Deliver on the Promise of Bimodal

Summary

Enterprises must innovate with a range of technologies and transform the business at speed. This special report collects research on developing and scaling an enterprise bimodal capability to enable exploratory, innovative responses.

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Analysis

Digital business is a sharp poke in the ribs for all organizations, demanding a strategic and transformational response. Digital business remains dynamic as business models emerge, technology evolves and markets begin to establish winners and losers. These changes create chaos and uncertainty for those designing and operating the business and striving to balance business stability with imminent innovation. Those responsible for product/service management, supply chain, manufacturing and customer service must prepare to incorporate digital innovations into the way they operate. Marrying a more predictable evolution of products and technologies (Mode 1) with the new and innovative (Mode 2) is the essence of an enterprise bimodal capability (see Figure 1).

- Mode 1 focuses on predictability and has a goal of stability. It is best used where requirements are well-understood in advance, and can be identified by a process of analysis. It includes the necessary investment in renovating and opening up the legacy environment.

- Mode 2 is exploratory. In this case, the requirements are not well-understood in advance. Mode 2 is best-suited for areas where an organization cannot make an accurate, detailed, predefined plan because not enough is known about the area. Mode 2 efforts don't presume to predict the future, but allow the future to reveal itself in small pieces. This work often begins with a hypothesis that is proven, disproven or evolves during a process typically involving short iterations/projects.

Figure 1. The Bimodal Enterprise
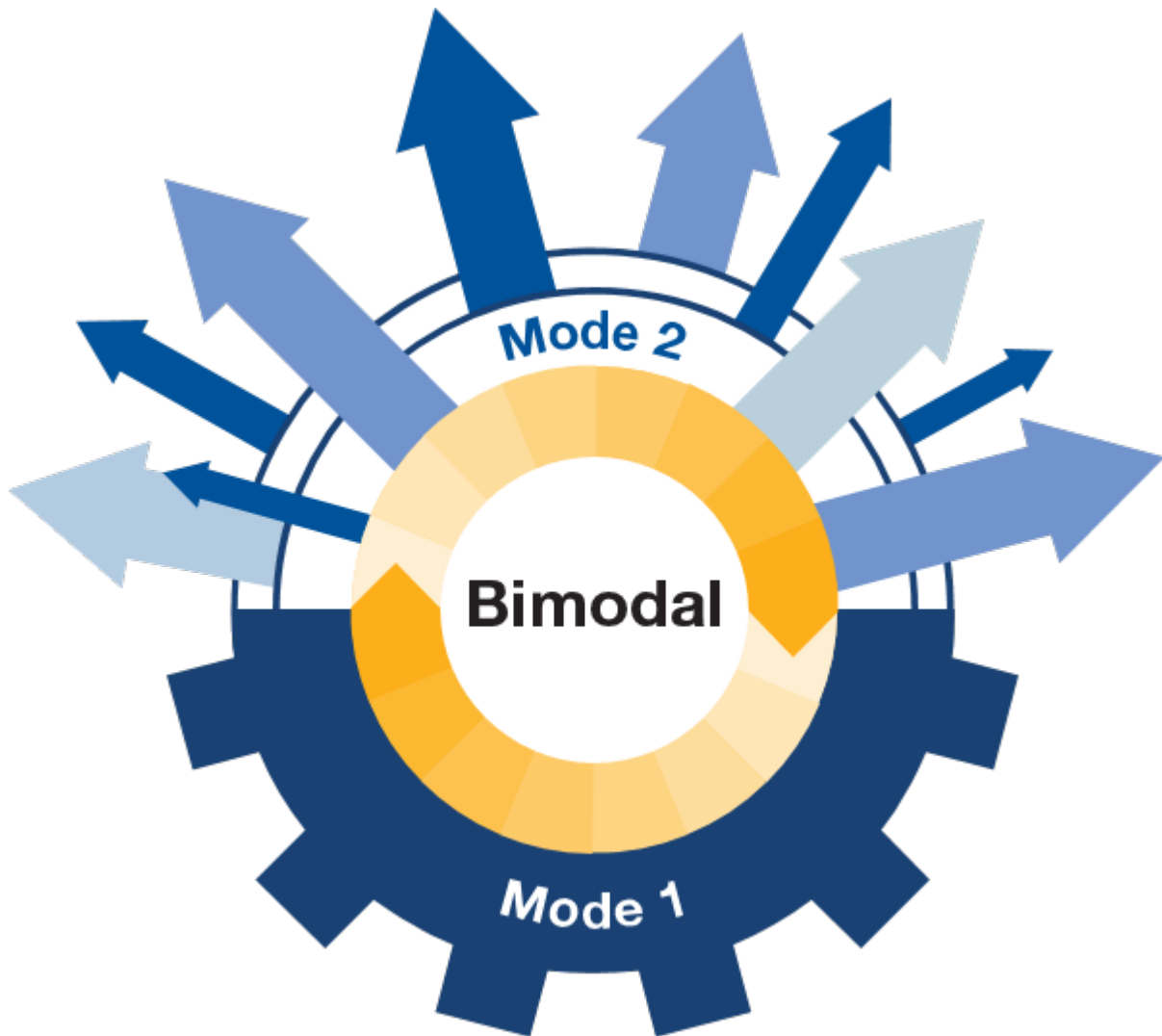
Source: Gartner (February 2016)

Bimodal is a collection of principles, capabilities, methods, behaviors and approaches that enable an organization to differentiate the normal from the abnormal, the evolution from the revolution, the continual improvement from the disruptive innovation — and manage them differently but coherently. It's about the business, not IT, even if in some cases bimodal starts within IT.

A bimodal capability can emerge from any part of the organization, but regardless of where it starts, it eventually affects the whole organization. As bimodal scales, it must be led as an integrated effort. The leadership team in most enterprises wants to identify, understand and explore the most compelling technology-enabled opportunities from mobile through analytics, smart machines to the Internet of Things. This exploration requires a willingness to take on new risks, and manage those risks and associated uncertainties in ways that differ from the traditional approach. The leadership team must invest in a capability that allows it to continue to evolve what it is doing, while innovating new products, services and business models.

