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In an uncertain economy and marketplace, change is the only loonstant. Long-range planning has grown nearly impossible. Competition is fiercer and faster than ever, as advances in technologies have shrunk the mean time to detect (MTD) and mean time to respond (MTR) to marketplace changes.

Companies need to be adaptive and agile to thrive. In fact, the ability of companies to sense and respond to their environment is quickly becoming a core competitive differentiator. Dynamic companies have begun to recognize that harnessing several emerging technologies can allow them to compete more effectively in this fast-changing environment.

Four "new" technologies — cloud computing, mobility, social media and data analytics — which arguably are not at all new, but rather a culmination of more than 50 years of evolutionary progress in the physics of silicon and circuitry — are rapidly changing business models across every industry.

Chief financial officers (CFO) are finally beginning to realize the promise (versus the vendor hype) of these technologies for competitive advantage. Implemented right, these technologies present a window of opportunity for CFOs to unlock new agility to innovate in and disrupt their markets.

For instance, social media enables companies to test new brands and concepts and quickly build product demand through customer interaction. Cloud computing enables them to scale their compute capacity up or down in response to business demands. Mobile technologies allow them to push new self-service capabilities out to their client base wherever the customer may be, while data analytics enables the ability to quickly sense trends and respond accordingly.

But these technologies are unlikely to fulfill their promise if they are treated as the end-game — when, in fact, the business strategy is the end-game. CFOs need to be squarely at the table, asking the right questions, and helping to establish the framework and guardrails about how technology can support the organization's strategic objectives, and not the other way around.

Leveraging the Cloud and Mobile as a Foundation

At its core, cloud computing allows the rapid scaling of a company's computing power separated from asset ownership and location while taking into account security and controls requirements. For CFOs, cloud discussions normally start (and too often end) with an analysis of operating expenses (OPEX) versus capital expenses (CAPEX) spending.

Strategically, though, these discussions should start with a conversation among key stakeholders as to the nature of information technology as an asset, the value it (and the company's data) contribute to the business and what can be "rented" as a commodity service versus what needs to be owned, managed and protected as a value-add component of the business. These emerging technologies present the opportunity and impetus for CFOs to lead that discussion in

a manner different from the past.

Extending applications and corporate data out to any device, employee, customer or supplier, exponentially increases the locations from which business can be conducted. Today, business leaders are asking: How can we use mobile applications to enable our key stakeholders to engage with us wherever they are and whenever they want? CFOs should view mobility technology as one of the greatest opportunities to disrupt the MTD and MTR equation.

Fostering the Organizational Capability to Sense and Respond

For most CFOs, identifying a single source of truth has long been a priority. With the exponential growth of available data, they now face the "big data" dilemma. At its heart, big data is a continuation of the challenge to handle the ever increasing volume, velocity and variety of data available to a company, sort through it and validate its veracity, synthesize it into meaningful, actionable content and deliver it in a timely enough manner to whomever can make the most use of it.

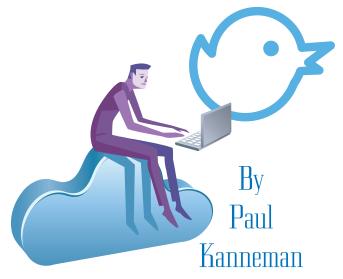
The use of data analytics to help organizations sense and respond has risen to the top of many corporate agendas. Certainly, businesses are inundated with data. In 2000, there were 220 million embedded devices capable of sensing, storing and reporting data within the United States. In 2012, that number grew to 10 billion.

All of these devices send endless information back to an organization — reporting, for example, which products and services are selling, in what locations and what times, consumer demographics and behaviors, etc. Along with this sea of structured data, information from social media and mobility applications present an ever-expanding volume of unstructured data, such as content on Web pages and the integration of media other than text, such as videos or voicemail. Ultimately, success hinges not on having the most data but, rather, the right data.

Data analytics brings together data from various sources, formats and media, and models that data to highlight trends, predict key events or accurately depict current status. Leading companies are already using it to sense and respond to the marketplace, guide decision-making and make needed midcourse directions that optimize results.

One example of synthesizing multi-modal and multimedia data to enhance supply chain and revenue results is the high-tech Coca-Cola Freestyle Fountain Machine, which dispenses nearly any Coca-Cola Co. product from one machine. Inside that machine is an embedded chip that is networked to Coca-Cola headquarters for diagnostics and reordering. Consumer choices are catalogued, fed back to headquarters, and then decisions are made nearly in real time to readjust the flow of product to that specific restaurant or marketplace.

