

Since January 2016, Gartner has taken approximately 3,000 end-user inquiries on bimodal. And you know what? Each of our clients told us that the process of scaling bimodal is a painful one. Not a single one said it was easy. Scaling bimodal is hard to achieve — because if well-executed, it is a full-scale transformation of the entire enterprise. And change is difficult, especially when embedded cultures and processes need to change.

This special report can help you move beyond your initial foray into starting bimodal, to achieve the enterprise agility and continuous innovation needed to achieve your digital ambition. Throughout the journey, we offer lessons learned and best practices that you can beg, borrow and steal to make your journey maybe a little easier, even if it is still hard.

Good luck with your bimodal journey. Your enterprise digital success depends on it!

Donna Scott and Simon Mingay

Executive Overview

Definition

Bimodal is the practice of managing two separate but coherent styles of work — one focused on predictability and the other on exploration. Mode 1 is predictable, improving and renovating in well-understood areas. Every organization has Mode 1 requirements or problems to solve. They plan and execute against it. In Mode 2, business and IT together explore and experiment to innovate and solve new challenges. With digital business requiring organizations to be more innovative, agile and flexible, every organization must invest in Mode 2 methods and processes as they seek to manage the increasingly uncertain business environment.

Business innovators, IT leaders and their teams are learning to experiment, prototype and scale new Mode 2 competencies that are applied to increase business innovation, teamwork flexibility and enterprise agility. As a result, CIOs and IT leaders are engaging the business in new ways and raising the perception the business has of IT throughout the enterprise. The IT leadership team can do more than just provide the IT services that keep the lights on and run the business, they can also leverage IT to help grow and transform the business.

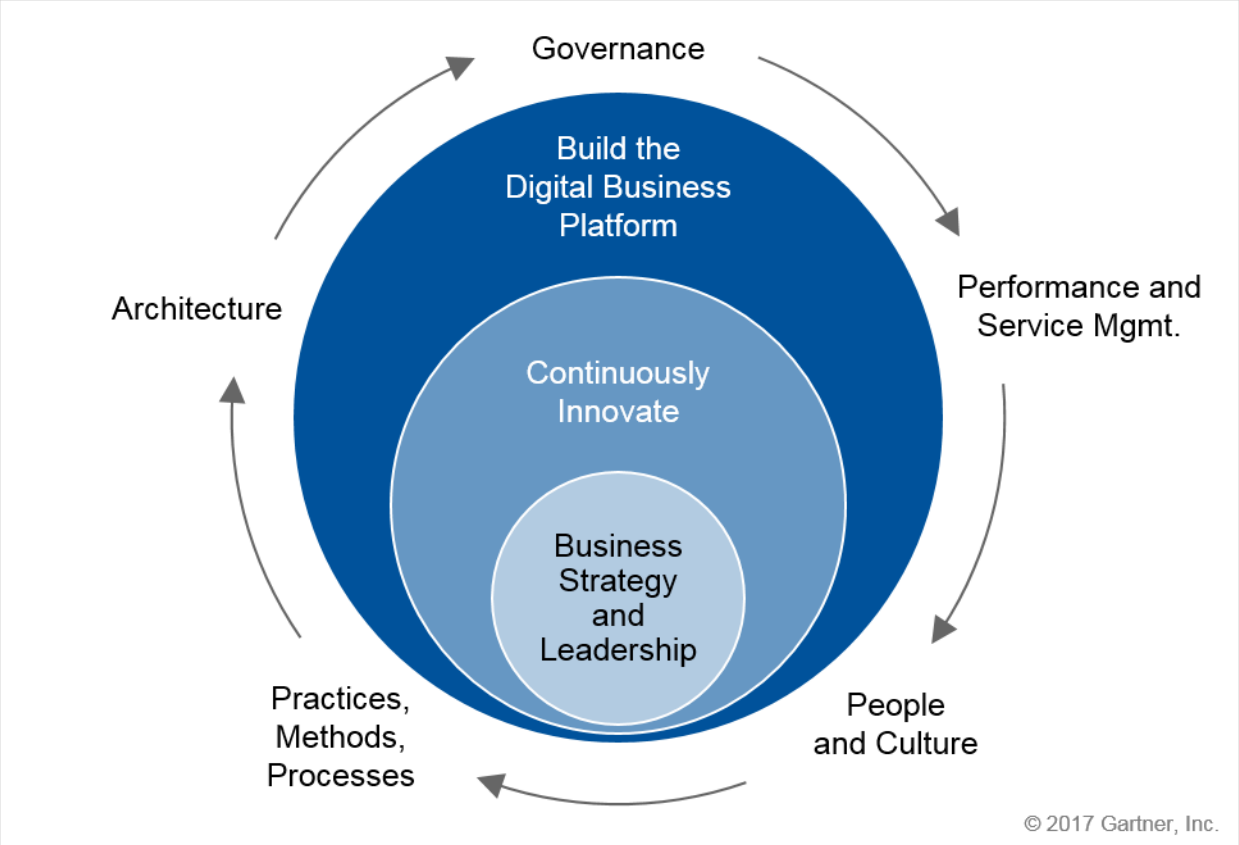
A key misunderstanding of bimodal is the idea that Mode 1 processes and cultures do not need to change. But what CIOs quickly learn is that when scaling bimodal, Mode 2 cannot succeed without changes to Mode 1. Mode 1 needs enterprise agility as it focuses on renovating the core and on transforming Mode 1 business processes to deliver on digital business. Mode 1 also needs increased flexibility to integrate with newly developed Mode 2 solutions. Moreover, Mode 1 needs innovation, too, especially when it comes to building a competitive digital business platform. Digital business depends on both modes.