The CIO and the IT organization are often at the front of this wave of investment and exploration in technology-enabled business innovation, since technology is part of nearly every growth and innovation-led transformation project underway. They must provide capabilities and services to support this massive change. If they don't or are slow to do so, the business stakeholders will do it anyway. Indeed, the spiraling growth of "shadow IT" being experienced by most enterprises is testament to that. IT organizations must adapt to this reality. They must do it quickly, and bimodal is a significant part of the answer.

Bimodal is not just agile software development. Agile is a great place to start (along with similar iterative methods for software development). It is an essential capability for any bimodal organization. Agile's principles pervade the whole bimodal approach. Organizations will rightly apply agile to Mode 1 initiatives as well. Any organization that suffers project failures that are due to "bad requirements," or where stakeholders don't appear to know what they want, should be considering iterative approaches to developing solutions, whether in Mode 1 or Mode 2. What makes Mode 2 distinctive is its focus on innovating, exploring and managing uncertainties. Bimodal is much more than agile and much more than enterprise agile. It includes a range of capabilities all focused on exploring the future in small chunks and reacting to what is discovered. Capabilities developed in Mode 2 include, but are not limited to, agile, DevOps, adaptive sourcing, lean startup practices, a focus on minimum viable product, employee and team empowerment, differentiated funding, and performance management and customer experience. For leadership teams familiar with lean, bimodal will feel more comfortable, because many of the capabilities and principles that underpin bimodal have their roots there.

Gartner's 2016 special report on bimodal is composed of 75 research notes, and picks up where the last special report left off (see "How to Achieve Enterprise Agility With a Bimodal Capability"), with a focus on scaling the bimodal capability. This follow-on report is intended to be of interest to a wide variety of roles across the enterprise. It aims at enterprises; however, we have included some notes specifically for vendors and service providers. We drill into a wide variety of areas essential to starting, scaling and leading the bimodal transformation:

- Bimodal capabilities, especially those in Mode 2

- Innovation and architecture in a bimodal world

- Bimodal business and governance

- Adaptive sourcing to align sourcing models, providers, relationship and terms and conditions (T&Cs), with the requirements of all IT stakeholders

- People management when you have two styles of work

- Renovating the IT core to make it bimodal-ready

Research Highlights

Invest in the Bimodal Capabilities

Bimodal is underpinned by multiple capabilities, such as agile, DevOps, innovation management, adaptive sourcing, differentiated funding and performance management models. These need linking and coordinating to create an enterprise capability.

Survey Analysis — The Key Capabilities, and What Stops Organizations Moving Forward With Bimodal

"The Most Common Barriers to Adopting Bimodal, and How to Overcome Them"

As part of Gartner's 2016 CIO survey, we asked a series of questions about organizations' use of bimodal. For those organizations currently exploiting bimodal, we asked what roadblocks they faced in growing that capability. The answer, perhaps unsurprisingly, is that culture (both within the business and in IT) is the main hurdle to how far and how fast an organization can exploit bimodal. In addition, a smaller but significant proportion of organizations said they had more urgent or important competing priorities. The constraints of the legacy environment are a significant obstacle for many, emphasizing the importance of investing in renovating the IT core as well as in the Mode 1 capability that is essential to move it and ultimately empower Mode 2. This research note drills into the details, analyses and the numbers, and provides suggestions on overcoming the roadblocks.

"Some CIOs Say Their Enterprise Will Never Become Bimodal — But Should They?"

The 2016 CIO survey further asked those organizations that are not using bimodal and/ or have no intention of using bimodal why. Respondents can be categorized into those that can't and those that won't use bimodal. Those that won't see it as unnecessary, for some because they currently see no demand, while others have mistakenly conflated bimodal and agile, and so because they are 100% agile they consider themselves 100% Mode 2. Those that can't become bimodal are blocked by concerns around being too small, too immature or too risk-averse. This research note explores the details further, clarifies what bimodal is, and proposes actions for moving forward with bimodal.

"The Practices That Deliver the Biggest Bang for Your Bimodal Buck"

The 2016 CIO survey revealed five key bimodal practices, including crowdsourcing and changes to funding models, which deliver the highest improvement in digital performance. Interestingly, these five practices are also the least used. This research delves into each practice, providing an easy, moderate and challenging approach to help CIOs get started with each. While all the practices we asked about have a positive impact, the most adopted, such as agile for software development, had the least impact.

Agile Is a Great Place to Start, but Nowhere Near Enough

"How to Create an Agile Pyramid to Achieve Enterprise Agile Delivery of Business Capabilities"

For those enterprises that are new to agile development methodologies, agile is a great place to start a Mode 2 initiative, and by far the most common place to start a bimodal journey. There are many advantages to starting with agile because it lays down many of the principles that will be applied across the organization, it's a well-established and proven approach, and tactically it helps address many immediate and pressing problems with application backlogs. But it is not enough, and needs to be part of a more strategic change program that takes a system approach. Enterprise agile sets a context in which agile can start to help to deliver on the promise of bimodal.

"Predicts 2016: Application Strategy and Governance"

A bimodal approach demands a recognition that there needs to be a differentiation in the optimization criteria used to shape the organization, its governance mechanisms and its attitude to managing risk. Traditionally, the optimization criteria have been stability and safety. That needs to be complemented by agility and flexibility for Mode 2. None more so than in the application governance mechanisms and the PMO.

"The End of the Waterfall as We Know It"

Throughout this report, we will refer to the need to invest in and develop both the Mode 1 capability and the legacy environment. Failure to do that will limit how quickly and how effectively the organization is able to scale Mode 2. Part of that investment will be changing the methods and capabilities of the Mode 1 organization, in particular the approach to software engineering and application development. CIOs and application development managers should transition their Mode 1 teams from traditional waterfall methods to agile, iterative or incremental delivery methods where possible.

