International Data Corp. (IDC), in a recent series of conferences, identified key trends that will impact the ability of organizations to digitally transform over the next few years. Among them are the following: By the end of 2017, two-thirds of CEOs from the Forbes Global 2000 companies will center their corporate strategies on digital transformation. In 2016, 65% of large enterprises will have committed to becoming information-based companies. Gartner’s recent CMO Spend Survey 2015-2016 also revealed that 65% of marketers ranked social marketing as the highest area of investment in 2015.

“Digital transformation requires businesses to step up and build a vision that drives user-experience effectiveness,” emphasizes Kalyan Kumar B (KK), executive vice president and CTO of ITO and Digital at HCL Technologies. At a time when consumer behavior is one of the most important inputs to a business, building a digitally agile front-end is critical. Remember, smartphone users are smarter consumers.
A digital transformation vision drives an enterprise’s ability to build their digital transformation strategy. According to Kumar, organizations embarking on this journey must start afresh; it would be “fake digital” if they superficially layered on their digital initiatives on top of legacy technology. They can leverage existing systems, but the effort must focus on creating digitally enabled platforms for operations and technology infrastructure.

Mobile, analytics, social media and the Internet of Things (IoT) are key elements of the strategy to ensure a maximized user experience, recommends Kumar. Together, they enable enterprises to achieve increased and effective engagement with users (internal/external), and to enhance the speed and quality of the market response.

Big data analytics, meanwhile, can help “discover patterns that no expert might have predicted,” says Eric Clemons, a Wharton professor of operations, information and decisions. And online social networks “strengthen existing connections among individuals and groups, and allow those groups to remain connected over time and across time zones and huge spatial distances.” They create “distributed pockets of autonomous connection, affiliation and even affection.”

**Digital Prerequisites**

Before starting their digital journey, organizations must clear their path of three obstacles, says Jerry (Yoram) Wind, a Wharton marketing professor and director of the SEI Center for Advanced Studies in Management. “One is an aversion to risk, and that has to do with mental models and resulting business models that protect the status quo.” The second is “a short-term orientation and lack of willingness to cannibalize the declining legacy business.” The third is “a senior management that is not tuned into the rapidly changing digital reality and believes it can avoid being disrupted.”

> “Big data analytics, meanwhile, can help discover patterns that no expert might have predicted.”
> — Eric Clemons, Wharton

Traditionally, organizations had a “project management” mindset, where they fleshed out requirements specified by a business unit into a project plan and delivered the required software and hardware, says Kumar. In the digital world, they have to pivot to a “product management” mindset, where they deliver a “minimum viable product” and periodically incorporate feedback and new market needs. For example, a mobile app may be launched with limited features, but future versions will incorporate user feedback.

**The Digital Journey: Three Cases**

**A Major U.S. Payment Services Firm**

With a rich legacy dating back over 100 years, the company’s challenge today is to meet Gartner’s recent CMO Spend Survey 2015-2016 revealed that 65% of marketers ranked social marketing as the highest area of investment in 2015.
the needs of the digital consumer and it has decided to focus on six areas for its digital transformation: mobile, web, payments, risk, data and international web (it has separate systems for the U.S. market and the rest of the world).

The company’s global reach is both “our strength and our challenge,” says a senior executive at the company. Its group of brands has a network of more than 500,000 agent locations in 200 countries that serve 70 million customers. In 2014, it moved $85 billion through 255 million transactions. But instead of trying to change existing teams and processes, the company decided to tap the dynamism of Silicon Valley and formed an incubation unit in San Francisco, “with the Bay Area culture and its tech and creative mindset,” he adds.

The incubation unit’s primary goals were to create a “culture shift” to view its offering as a “digital product,” foster a collaborative and agile work environment and “conquer risk,” especially since the business deals with cash. “Unless you conquer risk, you cannot conquer digital,” says the executive, adding that fraudsters are always lurking around his business.

The company’s efforts have enabled payment transfers on mobile devices in five countries and on the web in 13 nations. It also digitalized funds transfers in and out of European, Asian and American banks. Today, it collects 40% of its revenue (including money transfers) through its digital apps, while its digitally enabled operations are growing 25% to 27% annually compared to single-digit growth for its traditional business. The company collects 1.5 billion records daily to assess fraud and works with 22 vendors who glean data to identify likely thieves.

Over the next 18 months, the company plans to expand its web-based services to 13 more countries and launch 10 new mobile apps. Also underway is a project to digitalize its loyalty program and self-service kiosks. Customers walking into a store do not have to fill out forms, but instead collect a QR code they can scan at a kiosk, pay the remittance money and walk out. The company now has 7,700 kiosks in a major U.S. drugstore chain and is rolling them out in another 300 U.K bookstores. Next stop for self-service kiosks is France, where it has signed on a partner.

