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Part III

Digital Business 2020:

Getting there
from here!

Being Digital
Making Digital
Real and Rewarding



Making Digital Real and Rewarding

By Rob Asen and Burkhard Blechschmidt

Businesses can “do” digital by focusing on isolated initiatives. But to truly “be” digital, they need to ensure they are digital to the core, and redefine the nature of customer centricity.

“A lot of us play rock-and-roll, but not a lot of us are rock-and-roll.”¹

— Dave Grohl
(Foo Fighters and Nirvana),
describing the late Lemmy Kilmister
from Motörhead

Business leaders have heard the call to “become digital.” With good reason: They’ve seen established enterprises across the globe be disrupted by the likes of Uber, Spotify, Waze and others that showed up seemingly out of nowhere and then turned an industry on its head. Savvy business leaders would be remiss if they didn’t seek a digital remedy to avoid becoming the next victim.

Some have set out to transform themselves, in piecemeal or big-bang ways, and come away wondering why the markets didn’t respond to their digital dynamism. But for all their efforts, established companies might well consider the maxim: “know thyself.” Because their customers certainly know them – and instinctively recognize that a

few mobile apps, tweets from the CEO (or more likely a marketing intern) or zip-code targeted ads do not a digital brand make.

Focusing on isolated digital initiatives and taking a watered-down approach to customer centricity and personalization won’t enable established enterprises to keep pace with, much less leapfrog, companies that either were born digital or quickly learned to be from market pioneers. If the threat of disruption weren’t enough, digital transformation can also boost the bottom line by more than 50% when approached holistically, according to a study by McKinsey & Co.²

The core difference is “being” vs. just “doing” digital. We all know what “doing digital” looks like. Even the most non-digitally-savvy among us write e-mails – not letters – and have our paychecks directly deposited into our bank accounts or use our smartphones for navigation. As a society, we have embraced digital tools to replace analog ways of working.

But we also know people and companies that operate as though they never even knew the analog precursor to the digital tools and work styles they use so naturally, and whose very first step toward solving problems is digital in nature. Uber, Facebook, Airbnb – each began their journey by answering fundamental questions in a digital way, and each has arrived at a very different place from their traditional counterparts as a result.

So, what distinguishes “doing” from “being?” From our experience and research, the

With customer autonomy, businesses make key assets and capabilities available to customers, who pick and choose among them to design an experience that suits their needs.

key lies in reflecting a digital mentality in everything the business does and to the very core of the organization, including operations, processes, business models and the culture itself. Think of a cable provider or airline that provides a great new digital device or mobile app but then turns right back into an old-school business the minute a billing question arises or a bag is lost. At a digital business, the contextually-relevant, hyper-personalized experiences, agility, mobility and social linkages continue, no matter which part of the journey the customer is on.

Secondly, digital businesses fully embrace customer centricity as a guiding strategy, using digital to not just support but also redefine how customers interact and engage with each other and the business. In addition to understanding what customers really want and enabling hyper-personalized products, services and experiences, fully digital companies ultimately strive to take customer centricity to a whole new level – to “customer autonomy.” The end goal is to enable customers to leverage their assets and capabilities to design their own experience, even embedding the customer into previously closed processes and establishing them as a main actor in the value chain.

In short, digital businesses act as if older, legacy ways never existed. We believe that many non-digitally native companies can – and will – make this transition, by invoking substantive changes to their mindsets, attributes and operating models that truly enable them to focus on a digitally-defined customer experience – issues that not even the best technology and skills can cure. By doing so, they can achieve a performance boost, whether in traditional economic terms or in realizing entirely new forms of value.

The Bright Line Test: Customer Centricity

As noted, the defining characteristic of digital businesses is customer centricity. But this concept has come a long way from the playbooks of the 1970’s fast-food chains, whose “have it your way” motto embraced customer participation by personalizing hamburgers. Today, businesses can do that digitally, taking “hyper-personalized” recommendations, products and services to an extreme by empowering customers to take command and control of part of the supply chain, themselves.

