Drive Digital Business Using Insights From Symposium's Analyst Keynote

Published: 21 November 2014

Analyst(s): David A. Willis, Peter Sondergaard, Richard Hunter, Daryl C. Plummer, Kurt Potter, Frank Buytendijk, Paul E. Proctor, Brian Prentice, Jenny Sussin

CIOs must develop bimodal capabilities to deal with the permanent, structural changes brought about by digital business. Highlights from Gartner's 2014 Symposium Keynote show how IT leaders can use this approach to drive digital business in their enterprises.

Key Findings

- Digital business is blending the virtual and physical worlds, and is changing how processes and industries work through the Nexus of Forces and the Internet of Things.

- Digital activities permeate, and in some cases even dominate, our lives. Humans are becoming "digital first."

- The CIO has an opportunity to adopt a leadership role in driving digital business within the organization.

Recommendations

- Renew and strengthen your rock-solid and operationally excellent IT organization, while embracing digital business by acting like a digital startup and partnering with the startups that already exist within individual business units.

- Build a bimodal IT organization that operates in rock-solid and fluid modes.

- Implement a balanced approach that integrates digital humanism and thinks in terms of behaviors, emotions and interactions, not just traditional processes that are often driven by digital machinism.

Table of Contents

List of Figures

Strategic Planning Assumptions

By 2017, 50% of total IT spending will be spent outside of the formal IT organization.

By 2018, enterprises will own only half of the world's server computing capacity.

By 2017, the cost for service providers to deliver infrastructure will drop by almost 40%.

By 2018, at least one smart machine developer will have settled a liability suit because its product made a negligent or criminal decision.

Analysis

CIOs need to develop bimodal capabilities to drive digital business in their organizations. This was the main message of the 2014 Gartner Symposium/ITxpo opening keynote, which focused on helping CIOs and IT leaders with this approach to digital business. Gartner held its flagship event in Orlando, Florida; Barcelona, Spain; Sao Paulo, Brazil; Gold Coast, Australia; Cape Town, South Africa; Goa, India; and Tokyo, Japan.

In recent years, seismic and permanent structural changes have begun to affect the way we conduct business. The Nexus of Forces, combining cloud, mobile, social, and information, changed the technology market. Innovation coming from these forces has often been consumer-driven, and has not only given rise to the digital business, but has also affected consumer behavior. Consumers

and employees are becoming "digital first." For people who own multiple devices, the entire day is spent feeding and being fed by the digital world.

As a result, business are creating new designs, blending the virtual and physical world, and fundamentally changing how processes and industries work and thrive. These changes in business and human behavior are creating great uncertainty and unprecedented opportunities.

To deal with this shifting landscape, CIOs must adopt bimodal capabilities. They must maintain the rock-solid foundation of their IT organization, while developing a more fluid approach that enables them to deal with the flow of digital business.

A digital business isn't always linear or predictable. Embracing a fluid approach to IT will require IT leaders to balance their impulse to plan and control with the reality that consumers will use information and technology for whatever purpose best suits them. To drive the digital business, IT leaders need to rethink the makeup of their organization from being strictly digitally machinist, to taking a more digitally humanist approach.

This research provides insight and guidance on how CIOs can take a leadership role in driving digital business within their organizations by:

- Maintaining rock-solid IT while building a new, more fluid digital business

- Building a bimodal IT organization

- Balancing digital machinism and digital humanism

Maintain Rock-Solid IT While Building a New, More Fluid Digital Business

Digital business refers to the emerging trend of organizations creating new business designs by blurring the physical and digital worlds (see Figure 1). Digital business is creating a lot of buzz and excitement. However, IT leaders live in a pragmatic world with practical things. The utility industry can't afford the power to go out. People depend on insurance companies to handle their claims diligently. In government, the aid to families with dependent children needs to go to the right place.

All these things rely on rock-solid IT to perform reliably and effectively. And despite technology hype, organizations can't afford to throw away everything that IT has built and start from scratch just to embrace digital business. But that does not change the reality that digital business is here.

Consider the Scandinavian Saxo Bank as an example for digital innovation. Saxo Bank has shown the value of capitalizing on business moments by reinventing the relationship between its customers and its experts. A traditional wealth services firm relies on small teams of experts to guide customers to the best investments for them, but some individual customers far outperform others, even beating the best professional experts in their investment choices.

Saxo Bank has turned the expertise of the best performing customers into guidance for others. The crowd of "digital first" customers is leading their in-house experts with real-time guidance. The value of a future bank will not be measured by how many experts it has, but by how many successful customers it has in its network.

