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PART ONE

Baselining IT

The IT organization has evolved in stages.

For years, IT’s mantra was to provide a safe, reliable service, following the requirements that the business defined. IT expanded to master the internet, went mobile, and commercialized digital properties — but it was still largely a technology shop challenged to drive business value, coaching the firm on how best to capitalize on new technology and protecting it from outside and inside threats.

Dynamics driven by the age of the customer inspired more progressive IT shops to move into a co-creation mode with businesses, helping them find new ways to serve digitally empowered customers. This second stage favored those technologies — business technologies — that are vital to acquiring, retaining, and serving customers. DevOps processes established an agile co-creation environment between technology and the business. Chief digital officers (CDOs) appeared on the scene where CIOs were not willing or able to take the reins.
Boards and CEOs, with a marginal understanding of technology, struggle to drive more far-reaching change, and old-fashioned organizational inertia generates powerful headwinds to progress. In 2018, more than 50% of digital transformation efforts failed or stalled as the sheer size, complexity, and change of the mandate overwhelmed organizations.

These early stages were important but have hit a wall. They certainly won’t suffice as markets become even more dynamic — sometimes, downright volatile — and the shelf life for competitive advantage continues to shrink. The next stage will bring about a very different future for IT.
PART TWO

Tech-Driven Innovation Shapes The Future Of IT

Soon, nearly every company will operate as a digital entity. A company’s fate and fortune will be determined by its ability to exploit technology to its highest potential. The need to be customer-led will endure — but powerful forces are in play that will compel IT to take on a larger role: ensuring that technology creates new possibilities and capabilities that shape and guide strategy and operations. These forces include:

**Competition**

Call it the Amazon effect, except that it is not limited to Amazon. Digital natives are sprouting from within industries and encroaching from outside industries. Some are super-scaled and some are scaling, but they are all inherently more flexible — able to flex into new markets and rapidly create new products and experiences. Traditional companies are losing the protective fence of industry lines and must compete in more open and fluid markets where adaptability, powered by technology, will be a foundational requirement.

**Customers**

Digitally insatiable customers have a marginal and fickle loyalty to traditional brands, are willing to experiment, and are conditioned to switch affinity and spend based on a single poor experience. Customers have an affection for novelty brands and, notably, brands that “get” and tap into their day-to-day lives. This dynamic is now common across generations but more pronounced in Generations Y and Z, which will inherit significant wealth and wield overwhelming economic power in the near future.
Technology
The challenge is not that technology evolves faster; the challenge is that organizations must understand and capitalize on technology at faster rates — and convert that new technology to competitive advantage. This necessarily shifts the way technology is viewed — rather than seeing new technologies as a way to better meet business needs, firms must think of them as a way to imagine and create new possibilities.

Data
Most organizations struggle to govern data or toe the fine line of using data to create customer value without stepping over privacy concerns and destroying trust. The market will reward those that use data to create value for and engender trust with customers. But that reality requires a revolution, not an evolution — a more strategic, front-of-house role for those governing data and the underlying systems of record.

Economics
Businesses are rapidly embracing short-term efficiencies via software robotics and select system modernization projects, but the potential impending economic downturn will focus even more attention on margin opportunities driven by automation. Using AI to help transform claims or underwriting is one simple example of the impact of advanced technologies as the new basis of business and operational design, making the CEO and CFO core champions of a more central and powerful role for technology.

Work structures
AI will reshape the future of work. Beyond the ability to take human costs out of repetitive, simple processes through robotic process automation (RPA), AI will allow leaders to envision new ways of organizing and governing work. But AI is complex and opaque to the non-tech-savvy: It requires the close and persistent collaboration of technology and operational experts — not in the give and take of today’s IT structure but in a controlled framework where IT is actively helping shape the way work is done.
Leadership

Technology is still alien and strange to too many boards and CEOs. Beyond understanding technology’s power and coming to terms with a new family of acronyms and buzzwords, many executives and boards are unsure of how to best lead and exploit technology for their own firms. But that is changing: A new generation of directors and CEOs will make leadership more digitally confident — and more digitally aggressive. The C-suite will understand more and expect more.