**Novelis: Slimmer, More Agile and Cost-efficient**

The case of Novelis, a major U.S. industrial aluminum processor, shows how a company can transition to a digital environment with minimal disruption of everyday operations to achieve significant gains.

Novelis’ goals were the following: virtualization; elimination of data center duplication; process improvements; and a roll up of business

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**Three Obstacles to the Digital Journey:**

1. Risk aversion
2. Fear of cannibalizing the legacy business
3. Lack of senior management buy-in
operations, according to Kenneth Benson, global IT hosting director. The company invested significantly in the effort, including spending on new hardware and contracts with third-party service providers.

Virtualization, which involves moving away from dedicated physical servers to distributed systems serving multiple users, helps lower costs while greatly enhancing scalability and flexibility. When Novelis began its digital journey in March 2012, it was 20% virtualized across its 25 data centers. It achieved 88% virtualization in 18 months and is now 92% virtualized — the maximum Benson sees as possible.

Novelis shuttered more than 20 data centers, and became tenants in Private Cloud Data Centers in Atlanta, Frankfurt and Seoul, as well as a disaster recovery site in Munich. This helped reduce its carbon footprint and ensured that, in an emergency, it could switch operations among data centers with documented recovery objectives. In its next phase, the company will transform again to make greater use of public cloud and ultimately achieve a hybrid cloud goal with some blended percentage of public and private cloud services.

Here are its gains from digital upgrades:

• Novelis has saved $14 million from data center closings and reduced headcount. Annual savings came to $7 million to $8 million.
• Digital tools gave the company the flexibility and cushion to absorb costs.
• Business units gained greater transparency of the fees they pay for services like data storage and backup and gave them greater understanding of where they could drive efficiencies and reduce costs.
• Business units now have more predictability in the availability of services. Some may need higher-performing services that call for more expensive infrastructure, while others may have more flexibility, such as with downtimes.

“You can have a million downloads of your mobile app but very small engagement — and that would be missing the point.”

— Ian Fox, Manchester United

• In handling 40 to 50 projects a year, half of the efforts by Benson’s team would focus on building the required infrastructure. After digital transformation, that percentage dropped to 10% to 15%. For example, when Novelis recently sold its foil business in North America to Reynolds, the team could turn off related data storage and other IT assets within 30 days of closing the deal. Without digital transformation, the process would have taken months.
• With real-time monitoring and access to performance data, Novelis can anticipate problems with storage, servers, networking and the like before they occur.
• A more flexible storage platform makes compliance easier. Regulations require aluminum makers to store data for specified periods — seven years in the can industry unless you conquer risk, you cannot conquer digital.
and 20 years in the automotive industry — reflecting the life of aluminum in those environments.

**Manchester United: Fans Come First**

As a British sports brand, Manchester United does not see other football teams as competitors, says Ian Fox, head of digital operations. Instead, “we’re competing with global entertainment, content and broadcasting brands for a share of voice [or a measure of a brand’s presence].”

Manchester United’s top task in going digital is to retain, grow and deepen its engagement with its fan base, says Fox. In addition to the 76,000 fans that attend games at its home stadium Old Trafford, it counts 659 million global followers. It already engages heavily with fans through social media, its official TV channel MUTV, its website and a growing suite of mobile products.

Fox sees his prime goal as “producing better and more appropriate content, and delivering that seamlessly through whatever channel suits the fan best.” Data analytics is another priority. “We know a little bit about many of our fans. If we know a lot about all of them, it will allow us to engage with them better and in a more appropriate way.” A stronger relationship that creates more value for fans will ultimately translate into more value for the club and its sponsors, he adds. The brand has about 60 sponsors, among them Chevrolet, Adidas and Aon.

To be sure, Manchester United’s digital projects will make sense only if they eventually bring more value to sponsors. “Sponsorship is the life blood of sports today,” says Fox. In its latest fiscal year ending June 2015, sponsorship revenue grew 14% to 155 million pounds ($234 million) — one of two bright spots as total revenue fell 9% to 395 million pounds ($596 million) from the previous year.

The other bright spot in the past fiscal year for Manchester United was a 50% increase in social media followers to 100 million. That has since grown to 108 million, across 11 social media platforms. Helping that along were launches on the messaging platforms LINE and WeChat, as well as Kakao Story, and the social scrapbooking site Pinterest. On Pinterest alone, the team garnered 307,000 followers in early November.

For the next 12 to 18 months, Fox has prioritized social and mobile development initiatives, with plans to improve the web presence, create a global mobile app and rebuild the back-end technology infrastructure for both. He also wants to leverage an ‘innovation lab’ capability to explore emerging technology areas.