With customer autonomy, businesses make key assets and capabilities available to customers, who pick and choose among them to design an experience that suits their needs. They often figure out ways to leverage these capabilities that the originating business might never have imagined – creating even more value for both customers and the business. This requires organizations to open up their ecosystem and allow new levels of transparency, even if it means cannibalizing a piece (or pieces) of their business. Such an approach requires a new mindset and attitude toward value creation.

Customer autonomy capabilities are emerging at companies that were born digital or mindfully became that way (see Quick Take, next page). For example, autonomous customers already expect to design their own cable TV experience and telecommunications plans; it won’t be long before these expectations spread to hard goods, as consumers begin to design their own brands. Further, 3-D printing shops already offer design interfaces and 3-D print services to customers who wish to create their own products or gadgets.

Quick Take

The Many Faces of Customer Autonomy

Customer autonomy is an old concept made new in the digital age. Examples include:

- **Co-innovation:** Through the Nike+ social platform, customers share their running experiences with their peers, defining not just a new experience for themselves but also providing Nike with firsthand product design ideas through real user journeys, like marathons and suggestions to personalize products.
- **Sharing economy:** Customers and businesses can personalize their parcel delivery experience through a platform developed for DHL. The platform enables a sharing-economy approach to package delivery, using the flexibility of private couriers to enable personalization of when and where parcels are delivered. This approach is enabling not just one company to adopt customer autonomy but also an entire industry.
- **Prosumerization:** Some utilities are enabling consumers to become “prosumers” who produce and consume energy at the same time. Consumers who reduce their consumption or generate/store energy can sell their excess energy via a peer-to-peer model, significantly reducing energy retail costs. In another prosumerization model, energy consumers connect on social platforms to coach each other on energy consumption; in one case, this resulted in a 17% reduction in energy consumption.³
- **API-enabled business ecosystems:** As the channels and devices to expose data exponentially scale, many organizations are sitting on a gold mine of information assets. Telecommunication companies, such as AT&T, were the first to create API platforms, enabling app developers to easily incorporate telco services into their applications. Today the “API economy” provides the glue that ties together disparate data and systems, exposing a uniform data layer to the end-customer through devices like smartphones, wearables and IoT devices. (Read about the growing role of APIs in our look at platform businesses on page 41.)



The fact is, once businesses established a customer-centric approach, they would do well to stop thinking about “customer centricity” and begin viewing themselves through the eyes of the customer; after all, what looks like customer centricity from inside a company is customer autonomy from the point of view of the customer.

Customer autonomy can even extend beyond the supply chain and into the organizational model itself; might your organization’s chief customer officer eventually be chosen from among your best customers? The idea of everyone on the board of directors potentially being a customer has already been realized: A decentralized autonomous organization running on the blockchain defines the extreme end of the continuum of “being digital.”⁴ At this level, the company’s mission and decision-making processes could be encoded in “smart contracts,” run by intelligent software that uses machine learning and algorithms. Top

management decisions could be increasingly made through advanced algorithms and big data, and funding and ownership could be “open-sourced” based on encoded rules.

Becoming Digital

Of course, digital leaders have the freedom to operate as though there were no legacy processes to consider. Such is not the case for the majority of companies today. However, we believe even the most traditional businesses can shake free from entrenched structures and seemingly inviolable processes and mindsets, and begin moving in a digital direction. They can do this by assessing the gap between their own capabilities and those that are intrinsic to being digital (see Figure 1). By doing so, organizations can begin moving toward full digital enablement, in which a digital mindset pervades all business processes, the corporate strategy and the operational and business models.

