At the end of 2015, IT analysts looked into their crystal balls to identify trends that will have the most impact on Corporate America in the coming year. What did they see? 2016 will be the start of a new digital era. This coincides fittingly with the launch of EM magazine’s new digital format, the start of IT Insight’s 16th year, and this its first digital edition.

Technology Predictions
IDC predicts that 2016 will be the year that digital transformation really takes off, relying upon four technologies: The power of mobile devices and cloud computing will increase enormously when enhanced by advanced data analysis and artificial intelligence.\(^1,2\)

Forrester predicts that 2016 will be the year of the customer, and organizations that adopt additional digital technologies will leap ahead of their competition. The digital gap will continue to widen.\(^3\) The IDC report\(^2\) supports this, saying that enterprises will open their “digital front doors” to 1,000–10,000 times more customers and customer touch points.

Gartner predicts an increased development of content by machines, increased adoption of the “Internet of Things,” and the use of automated software “agents” and “robo-bosses.” By 2018, 20 percent of all business content will be authored by machines, and 6 billion connected devices will request support. By 2020, smart agents will facilitate 40 percent of mobile transactions.\(^4\)

Implications
Global digitization employs a number of information technologies. Cloud computing, mobile devices, big data, analytics, and the Internet of Things are mainstream and becoming increasingly affordable. Though decades old, artificial intelligence and neural networks are more unproven and costlier. The new digital era will change the way we live and work, and how we perceive technology and the world. Among the many imaginable implications, here are four of note:

1. Leading organizations will make a paradigm shift
Leading organizations will break down institutional, organizational, and cultural barriers. They will adopt technologies by abandoning the mindset, “we have always done things this way”. They will charge ahead with clear strategies and objectives that deliver value by harnessing new technology. They will employ staff with multidisciplinary skill sets to create value throughout the enterprise, adopt agile processes, abandon legacy business processes as needed to respond to the market, reward innovation, and leave laggards behind.

2. Digital requires new leaders and staff
IT leaders with a new mindset and skills will be in demand. Chief Information Officers (CIOs) have a relatively short lifespan, on the average of 4.4 years. A 2014 McKinsey survey says that 20 percent of executives believe that new IT leadership will improve performance
(of this 20 percent, 7 percent are business leaders and 13 percent are IT leaders). A 2015 McKinsey survey says that the most significant challenge to meeting digital priorities is the lack of leadership.

Smart machines will acquire more and more capabilities to replace humans in certain situations. However, the use of automated customer agents requires people with subject matter expertise and interpersonal skills to design the systems, and people with technical skills to develop the systems. Day-to-day operations will require people with multiple skill sets to manage the function and to resolve one-off issues.

Launching new digital technologies could result in the doubling of value-added IT staff, while outsourcing routine functions. Unlocking the value of big data will extend today’s high demand for data scientists, coders, and analysts. To gain the most value, I expect organizations will embed some of these data scientists and analysts in various parts of the business.

3. Users see a more personalized experience
Social media, big data, and the Internet of Things will lead to a better, more personalized, user experience. Software and wearable technologies will allow users to personalize the interface without the need for technical skills. Routine transactional data will feed back to vendor databases, allowing further personalization.

Automated customer service agents, rather than human agents, may help you to resolve software and service issues. These agents will be well-versed on anticipated issues and their resolution and will have personalized information at their fingertips to more quickly and effectively resolve everyday issues.

4. Analytics will make sense of big data
Big data technologies enabled organizations to collect massive amounts of data, but by themselves did not provide insight. Often, only large marketing organizations took advantage of big data. Successful organizations will take big data to the next level. They will employ data scientists and use powerful analytics tools to better understand the data, and act upon it. In addition, they will extend big data beyond the marketing function, permitting better decision-making throughout the business enterprise.

A New Digital Future
IT analysts (and I) see 2016 as the launch pad to a new digital future, with significant changes coming over the next five years. Leading organizations will differentiate themselves by breaking the old paradigms for new ones, applying technologies, and rewarding innovation. Individuals will benefit from new career options, a more personalized user experience, and better data for decision-making.

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References