In fact, the digital shift threatens many existing businesses. Mature industries, such as the media, traditional phone and music industries, are already facing a flattening or slow decline in revenue — a decline that disruptive, digital competitors may accelerate.

Figure 1. Digital Business

Source: Gartner (November 2014)

Traditional leaders may resist the move to digital business, especially when digital models have lower margins and require a major startup investment. The dilemma lies between the top-line erosion of high-margin business and a leaner, growing digital business with less profit, and that survives.

Digital business is also changing the composition of the board of directors, with nearly half actively recruiting digital talent to put on their boards. However, this does not necessarily mean that all CEOs are looking to CIOs as digital business leaders. In fact, half of CIOs think they are leading the digital charge in their organizations, but only 15% of CEOs agree.

Despite not automatically being recognized as the digital leader, the CIO has an opportunity to take advantage of the shifting perspective of senior executives by adopting a leadership role in driving digital business within the organization. However, the challenge remains: how to deal with the need for rock-solid IT alongside the fluidity that digital business requires. Of course, the CIO first must take care of the rock-solid side first. Digital business cannot exist without that IT foundation. IT also provides a platform for the CIO to thrive in the new digital environment.

But the CIO can also create more fluid capabilities by supporting business moments. Business moments occur when businesses, people and things intersect in the digital world, revealing transitory business opportunities that are available, in near real time. From a business perspective, these moments take place in customer interactions and in operations — all the more reason for the CIO to partner with the COO.

In fact, it's quite likely that various business units have already begun adopting the digital startup mindset.

To develop the fluid side of their personality, CIOs must think like a digital startup by focusing on three key areas:

- Every business unit is a technology startup

- Invest like a digital startup

- Get the right people on board

Every Business Unit Is a Technology Startup

A shift is occurring in how businesses distribute power. Many business units within the organization are already acting like technology startups. IT must embrace that same kind of thinking, next to being rock-solid. To lead the transition to digital business, IT leaders must partner with the digital startups inside their own organizations. The new digital startups sit inside marketing, HR, logistics, sales, finance or any other business function. Control is shifting away from the formal IT organization and toward business units that are closer to the customer.

Thirty-eight percent of total IT spending is outside of the formal IT organization already, with a disproportionate amount in digital. By 2017, this number will grow to more than 50%. Also, 50% of all technology salespeople are actively selling direct to business units, not just to IT. Salespeople understand that budgets in the formal IT organization are only going to grow by a meager 1%, on average.

CIOs must recognize that many business units are acting as technology startups, and learn how to invest and collaborate differently as a result.

Invest Like a Digital Startup

IT budgets are also changing, with the migration from capital expenditure to operational expenditure and from centralized to dispersed spending. A closer look at the typical IT organization's budget and how it differs from that of the digital startup shows the depth of these changes (see Figure 2).

The major categories for most IT budgets are services, software, hardware and people.

- Services, in the broadest sense, is already a $1 trillion market. Traditional IT services contracts tend to be long term. But that is changing as a result of the digital shift. Even large traditional IT organizations are changing their approach to sourcing because of the cloud-driven marketplace.

- Software is seeing a similar shift. Traditional IT software deals can run for decades. On average, it takes 10 years to fully roll out an ERP system. Over that period, maintenance payments are likely to be twice the cost of the initial purchase. Changes in functionality mean another 40% expense increase. This is not the model for a fast-moving organization.

- Traditional IT hardware replacement cycles are way too long for the cloud era. Large IT organizations may be putting off their next data center modernization effort, but the new data centers they are building use a different approach at a massive Web scale.

- Data center builders are either purchasing white-label componentry and building their own infrastructure from scratch, or purchasing integrated systems as a prepackaged bundle. And some are migrating to the cloud. By 2018, Gartner predicts that businesses will own only half of the world's server computing capacity.

Finally, there are shifts in personnel. People make up a huge cost in the traditional IT organization, supporting older legacy systems, and others handling infrastructure and operations.