Assessing Digital Gaps

 Digital Capability	 Result	 Challenge for Pre-Digital Organizations
STRATEGY AND INNOVATION		
Agility	<ul style="list-style-type: none"> ■ The culture nurtures innovation principles, such as think big/start small/fail fast; move quickly, learn quickly, reorient without remorse. 	<ul style="list-style-type: none"> ■ Processes are heavy, with decision-making bottlenecks, extensive testing, long cycle times.
Continuous, iterative planning cycles	<ul style="list-style-type: none"> ■ Strategies are geared toward big-picture thinking and lifetime relationships, not transactions. 	<ul style="list-style-type: none"> ■ The quarterly focus is on making the numbers, which typically requires rote thinking and execution, with no time to experiment.
Openness to risk and failure	<ul style="list-style-type: none"> ■ Experiments yield confirming or non-confirming results, and both are valued; ongoing testing ensures continuous improvement. 	<ul style="list-style-type: none"> ■ There is little tolerance for failure and lack of appreciation for lessons learned from experimentation.
Institutional innovation	<ul style="list-style-type: none"> ■ Idea-generation extends beyond the enterprise, redefining accepted truths and “givens.” ■ The business model is open for reinvention, even if that means cannibalizing pieces of the business. ■ Systemic barriers to entry are challenged, and new industry standards/protocols are defined. 	<ul style="list-style-type: none"> ■ Innovation is applied only at the product or service level. ■ The current business model and modes of profitability are protected at all costs.
USE OF INSIGHTS		
Data-driven culture	<ul style="list-style-type: none"> ■ The organization is flat and data-driven, with a welcome attitude toward diverse opinions to generate and test ideas. ■ Decisions are made on metrics, not opinions. 	<ul style="list-style-type: none"> ■ A top-down command-and-control culture exists, in which the “HiPPO” (highest paid person’s opinion) rules, shooting down contradictory opinions and dismissing input from underlings.

Figure 1

Continued on next page

Assessing Digital Gaps (cont'd. from previous page)

 Digital Capability	 Result	 Challenge for Pre-Digital Organizations
LEADERSHIP AND CULTURE		
Employee empowerment	<ul style="list-style-type: none"> ■ Everyone is an owner, and every employee represents the company. ■ Employees are well treated because management values their contributions. 	<ul style="list-style-type: none"> ■ Ossified labor structures maintain the status quo. ■ Management believes employees are easily replaced commodities.
New approaches to measuring success	<ul style="list-style-type: none"> ■ Economic values are often transcended and replaced by new, digitally-driven value for both customer and company: information equity, social equity, reputation equity, cyber/trust equity. 	<ul style="list-style-type: none"> ■ Decision-making is driven by short-term, lagging financial indicators. Growth targets are linear projections based on past growth rates. ■ Business leaders fail to recognize that outcome-based economic valuation of success can be misleading in an age of digital disruption and an emerging digital generation with a different value system.
Transparency and trust	<ul style="list-style-type: none"> ■ An open-source culture utilizes APIs to leverage company assets/data for bolt-on innovation, and sells on reputation and product transparency. 	<ul style="list-style-type: none"> ■ The company believes it needs to keep knowledge secret, leading to an inward focus.
PRODUCTS & SERVICES		
Smart, connected design	<ul style="list-style-type: none"> ■ Products are designed to be digitally enhanced with data for software-based customization, enabling remote services, upgrades and maintenance. ■ Open interfaces comply with the connected "Internet of everything." ■ Products and services are highly personalized, as the cost of customization for digitally enhanced products and services is minimal. 	<ul style="list-style-type: none"> ■ Product design is based on what is digitally possible, not what the customer will value.
Interoperability with ecosystems and platforms	<ul style="list-style-type: none"> ■ Platforms and ecosystems are real-time-enabled by open source protocols for the Internet of everything. 	<ul style="list-style-type: none"> ■ Companies try to monopolize their smart products and services into closed ecosystems. ■ Ecosystems are defined within the boundaries of the industry. ■ Protection of personal data related to smart products and services is only guaranteed in closed ecosystems.
Focus on marketing and monetization	<ul style="list-style-type: none"> ■ Marketing enables mass customization and predictive customer experiences. Monetization is based on personal customer value. 	<ul style="list-style-type: none"> ■ Market segmentation, pricing and business models follow industry truths and givens. ■ Many monetization ideas are based on customer data or hard-to-measure assumptions around creating customer loyalty and a trusted brand, sometimes creating customer lock-in.
SYSTEMS & PROCESSES		
Scalability	<ul style="list-style-type: none"> ■ Scalability is a required design consideration for every process and system. 	<ul style="list-style-type: none"> ■ Structural limitations exist, constrained by company-owned assets, traditional entry barriers, legacy systems and concerns.
Automation	<ul style="list-style-type: none"> ■ Planning and budget processes include not just employee headcount but also how many software bots are required in the next planning cycle. 	<ul style="list-style-type: none"> ■ No thought is given to applying automation and innovation to how work will get done. Labor costs are focused only on full-time employee headcount.
CUSTOMER TOUCHPOINTS		
Customer centricity	<ul style="list-style-type: none"> ■ The company has an obsessive focus across the entire customer lifecycle. In many cases, the ultimate end state is "customer autonomy." 	<ul style="list-style-type: none"> ■ Interactions with customers beyond the sale are considered a cost of doing business. ■ Internal systems and IP are closely protected.