"Apply These Seven Lessons From Agile to Mode 1 Development"

CIOs and application development managers should pilot and evaluate the seven practices described in this research to determine which ones their organization can incorporate into Mode 1 development.

"Five Steps to Increase Development Release Velocity"

The key value proposition of bimodal is innovation and providing a set of tools to better manage uncertainty and the associated risks of an emerging digital world. But it is also about speed, responsiveness and improving the end-to-end flow of activities in order to improve the cycle time from idea to production. As organizations bring new capabilities to bear, such as agile and DevOps, it is inevitable that new bottlenecks will emerge. Applying the Theory of Constraints to the process of developing and deploying solutions can be very effective.

Moving Forward With Bimodal for the Infrastructure and Operations Group
"Survey Analysis: DevOps Adoption Survey Results"

As noted previously, most organizations begin the development of their bimodal capability in the solution development arena, often with the use of agile. But they must

quickly move on to adding the other capabilities that move beyond the realm of development, such as DevOps. Most enterprises reach a scaling problem in bimodal adoption wherein they hit obstacles that prevent them from doing more. DevOps is fundamental to overcoming these obstacles. If the organization wants bimodal and the benefits it offers, it's going to have to bite the bullet on DevOps. DevOps remains a "moving feast" in that the practices are fluid, which is partly why adoption remains below 30%, with an additional 24% of organizations intending to implement it before the end of 2017. This research note details adoption rates and survey results.

"Seven Steps to Start Your DevOps Initiative"

DevOps is controversial because it challenges conventional IT thinking. While frameworks like ITIL add more process rigor while ignoring organizational barriers, DevOps does the opposite. It implies process, but allows each implementation to define and continually adjust to improve the desired outcome. It is this vagueness that has stalled many IT organizations from implementing a DevOps strategy. While there is no specific set of required steps, we consider these seven steps to be critical when starting a DevOps initiative.

"Avoid DevOps Disappointment by Setting Expectations and Taking a Product Approach"

This is a set of important practices that needs to be applied to facilitate the adoption of DevOps.

"You're Not Doing DevOps If You're Not Focused on the Customer Experience"

With a focus on customer experience, DevOps teams have an opportunity to map, measure and more fully understand the business implications of their activities. This research describes some of the key practices that DevOps teams should consider as IT organizations seek to add more delight and value to their customer interactions.

"When Using DevOps Principles, Follow Five Gartner Rules to Minimize Compliance and Audit Findings"

Regulatory issues can be seen as a roadblock to moving forward with bimodal. Infrastructure and operations (I&O) leaders must ensure DevOps teams involve key stakeholders to seek agreement, document and implement management's intent regarding risk-mitigation strategies. This research presents an approach that can mitigate regulatory risks when leveraging DevOps.

"Adapt the IT Service Desk for a Bimodal Environment"

The IT service desk (ITSD) has been integrated into the release cycle and support of Mode 1 initiatives, and ITIL has served the organization well in facilitating this. However, for Mode 2, or even just organizations using agile, that integration and involvement are often not what they could be. The ITSD is a stakeholder of Mode 2 initiatives and needs to be proactive in its engagement with the Mode 2 or product teams.

Innovation and Architecture

Adopt Experimentation, Design Thinking and Iteration as Key Principles of Bimodal

"Give It a Try! Experiment Your Way to Digital Business"

Digital business requires substantial and often disruptive change to an organization's products, services and internal operations. The essence of bimodal is selective experimentation and testing of hypotheses. For many organizations, that requires a change of mindset and an approach to change management that supports the innovation-led approach.

"Design Thinking Can Revolutionize Your Customer Experience Strategies"

A common theme in enterprise IT goals is improving the customer, user and/or employee experience. The major software and IT service providers have been focused on this for some time, and most have adopted Design Thinking to help them do that. It can be applied in both modes and is not unique for Mode 2, but brings particular value to Mode 2, where it is trying to innovate, challenge the status quo and create change. IT leaders and enterprise architects, particularly those leading in Mode 2 initiatives, should understand Design Thinking and be introducing it as part of the overall change of approach and culture.

"Enterprise Architects Combine Design Thinking, Lean Startup and Agile to Drive Digital Innovation"

Iterative, experimental approaches to innovation are needed to guide an organization through the digital revolution. While there are many approaches, Design Thinking (with its focus on the customer), lean startup as an innovation "engine" and agile to develop technology elements work well in combination. The combination of these approaches provides a powerful set of capabilities to help the organization innovate and architect its digital future.

"An Enterprise Architect's Guide to Using Lean Startup to Design Innovative New Offerings"

The business models enabled by innovative technologies are often entirely new. Organizations begin with a set of hypotheses of what is possible, and must experiment with their customers to develop an offering and a repeatable business model. These experiments are iterative, developing insight and refining the offering until it is of value to customers. Many organizations use a lean startup approach for the early phase of identifying and developing new business models.

Put the Vanguard Enterprise Architect at the Center of the Bimodal Program
"Vanguard and Foundational Enterprise Architects Must Collaborate on a Bimodal Technology Architecture"

Enterprise architects must adapt and engage in Mode 2 initiatives. This is very much the domain of vanguard enterprise architects, who are individuals or teams of individuals using enterprise architecture (EA) practices to focus on leading and driving innovation with disruptive technologies and new or reinvigorated business models (Mode 2) to deliver business outcomes. The tension between Mode 1 and Mode 2 is keenly felt by architects. Foundational enterprise architects strive to preserve the reliability and scalability of core technical capabilities, while their vanguard peers seek to exploit disruptive trends — but all architects should use the same business-outcome-driven approach to achieve their objectives.

"Vanguard Enterprise Architects Will Lead Bimodal Model 2 Innovations"

Leaders of enterprise architecture teams should dedicate at least one EA practitioner as a vanguard enterprise architect for critical digital business initiatives that require a Mode 2 innovation mindset.