Organizational design

Although functional silos created control and comfort in the past, they will soon frustrate workers and progress. Shapeshifting organizations are gaining steam. Forrester predicts that they will become the rule versus the exception in the future, creating the opportunity — or momentum — to challenge long-standing functional silos. Workers will become more comfortable and expert at navigating fluid structures made up of teams formed from diverse skills and experiences.

Employee experience

Employee engagement is increasingly dependent on technology. Whether due to the exposure and impact of shadow IT, the real and acute issue of data governance and legacy business systems, or the impact of a new generation of digital-native workers, the technical competency and fluency of business workers is fundamentally different. Technologies such as low-code have democratized software design, lessening (not eliminating) the distance between IT’s and the business’ technical competency.

These forces combine to reset the table — to change what is normal — and create a far different future for IT.
PART THREE

A Future Scenario: Immersive IT

Technology-driven innovation is vastly different than how most firms operate today, but it will soon be table stakes in a fast-moving and uncompromising market. It will magnify the importance of technology — and thus, IT — but will also demand an environment in which the boundaries between IT and the overall business fade, with much more powerful and fluid IT capabilities becoming immersed in the very core of the business. The result: big changes to the who, what, and how of IT.

Who

IT will follow the broader organizational future of matrixed, shapeshifting organizations that form and morph based on changing priorities. As such, IT will not be a standalone functional organization — nor will it be a fully decentralized competency that cascades expertise, capabilities, and tools into the broader organization. Instead, IT will be deeply federated with a central control framework. Key elements will include:

- **An expanded CIO remit**
  Against the measuring stick of acting as an innovator and value creator, Forrester estimates that no more than 20% of current CIOs can fulfill this expanded mandate. And yet, the mandate for the CIO and her team will radically evolve and expand further as CEOs wake up to the fact that parsing out responsibility to CTOs, CDOs, and CIOs only exacerbates the problem. No matter who sits in the chair, the CIO and her team will be core to business design and take the lead role in technology-driven innovation.

- **Diverse leadership**
  Expanding the remit of the CIO from an already broad swath of responsibility only works with the support of a well-casted leadership team. Creative CIOs will need a senior trusted operator to manage the day-to-day, and vice versa. Similarly, technology-native CIOs will need business strategists to round out the team. Most important is a diverse set of capabilities throughout the group, all with strong leadership skills, a heavy dose of modesty, and the ability to work as a team.
Deeply federated teams

The majority of energy and creative spirit will be federated across the enterprise, placing technology-driven innovation closer to the customer. Teams will be task-focused, not job-focused. They will have diverse skills, some owned and others borrowed from the gig economy. And they will form to address a specific initiative — and dissolve as those needs expire. IT will have a central role in these teams, not taking requirements but imagining new possibilities and driving innovation.

A trusted core

A lean set of interconnected functions will form the central core of IT. This core will assume the role of trusted architect and orchestrator of technology investments, complex efforts, and data challenges, as well as coordinator of automation across the shapeshifted organization. It will also be the governor of new control frameworks made necessary by federated innovation and new technologies that inherently introduce new forms of risk. Many will build emerging technology assessment capabilities that operate similar to a venture capitalist, charged with discovering, analyzing, and recommending action for acquisitions, joint ventures, ecosystem partners, and others.

What & How

IT will create the underlying capability to adapt and flex at the speed of the market. Technical agility is a starting point — the end goal will be to predict and continuously adapt to changing customer expectations, technology possibilities, and market realities. To get there, IT will need:

To be more than agile but also adaptive

IT has made great strides in becoming agile — which is a productive model when the business is evolving in a linear fashion. But agile is not good enough in a market where businesses must adapt to disruption or where, through technology-driven innovation, businesses choose to disrupt the market themselves. Either way, the future measuring stick will focus on how technology provides a platform to efficiently adapt to market pressures and market opportunities.
Minimal infrastructure and technical debt

IT is already well past its original function of managing technology infrastructure. Ultimately, we predict that 80% of IT’s workload will be offloaded to the cloud, while 20% of the workload centered on differentiated offerings and experiences will remain in-house. Meanwhile, any hopes of market leadership will be in peril for those with legacy systems or governance environments that hold back progress. We predicted that in 2019, firms will focus on foundational elements to come out swinging in 2020. These efforts must take a chunk out of technical and data debt, creating a foundation that is able to adapt to new ways of working, new opportunities, and new threats.