Scaling bimodal extends new work styles and new methods to the entire enterprise. When organizations scale bimodal, the "IT versus the business" culture vanishes over time. Scaling bimodal results in a fused and collaborative multidisciplinary team-based approach to deliver on shared digital business ambitions and metrics.

To scale bimodal, CIOs and their teams, in partnership with the business, must create new approaches and capabilities that will involve and touch the whole organization — with business and IT governance front and center. *Bimodal is not just scaled agile in application development*. The real story is that everyone, not just IT and development, can achieve enterprise agility. When CIOs scale bimodal beyond IT, the way the enterprise thinks and behaves changes — in fact, the entire operating model changes, affecting internal processes across the organization (see Figure 1). The business and IT become fused.

This special report is structured into nine chapters, eight of which address the critical areas central to scaling bimodal highlighted in Figure 1, the ninth brings in some industry-specific perspectives.

Figure 1. Scaling Bimodal Changes the IT Operating Model



Source: Gartner (July 2017)

Research Highlights

Business Strategy and Leadership

CIOs and their teams implement bimodal to execute differently. They look to infuse an ongoing continuous learning philosophy to inspire speed, innovation, flexibility and agility within the organization. Starting bimodal is mostly about learning and discovering new ways of working that are then used when scaling bimodal.

When scaling bimodal, larger, more complex and more audacious initiatives are taken on to drive greater impact and strategic outcomes to the organization. The Mode 1 IT and business processes are transformed by transplanting many of the new practices developed in the Mode 2 nursery. The entire business becomes more agile and innovative. A key investment made when scaling bimodal is to renovate the core into the digital business platform.

Scaling bimodal enables the enterprise to take larger, more integrated initiatives to achieve digital ambitions as documented in the enterprise strategy.

Scaling bimodal requires CIOs to have a destination. They can lead the organization to where it needs to go — to win in the marketplace, or, for a public-sector organization, to successfully deliver on its mission. The dozens of enterprises we interviewed on scaling bimodal all emphasized the need for an integrated business-IT vision, strategy and strategic plan describing how to get there. Where one did not exist, CIOs had the opportunity to lead the senior leaders in the organization to develop and shape their future. Bimodal is not the strategy; rather, bimodal shapes the operating model to execute the strategic plan. Having that shared vision and goals unites the business and IT.

Related Research

"The 2017 CIO Agenda: Seize the Digital Ecosystem Opportunity": Top digital performers reported being very effective (self-reported score of 6 or 7 [out of 7]) on the question, "How effective is your company at factoring digital considerations into strategy and planning?" At the same time, 68% of top performers adopted bimodal, versus 43% of average performers and 17% of trailing performers.

"Five Situational Leadership Types for CIOs Working With Digital Teams": CIOs are encountering growing leadership expectations as a result of digital workforce demands, but may have little practical experience in leading diverse digital teams in new situations. CIOs must learn to respond to their new digital teams with a leadership type suited to team circumstances.

"CIOs Can Become Stronger Digital Transformation Leaders by Training the Brain": CIOs can master their digital transformation and people dynamics leadership if they focus beyond their technology contributions and further develop their soft skills via brain training. Brain science can provide CIOs with effective knowledge for their leadership development efforts.

"Competitive Landscape: Bimodal Enablement Consulting Services": CIOs don't have to "go it alone." Rather, they can engage with external service providers experienced in delivering bimodal in order to accelerate their digital success.

"The Case for Change: Why Digital Business Needs a New Approach to Strategy": This research outlines how Gartner updated its strategic planning framework to reflect the criticality of embracing both information and technology to shape the digital business strategy. We explain the drivers behind these changes and the implications for CIOs.

"Information and Technology Strategy for the Enterprise on the Cusp of Digital Business": Because strategy is such a critical element for CIOs to be able to embrace digital business, CIOs need to revamp their strategic planning processes to ensure their information and technology plans are an integral cog of the business strategy.

"Master Four Types of Strategy to Perfect Your Digital Transformation": CIOs can leverage this research to identify which type of strategy is best suited to their digital transformation initiative — ranging from experiments, options, choices or improvements.

"How to Create an Information and Technology Strategic Plan": Digitalization is transforming the way enterprises approach and deliver on their digital and strategic goals. Using this research can help CIOs to realize positive enterprise business results through unified information and technology planning.

"Developing Strategic Plans: A Practical Guide to Getting Started": To achieve positive business outcomes, especially with their digital business initiatives, CIOs must develop impactful IT strategic plans. These plans must include the enterprise business strategy. This research can help CIOs shape those plans.

Continuously Innovate

When implementing bimodal, the CIO often initiates innovation activities by engaging the business and acting like an internal startup. For example, these actions include:

- Educating business leaders on emerging technologies (such as artificial intelligence [AI], machine learning [ML], IoT, IT/OT, augmented reality [AR], and so on) so they can envision how those technologies may be used for business benefit.
- Engaging with startup vendors to understand these emerging technology capabilities and how their customers use them.
- Taking field trips with the business to see advanced technologies in action in real businesses and processes. Experience firsthand the value they deliver.
- Educating the business and IT on Mode 2 techniques such as design thinking, lean startup, agile methodologies, prototyping, crowdsourcing and other methodologies. These techniques drive innovation but also test ideas to choose those with the greatest chance for success (and pivot or scrap those that do not).
- Initiating small pilots or placing "small bet" ideas to motivate business and IT leaders to learn new methods for selecting and implementing pilots.