Figure 1

To make this pivot, organizations must:

- **Ensure digital initiatives are aligned** with changing industry dynamics.
- **View digital initiatives as programs** that require not just technology change but also corresponding changes to business processes and operating models.
- **Consider digital initiatives from a cross-functional view**, across the end-to-end value chain, and assess how they redefine the customer experience and the organization itself.
- **Create a focused organizational unit to drive the digital agenda** in collaboration with all functions across the organization; digital endeavors require a centralized effort but cannot be the responsibility of a single team.
- **Spark a culture of innovation** by creating dedicated incubation centers that foster ideation and experimentation, with executive support for non-traditional funding and business case development.
- **Rely on customer input to drive ongoing and continuous ideation, innovation and renovation**, both directly and by tracking and analyzing customer journeys, interactions and experiences.
- **Empower associates to understand the customer's view** and make in-the-moment decisions that improve customer engagement.

- **Understand that digital initiatives are not run-of-the-mill projects** but instead require new thinking around implementation and ROI analysis, outside the usual framework of annual budget cycles.

Adopting these new mindsets and practices can only happen with active sponsorship from senior-level executives, most typically the CEO. In our experience, digital transformation efforts that are led exclusively by the CMO or CIO often fall short of addressing transformational needs across the business, as they fail to prevent insular, departmental or divisional agendas from overtaking the enterprise digital mandate.

Most established organizations adopt a staged approach toward a fully digital posture. They might start with skunk-works digital experiments, nurturing a culture of innovation until they can eventually expand to all aspects of the operating model. Such initiatives typically include a range of digital deployments involving emerging digital technologies beyond social, mobile, analytics and cloud technologies (the SMAC Stack)⁵ to the Internet of Things (IoT) and intelligent automation.

To help organizations in this journey, we have developed a maturity model that describes how various operating model parameters need to change, in order to evolve from “thinking,” to “doing” to “being” digital (see Figure 2, next page).

Digital transformation efforts that are led exclusively by the CMO or CIO often fall short of addressing transformational needs across the business, as they fail to prevent insular, departmental or divisional agendas from overtaking the enterprise digital mandate.