Figure 2. Budget Allocations

Budget Allocation
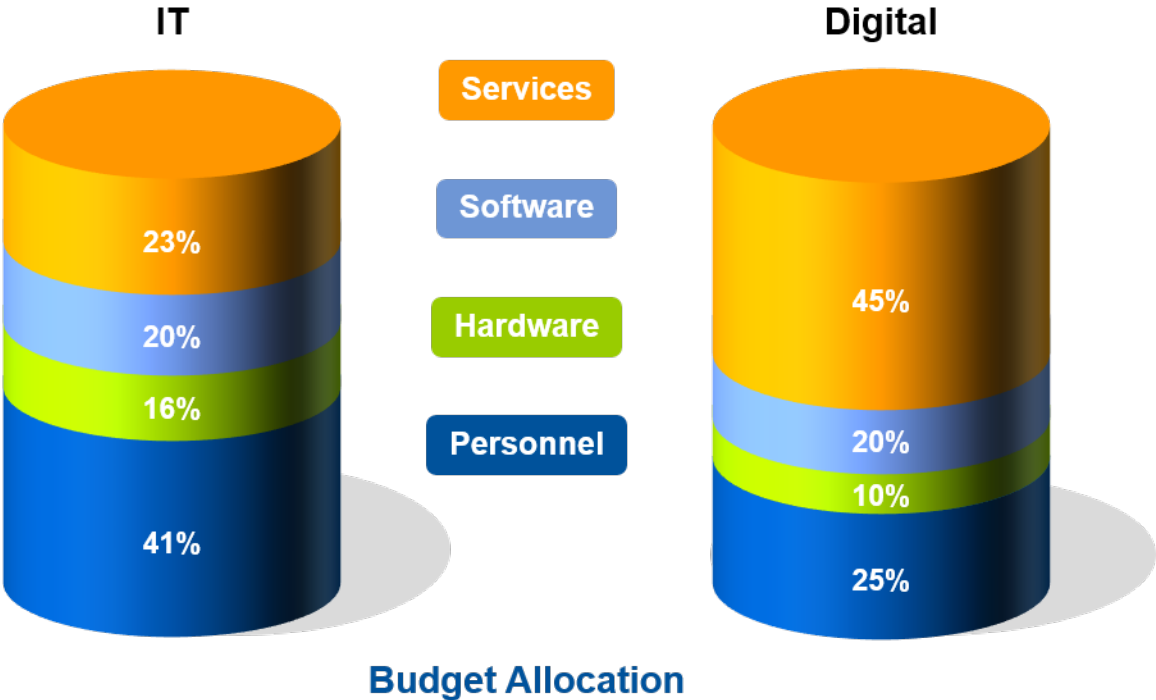
Note: Gartner IT Key Metrics Data 2014

Source: Gartner (November 2014)

Digital startups, however, look at IT budgets in a very different way. The startup investment profile begins with external services. Digital startups would rather rent than own. Whether it is infrastructure or expertise, they see little need to own anything that doesn't differentiate them.

The cost for service providers to deliver infrastructure will plunge almost 40% by 2017. Competition will drive pricing down on a similar curve, just at a slower rate. It's a great time to be a buyer in the cloud and digital startups know that.

Digital startups also take advantage of new approaches to infrastructure, owning much less hardware.

Much of what they do in software is being absorbed into the cloud. As a result, CRM deployments will be half in the cloud by 2016 and ERP will follow. Adoption of software as a service will keep accelerating through the end of the decade, while on-premises licensed software will decline.

Get the Right People on Board

Lastly, digital startups look at people very differently. They run lean, often employing one-fourth of what is required by traditional IT departments that support organizations of similar size.

Startups have a much smaller head count because they manage a portfolio of suppliers with short-term contracts. They emphasize information by focusing on getting the best data scientists at a much higher percentage than the traditional IT organization. They hire people to manage digital products, and take new approaches to coding. They take a controlled, integrative approach to software and infrastructure using DevOps principles.

Digital startups also worry about the customer experience because they know the "digital first" customer is only a moment away from choosing the competition.

IT leaders need to learn from this digital-startup mindset to create the new digital organization by focusing on new talent needs. Right now, the hottest skills are mobile, user experience, and data sciences. Three years from now, IT will need skills for Smart Machines, including the Internet of Things, robotics, and automated judgment and ethics. Over the next seven years, the surge of jobs will include integration specialists, digital business architects, regulatory analysts, and risk professionals.

CIOs should build a talent plan for the digital organization of 2020 — not just for the Digital Technology organization, but for the whole enterprise. Talent management and development is the key to digital leadership. Instead of trying to instantly transform the traditional IT organization, incubate a digital startup.

Focus on talent and organizational strategy. The new digital startups in these business units are thirsting for data analysts, software developers and cloud vendor management staff, often hiring them faster than IT is. They may be experimenting with smart machines, seeking the technology expertise the formal IT organization probably doesn't have.

Build a Bimodal IT Organization

Clearly, if digital business requires CIOs to develop bimodal capabilities, then they must rethink their approach to their own IT organization. CIOs can make this shift by building bimodal IT capabilities. IT leaders must recognize two modes of operations, while embracing the inherent risks.