Move to a decentralized approach to innovation.

When scaling bimodal, IT leaders and the IT organization should relinquish their grip on a centralized approach to innovation. They need to move to a more decentralized innovation approach and firm up processes across the entire enterprise to innovate as part of the enterprise culture. The key is to develop the processes to enable continuous innovation and not just a one-time brainstorming session to ideate and develop a pipeline of initiatives.

Especially when it comes to enterprise architecture (EA), a centralized approach to innovation will and should continue to be performed. EA practitioners focus on driving business outcomes in support of the business operational and strategic direction while balancing risks and benefits.

Related Research

"Embrace Bimodal Business Transformation by Adopting Lean Startup Techniques." With business climate uncertainty comes the need to change and indeed transform differently. Bimodal business transformation adds lean startup and other techniques for a second mode for change at the business level.

"The Digital Economy Requires Venture CIOs": Enterprise digital business transformation requires CIOs to go beyond their traditional roles. CIOs must transform themselves into venture CIOs to lead disruptive innovation efforts and drive techquisitions.

"Create a Research Engagement Plan to Advance Your Innovation Culture and Processes": CIOs can use this research guide to design an innovation process and action plan that incorporates Gartner recommendations to create an impactful innovation process.

"Seven Best Practices to Create an Innovation Center": CIOs can leverage these best practices to help them and their business counterparts to plan and build innovation centers to deliver business value.

"Toolkit: An Enterprise Architect's Guide to Ideation": Enterprise architects and technology innovation leaders can use this guide as a best-practice tool to establish a business-led innovation approach to building a strong digital business.

"Best Practices in Staffing for Technology Innovation": This research helps CIOs clarify where to allocate resources to enable innovation. It covers decisions that CIOs need to make as to whether to create a full-time or part-time technology innovation group and the role of external service providers.

"Applying Lessons From 20 Years of Hype Cycles to Your Own Innovation and Forecasting Strategies": This research helps IT leaders design their organization's technology tracking and adoption processes to account for technology progress in the wake of digital business transformation.

"Business and IT Leaders Want CTOs to Focus on Innovation": New technology developments resulting from the increasing importance of digital business have put a new focus on IT. Findings from our survey show that CTOs and IT leaders see an opportunity to evolve the CTO role to one that focuses on technology-enabled business innovation.

"Leadership Vision for 2018: Enterprise Architecture and Technology Innovation Leader": Enterprise architecture and technology innovation leaders are key enablers for digital business and are accountable for helping the enterprise balance the risks and benefits of digital business.

The two research notes below are included as examples of approaches to managing innovation in two different areas. Regardless of interest in the specific technology areas, they provide useful insight into innovation management.

"Alternative Channels for Engaging Customers of the Future": This research depicts various ways for application leaders and CIOs to identify and prioritize new channels to engage customers.

"The Disruptive Potential of Blockchain Technology": While many CIOs see blockchain as a disruptive technology, most enterprises see that real innovation will occur outside conventional enterprises, including disruptive innovation transformation.

Build the Digital Business Platform

When IT leaders and their IT organizations begin to implement bimodal, they typically form Mode 2 teams that learn and apply new Mode 2 techniques, such as:

- Iterative methodologies like agile
- Adaptive sourcing
- A/B testing
- Design thinking
- Lean startup
- A formal approach to innovation management and continuous innovation

They quickly realize, however, that they won't be successful with an antiquated foundation/core. Many of these old foundation/core IT systems are monolithic and fragile. A single change to one could result in a massive outage affecting the business's ability to sell and transact business. To work with these systems' fragile architectures, the infrastructure and operations (I&O) organization must adhere to rigorous change management practices.

As enterprises invest in core renovation, many of these systems becomes part of a digital business platform — which also encompasses four other IT solution domains: information intelligence and analytics, ecosystems, customer experience, and IoT platforms. These changes impact security, management and infrastructure architectures. Moreover, the new methods that were nurtured in Mode 2 teams become standard on Mode 1 teams as well, because these teams also need to be agile and flexible, and able to release change on an iterative basis.

Therefore, when organizations scale bimodal, they must invest money and resources into renovating the core. During this time, systems are classified as to whether they are core to the digital business platform or not. Noncore systems are often outsourced or moved to SaaS. Core systems may be modernized, rearchitected or replaced. Some of our clients spend tens or hundreds of millions of dollars on core systems renovation to be done in a one-to-two-year time frame. Those spending large sums and implementing it in one-to-two years (instead of three-to-five years) tend to want to be a digital leader or they are being challenged competitively from a business perspective and need to invest in short order to stay competitive.

Related Research

"Top 10 Strategic Technology Trends for 2017: Digital Technology Platforms": Platforms are evolving to support digital business ecosystems and customer experience. This research helps IoT and technology innovation leaders to understand how these platforms can support foundational and architectural needs.

"Every Organization Needs a Digital Platform Strategy": Every organization needs a cohesive digital platform strategy that includes IT and the business. CIOs must collaborate with their business counterparts to integrate digital platform development into their technology and business strategic planning.