Coke is using the technology to sense and respond in a way that provides a competitive advantage, due to both the "coolness" of the machine and shrinking MTD and MTR asso-



ciated with consumer preferences.

Mastering big data — and leveraging the tools of cloud, mobile and social to do it — represents the key challenge in winning the "sense and respond" race in our "new normal" economy.

Advancing a Brand in Social Media

Social media may be excessively hyped, but it is far too pervasive and influential for CFOs to ignore. Facebook is now the most visited website on the planet. In October 2012, there were one billion users. If a company's digital marketing strategy hasn't fully encompassed social media — particularly Facebook, LinkedIn and Google Plus — it may be passing up ample opportunities to engage with consumers, garner feedback about products and services and build its brand.

Companies that may be paying money for search engine optimization but aren't active on Facebook are going to be trumped by those with better social media strategies.

A growing number of companies are using social care, i.e., providing regular customer service through social media platforms, to connect with customers. Not only is this cost effective, but many customers prefer it. A 2012 Nielsen

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new" technologies can unleash for their companies in driving profitability and value.



Co. and McKinsey & Co. study revealed that one in three social media users prefer social care to contacting a company by phone. Companies successfully leveraging social media have come to understand that it now represents the predominant channel for word-of-mouth advertising and provides a key channel to sense, respond and adapt to the changing cultural and workspace environment.

Five or six years ago, the discussion surrounding social media was whether it had commercial relevance. Next, the overarching questions were about security and data ownership. Now the conversations have shifted toward business outcomes.

CFOs are asking: How are we going to leverage this to improve our sales and marketing function? How do we tap into social media to improve customer service, recruiting and human resources? How do we maximize its value as a sensing and responding mechanism for the enterprise?

Implications for CFOs: What Needs to Change?

Many CFOs have already been grappling with some of the aforementioned issues at their organizations. The questions many have is: What do I do with all of this or what are the implications for my organization?

Here are five key takeaways for CFOs for leading their organizations through this technological shift.

1. Have the Tough, Strategic Conversations First.

The discussion about a company's technology should never start with a discussion of technology. The CFO can be a pivotal resource in focusing the discussion on strategy, rather than technology. What really matters to remain competitive? Does the company have the appropriate sensing and responding mechanisms in place to adapt to the current environment?

Begin with strategy and "what if" questions about the possibilities. Frame the technology discussion around a desired outcome that yields bottom-line results. Only in that context should technology come into play as a force multiplier, critical enabler or effective utility. It is critical for the CFO to gain consensus among key stakeholders, including external business associates, as to the business imperative (the why), the risks and rewards, the guardrails bounding any decision and contribution of technology to the desired outcome (the how and what).

2. Shift to Outcomes-based IT Model.

Management needs to examine the fundamental structure, skillset and resource deployment of its IT capability given the emerging technologies and the shift to outcomes-based IT delivery. The CFO can play a pivotal role in helping ask the right questions about the IT organization.

How does the current IT structure facilitate the company's ability to rapidly sense, respond and make mid-course corrections to market conditions? What skills and governance structure

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are needed? What acquisition and deployment process is needed? What, when and where are data and compute capability needed? A core competency for IT in the past has been the "manufacturing or fabrication" of IT components — software development and infrastructure deployment. However, a core competency that might better serve the company looking forward is one of demand management, sourcing/procurement and data oversight.

Should IT resources be positioned as coaches and coordinators to support

the team's business unit head in crafting, procuring and deploying technology? Should the senior IT resource be positioned in a more prominent governance role that crafts the guardrails and guidelines regarding security, control, procurement, deployment and operation of technology, rather than being the chief operator of technology? This scenario would leave more technology decisions to business teams.

3. Establish Strong Data Governance.

A critical success factor in sensing and responding is identifying, acquiring, analyzing and synthesizing the right data to capture the company's strategic intent and to make rapid and agile mid-course corrections. Often companies attempt to leverage the new technology (and acquired data) by just overlaying it on an existing foundation of business information. This often results in a lot of value leakage by the time the technology is deployed and the data presented. It may even cause the initiative to fail.

Most IT professionals and their business counterparts readily acknowledge the disarray of their company's existing data structure. Yet few want to take the time and effort to normalize that data. This requires identifying what is really important, defining the data attributes and determining how it is to be stored, managed and protected. Complaints abound when the benefits of intelligence or data analytic technologies are not realized due to data inefficiencies.