Bimodal IT fills the digital divide between what the formal IT organization provides and what the enterprise needs right now (see Figure 3). Mode one is traditional. These systems are reliable, predictable and safe, like a great IT organization. Some IT leaders have spent a career building safe, scalable, accurate systems that provide operational excellence, but that on its own will no longer be sufficient to justify a place in the senior executive team.

Mode two is nonsequential, emphasizing agility and speed. Mode two is like a startup — more fluid than solid. Business moments are those moments when you can leverage digitalized processes to create new opportunities. A more fluid form of IT that is flexible and ready for anything supports those moments. Changing economics allow business moments to be operationalized everywhere.

Fluid business moments are all around us. Facebook invested in fluidity when it acquired WhatsApp for $19 billion. WhatsApp is essentially a communications network that has operationalized the ability for users to act in their own best interests by defining who is included in their network, and when and how they will communicate. Fluidity is a fundamental quality of digital business because it operationalizes business moments.

Both of these modes are necessary. IT leaders must nurture these bimodal capabilities — part rock-solid and part fluid.

Figure 3. Bimodal IT

		Mode 1	Mode 2
Think marathon runner	Goal	Reliability	Agility
	Value	Price for performance	Revenue, brand, customer experience
	Approach	Waterfall, V-model, "high-ceremony IID"	Agile, Kanban, "low-ceremony IID"
	Governance	Plan-driven, approval-based	Empirical, continuous, process-based
	Sourcing	Enterprise suppliers, long-term deals	Small, new vendors; short-term deals
	Talent	Good for conventional processes and projects	Good for new and uncertain projects
	Culture	IT-centric, removed from customer	Business-centric, close to customer
	Cycle times	Long (months)	Short (days, weeks)

(Note: "Think sprinter" label appears on right side of table)

Source: Gartner (November 2014)

Consider Luxottica, an eyewear company in Italy, as a great example of how to develop a fluid mode of operation. The company had a seven-year-old B2B portal, but the business wanted to

make the wholesale customer experience resemble what a consumer might have on eBay or Amazon. The idea was, "Get everything you need from Luxottica — products and services — integrated on a single portal."

Group CIO Dario Scagliotti created a MyLuxottica.com project, staffing it with a small team of experienced people, some with technical competencies. A nonexecutive led the team, reporting directly to Scagliotti. A huge success, the project resulted in 77,000 retailers using the portal on a daily basis — the only project mentioned in a recent Luxottica Group investor presentation.

Scagliotti agrees that CIOs and other technology and innovation leaders must have a split personality: a rigorous, detail-focused half and a creative, unstructured and curious half. "The second half of the personality is about adapting" (see "Creating a Bimodal Personality at Luxottica").

Or look at Mass Transit Railway (MTR), Hong Kong's rapid transit railway system. MTR illustrates the value of operating with two modes, and both modes are necessary. The first mode makes sure the trains keep running on time. The systems that support the MTR must be reliable, predictable and safe. Essentially, this is the MTR's rock-solid mode.

MTR's second mode helps interactions with passengers, especially in times of emergency such as weather alerts. When a typhoon hits, the crowd of people in a packed train station need to understand the fastest and safest way for everyone to get out of harm's way. In this mode, MTR is managing a flow of people, a flow of information and a flow of events. Mode two is more fluid than solid (see "MTR Corporation's Bimodal IT Team Operates on Two Tracks").

Partner with the COO to enhance business operations, because it's in operations where business moments get operationalized. The CIO can contribute from a work-style perspective. Many CIOs are familiar with DevOps. A DevOps capability enables the business to experiment faster and "fail faster" to deliver the right innovations in the right time, to be agile in facing change without being fragile, to iterate on process changes by taking continuous feedback from customers and employees, and to solve the problem of continuous business transformation. The economics of DevOps will be the economics of your digital business success.

Embrace Risk

Bimodal IT also helps with better risk management. Eighty-nine percent of CIOs agree the digital world is creating new types and levels of risk.

In digital business, you must change your relationship with risk. Digital risk is not always bad, and it is not something to mitigate. Accepting risk is OK, while ignoring risk is tragic. Even more, embrace risk. Focus so you can see what risks are worth taking and which ones are not. Seek out the risk that fits you best. View risk as a conscious leadership decision. Treat your ability to manage specific risks as a competency and capability. Use the more fluid mode of bimodal IT to take on the preferred risks. Mode 2 allows a "fail fast" attitude.