"Modernize Your Information Infrastructure to Support Bimodal IT": Bimodal IT needs a modern approach to data management technology. To make this a reality, data and analytics leaders must embrace a reusable infrastructure and introduce new technologies with a focus on openness.

"The Integrator's Dilemma: Can a Bimodal Approach Balance Integration Agility and Control?": Digital business requires an enterprisewide integration competency. Application leaders must build a bimodal capability to support both high-control systematic and high-speed adaptive integration approaches.

"Core Architecture Principles for Digital Business and the IoT — Part 1: Modernize": This research provides an overview for how companies are still moving forward with new products and services to provide tailwind for many semiconductor companies in the future. As evidenced at this year's Consumer Electronics Show, companies were displaying their wares and showcasing their future trends.

"The Most Common SOA Mistakes and How to Avoid Them": Service-oriented architecture (SOA) is the entry point to modern application architectures is central to renovating the IT core and building the digital platform. This research helps organizations along their journey as it outlines the common SOA pitfalls and actions to help application leaders working with the architecture.

"What CIOs Need to Know About Software-Defined Infrastructure and Digital Business": CIOs need to cut through the marketing hype to identify which technologies can deliver on digital business. This research explains why and where software-defined infrastructure is required for digital business and how to leverage a bimodal work style to implement it.

"Five Steps to Shrink Your On-Premises Data Center": On-premises data centers are not agile enough to support today's digital business. This research helps technical professionals to shrink the equipment footprint so that the data center can effectively deliver essential IT services to the business.

"How to Change the Role of Ops in DevOps": This research helps CIOs and I&O leaders understand how DevOps changes the role that IT operations plays in the enterprise. It also clarifies what organizations can do to improve their operations and meet new challenges.

"Change How You Fund, Build and Measure to Achieve Network Agility to Support Digital Business": Digital business demands infrastructure agility. I&O leaders must adapt to the changes

brought about by digital business. They must change how they recruit, assess and reward team performance, and how they design, build and operate networks to deliver the required agility.

"Make Networking a Critical Strategic Infrastructure Resource for Enabling Digital Business": Since enterprises' digital business initiatives rely on agile and robust connectivity, networking will become an increasingly critical enabler for these activities. CIOs must ensure that they have the right networking people, processes, technology and investments to drive and not inhibit these initiatives.

Scaling Bimodal Transforms Governance

The most intransigent challenges that enterprises run into when they try to go faster, increase agility and flexibility, and innovate at scale, are typically associated with governance. Implementing bimodal methods, such as agile prototyping, adaptive sourcing and lean startup, can be relatively easy up to the point where material changes to governance need to be put into action. What sounds like simple changes, such as establishing an investment portfolio management discipline, rather than working from a prioritized project list, can be difficult. In addition, moving to an operating model that is based on joint business-IT accountability and shared responsibility for business outcomes takes time and persuasion.

Governance processes and controls, and those charged with fulfilling governance roles, must adopt a more adaptive and differentiating approach reflecting the different kinds of investment and change programs the enterprise now need to undertake. Governance processes and controls must be able to respond to changing circumstances and be able to change funding, resources and priorities accordingly. There cannot be a one-size-fits-all approach.

For many organizations, governance mechanisms and behaviors have long since been geared toward control rather than agility. But digital transformation and a bimodal approach demands pushing decisions down, enabling greater autonomy, confronting intrinsic uncertainty in solution development and managing new risks in different ways. Product teams and the product organization are at the sharp end of that, but will not thrive without changes to governance. Such changes are difficult, involving senior leadership, changes to the way IT is funded, and to the way that program and portfolio management (PPM) operates. Moreover, the project management office (PMO) must transform its skill set and competencies to survive in the new world of product management. Similarly, those principles extend to security with a shift from control to influence.

A lot of the bureaucratic "box ticking" procedures have introduced very low value, adding control activities and delays, but distanced executives and managers from understanding their market or domain, resulting in low levels of business trust in IT. Moreover, traditional governance many times fails to be instrumental in steering resources toward changing business objectives and new solutions. Finally, these past approaches lack clear and shared accountability for the business outcomes and alignment with business goals. Changing these deeply embedded approaches and behaviors is imperative.

Related Research

"Use Adaptive Portfolio Investment Management to Execute Strategy": Program and portfolio management (PPM) leaders need to expedite the process to move good ideas into the execution pipeline. This research shows PPM leaders how to use adaptive portfolio investment management, which is designed to focus on collaboration.

"Adaptive IT Governance": Adaptive IT governance is integral toward achieving sustainable business outcomes tailored for the digital age. CIOs and their business counterparts can add new practices and approaches to their current governance processes and apply them accordingly.

"How to Make Bimodal Application Governance Work": The ability to deliver new business functionality through bimodal development is gaining popularity among organizations that demand IT to be more agile and respond quickly to discontinuous business opportunity, while maintaining a sustainable support for the current applications landscape. CIOs and application leaders must develop and embrace bimodal application governance in order to manage Mode 1 and Mode 2 activities to avoid compromising release schedules and increasing risks of a system breakdown.

"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 PMO. PPM leaders and CIOs will find this research designed to provide a framework to help the organization achieve value and results across an enterprise's portfolio of initiatives.

"Changing Governance to Exploit Enterprise Agile": This research shares best practices from organizations that have implemented advanced practices for agile development. These practices help improve technology projects, budgeting and governance processes.