"Toolkit: Develop a Vanguard Enterprise Architecture Team to Support Digital Business"

Spurred by digital business, leading enterprise architecture teams must develop five new competencies to complement traditional enterprise architecture competencies — and, increasingly, to replace them. Chief architects and CIOs can use this Toolkit to build a "vanguard" EA team focused on digital business.

"Toolkit: How Enterprise Architects Can Conduct Digital Disruption Innovation Workshops for Business and IT Leaders"

Enterprise architects and leaders of Mode 2 teams should be working with those parts of the business that are looking to innovate with digital technologies. Workshops can be a very productive way to initiate such engagement.

Invest in a Formal Approach to Innovation Management
"Seven Best Practices to Create an Innovation Center"

This year's CIO survey highlighted formal innovation management as one of the top five Mode 2 practices correlated with digital performance. Many organizations aiming to grow digital innovation capabilities and impact are creating physical innovation centers. Several key decisions can make or break the success of an innovation center, including location, level of resources and program focus. There are a number of critical success factors for the successful innovation center, not the least of which is identifying clear goals and the types of programs and projects it should focus on.

"Three Questions of Innovation Every Leader Should Ask"

A Mode 2 team needs to tackle three important questions, and the order in which each question is addressed is critical. Mode 2 initiatives are often based on hypotheses that need testing. The first question asks whether a new idea is valuable or not. To answer that, the team should make the idea tangible quickly, as technology innovation is difficult to evaluate properly in conceptual form. The second question is about shaping the idea

into its best form. Notions of minimum viable product and iterative development are paramount here. The third and final question is about scaling the solution. Frequently, organizations fall into the trap of trying to address the last question too early, before the value has really been assessed, which can result in great ideas never seeing the light of day as the organization favors things it knows how to scale or those that would cause relatively low disruption.

"Jump-Start Your Innovation at Lunch"

Innovation is at the heart of Mode 2. But many enterprises don't have the requisite innovation culture that permits experimentation and failure. Big-bang approaches to starting innovation often fail, and innovation can be like a new resolution that gets set aside once reality kicks in. However, getting the innovation muscles working again can be done if you start small by building some rituals and traditions, and then expanding from that base.

"Leading Enterprise Architects Leverage Gartner's Innovation Crowdsourcing Framework"

Organizations that have a well-exercised innovation muscle can look at exploiting one of the most productive approaches to innovation and generating ideas. As noted above in the CIO survey, crowdsourcing is one of the bimodal capabilities that has the greatest impact on enterprise digital performance. But matching the problem to the solution can be challenging. Gartner's innovation crowdsourcing framework can help determine the most appropriate approach.

Making the Enterprise Bimodal — Extending Bimodal Beyond IT

Bimodal Business Functions

"Digital Commerce Is Prime Candidate for Innovation in 2016"

The recent surge in digital commerce and innovation investments evidenced in Gartner's 2015 to 2016 CMO Spending survey means that digital commerce marketers need to think about innovation now in preparation for several years of increasing competitiveness in the digital commerce marketplace. Digital commerce marketers should involve cross-functional teams in periodic visioning and brainstorming sessions to identify innovation opportunities and build an experimentation roadmap aimed at clear business outcomes, which will reinforce and fund ongoing innovation.

"How Government Can Accelerate Mobile App Delivery Using Bimodal IT and RMAD Strategies"

Government CIOs face increasing demands from citizens and employees who want to interact with services and information using mobile-centric channels. Public-sector CIOs need to implement a bimodal IT strategy to achieve mobile app innovation and address mobile app demand by leveraging third-party development services.

"Predicts 2016: Utilities Get Ready to Transform While Performing"

Digital business will have a major impact on the utility sector, not only on the utilities' IT organizations and the application portfolios they manage, but also on the core business processes within the utility industry and the emergence of new ecosystems in the sector. Future utilities will have to be ambidextrous businesses by continuing to provide ubiquitous, reliable and economically priced energy to consumers, while exploring and supporting new energy provisioning models. They will operate under the "transforming while performing" mantra. By 2019, more than 40% of utility CIOs will manage bimodal IT organizations.

"Disrupt or Be Disrupted — Defining the Bimodal Supply Chain"

The world of supply chain today is vastly different to that of just five years ago. Traditional supply chain strategies that focus on incremental change and being risk-averse, and that are measured mostly on cost savings and efficiencies, will no longer win. While the operationally excellent supply chain will not go away and is foundational to any business, new capabilities are being built that embrace speed, risk, innovation and out-of-the-box thinking — like a startup. This bimodal balance is what it takes to successfully deal with oncoming disrupters and reinvent business models.

"Create a Plan to Advance Your Supply Chain Innovation Culture and Processes"

A number of triggers or goals can lead chief supply chain officers (CSCOs) to make the decision that their supply chain organization needs to become more innovative. Examples include the need to support new product or service offerings, recasting supply chain as a more proactive contributor to the business or establishing a culture of innovation within the supply chain organization. A three-step approach can help CSCOs clarify their innovation goals and implement an actionable plan: (1) Determine your innovation goals and targets, (2) develop your innovation plan, and (3) maximize the impact of your supply chain innovation.

"Applying Bimodal Practices to Supply Chain and Operations"

The supply chain and operational processes supporting new business models or offerings need to adapt quickly because the required outcomes are not as clearly understood and defined as offerings associated with established business models. As a result, supply chain and operational functions need to operate in two modes. The first mode, existing business models, must continue operating in an efficient and profitable manner. The second mode, new business models such as a digital business offering, requires fast, flexible and adaptive operational capabilities. Supporting the existing and new business models means being bimodal.

"Toolkit: The Path to Bimodal Supply Chain Leadership"

This Toolkit is designed for chief supply chain officers looking to develop specific leadership competencies — skills, knowledge, behaviors and experiences — in themselves and their direct reports. In many cases, corporate HR provides standard leadership programs and content, but a disconnect occurs when supply chain leaders'

leadership skill sets do not align to their company's supply chain strategy and organizational maturity.