Balance Digital Machinism and Digital Humanism

Another way of defining the CIO's bimodal capabilities is through the differing philosophies of digital machinism and digital humanism.

Many CIOs naturally adopt the behavior of a digital machinist. Machinists see automation of tasks as the biggest virtue of technology. IT helps to remove mundane, repetitive and inefficient tasks. In the process, people are often ruled out because their behaviors are hard to capture in business rules. The digital machinist thinks in terms of functional requirements, analyzing and acting on data, creating control, and reducing complexity by establishing order.

However, ultimately, business moments are human moments. Digital activities permeate and in some cases even dominate our lives.

As a result, the philosophy of digital humanism has the same focus on business, but it subscribes to a different approach. Humanists believe that technology is there to put people at the center, enabling what they want or even what they don't know is possible. The virtue of technology comes from being able to help people realize their ambitions.

The digital humanist thinks in terms of behaviors, emotions and interactions, not traditional processes. Instead of seeking control, the humanist seeks to participate, understand and provide freedom.

Imagine a car crash. Digital machinists will have all kinds of opportunities to automate the response. The police and insurance can be notified immediately. City services can be alerted of a traffic problem and a needed cleanup. A machine can immediately inform the loved ones of the drivers.

The digital humanist, however, looks at the crash site very differently. The humanist system might first determine whether the people are conscious. The system will seek out health indicators and share them with emergency responders. Aware that the drivers might be embarrassed by what turned out to be a fender bender, the humanist system would ask them who to notify first and how. Technologies built by digital humanists act on the customers' needs, understand what they want and ask for their preferences.

The car crash example illustrates the disconnect that exists between what businesses *can do* with the available information, and what they *should do*.

When you get it right, the machinist part of the equation blends in while the humanist part stands out. In the end, digital business is about mass personalization, which requires massive amounts of technology. This creates the paradox — digital business needs a thorough machinist infrastructure, but what makes the difference is the human approach.

CIOs must look to shift the needle between the two philosophies, and find the balance between digital machinism and digital humanism. Machinism has help them construct the foundation on which IT is built. But CIOs must also incorporate the principles of digital humanism to create an IT organization that is prepared to capitalize on the business moments that drive digital business.

Digital Humanist Manifesto

To help CIOs find their inner digital humanist, Gartner proposes the adoption of the digital humanist manifesto. The three principle of the manifesto are:

- Put people at the center

- Embrace unpredictability

- Respect personal space

Put People at the Center

All design should be human-centered design. It starts with observing people. Don't ask people for their requirements. Don't ask people what they want, watch what they do and observe. Next to traditional requirements analysis, adopt methodologies such as ethnographic research, which takes into account cultural and social factors based on observing what people do.

Every project should put people at the center. IT leaders must put their people where the action is.

Embracing Unpredictability

Embracing the unexpected — allowing for serendipity — is not a new concept, but it is particularly relevant for digital business. The moment digital technology is in the hands of consumers, it is out of your hands. The technology will affect users' behaviors immediately, in both intended and unintended ways. Users will use the technologies in different ways too, again in many intended and unintended ways. Digital business leaders must listen and get out of the way.

There is a strong business imperative to embrace serendipity. The business results can range from new products, to new brand ambassadors and to new markets, and ultimately lead to true competitive differentiation.

Create, Respect and Protect Personal Space

It is easy to cross the "creepy line," going a little bit too far with the use of technology, or the use of information. The creepy line is not always obvious, as it depends on culture and other circumstances. Avoiding that creepy line by protecting privacy is essential to the digital humanist philosophy. Organizations must adopt privacy by design, taking into account privacy throughout the entire product life cycle.

Take a look at Osaka train station in Japan, which services 413,000 passengers every day. The station experimented with face recognition software, following people throughout the station to improve passenger flow and safety. As a next step, this data could be used to catch violent criminals or to stop terrorists, but it could also be used to collect parking fines or child support payments. Where do we draw the line?

In the end, this can be as simple as applying the Golden Rule: Treat your customers how you, as a customer, citizen and human being, would like to be treated.

Gartner Recommended Reading

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

"Creating a Bimodal Personality at Luxottica"

"MTR Corporation's Bimodal IT Team Operates on Two Tracks"

GARTNER HEADQUARTERS

Corporate Headquarters
56 Top Gallant Road
Stamford, CT 06902-7700
USA
+1 203 964 0096

Regional Headquarters
AUSTRALIA
BRAZIL
JAPAN
UNITED KINGDOM

For a complete list of worldwide locations,
visit http://www.gartner.com/technology/about.jsp