"Bimodal IT Is Having an Impact on Security Governance": Bimodal practices are presenting challenges for security and risk management leaders. This research provides new guidance for organization leaders to understand new requirements to handle Mode 2 projects. The research also helps managers to change their thinking about how security should be allocated to Mode 2 projects.

"How to Differentiate Governance and Change Management in Your Pace-Layered Application Strategy": Gartner's Pace-Layered Application Strategy allows IT leaders to implement different kinds of approaches based on application type. This research provides guidance as to how to differentiate governance and change processes by layer.

Scaling Bimodal Transforms Performance and Service Management

If enterprises want to be serious about increased speed, agility and innovation, then as described above, governance must become more adaptive, with decisions increasingly pushed out to points closer to the product, service or customer. CIOs and the business leadership team will have to start running and supporting self-organizing teams with fewer management roles to flatten the organization. As such, the way organizational, team, individual and sourcing performance management is conducted needs to change. There has to be an increased focus on the team performance over the individual, and much greater emphasis placed on measuring against the desired outcome.

CIOs and their business counterparts should consider shifting toward measuring aspects of a service that increases its ability to respond in a timely manner to change; particularly change that was not directly foreseeable. All service teams and organizations involved in delivering a service must be measured against that same goal of increased agility and innovation. CIOs need to ensure suitable incentives are in place.

Related Research

"Change Five Leadership Practices for Effective Digital Software Delivery": CIOs shifting to digital software delivery often perpetuate "bossy," top-down project and performance management techniques that are unsuited to the fluid, fast-moving digital world. Instead, they should foster a "servant leadership" approach to improving lean, self-organizing and diverse teams.

"Use Bimodal and Pace-Layered IT Together to Deliver Digital Business Transformation": Many organizations recognize that they need to adopt a bimodal approach to managing change in IT, but are inhibited by culture, priority and legacy. Using Gartner's Pace-Layered Application Strategy framework, IT leaders responsible for applications can clarify their strategy for adopting bimodal.

"Simplify Service Portfolio Prioritization and Resource Planning Using Run-Grow-Transform Categorization": Run-Grow-Transform is a useful and respected simplification that CIOs can use to communicate differentiated value and quality of services in the IT service portfolio. It can help prioritize where IT needs to spend resources to excel versus reducing costs and optimizing with minimal business impact.

"Agility Should Be Among the Top Three Goals for I&O Leaders": Being agile is an essential component of thriving in the digital world. This research helps I&O leaders to improve implementation of enterprisewide agility.

"How CIOs Develop Trust to Increase the Value of Team Collaboration and Outcomes": How work is performed is changing, from regular tasks performed within organizational boxes, to one-off, team-based initiatives that cross organizational boundaries. To unlock needed collaboration, CIOs must develop trust between teammates and for the leader.

"Get Ready to Maximize Focus and Outcomes for Investments in Digital Business": Executives generally have two questions about IT: "Am I spending the right amount on IT?" and "Am I spending it on the right IT?" Answering the latter question requires changes in the way initiatives are prioritized. Instead of assessing against each other, we recommend a portfolio approach first, followed by prioritization based on strategic outcomes.

"How Sourcing Executives Can Successfully Negotiate Business Outcome Contracts": Sourcing and vendor management leaders who ask IT consultancies and system integrators to accept payment based on business outcomes often find negotiations difficult. This research sets out a process for defining business outcomes and bringing contract negotiations to a successful conclusion.

"Data-Driven DevOps: Use Metrics to Guide Your Journey": A metrics-oriented mindset is key to ensuring that DevOps initiatives deliver results. This research identifies metrics that I&O leaders can

use from a general perspective to track DevOps teams' progress toward business goals, identify areas for improvement and promote collaborative culture.

"Transform IT Sourcing to Accelerate Agility, Innovation and Performance": Digital business requires rapid innovation to generate new revenue streams. To become a strategic partner to the business and avoid being bypassed, IT sourcing and vendor management leaders must transform the service sourcing organization through greater innovation, agility and performance.

"Use Adaptive Sourcing to Drive Double-Digit Cost Optimization of IT and Business Processes": Gartner advises sourcing and vendor management (SVM) leaders to create a dedicated cost optimization team to work collaboratively across functions to help restructure operational spending and deliver cost reduction in IT and business processes. On top of that, SVM leaders must ensure that their support and participation in the delivery of digital business innovation initiatives deliver what is expected by the business in terms of Mode 2 innovation, with the required degree of efficiency and effectiveness.

"Managing Distributed Agile With Outsourced Service Providers": Agile development methods require frequent team interaction, so project owners often prefer on-site resources to offshore options, even if this increases costs. Sourcing executives must match nearshore and offshore service providers with the type of project where they can be successful.

"How Network Leaders Can Support Bimodal": Bimodal work styles will severely stress existing network processes and culture. Since close to half of IT shops have adopted bimodal IT, I&O leaders with responsibility for designing and managing network infrastructure and services must adapt to support new Mode 2 business projects.

"CIO Futures: CIO Performance Management in 2030": As the CIO role evolves, so too will the way organizations perceive and measure the value of the CIO. This 2030 scenario explores technology, behavioral and management trends that will reshape future CIO performance management.

