Why Transforming into a Digital Enterprise is an Imperative

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Time and again you read articles about the need for any organization founded on industrial age principles to transform into a digital enterprise. There are numerous reasons pundits insist digital transformation is an imperative. Atop that list is the empirical fact that information age technologies have dramatically disrupted many industries. Boston Consulting Group (BCG) analysts Vikram Bhalla, Susanne Dyrchs, and Rainer Strack predict more change is on the way. "A tidal wave of change is coming that will soon make the way we work almost unrecognizable to today's business leaders," they write. "In an age of rapidly evolving technologies, business models, demographics, and even workplace attitudes — all shifting concurrently — change is not only constant but also exponential in its pace and scope."[1] Nearly 2500 years ago, Heraclitus wrote, "The only thing that is constant is change." Sometimes, however, change is revolutionary not evolutionary. Steven Norton (@steven_norton) notes, "Many fail to recognize digital shift as more than continuation of industrial revolution."[2] He believes that is a big mistake.

Trends Making Digital Transformation an Imperative

Bhalla, Dyrchs, and Strack suggest there are at least half a dozen "forces or megatrends" reshaping the global business landscape that fall under two general categories: technological and digital productivity trends and trends causing shifts in ways that businesses generate value. In the first area — technological and digital productivity trends — they place automation, big data and advanced analytics, and access to information and ideas. In the second area — shifts in ways businesses create value — they place simplicity in complexity, agility and innovation, and new customer strategies.

Automation.

"Although companies have been gradually automating for decades," they write, "recent advances in areas such as robotics and artificial intelligence are not only obligating people to work side by side with machines but are also creating replacements for human workers — even in fairly sophisticated jobs." The companies most likely to succeed in the long-run are not those that displace workers but organizations that use technology to

augment workers. Kevin Kelly (@kevin2kelly), founding Executive Editor of *Wired* magazine, writes, "This is not a race against the machines. If we race against them, we lose. This is a race with the machines."[3] The "machines" that will have some of the greatest impact will be cognitive computing platforms. Such platforms are adept at gathering, integrating, and analyzing the massive amounts of data that will be generated in the years ahead.

Big Data and Advanced Analytics.

Bhalla, Dyrchs, and Strack write, "The past two decades have seen unprecedented gains in the storage, processing, and transmission of data, leading to an explosion in the amount of information available to businesses around the world. … Advanced analytics, in turn, makes it possible to analyze enormous amounts of unstructured data, improving forecasting and decision making as never before. Through the use of big data and advanced analytics, companies are now able to improve marketing, productivity, and other essential aspects of their existing operations, lower costs, and gain real-time insights into promising new approaches and opportunities. BCG estimates that big data and advanced analytics could unlock more than $1 trillion in value annually by 2020." As noted above, cognitive computing platforms are the most likely systems to be adopted by the business world to carry out advanced analytics. These capabilities, according to Bhalla, Dyrchs, and Strack, will be necessities in the years ahead. "The implication for management teams is clear," they write, "companies will need to adopt analytics in every aspect of their operations. Once a novelty, the technology will become a basic competitive requirement."

Access to Information and Ideas.

Bhalla, Dyrchs, and Strack write, "The ability to tap information and ideas from anyone, anywhere, is multiplying exponentially, both for individuals and for businesses. As the cost of technology — including both hardware and data — continues to fall and global internet penetration expands, recent advances in cloud computing and storage are lowering the cost of access and processing. The implications are wide-ranging: people can be continuously connected, access data from any location, work remotely with ease, and collaborate with their global colleagues in real time." The real-time connectivity to which they refer will be provided by the Internet of Things (IoT). Analysts from Hewlett Packard Enterprise (HPE) explain, "We are in the earliest phases of a technological transformation, whose impact will be at least as great as every previous cultural and industrial revolution in human history. Every object, system and technology in our present reality — from office equipment to our physical organs, from defense and

security systems to the local grocery store — will be connected, and those connections, thanks to AI-driven data analytics, will make once mute objects into autonomous actors, even co-creators of the future."[4]

Simplicity in Complexity

Bhalla, Dyrchs, and Strack explain why complexity is bad for business. "Organizations tend to respond to new challenges," they write, "by adding teams, functions, and departments. As organizations grow, their structure becomes increasingly complicated. New silos develop, the number of stakeholders involved in decision making increases, and interdependencies between functions multiply. The plethora of stakeholders, decision rights, processes, and policies slows down every decision and hinders collaboration across departments, reinforcing the silo effect. Not surprisingly, organizational complexity imposes a tremendous cost, both in terms of managers' ability to meet their goals and employees' engagement and productivity. … Organizations must learn how to manage complexity in entirely new ways if they hope to thrive, understanding how to get results without adding more layers, processes, and silos." One way simplify is to leverage cognitive computing capabilities. Since cognitive computing platforms can integrate data, they can also provide the right information to the right people at the right time using a single version of "the truth" (i.e., by eliminating information silos).