Before approaching a big data initiative, the CFO should act as the catalyst to achieve clear consensus on what data matters and how it is defined, controlled and protected, e.g., ensuring the company has a master data management capability.

4. Challenge the Current IT Cost Model.

For most companies, gone are the days when they were forced to estimate demand and invest in servers, mainframes and staffing accordingly over a multi-year horizon, normally about five to seven years. Those companies that underestimated demand ran into customer service issues or client satisfaction issues. Those that overestimated demand failed to allocate their capital efficiently.

Instead, with cloud computing, hardware, software and infrastructure can be delivered as a service, much like a utility. Companies can provision and de-provision compute capacity and network services as needed, hence balancing supply and

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demand much more closely than the past. They also can better utilize and scale resources, without capital investment in the core infrastructure and staffing required to run these technologies.

These emerging technologies present the opportunity and impetus for CFOs to begin these discussions about the company's IT model. In the long run, IT may become more like a commoditized utility model, like water or electricity. If a company has its own data center, the CFO should be asking: What is the strategic imperative for operating and staffing our own

compute utility? What are the advantages of licensing on-premise software applications, e.g., email and office applications, or core customer-relationship management (CRM) or enterprise resource planning (ERP) software, versus subscribing or renting?

Though the topics of these discussions are not new, too often they have failed to achieve clear consensus among stakeholders who drive procurement and deployment decisions. The CFO needs to be asking how to best deploy company funds in IT, in order to change the fundamental cost structure from a relatively fixed/non-discretionary spend (in many organizations as high as 80 percent to 90 percent of total IT spend) to a more balanced model, in which IT spend tracks with market conditions. In this scenario, as much as 50 percent of the total IT spend would be variable and discretionary.

This was the case with a U.S. based ethnic-food themed restaurant chain that was being spun off recently from its parent company. It had one year to create a standalone IT environment for both its stores and corporate operations. Rather than re-construct what it had been using with the parent, the company, in an effort led by the CFO, questioned the existing IT model supporting most restaurant chains and asked the question: "What if we didn't have to 'own' any of it?"

What evolved was a hybrid environment with components operating in the cloud, back offices being supported through hosted, outsourced solutions and a relatively small piece of the overall solution being owned and operated by the company. This resulted in a highly variable IT cost structure that was significantly more advantageous than the existing services agreement with the parent and extremely competitive within an already competitive industry.

It also allowed for a smaller IT function, primarily focused on provisioning services and helping the business sense and respond to developing market conditions.

5. Consider a Two-Tier ERP Model.

Many companies have made large capital investments in existing, on-premise ERP implementations and, for obvious reasons, are reluctant to walk away from these systems. Interestingly, a growing number are leveraging cloud ERP systems alongside their on-premise ERP systems in a twotiered strategy. This strategy enables them to keep expensive,

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existing ERP systems at the corporate level, while empowering divisions and business units to innovate with a second, often cloud-based, ERP system.

In fact, a 2011 survey showed almost 50 percent of companies are now starting to look at this type of two-tiered approach. The benefits include lower capital expenditures, increased operational efficiencies and improved speed, flexibility and visibility due to the increased standardization of ERP systems.

This was the case for a Philippinesbased restaurant chain, when it was ex-

panding throughout Asia and North America. The company already had a sizeable investment in an on-premise ERP system. When the company looked at rolling this into the expansion regions, it realized it was far too costly and time-consuming and began to explore a cloud-based ERP solution for the second-tier locations.

The company ultimately chose a cloud provider of ERP solutions for its regional expansion locations and quickly saw numerous benefits. Supply ordering times dropped from three days to one. The regional managers were able to better customize and control those systems related to taxation and supply chain process. Ultimately, the company established a strong foundation for growth and better systems controls throughout the organization.

CFOs Need to Lead the Conversation

These technologies may not be particularly new, but what is new is that companies are beginning to harvest their business value. Together, cloud computing, mobility, social media and data analytics technologies offer opportunities to achieve groundbreaking levels of efficiency, cost savings, flexibility, scalability and agility.

A growing number of CFOs are moving from awareness to acute interest when considering the competitive innovations or disruptions these technologies can unleash for their companies. CFOs need to lead these conversations and raise new questions about how these technologies can drive profitability and value.

Bringing these opportunities to fruition requires a relentless focus on the big-picture outcomes and how the technology can support them. It doesn't require CFOs to know everything about the inner workings of the technology, but rather to ask the forward-looking "what if" questions about the performance of the business. Those CFOs that recognize these strategic opportunities and act on them will help their companies achieve competitive advantage.

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