Scaling Bimodal Transforms People and Culture

Scaling bimodal involves:

- Flatter organizations
- Greater delegation of decision making
- More team and individual autonomy

IT leaders must recruit people that can operate in such an environment, and they have to develop people with the same objective. These individuals are what Gartner has been calling versatilists for several years. But as IT organizations shift toward the multidisciplinary product teams that are at the heart of the bimodal transformation, and we see a reduction in the technology and role-based organizational silos, so staffers need to be able to be more versatile, and be able to take on a broader set of roles. That demands more active career development by IT leaders and staffers, having them exposed to and gaining experience in a range of roles and domains.

Many new digital, business and IT skills and roles are emerging. And they will need to be sourced and developed in more creative ways than most HR and IT groups have done so far. In addition to changes to internal talent acquisition and workforce development, adaptive sourcing is an essential capability.

There are also roles that many organizations will need fewer of, such as project managers, midlevel managers and business relationship managers. CIOs must ensure that these individual's valuable skills and knowledge are leveraged in the most productive way while they transfer to new roles in the organization.

Related Research

"CIOs Must Evolve IT Roles and Talent Profiles to Adopt and Scale Bimodal": The journey to digital business requires CIOs to implement a bimodal IT strategy for building enterprisewide capabilities to transform the business. CIOs can apply survey data presented in this research to define and develop key roles and talent profiles required to adopt and scale bimodal for digital business growth.

"High-Performing App Dev Teams Have 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.

"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.

"CIOs Should Use Universities and Nontraditional Alternatives to Build Talent Pipelines": CIOs looking to secure and expand their talent pipeline can accelerate access to interested and qualified people by building relationships with academic institutions, alternative education sources, and the faculty, activities and events around them. This roundup can spur CIO action.

"How to Source Critical Domains of Expertise for Successful Digital Business Initiatives": New expertise domains are required to make businesses ready for the realities of digital competition. Sourcing and vendor management leaders must execute on six critical steps to source the skills, competences and capabilities needed to make each mission-critical priority initiative successful.

"Power Your Digital Leadership by Tapping Three Hidden Forces That Shape Behavior": Digital business requires deep changes that fly counter to entrenched behavior and attitudes. To excel as digital leaders, CIOs can tap into three powers — context, language and habit — to drive effective change for themselves, their teams and their organizations.

"How to Be a Successful I&O Leader in the Era of Digital Business": In the era of digital business, I&O leaders will have to transform themselves yet again to be a catalyst for positive change. By focusing on platform creation, fostering risk-taking culture and recalibrating I&O's role within the enterprise, I&O leaders can lead the charge.

"Plan the Next Generation of IT Infrastructure and Operations Organization Structure": I&O leaders often find that their organization structures hamper their ability to deliver and support digital business infrastructure. Learn how to reorganize for cloud, hyperconverged platforms, bimodal IT, DevOps and digital business success.

"Flattening the Application Organization — Everyone Must Be Part of the Agile Value Stream": Lean IT is flattening application organizations, eliminating management slots and moving specialist staff roles into product-focused agile teams. Application leaders must move these people into new roles as accountable team members and foster the cultural change to customer-focused accountability.

"DevOps Requires Faster Organizational Learning": I&O leaders are launching DevOps initiatives amid growing demand for faster and more agile IT. For DevOps to deliver the desired speed, organizations must learn more quickly. We discuss the nature of organizational learning, and how I&O leaders can speed learning and DevOps success.

"True Project Managers Will Adapt to New Roles in Bimodal IT": Program and portfolio management leaders find that project managers accustomed to working in Mode 1 are challenged to adapt to Mode 2 roles like ScrumMaster. Some, however, are able and eager to do so. PPM leaders must match individual skill sets to Mode 2 roles to ensure a successful adaptation.

"Bold Steps CIOs Can Take to Extend Expertise, Skills and Performance Without Hiring": In this research, we identify nine bold practices that help CIOs close the gap between the demand and supply of expertise, and develop the versatilists that the flattening organization needs. None of the practices operates in isolation; they require the CIOs to build a latticework of practices appropriate to organizational maturity and risk appetite.

Scaling Bimodal Transforms Practices, Methods, Processes

When organizations start bimodal, CIOs and IT leaders begin by changing their practices, methods and processes to drive increased agility and innovation. As they scale bimodal, they do so by implementing these practices across the entire IT organization. Over time, they realize that changing the IT organization is not enough. The entire business must use new practices, methods and processes to achieve the agility and innovation they need to successfully execute on business strategy.

This section offers the broadest research coverage. We offer insight into:

- Movement from project management to product management, including for platforms on which products rely
- How that shift changes the ownership and accountabilities for IT investments and outcomes
- Agile methodologies and DevOps
- Agility of sourcing and vendor management through adaptive sourcing

We have also included research that shows the depth of process changes required by the IT organization. They are highlighted by release and endpoint management processes as well as changes to the IT operating model as a result of an end-user-centric delivery model. Few processes

remain the same when scaling to bimodal, as new methods and changed processes encompass the entire value chain. Those changes result in transforming the culture of the entire organization.

Related Research

"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.

"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.

"Reinventing How Teams Deliver Software as Products for the Digital World": Application leaders responsible for digital business are embracing the product model to maximize digital value. As their application spending evolves to a hybrid of projects and products, they must reinvent their organization's delivery of software to gain maximum benefit from the product model.

"Manage Your Foundation/Core System Investments as Products to Spur the Right Type of Innovation": Project thinking with a detached "run" or hosting operations has led to a plethora of systems managed for cost optimization and disconnected from business value. CIOs who apply product management techniques to core systems will benefit by optimizing for business value and strategic intent.