Digital Business Maturity Model

 Thinking Digital	 Doing Digital	 Being Digital
STRATEGY AND INNOVATION		
<ul style="list-style-type: none"> Digital plans are articulated at a high level. Technology refresh initiatives are declared to be “digital.” Digital innovation is driven only by the CIO, and innovation is primarily aimed at products and services. 	<ul style="list-style-type: none"> Digital initiatives are a core part of the strategy and significantly funded. Larger parts of the company get involved in the innovation process related to digital (internal crowd innovation). Principles of design thinking have been adopted; workshops are frequently held throughout various functions. A digital innovation spin-out/spin-along is set up to spur digital innovations and new market models. 	<ul style="list-style-type: none"> The strategic planning process has been replaced by a continuous innovation process involving people inside and outside the company. Multiple, diverging long-term scenarios are defined as potential futures. The strategic roadmap is replaced by a strategic compass that indicates whether the company is headed toward one or more of the envisioned future states. Innovation is not a function but a capability and leadership style deeply rooted in the culture of the company.
USE OF INSIGHTS		
<ul style="list-style-type: none"> Big data pilot projects are initiated. A big data platform is selected and rolled out. 	<ul style="list-style-type: none"> A big data/data science state-of-the-art platform is in place, and a data science or big data group works closely with the business. Investment plans for data monetization initiatives are in the pipeline or prototyping phase. Some processes have adopted data-driven/evidence-based decision-making. Big data startups are funded by an in-house-funded venture group. 	<ul style="list-style-type: none"> Evidence/insights-based decision-making has become the new way of working. Many decisions are made by AI or bots. Customers opt-in on their data and have transparency on their personal data in use by the company. Customer insights are used to personalize products and services and predict emerging customer behavior patterns. Data is also used to enrich products and services with information and make them social.
LEADERSHIP AND CULTURE		
<ul style="list-style-type: none"> Digital innovation is led by the CIO or another C-level executive. A digital team is in place, mainly working on positioning the company and its products and services on the corporate website. 	<ul style="list-style-type: none"> A C-level executive is charged with consolidating/ prioritizing digital ideas across the company and driving a digital agenda. Digital innovation is a board-level agenda item; all major functions and business units fund digital innovation. Digital innovation is crowd-sourced from inside the organization through social channels. People with the best ideas become the digital leaders. Existing employees are trained on innovation techniques and encouraged to participate in digital initiatives for short periods of time. A hiring strategy is established to source the best digital talent and creative skillsets. 	<ul style="list-style-type: none"> Digital is no longer seen as a function led by a top executive but as a way of doing business that transcends traditional functions. While basic business operations continue to be executed (partially automated through bots), strategic programs are defined around business themes requiring multidisciplinary leadership, which is partially provided through external partners and key customers. Organizational intermediation through middle management is minimal; the organization is flat, and interpersonal relationships, trust, collaboration are key. Hiring criteria are less driven by functional role descriptions and digital capabilities but by success stories in a digital ecosystem. Talent is attracted by the company’s digital (social and reputational) equity.

Figure 2

Continued on next page

Digital Business Maturity Model (cont'd. from previous page)