Agility and Innovation

According to Bhalla, Dyrchs, and Strack, "A number of innovative approaches that began in software development are now being adapted by organizations for non-IT products and processes — including agile, scrum, kanban, design thinking, and other creative methodologies. … Bringing such approaches to day-to-day work beyond IT requires organizations to become far more fluid than the traditional rigid structures allow. In addition, companies must create room for experimentation, rapid prototyping, the testing of new ideas, and the introduction of a fail-fast innovation culture." At Enterra Solutions®, we recommend clients use a crawl, walk, run approach. This approach allows a company to assess quickly whether they are asking the right questions, taking the right approach, and getting the right answers. This approach allows necessary tinkering with solutions before they are scaled. Cognitive computing can also help in this area since it brings a new scientific and data-driven approach to enhancing innovation. Cognitive platforms can help speed up innovation through Design of Experiment (i.e., they can simulate an innovation *a priori* to determine its efficacy). In many cases, innovation dollars are the first resources to disappear when companies look to cut costs in order to increase profits. Generally, that is not a good bargain.

New Customer Strategies

Most analysts agree we are entering an era in which customers are king. Bhalla, Dyrchs, and Strack explain, "Boundaries between companies and consumers are fading as people, informed and enabled by the internet, become more aware and demanding. They want personalized offerings and will collaborate with companies to help develop the products and services they desire." Randy Bean (@RandyBeanNVP), founder and CEO of NewVantage Partners, adds, "Big data isn't just being used for cost-cutting. [A survey of executives of Fortune 1000 companies] strongly indicates that firms are also undertaking 'offensive' efforts that are explicitly intended to change how they do business."[5] Using data to change business models draws most of public's attention because it has the potential to disrupt entire industries. Aashish Kalra (@aashishkalra), Chairman of Cambridge Technology, explains, "Big Data Intelligence is transforming the ways businesses function — from transactional to relationship basis. The adoption of Big Data in understanding consumer behavior helps any enterprise understand its most important customers and competition. Big Data can be effectively used to show the right products for the right consumers at the right time, and to identify any irregularities in the sales patterns. Big Data can bring about a radical growth for any enterprise by predicting the current trends accurately. For sellers and producers too, this technology fuels analytics which can help in predicting demand or shift in demand."[6]

Summary

Most business leaders recognize the ground is shifting beneath their feet. As they struggle to maintain their balance, many times they fail to understand trying to maintain the status quo is no longer a viable option. In the future, Bhalla, Dyrchs, and Strack predict, "Companies will develop a more fluid sense of what is inside and what is outside their boundaries. They will move beyond rigid distinctions between employees, outside suppliers, and customers, developing platforms to promote collaboration among all stakeholders. Eventually, as value chains break up into networks and platforms, the role of the organization will shift from that of a controller of resources to that of a facilitator of ecosystems and a conduit for realizing individual aspirations. Speed and agility will be essential to competitiveness. Many companies will look to break up entrenched departments and reporting lines, opting to organize work in smaller and more agile interdisciplinary teams. … Smart leaders will monitor these changes and experiment with new ways of working that align with their company's context and capabilities." I predict cognitive computing will be the most important tool in kit as companies transform into digital enterprises.

Footnotes

[1] Vikram Bhalla, Susanne Dyrchs, and Rainer Strack, "Twelve Forces That Will Radically Change How Organizations Work," Boston Consulting Group, 27 March 2017
[2] Steven Norton, "Digital Transformation Requires Rethinking, VC Says," *The Wall Street Journal*, 28 April 2017.
[3] Kevin Kelly, "The Seven Stages of Robot Replacement," *Backchannel*, 27 December 2016.
[4] HPE, "How IoT Will Change Our Society," *Longitudes*, 31 January 2017.
[5] Randy Bean, "How Companies Say They're Using Big Data," *Harvard Business Review*, 28 April 2017.
[6] Aashish Kalra, "Need for Big Data Intelligence in an Enterprise World," *BusinessWorld*, 1 May 2017.