"New Bimodal Sourcing Strategy Options Enable Successful Digital Businesses": Digital business transformation requires leveraging a broad set of sourcing options to enable rapid digital innovation and accelerated legacy modernization. Sourcing and vendor management leaders will learn how to choose from a spectrum of bimodal sourcing options for digital business success.

"Accelerate Digital Service Sourcing With Key Guiding Principles": Acquiring digital services requires sourcing and vendor management leaders to act fast and effectively. This research provides guiding principles and innovative mechanisms to incentivize providers through gain-sharing and outcome-based pricing models.

"Planning an Agile Project": Application leaders should use this research to plan an agile project that maximizes the chances of delivering the intended business outcome on time and on budget. It should be used as part of a strategy to earn enough trust from the business to move to product-oriented development.

"Scrum Is Not Enough: Essential Practices for Agile Success": To arrive at your destination on the agile journey, Scrum is not enough. Application leaders who must deliver digital business solutions, implement DevOps or scale agile will be positioned to succeed when their teams are skilled in agile technical practices and have an agile mindset.

"Implement Agile Database Development to Support Your Continuous Delivery Initiative": Agile and DevOps require application and data developers to adopt iterative and incremental design and implementation processes. To truly achieve continuous delivery, technical professionals focused on agile development must apply these same processes to their application database changes.

"Principles and Practices of DevOps That I&O Leaders Need to Cultivate": Many enterprises are conducting DevOps initiatives; however, they have often embraced the spirit of DevOps somewhat incompletely, which is inhibiting their success. I&O leaders engaged in DevOps initiatives should ensure that their teams adopt its core principles and practices.

"DevOps Is the Bimodal Bridge": I&O leaders looking to support a bimodal IT strategy often struggle with where to start and then scale Mode 2, as well as how to spark innovation for the continual improvement of both modes. When properly pursued, DevOps can enable Mode 2 capabilities, while sharing knowledge and bridging the modes.

"How to Size, Estimate and Track Agile Releases in a Bimodal World": Many firms are struggling with how to size and estimate agile software delivery as they move from early to widespread agile adoption. Agile practices alone do not automatically improve sizing. Application leaders should follow the steps in this research to improve the sizing of their agile releases.

"Enterprises Must Adopt Agile Endpoint Operations to Support the Digital Workplace": Endpoint operating systems and applications are evolving with more rapid and less controllable update models. I&O leaders responsible for endpoint engineering and operations must change their organizational model and processes to support a more dynamic environment.

"Use a Bimodal Operating Model to Deliver Unified Workspaces": Moving to a dynamic, user-centric delivery model requires organizational realignment as well as process and culture change. This research shows how I&O leaders can use bimodal — embracing Mode 2 without neglecting Mode 1 — to evolve their operating model and move to contextual workspaces.

Scaling Bimodal Transforms Architecture

Architecture must be about achieving speed, agility, flexibility and innovation. Without architecture, the applications that emerge may be difficult to operate, integrate, maintain, enhance and reuse. Speed is good, but it needs to be long-term, sustainable speed — not the more tactical speed of any individual project/product team, where there may be little concern about any technical or architectural debt that is created.

When scaling bimodal, architecture must change to incorporate a just-in-time approach that ensures close collaboration between architects and development teams. Trade-offs will be made to increase speed of release, but the ensuing architectural debt must eventually be reduced to ensure that agility continues and is not hampered by the debt load.

Architectural debt is a good proxy measure for the ability to innovate — the more debt you have, the less your ability to innovate. Bimodal architecture practices solve these problems — by consistently and continuously managing the trade-offs of speed versus architectural compliance, the continuous removal of debt in each release, and by closely managing and driving the architecture roadmap going forward.

Related Research

"A Bimodal Approach to Agile Web Application Architecture": User and business demands require technical professionals who architect and develop web apps to deliver innovative solutions while maintaining predictability and consistency. A bimodal strategy with decoupled web clients, APIs and services will balance both by using different rates of delivery.

"Your Cloud Strategy Needs to Be Bimodal": Many organizations are struggling to match service delivery with the insatiable pressure for cloud use. Gartner's bimodal concept enables CIOs to optimize their approach to cloud computing.

"A Primer on Technical Debt": Software systems frequently run at suboptimal efficiency, impeded by the technical debt that inevitably accumulates in large, complex portfolios. Application leaders should use the debt management approaches set out in this research to manage technical debt in applications.

"Improving the Total Experience of Ownership Is Imperative for Software System Design": A software system is an intangible asset with many stakeholders, and one of an application leader's primary duties is to ensure that the ever-changing wants and needs of all those stakeholders are respected throughout the system's life. Measuring and enhancing the total experience of ownership is essential.

"Simplify Bimodal Delivery With Commercial Off-the-Shelf Infrastructure": To stay efficient and competitive in a world where cloud grows more pervasive, I&O leaders must reduce infrastructure complexity and standardize around commercial off-the-shelf infrastructure. This research introduces Gartner's COTS-I Simplification Framework to assist leaders with this challenge.

"Use Bimodal Enterprise Information Management for Data and Analytics Program Innovation": Delivering on new, innovative uses of data and analytics requires new approaches to managing data and analytics programs. Data and analytics leaders must master how to react to these different approaches, how they vary as conditions change, and the associated impact on program management.