*“Successful digital transformations will typically bring four broad benefits: increased automation and efficiency; better quality of decisions from using artificial intelligence and cognitive computing; rapid scalability; and the increasingly important ability to tap consumers to co-create and co-market products and services.”*  
— Jerry Wind, Wharton
that support the next dimension of a fan’s experience. The tangible ways of measuring returns on digital investments for Manchester include looking at the number of social connections, unique visitors to the website and app downloads, says Fox.

Yet, the true measure is the depth of its engagement with fans. “You can have a million downloads of your mobile app but very small engagement — and that would be missing the point. Having a million downloads and a million active users on a mobile app are much more valuable to the club, and to the partners and sponsors,” he adds.

Return on Digital Investments

Since digital transformation drives essential changes in the business, justifying digital investments is the responsibility of the entire company and not just its IT unit, asserts Kumar.

Metrics that measure the effectiveness and progression of the digital pathway include external and internal milestones. Wind notes that the external milestones include the percentage and growth rate of business that flows from digital channels and initiatives; the growth in the “share of wallet” that the enterprise captures from a customer’s spending in a specific area; and the impact on the lifetime value of target customers.

Internal milestones include ensuring that the relevant “digital elements” are integrated into strategy; having “stretched objectives” on the number of engagements with online customers and followers; and making sure that “digital experiments” are a key part of business plans.

Wind further notes that successful digital transformations will typically bring four broad benefits: increased automation and efficiency; better quality of decisions from using artificial intelligence and cognitive computing; rapid scalability; and the increasingly important ability to tap consumers to co-create and co-market products and services.

Nike, The North Face and Jeld-Wen are some companies that let their customers co-create with them, according to a recent Knowledge@Wharton article co-authored by Wind. “These organizations move their customers along the spectrum of affinity from ‘transactors,’ who have no relationship beyond the purchase, to ‘supporters,’ who regularly interact with the firm, to ‘promoters,’ who share their enthusiasm for the brand with friends and family, to ‘co-creators,’ who actually feel that they are partners with the organization.”

Meanwhile, continuous adaptive experimentation will help those organizations track the performance of their digital initiatives, says Wind.

Management Challenges

But digital technologies do bring risks that can be hard to control, says Clemons, who researches risks in strategic IT implementations. With collaboration comes greater freedom to do anything. “One has to do with the belief that if you put in a social network, you can control it. You may have your own social network within the firm that you monitor, but there are so many other ways for your employees to communicate and they may well construct their own social networks.”

That autonomy can be risky. “Social networks are uncontrollable and therefore can be used in ways the firm does not intend,” adds Clemons. He believes that is what played out in the recent case of Volkswagen’s faking of emission readings for its diesel-powered cars. The Volkswagen executives involved must have “shared beliefs about protecting themselves and their group” over social networks, he adds.
“Volkswagen’s senior management was not part of this social network and was not aware of the deliberations or of the decisions of this social network.”

But as long as businesses are mindful of the risks involved and put in place policies to handle any blow ups, the benefits of going through a digital transformation offsets the downside.

To be successful at digital, businesses must be willing to change. “In some cases, they may end up rewriting the business model itself,” Kumar says. Some will have to cannibalize their current business to make way for the digital opportunity. “The problem is people are in the comfort zone of their legacy business.”

The New Digital Frontier

So how do you handle the new challenges of going digital? “Be prepared to face the unknown,” says the executive for the payments transfer company. “Every time you find an obstacle in the transformation process, do not give up. Reinvent yourself completely.”

At Novelis, communicating the full digital rollout plan with various business units was useful, says Benson, adding that his team continually incorporated feedback. Flexibility also helped. The units had cautioned him that their needs could change midstream. “We had to change as those business strategies changed.”

Manchester United deployed “a deep, well-considered and tested strategy” of staying connected across the business including ticketing, hospitality and merchandise sales, says Fox. In particular, he advises companies to sharpen their focus, prioritize investments and have sufficient bandwidth to allow for flexibility in innovation and infrastructure scalability. He also cautions against incurring “technical debt,” or hastily spending on the wrong or soon-to-be obsolete technology. Fox’s final watchword is to “get the right partners who truly understand your vision, have the right ethics and innovate along the way.”

CHECKLIST FOR DIGITAL ASPIRANTS

✔ Align corporate culture and risk appetites for flexibility if business models change.
✔ Step out of the comfort zone of legacy businesses and risk cannibalization if needed.
✔ Design brand new digital systems instead of layering digital onto legacy infrastructure.
✔ Leverage social media, mobile, data analytics and cloud technologies.
✔ Place customer needs at the center.
✔ Evolve digital rollouts from a minimum viable product and do refinements based on user feedback.
✔ Shift from a project management to a product management mindset.
✔ Test your strategy and avoid “technical debt.”
✔ Create strategies to manage risks inherent in social networks.
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