"Beyond Process Standardization: Enabling Just Enough Variation for Business Differentiation"

While it is good to impose some standardization on a chaotic set of operations in which the unfettered variation is counterproductive, going too far in such standardizing means the organization's processes are hard to change and may even be holding the business back from needed variation. Indeed, digital business needs digitalized processes, which go beyond standardization and process automation. But digitalizing those processes using the techniques and capabilities described here is critical to success in an increasingly digital-business-driven marketplace. Intelligent business process management suite (iBPMS) technology enables big change by moving from automating existing routine work to digitalizing nonroutine, increasingly differentiated and innovative work, and will be an increasingly valuable tool for Mode 2 initiatives.

"Maturing Bimodal: Five Best Practices to Ease Transitions Between Mode 2 and Mode 1"

This research shares five best practices to mature bimodal approaches and smooth the transition of business capabilities, products and services between both modes of working to meet the business need at the time. CIOs, business architects and business transformation (BT) leaders can apply and foster these best practices with their business counterparts to better enable bimodal business change and develop a more symbiotic relationship with business operational leaders.

Bimodal Governance

"Consider Fear-, Fact- and Faith-Based Investment Portfolios for Stakeholder Design of Digital Business"

It is time for CIOs to move beyond multiyear cutting and optimization programs that do not shift savings to innovation and transformation. To drive toward digital business and away from IT's organizational legacy of cost center custodian, CIOs must flip to recalibrating and rebalancing portfolios so that interested stakeholders no longer see the IT budget as an opaque black box. The investment categories used by enterprises often hide a confirmation bias toward protecting the current business model. Fear-, fact- and faith-based investment categories better communicate the predictability of outcomes to stakeholders. Fact-based investments are typically Mode 1, faith typically Mode 2. Fear could be either.

"Emerging Mode 2 Practices in Bimodal Governance"

Implementing bimodal IT requires a new set of governance processes for Mode 2 development efforts that, unlike Mode 1, cannot be planned and designed in detail upfront. Mode 2 efforts are exploratory and the detailed requirements, features and architecture only emerge as initial versions of the product or service are released to

customers or end users and their feedback is incorporated rapidly into development. Gartner has been researching the emerging practices of organizations that are scaling agile development. This research presents the early findings and common practices learned from those interviews.

"The Lean PMO at Level 3 Focuses on Efficient IT Quality"

A typical Level 2 PMO that tends to have excessive focus on compliance checklists and have weak approaches to project follow-up will be hopelessly inadequate for an organization operating in a bimodal fashion. Level 3 PMOs generally employ lean principles to support both Mode 1 and Mode 2 IT work, and provide an integrated view of the IT portfolio. In bimodal organizations, PMOs must be much active and engaged. PMOs must assess project value and benefits — not just schedule and budget — during postproject reviews in Mode 1, but continuously in Mode 2.

"Activist PMOs and the Struggle for Lean PPM"

We have observed an increase in more provocative or impolitic PMOs. Like consumer activists leading a boycott, political activists organizing a protest or activist investors forcing a shareholders' vote, these PMO leaders inspire stakeholders and reorganize processes to implement change. They see a need for change in order to respond to major threats or promising opportunities — and they consider the risk of not changing greater than that of disrupting the status quo.

"Application Strategy and Governance Primer for 2016"

Application leaders face disruption of their organizations as they strive to shift to bimodal delivery. A Pace-Layered Application Strategy, cloud deployment and the provision of successful APIs still require strong governance and a clear strategic framework. The formal adoption of a bimodal strategy for business places pressure on application organizations. While some lack maturity and strategy, others have clearly defined, heavily weighted one-size-fits-all processes, which can be just as dangerous. The lack of a formally differentiated bimodal strategy for governance and a clear application strategy leaves many application organizations unable to meet business demands.

Sourcing Teams Must Adapt to Bimodal Operations
Why Sourcing Needs Bimodal Capabilities
"A Practical Guide to Bimodal Adaptive Sourcing Research"

Sourcing organizations must operate in a more strategic and adaptive way as part of this digital transformation. Adaptive sourcing is one of the critical capabilities underpinning bimodal. Sourcing leaders need to be proactive in implementing adaptive sourcing and linking to the other bimodal-related developments going on around the organization. A good place to start to understand adaptive sourcing is to refer to this recent guide.

"Adaptive Sourcing Strategies Are Bimodal by Design to Accelerate Digital Transformation"

CIOs and sourcing executives who have not yet taken the steps to move to bimodal and adaptive sourcing may see their organizations become irrelevant to the business stakeholders, who believe the highest contribution to their organization's digital performance is driven by new sourcing partners, agile methods, innovation management and adaptive sourcing strategies. This research recommends that sourcing executives: (1) Go bimodal and embrace adaptive sourcing strategies, (2) develop a Mode 2 sourcing strategy to disrupt the market before others disrupt the enterprise, and (3) rapidly modernize the Mode 1 production environment.

"Key Impacts to Consider When Building an IoT Service Sourcing Strategy for Digital Business Success"

To ensure the business benefits from the insight of service providers as they identify Internet of Things (IoT) opportunities, sourcing managers must develop an IoT sourcing strategy, and demonstrate their domain expertise through their understanding of IoT market maturity and the ability to differentiate providers' capabilities (hype versus reality). Thus, sourcing managers should be able to address the security and risk concerns in contracts and support the speed and urgency desired by digital business initiatives.

How to Adapt to Bimodal Operations While Integrating External Capabilities
"Three-Step Roadmap to Bimodal Adaptive Sourcing: Leverage Digital Urgency to Be an IT Broker"

More than a third of businesses will change their business model in the short/medium term; even if 70% of them will fail, the remaining 30% will be successful and able to disrupt the industry by applying digital business models. To be one of the 30%, CIOs and sourcing executives must take the following bold actions — whether they feel ready or not: (1) Implement a bimodal approach that addresses rapid ongoing innovation, (2) prepare for big change in the current organization and processes, and (3) create an adaptive sourcing strategy to get the most from the IT services market with both accelerated modernization and rapid innovation strategies.