"Avoid Chaos in Agile Development by Defining When a Story Is 'Done'": A strong definition of "done" improves quality, tracking and sustainability. Application leaders should work with agile teams to ensure a thorough and consistent understanding of what is needed to complete a story.

"Use EA to Ensure Your Agile Development Succeeds": EA and technology innovation leaders are struggling with their roles in agile development. Does outcome-based EA fit in a bimodal IT world? Is EA still relevant when doing agile development? How do enterprise architects engage Scrum teams? This research discusses how EA supports agile development.

"Core Architecture Principles for Digital Business and the IoT — Part 2: Innovate and Reinvent": Application leaders responsible for architecture are facing increasing demands for innovation. The principles guiding an organization's architecture decisions must support the transformational demands of digital business, and move beyond early incremental modernization.

"In Your Rush for Mode 2, Don't Forget Four Foundational Practices": As CIOs rush to put Mode 2 capabilities in place, they must not overlook key foundational concepts or most gains will be short-lived. This research identifies four practices that CIOs must implement and evolve in order to keep their bimodal momentum going.

An Industry and Supply Chain Perspective

CIOs, supply chain executives and business leaders must work together to break the status quo and inertia in enterprises that inhibit innovation, flexibility and agility. This is particularly the case where a conservative approach has served the organization well in the past, but has resulted in a culture and a set of processes and controls that are blindsiding the need to innovate to be relevant in an increasingly digital world. Bimodal brings with it an approach to organizational change and development, as well as complementary work styles that enable greater innovation and, when done properly, manage the associated risks.

Related Research

"Apply Bimodal and Segmentation Techniques to Improve Supply Chain Performance": Many supply chain leaders confuse bimodal and segmentation when they think Mode 1 represents an efficient but inflexible supply chain, while Mode 2 exemplifies an agile and flexible supply chain. We clarify the difference between the two frameworks and show how bimodal can be applied to segmentation.

"Designing a Bimodal Logistics Strategy: Mastering the Disciplines of the Samurai and Harnessing the Agility of the Ninja": A successful bimodal strategy requires the supply chain leaders and logistics organizations to foster two different mindsets during strategy design and execution — Mode 1 is traditional, while Mode 2 is more exploratory.

"How to Overcome Three Obstacles to Accelerate Innovation in Manufacturing Operations With Bimodal": A bimodal approach to manufacturing operations can enable continuous innovation without bringing operations to a halt. However, supply chain leaders responsible for manufacturing strategy will need to overcome three obstacles to help ensure their bimodal initiative doesn't fail.

"Industrial Analytics Revolutionizes Big Data in the Digital Business": CIOs of asset-intensive companies are finding themselves at the leading edge of industrial analytics, the next wave of business transformation. Use this research to surmount existing challenges of IT/OT data integration and analysis by examining opportunity, business needs and skills availability.

"Best Practices in Automotive Innovation Labs": Automotive manufacturers continuously look to evolve their digital capabilities. CIOs must play a pivotal role in this process and enable digital innovation at product development laboratories.

"Healthcare Provider Analytics Needs a Bimodal Delivery Mindset": Healthcare delivery organizations are venturing into advanced analytics to improve outcomes and lower costs, but are unclear how to set up the right people, processes and technologies. A bimodal approach can help CIOs differentiate standard reporting from advanced analytic capabilities.

"Healthcare Provider CIOs Should Quickly Advance to a Bimodal IT Model": Healthcare provider CIOs are entering a period of rapidly expanding opportunities for IT innovation, but are often buried in the complexities of post-EHR IT operations. The bimodal IT model can help stimulate innovation.

Related Priorities

Table 1. Related Priorities

Priority	Focus
Risk Management Program	Risk management programs mitigate the impact of uncertainty on business performance. Gartner recommends an integrated risk management (IRM) approach to build and sustain successful risk management.
Accelerating Infrastructure Innovation and Agility	This initiative focuses on Mode 2 of bimodal, which drives innovation as the foundational IT platform for digital businesses.
CIO Mastery of Leadership, Culture and People Dynamics	The CIO mastery of leadership, culture and people dynamics initiative unlocks the professional, organizational and performance practices to meet changing business, societal and technology demands.
Application Strategy and Governance	The application strategy and governance initiative encompasses key disciplines and concepts that application leaders must embrace as organizations evolve toward digital business.
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.
Modernizing Application Architecture and Infrastructure	A modernized application architecture and infrastructure increases business agility, improves application usability and resiliency, and enables digital business.

Source: Gartner

Gartner Analysts Supporting This Trend


Donna Scott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Related Resources

Webinars

"Bimodal: Raising Everyone's Game for Digital Business"

"Use Bimodal IT to Deliver the Four Transformations of Digital Business"

Articles

"Scale the Bimodal Business"

"Busting Bimodal Myths"

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Digital Disruption and the New Disruptors: Recognize, Prioritize and Respond — A Gartner Trend Insight Report"

"Scaling Bimodal: Raising Everyone's Game"

"Deliver on the Promise of Bimodal"

"Bimodal in an Agile-Everywhere World"

"Three Steps to Successfully Implementing Bimodal-Aware IT Governance"

"Building a Bimodal PPM Capability Is, First, About Effective Practices and Their Management"

"Bimodal IT Is Essential to Successful Application Rationalization"

"Apply These Best Practices for Application Consolidation"

"Why Developing an Application Strategy Is Hard, and How to Get Past the Excuses"

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

"Where to Start (or Restart) With Service-Oriented Architecture"

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