 Thinking Digital	 Doing Digital	 Being Digital
PRODUCTS & SERVICES		
<ul style="list-style-type: none"> Product information is available through various digital channels. Online shops are available as an additional channel. 	<ul style="list-style-type: none"> Some products are digitized, and digital channels are in place. Frequent product enhancements are delivered, through open-sourced innovation. Mass customization is enabled through digital technologies (user product configuration portals). 	<ul style="list-style-type: none"> Products are enhanced through sensors and digital product memories embedded on the product. Product IP and proof of authenticity is secured (i.e., on blockchain). Product experience is enhanced through social channels. Products and services are continuously innovated and personalized based on customer data and open innovation.
SYSTEMS & PROCESSES		
<ul style="list-style-type: none"> Process integration is in place through standard ERP solutions. Individual systems and processes are customer-focused but lack cross-channel linkages. 	<ul style="list-style-type: none"> Fully-integrated systems and processes are harnessed across channels. Digital innovation processes and teams are consolidated into a shared-service setup and leveraged across the organization. Global sourcing (if any) for digital work is handled by the central digital function, led by a C-level executive. All processes are redesigned to align with the digital strategy, with a built-in periodic review. 	<ul style="list-style-type: none"> Processes are largely standardized across the entire value chain in an industry or ecosystem and provided by business process as a service (BPaaS) providers. Internal non-standard processes are largely automated through bots. Next-generation IT is in place; some principles include the "Uberization" of enterprise IT, with mostly federated IT architecture layers, and first preference given to construction of loosely-coupled modular apps (microservices).⁵ Business cloud capabilities are highly verticalized, scalable and self-service-based, with autonomous management to address volume and velocity of unstructured data.
CUSTOMER TOUCHPOINTS		
<ul style="list-style-type: none"> Customer journey is understood, but there is little management across digital touchpoints. 	<ul style="list-style-type: none"> Customer journey is integrated across channels, but the strategy is primarily channel-focused. Customer journeys are mapped across multiple channels and cascade into back-end operational processes in order to ensure a seamless transition and a standard experience across channels. A strategy is in place to leverage social media to connect with customers and gather customer insights/feedback that feeds into future strategy. 	<ul style="list-style-type: none"> Customer autonomy is enabled, with customers becoming part of companies' value chains and ecosystems. Customers are invited to share data, experiences and knowledge but remain in control of what they share, with whom, and for what purpose. Customer touchpoints are highly personalized across all channels, creating valuable, emotional and meaningful experiences for each individual customer. Companies build reputational equity through the quality of customer interactions. Managing customer reputational equity is the company's core capability, extending well beyond the classical marketing function.

Figure 2

Being Digital: A Call to Action

Growing into digital maturity is a process of evolution, accompanied by experiments and failures. It might start at the edges of the organization, but it ultimately redefines the enterprise. A bundle of digital experiences – no matter how innovative – won't bring lasting change to the enterprise by itself, as digital businesses require a reimagining of the operating model.

Companies intent on being digital must foster leadership behavior that encourages difficult questions, challenges truths and industry givens, and sees beyond boundaries both across and outside the organization. The shift to a digital operating model requires understanding, engagement and commitment at the senior leadership levels, along with the strategic programs and change structure and operational reset that would accompany any other enterprise-wide transformation.

So, why should organizations even bother to make such a dramatic transformation? Some argue that a fully digital approach interrupts traditional streams of revenue and profitability, and is simply the only way to stay in the game. In many cases, however, being digital is also a path to customer loyalty and trust and, thus, higher revenues, better reputation and higher employee satisfaction.

As evidenced by our own work and other market studies, companies can realize bottom-line improvements even when taking initial steps into digital approaches. But while such forays can help attract digitally savvy spenders, these same customers will also be the first to leave if they bump into limits in digital capabilities. To maintain the momentum and establish themselves in the new digital economy, organizations would do best to go the full distance on the digital journey.



Quick Take

“Being” Digital: One Company’s Lessons

By William Shea & Jagan Ramachandran

Defining a digital strategy, prioritizing investments and designing a roadmap are the first steps toward digital transformation. However, as one organization is finding, truly being digital requires an even deeper understanding of how digital initiatives will affect business operations.

We are working with a healthcare payer that is shifting its focus from marketing health insurance policies to employer groups, to selling policies directly to consumers via online marketplaces. Business leaders are keenly aware that delivering compellingly reimagined digital experiences will be critical to gaining share in this highly competitive market segment.

We initially worked with the organization to define and prioritize the key administrative and clinical capabilities it needed to deliver via digital channels and jointly develop a robust technology roadmap. Knowing that digital transformation goes well beyond IT, and requires significant business and operating model change, we also enabled the company with strong change management capabilities and organizational design acumen, both of which are foundational for being digital.

Like other healthcare payers, our client is finding it must concurrently address the following critical factors to deliver on its digital agenda:

- **Institute strong digital governance:** As is often the case, our client’s initial investments in digital capabilities were ad hoc. Business leaders often bought, built and deployed digital assets as disparate point solutions without an overarching governance or maintenance strategy. The company risked creating an amalgam of “shiny new objects” that would not deliver on its overall objective of creating a unified consumer experience.