Zero Trust everywhere

Evolving architecture and digital flexibility will force an upgrade of security systems and practices. A perimeter-based strategy will no longer be effective. Matrixed structures will require tighter control of identity and access management. With more technology integrated into vital business functions, the inner workings of your company will become vulnerable to new risks from outside actors. There needs to be systems of control, monitoring, and testing in every facet of the organization. To garner trust with customers, IT will need to lead and drive Zero Trust operations.

Automation everywhere

Advanced automation will simplify infrastructure and applications activities within IT. Meanwhile, as RPA, robots, and other forms of automation permeate all corners of the enterprise, IT will look to establish an AI capability and be able to help (or lead) the orchestration of work and grow the abilities of human employees to work alongside robots — helping them build and flex robotics-quotient muscles. As the business shifts from siloed hierarchies to an orchestrated organism, IT will be responsible for managing and orchestrating AI implementations and business logic to ensure that AI is properly adapted throughout the organization.

A rolling tide of technologies

We are at a new technology revolution in which the pace of new technologies will call to mind Moore’s law: not processing power but technology itself. The global competitive landscape, size of private and public investments, and impact of digital-native and -fluent workers promises to create a rolling wave of new technologies. The architecture needs to support a whole new level of dynamism to test, learn, and adopt technologies that get in front of opportunities and risks.
PART FOUR

What It Means

The future of IT is a revolutionary and lucid response to external and internal dynamics. It will have stark implications for boards, CEOs, business leaders, CIOs, and organizations as a whole. Watch for these signals to know if and when immersive IT is becoming a reality:

01

Boards and CEOs look beyond financials to value IT

Leadership will gain fluency in the technology choices made and in the portfolio performance of different innovation efforts, becoming clear-eyed and visionary about how to make business technology a basis of durable strategic advantage and valuation. It won’t happen overnight. Expect a shakeup in the board makeup to get there, with a bias toward digitally savvy change leaders experienced in navigating the ambiguous and pushing beyond the horizon to set the leadership bar at its highest point.

02

Budget allocations go real-time

Whether they are disrupting or responding to disruption, businesses will formally move away from annual allocation of resources to a model that can reallocate budget, human capital, and technology-driven innovation on a quarterly or event-driven basis. Most firms are already increasing the frequency of their budget cycles, moving to at least quarterly reviews and adjustments based on shifting needs. But more organizations will embrace more flexible funding, with fluid teams bidding for funds without rigid definitions of functional budgets.
03

Shadow IT evaporates

Instead, business leaders will move into an immersive, team-driven partnership with IT as the underlying technology becomes inseparable from the offering, experience, and financial performance. A healthy “tell” is if one can no longer easily recognize who is from IT and who is not; both work on the same team, with one (IT) having specialized technology skills and the other possessing the instincts and skills needed to capitalize on existing and emerging technologies.

04

CIO personas multiply

The CIO role is getting far more consequential and exciting — but harder. No longer a support function and now the creator of customer value and strategic advantage, the CIO will become a central figure in what the company is and does, as well as how well it fares in a hyper-digital world. Part VC, part architect, part orchestrator, the CIO will move from caretaker to disruptor and from technocrat to business visionary. The reality, though, is that no one person will be able to do all of that; each CIO will come with their own bias, making the collection of successful CIO personas that much more dynamic.

05

Tech skills gaps shrink

IT roles have historically been built based on the context of specific expertise and hierarchies. The future is less clear but brighter: IT, as a whole, will be dynamic to the task, pulling capacity and competency from a broader range of sources, including traditional employees, robots, or expertise-as-a-service from members of the growing gig economy. And as IT is called upon to make major decisions on the nature of products and experiences, paths to innovation, the best ways to compete, and making the most strategic use of the enterprise tech stack, expect more employee engagement and less turnover.
The combined pressure from digitally savvy and restless customers, the dizzying pace of technology change, and competitors from within and outside the industry will not abate. It will intensify, and it will overwhelm existing norms. Disruptive threats will no longer be the exclusive domain of digital natives but will become the normal give-and-take of traditional companies, as well.

Technology leadership is business leadership in the future market, and that simple but powerful reality will reshape expectations for — and the nature of — the IT organization.

The future of IT is both revolutionary and expected. It is the best business response to unrelenting forces and goes toward the long-term survival of the firm in a market where digital excellence will be both table stakes and critical to success.
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