"How to Contract for Agile Development Services"

Conventional contracts for application services set out an "iron triangle" composed of three elements: the functionality to be delivered, a deadline and a fixed cost. Sourcing managers expect service providers to accept responsibility for delivering all three. They often are concerned that agile will result in this discipline being abandoned. A more flexible contract is needed in which each sprint is viewed as a separate piece of work. The service provider is made accountable for delivering each sprint, but the content of a sprint can be set just before the sprint starts, not at the start of the contract.

"Drive Business Outcomes in Innovation Projects Through Effective Contract Terms"

Leading IT groups are taking a bimodal IT approach to application services as a way to meet increasing business demands for quicker innovative application solutions. Implementing Mode 2 projects requires changes in negotiation, vendor management, relationship management and risk management. Sourcing organizations that can adapt to bimodal delivery are more likely to succeed and deliver the expected innovative business outcomes: (1) Define and document, with business input, expected outcomes and measures of success for innovative sourcing contracts; (2) include key contract terms in an RFP template to evaluate potential providers; and (3) understand, validate and plan for provision of the resources required from the organization.

"Digital Business May Kill Traditional Service Contracts"

This research details an intentionally controversial position Gartner is advancing for the purpose of inspiring sourcing executives to consider the consequences of moving to a digital business world. Most sourcing executives cannot imagine a world where contracts become an afterthought in a provider relationship, and where agreements get signed with a mouse click even for strategic engagements. This research starts from the position that traditional contracting approaches are not compatible with digital businesses.

"Bimodal Vendor Management Reduces Risks and Enables Rapid Digital Business Transformation"

Ubiquitous, easy-to-access technology is causing stakeholders to have a much lower tolerance for lengthy cycle times. Managing these varied vendors and meeting stakeholder demand require an approach that veers away from the traditional best practices that have been followed by vendor management (VM) teams for decades. More flexible, agile VM processes must be developed that deliver targeted results with shorter cycle times, yet still reduce vendor-related risks. Developing an agile VM discipline means understanding the specific business demands for vendor-led digital capabilities, and adopting creative and collaborative processes that foster facilitation, rather than strict control.

"DevOps Applied in Outsourced Environment Delivers Business Agility"

Most use cases for DevOps involve integrating agile IT development and operations teams, but it does not have to be restricted to these cases. DevOps applies to all digital, business, process, application development and infrastructure services. Every service follows a similar process, from requirements to design, to development and operation; thereafter, the cycle restarts through change requests. As such, every service has a development and operational phase. This research describes three major impacts of DevOps on a multisourced IT services environment.

Tools to Help You Acquire Bimodal Sourcing Capabilities
"Toolkit: Rapid Innovation Requires Bimodal IT and Adaptive Sourcing"

This Toolkit can be used by sourcing managers to investigate opportunities and threats associated with digital business transformation, increase internal awareness of what bimodal IT is about and create a draft plan for an innovation proof of concept. As a result of this workshop, sourcing executives can: (1) Increase the business "sense of urgency" for digital opportunities and accelerate their ability to react to business threats, (2) act on defined preparatory steps to create bimodal operations scenarios for digital moments, (3) collaborate with IT managers and technical teams to consider holistic options, and (4) gain experience working in a war/ideation room and facilitating the process that is typical of these exercises.

"Toolkit: How to Make Your Sourcing Team Essential for Rapid Digital-Driven Business Innovation"

This Toolkit aims to provide sourcing executives with a workshop that identifies key business questions and informs senior executives of the negative consequences of disintermediating IT and sourcing as they prepare to look at the impacts or implementation of digital business initiatives within the enterprise. These key questions can then be used to enunciate the potential value and contribution that the IT and sourcing organizations can make toward the business's digital initiatives. Sourcing executives can also use these critically important questions to create a sense of urgency for senior executives, requiring the enterprise to investigate and pilot the use of relevant innovative and disruptive service options, such as digital business transformation or the Internet of Things.

"Toolkit: Your Roadmap to Delivering Bimodal IT and Adaptive Sourcing"

This Toolkit can be used by sourcing managers, CIOs and IT managers to: (1) Plan for practical steps to support rapid digital innovation, implement bimodal IT and realize the full potential of adaptive sourcing; (2) be more relevant by bringing a sense of urgency to evolve their traditional IT sourcing capabilities into Mode 1 adaptive sourcing capabilities; and (3) complete the bimodal strategy and be the IT broker to deliver outcomes.

"Toolkit: Evaluate and Develop Critical Competencies to Ensure Bimodal IT and Digital Business Success"

Each sourcing role in the organization will require both multisourcing competencies and bimodal IT competencies; however, the proficiency levels may be different, depending on the job definition. This Toolkit can be used by sourcing executives to assess individuals against the required competencies and identify opportunities for development. They can use the gap analysis to recommend training for individuals and/or group training to improve the team's capability to meet both Mode 1 and Mode 2 demands effectively.

Technology Vendors and Service Providers Must Transform to Reflect the Changing Needs in the Market

"Technology Service Providers Must Implement a Bimodal Roadmap or Risk Irrelevance and Decline"

As digital business transforms buying behaviors, clients are quickly adopting bimodal strategies but doubt that providers can rapidly adapt to their evolving needs. Service provider executives and strategists must execute a bimodal roadmap to exploit this unprecedented differentiation opportunity: (1) Align with buyers' dual mandate for rapid business-led innovation and predictable, efficient IT; (2) take bold steps to build a bimodal organization; and (3) guide product and sales enablement leaders and account managers to make bimodal practical, and incentivize these goals.