An early lesson learned was to establish a digital owner, or chief digital officer, as well as a supporting strategy office. Now in place, this governance team vets all key initiatives and programs related to digital capabilities to head off incongruities. Doing so enables the health payer to optimize its digital investments, ensure organizational alignment and deliver a seamless user experience.

- **Create a culture of innovation:** “Being digital” requires organizational change that spans both business and IT, making it imperative to continuously iterate, prototype, fail-fast and try again. It is not a one-and-done type of investment. Successful companies must launch new products and services quickly. Our client has realized that embedding innovation into its business culture, as well as rewarding innovators, are key factors to succeeding in the new digital economy. Institutionalizing innovation has required the healthcare payer to consider investing in in-house innovation labs, hackathons and shark tanks, as well as new ways of opening up its data to external application developers.
- **Take a platform-based approach:** The organization quickly discovered the impossibility of “out-innovating” the market, thanks to the explosion of healthcare venture capital creating a frenzy of new developments. The business needed a way to harness best-of-breed innovation from the marketplace while still controlling the end-to-end customer experience. As a result, a platform-based approach to digitization is underway.

Standard frameworks for digital platforms that are emerging in healthcare typically consist of four layers: a foundational layer that includes the systems of record,

a data integration layer that supports an intelligence layer, topped off by the experience and engagement layer. Using this platform-based approach, our client will be able to plug the best commercially available innovations into the experience layer, while capturing and exploiting the data needed to optimize the end-to-end customer journey.

- **Increase IT responsiveness:** This healthcare player realized early on that traditional software development lifecycle processes cannot keep up with the speed of digital business. The company realized it needed to master the art of agile software delivery to support the rapid releases and frequent enhancements required by the highly competitive healthcare marketplace.

Equally critical is the need to understand new ways of organizing IT development operations, such as DevOps, which involves cross-departmental integration and iterative collaboration between development teams and business operations.

Digital initiatives, even seemingly simple ones, also require new types of IT leadership and skills. Investing in training and/or hiring new categories of talent, such as data scientists or human-centered experience designers, must be part of the roadmap from day one.

As this organization has learned, there is no single playbook for being digital. Each health plan, and every company in every market, must understand its position on the digital maturity continuum (see Figure 2, page 21) and invest and move forward accordingly. That said, there is an ever-increasing set of best practices and lessons learned that organizations and digital integrators can tap to better navigate the shift to digital business models.

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Footnotes

- ¹ Grammy Awards, Feb 15, 2016.
- ² “Finding Your Digital Sweet Spot,” McKinsey & Co., November 2013, <http://www.mckinsey.com/business-functions/business-technology/our-insights/finding-your-digital-sweet-spot>.
- ³ “Social Physics Can Change Your Company (and the World),” *Harvard Business Review*, <https://hbr.org/2014/04/social-physics-can-change-your-company-and-the-world/>.
- ⁴ Blockchain – the underlying technology to Bitcoin – is a distributed public ledger of verified transaction records that is publically available (thus transparent) and secured through cryptography. It is an open, searchable, easily-verified record that ensures the integrity, indelibility and sequence of each data entry.
- ⁵ Malcolm Frank, “Don’t Get SMACK’ed: How Social, Mobile, Analytics and Cloud Technologies Are Reshaping the Enterprise,” Cognizant Technology Solutions, November 2012, <http://www.cognizant.com/InsightsWhitepapers/dont-get-smacked.pdf>.
- ⁶ “Overcoming Ongoing Digital Transformational Challenges with a Microservices Architecture,” Cognizant Technology Solutions, November 2015, <http://www.cognizant.com/InsightsWhitepapers/Overcoming-Ongoing-Digital-Transformational-Challenges-with-a-Microservices-Architecture-codex1598.pdf>.

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