"Vendors Must Become Bimodal to Survive the Flip to Digital Business"

This research explains the flip to digital business and the key areas that are affected. Although many end users can afford to develop their initiatives through a steady process, the vendor community must react quickly. However, these vendors often are not ready for the more subtle changes of the flip, such as changing sales models, shrinking margins and smaller deal sizes. They face an innovator's dilemma. To help with this, they need a model for viewing digital business opportunities.

Build the Talent and Cultural Norms
"Leading From the Heart: Mode 2 and the Art of Leading Self-Organizing Teams"

As we mentioned earlier in the report, what you are optimizing for has a significant impact on the leadership, organization, governance and approach to risk management. Conventional organizations optimize around control in a predictable environment, where reliability and delivering what you said you were going to deliver on time, on budget (more or less) are key. In the more uncertain Mode 2 world, you must optimize for creativity, agility and cycle time. Unsurprisingly, conventional management approaches and hierarchical structures don't work for Mode 2, as they are too rigid, too slow and stifle innovation. Mode 2 requires an organization consisting of self-organizing teams that nurture and develop responsiveness and creativity. There are eight attributes of self-organizing teams that should be used for designing, developing and leading them.

"Hit the Bimodal IT Highway Now — Considerations for Structuring and Staffing"

As well as leading and managing teams differently, the two modes each require different mindsets and put emphasis in different places in terms of competencies, behaviors and skills. This in turn has consequences in terms of the organization's structures.

"Build Clusters to Deliver Talent for a Bimodal World"

A significant challenge with bimodal is acquiring and developing the right talent, with a need to acquire and focus talent in much more precise and powerful ways. There is a radical alternative to developing the necessary talent called clusters. The cluster approach centers around treating well-designed, balanced, self-managed teams of five to eight people as the atomic units of talent and capability in the organization. The

organization stops trying to manage and lead individuals, and starts managing clusters, devolving the responsibility for managing the individuals and the work to each cluster.

"CIOs Must Partner With HR to Revitalize Compensation Practices to Compete for Digital Talent"

Compensation is a key element of a competitive employment value proposition for attracting and retaining talent. CIOs must partner with HR to evaluate the effectiveness of IT compensation strategy and practices to ensure they support talent needs of digital business. IT and digital teams need to move from a "paying the job" to "paying the person" principle to differentiate pay for top performers and high-potential talent critical to the digital business transformation.

"Use Crowdsourcing as a Force Multiplier in Application Development"

We've mentioned crowdsourcing several times in the report, not least because it can be used to generate ideas, but it can also be employed to resource development capability. When applied to application development, crowdsourcing includes the processes for sourcing the development of custom software through a broad, distributed set of community contributors using the Web and social collaboration techniques. Effectively, it allows application architects to apply the cloud operating model (scalable and elastic, shared, service-based, metered and delivered using Internet technologies) to the development and delivery of custom software. Application architects should consider this model when projects dictate short time to value and require leading-edge technical skills.

"Extend IT's Reach With Citizen Developers"

It is essential not to confuse or conflate Mode 2 with shadow IT, or to consider shadow IT a viable approach to Mode 2. The word "shadow" suggests something that is hidden, maybe something nefarious, and certainly in the minds of most IT professions something with a high risk. Bimodal requires an open collaborative style, and transparency between the modes — and shadow IT never includes those qualities. However, citizen development is something different. Citizen developers are end users who create new business applications for consumption by themselves and potentially others, using development and runtime environments sanctioned, or at least not actively forbidden, by corporate IT (see "Citizen Development Is Fundamental to the Digital Workplace"). Citizen development overcomes the challenge of ungoverned shadow IT by providing for centralized "just enough" governance on the part of the IT organization while enabling technically savvy business users to be more effective business contributors through their IT skills. In time, citizen developers will account for a substantial amount of business solutions. This fact has profound implications on the future of IT work. Citizen developers are a very valuable resource to exploit for Mode 2 initiatives.

Case Studies in Driving Cultural Change

As noted at the start of this special report, culture is the biggest roadblock to organizations being able to develop and scale a bimodal approach. Here we feature two case studies of organizations that are implementing bimodal, which highlight some valuable lessons for everyone.

"University of Oklahoma Implements Bimodal IT With a Comprehensive Approach to the Cultural Change and People Implications"

The University of Oklahoma case study provides some great insight into the people and organization side of implementing bimodal.

"Lantmäteriet CIO Leverages Underground Agile Activities for Driving Bimodal IT"

Lantmäteriet is the Swedish mapping, cadastral and land registration authority. It began its bimodal journey with agile and cultural change across the organization.

Renovate the IT Core to Enable the Scaling of Bimodal
"Modernizing Application Architecture and Infrastructure Primer for 2016"

Initial efforts in a bimodal transformation are frequently focused on forging a Mode 2 identity in a Mode 1-dominated organization. Usually great things can be achieved quite quickly. But all too soon, the legacy environment starts to massively constrain the burgeoning demands being created by the success of the Mode 2 initiatives. There is no magic fairy dust in bimodal, the legacy environment needs renovating and there are some hard decisions that need to be made to make renovation a reality and to enable bimodal to deliver on its promise. When it comes to scaling bimodal, the limiting factor will be the speed at which the enterprise can pursue that renovation. Central to that renovation is rationalization and modernization of the applications, application architectures and supporting infrastructure, and opening the legacy application environment up with an integration strategy, service-oriented architecture (SOA) and APIs. This is why Mode 1 is not business as usual; neither is it in any way static or somehow an uninteresting dead end from a career or development perspective.

"Applications Have Changed; Why Does That Matter?"

While the complexity of application requirements and resulting application architecture has risen to dizzying heights, the functional footprints of traditionally designed and developed applications have expanded exponentially. The circumstances that we find ourselves in today encourage us to look for new paradigms for understanding modern applications and their design and development. Each of these new paradigms directs us to shift our approach to better deliver the capabilities that users and line-of-business managers require.

"The 12 Principles of Application Architecture for Digital Business and IoT"

Digital business demands a leap to a new level of excellence and competency in architecture that cannot be left to the unguided imagination of individual developers. IT leaders must provide the guiding vision, and establish and socialize some fundamental

architecture and process principles to facilitate consistently excellent application design. This research describes these foundational principles.

"CIO Call to Action: Shake Up Your Integration Strategy to Enable Digital Transformation"

Reshaping your integration strategy toward a bimodal and self-service "pervasive integration" approach is required to achieve sustainable advantage in the frantically evolving and increasingly digital business world.

"Bimodal for Applications Hinges on APIs"

An API program is essential to successfully renovating the core and scaling Mode 2. APIs are the hinges around which Mode 1 and Mode 2 are connecting, and the doors Mode 2 applications use to access Mode 1.

"How to Make APIs a CEO and Board Priority"

It is very important that the senior executive team understands the need for the renovation and an API strategy as an enabler of the much desired digital transformation and Mode 2 capability.

"Resolving Data Center and AD Conflicts During IT Modernization Initiatives"

Renovating and modernizing require close collaboration between the I&O and the application development teams. It is important for those overseeing the renovation to understand the complexity of the legacy application installed base on the existing infrastructure and the impact of changing to a new infrastructure. Be aware that the skills necessary to run a modern infrastructure with a high quality of service require an investment in training and new, operations-centric software, while retaining the embedded skills of legacy architectures.

"Set the Stage for Successful DevOps With Combined IaaS and PaaS for Continuous Delivery"

Many private cloud deployments are failing to achieve the benefits that enterprises had hoped for, in part because requirements have shifted beyond only provisioning infrastructure to agile and DevOps requirements. I&O teams are also building fragile infrastructure by ad hoc piecing together of multiple provisioning tools, elongating the provisioning process. CIOs and I&O leaders must engage their development community and identify the services the development teams need when the I&O team commences a private IaaS deployment. Cloud deployment must be linked with the DevOps initiative.

"What ERP Leaders Must Do to Succeed With Mode 2"

Organizations are adopting bimodal approaches that include ERP solutions, and are experiencing unanticipated challenges and opportunities. ERP leaders must leverage their own and others' bimodal experiences and follow best practices to succeed with Mode 2 in the ERP domain. They need to identify when Mode 2 is suitable for ERP

initiatives and when it's not — and not get trapped into old thinking or forced into misapplying new thinking.

"How to Develop a Postmodern ERP Strategy"

As enterprises adopt a postmodern ERP approach, complexity is added in some areas (such as integration), which raises the imperative for organizations to develop and maintain a robust ERP strategy that clarifies the business's need, sets out ERP life cycle control mechanisms, outlines the IT supply services, highlights success and risk factors, and provides a course of recommended actions based on the information gathered and the decisions made.

"Use Application Rationalization to Get Out of an Application Hole"

Business stakeholders and executive teams are getting very interested in innovating with technology. They get very excited when they see a Mode 2 capability in action and begin to understand the potential. While any of us might to wish to start afresh with our application portfolios, that's not a reality. However, application leaders should leverage the interest and excitement to garner support for investing appropriately in renovating and modernizing the application portfolio and associated management practices. It is important to stop the rot and not go round the same loop all over again.

"Focus on Application Agility to Deliver Change With Velocity"

Most demand for application capability involves changing many existing applications as well as adding new code. To reduce the cost and time to change their application portfolios and enable the scaling of the Mode 2 capability, CIOs and application leaders need a strategy to improve application agility, which means CIOs must focus on improving underlying agility rather than simply concentrating on the speed of delivery and reducing application complexity.

"Modernization Roadmap for IT Run Environment Is Critical to Digital Success"

IT and sourcing leaders need to collaborate to ensure development of a modernization roadmap for the IT run environment to enable value delivery from the digital initiatives. CIOs should create a cross-functional modernization team with clear objectives and outcomes. This will deliver a modernization roadmap for the production environment to meet the digital needs of the enterprise. This research note covers cross-functional team accountabilities and the initiative prioritization framework required to develop a modernization roadmap, as well as the importance of linking with the business innovation teams. This ensures that the modernization roadmap execution priorities are aligned to enable the new digitized business processes.

This special report on bimodal includes a wealth of information on how bimodal scales to other areas of the enterprise and IT, including how bimodal affects sourcing, operations, innovation management, enterprise architecture, development, the wider enterprise, governance, the PMO and other areas. In combination with the first bimodal

special report, it arms you with what you need to start and then scale a bimodal initiative.

Gartner Recommended Reading

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

"2015 CEO Survey: Committing to Digital"

"2015 CEO Survey: Bimodal Balance Is Required for the Future of Supply Chain"

"Building the Digital Platform: The 2016 CIO Agenda"

"Driving Your Disruptive Innovations With Our Maverick* Wisdom"

"Embed Digital Business Into the Fabric of Your Organization"

"Entering the Smart-Machine Age"

"Gartner's IT Market Clocks for 2015: Adopting a Bimodal IT Strategy to Pursue Digital Business Opportunities"

"Focus on Startups and Small Vendors as Drivers for IoT Innovation"

"Best Practices for Implementing Enterprise Agile Principles"

"Modernizing Integration Strategies and Infrastructure Primer for 2016"

"Adopt an Adaptive Approach to Effectively Support Rapid Integration Requirements"

"Integration Competency Centers Need to Define Integration Implementation Services"

"Five Steps Toward More Effective Integration Delivery"

"Transforming ERP to Postmodern ERP Primer for 2016"

"Renovate the IT Core: Laying the Foundation for Digital Business"

"How to Modernize Your Application Portfolio"

"Use Metrics to Drive Your Agile, DevOps and Continuous Delivery Initiatives"

"Market Trends: DevOps — Not a Market, but a Tool-Centric Philosophy That Supports a Continuous Delivery Value Chain"

"Best Practices to Sync and Streamline DevOps Cycles for Faster IT Service Delivery"

"Leverage the Cynefin Framework to Improve IT Operations Decision Making"

"PPM in a Complex World: Identifying Complexity"