

## Meet Your New Partner: The Ascendancy of Government

By Wes Frye, Marc Girardot, and Kaveh Safavi, M.D.,  
Cisco Internet Business Solutions Group (IBSG)

### Introduction

The worst economic crisis since the Great Depression set the stage for government's increasing role in the private sector. The bailout of some of the largest financial institutions was just the beginning, with government becoming part "owner" in banks, setting further industry regulations. More government bailouts followed in the automotive industry worldwide, with the loaning of billions of dollars to automakers.

In February, U.S. President Barack Obama signed into law a \$787 billion stimulus package designed to rev up the American economy and create more jobs across industry sectors, including \$4.5 billion for smart grid projects.<sup>1</sup> More recent is the Obama Administration's plans to overhaul the U.S. healthcare system. The proposal includes a "public option" that naysayers argue would position the federal government as a "competitive" healthcare provider for citizens who cannot afford costlier insurance or do not have a group plan—a clear indication that government's role in the private sector is on the rise.

What implications does government intervention have for CIOs from a business and technology perspective? What must they do differently to help ensure their companies' success while "partnering" with government?

The days of the CIO reacting only to the technological needs of the enterprise are over. This Point of View discusses how government intervention is changing CIOs' role, creating opportunities for them to become strategic leaders rather than expense managers.

### Moving Out of the Back Office and into the Front Office

CIOs can no longer work solely in a supporting role, taking orders for and allocating technology to front-office departments that need IT support. The new way of working requires that CIOs become "entrepreneurial," actively seeking out technologies to drive new business opportunities. These strategies are discussed in further detail, using three examples of industries currently under the government's microscope.



## Smart Grid

Smart grid is a data network that overlays the transmission and distribution network used to conduct electricity—from the point of generation to consumption. In the United States, smart grid stimulus funding is being allocated to modernize the electric grid in areas including demand response equipment, security and reliability, energy storage, R&D, and disaster recovery. Roughly \$3.4 billion is for smart grid investment grants and \$615 million for demonstration projects. Some of this money will flow through the states, which will evaluate proposals and issue grants. Some will flow through the Department of Energy (DOE), which has its own application and evaluation process (awarding up to \$200 million per project).<sup>2</sup> The first phase of funding closed in early August; the DOE expects to make its first announcement regarding grants for commercial- and demonstration-scale smart grid programs in mid-November.<sup>3</sup>

Smart grid stimulus funding will provide CIOs—particularly those of Fortune 500 companies—with a major opportunity to leap in front of the energy industry's biggest evolution in 30 years, with IT at the center of everything. Awardees must demonstrate the validity of smart grid: Is it real? Does it improve grid operations? Does it create value for the end customer? Does it provide new business opportunities? Is it "shovel-ready"? Can it create jobs within the one-and-a-half year timeframe imposed by grant parameters?

Smart grid promises to provide a secure electricity delivery system that can reduce blackouts, guard against terrorist attacks, and meet tougher standards for greenhouse gas emissions. Sensors installed across the electric grid will enable utilities to gather data on how grid equipment is operating and monitor/influence energy demand, providing consumers with near-real-time visibility into how much power they are using. For example, energy management systems in homes and buildings can provide consumers with a readout showing how much energy different appliances use, and can actively turn off unnecessary lights, thermostats, and appliances. Information collected is transmitted back to the utility, allowing it to perform automated billing and service, restore interruptions remotely, identify outages, control physical access into substations, mitigate some blackouts before they occur, and predict equipment failures.

Smart grid requires robust and secure data communications among various grid components, generation plants, distributed grid equipment, utility data centers, and households. The challenge for CIOs will be in figuring out how to architect a system that can provide information in near real time, ensure that the information is secure, and convert multiple open and proprietary protocols. In addition, CIOs will have to determine the cost of building such an architecture, and how it will impact actual energy usage and carbon emissions.

Smart grid is still in its infancy; new technologies and solutions are being announced nearly every day. CIOs must develop an architecture that is flexible, scalable, and secure enough to evolve as technologies change over the next 20 years. CIOs will also need to anticipate changing solutions and build a plan that will survive early obsolescence and establish the network as the platform to ensure their companies' success. Such efforts would propel CIOs to the front office in regard to how the business, as a whole, goes about doing everything from revenue recognition and asset planning to service/repair/maintenance of their asset base in the field.

## Healthcare

Providing affordable, accessible, and quality healthcare is a common goal for governments of many nations. Some have addressed the issue, while others are just beginning. A recent proposal set forth by the Obama Administration to reform healthcare in the United States aims to achieve these objectives. The big issue, however, is how to improve access to healthcare without increasing costs. This ongoing debate has forced governments to conduct “business as usual” for decades.

The technological tools at the healthcare industry’s disposal have helped improve quality in terms of curing illness. At the same time, current market conditions have had little to no positive impact on the way physicians, clinicians, and nurses work—their work styles have not changed in 50 years.

The U.S. government’s view is that the healthcare industry has moved sluggishly to address affordable, accessible, quality healthcare. Institutions have been slow to invest resources in activities that make care safe and eliminate unnecessary expenses such as duplicate tests, extended hospital stays, wasted supplies, and fraudulent payments. Because of these inadequacies, government is creating regulations and financial incentives for providers and lowering medical payments to achieve greater efficiencies in healthcare.

Information and communications technology (ICT) has become the center of the healthcare conversation in terms of improving cost, access, and quality simultaneously. The healthcare industry spends only 2 percent of gross revenues on health ICT, compared to other information-intensive industries such as finance, which spends upward of 10 percent.<sup>4</sup>

For example, as of 2000, less than 10 percent of American hospitals had implemented electronic health records (EHRs)<sup>5</sup> and computerized physician order entry (CPOE), while only 16 percent of primary care physicians used EHRs.<sup>6</sup>

The benefits of EHRs include improved care and potentially reduced costs. For example, printing and mailing checks is costly to healthcare. America could save \$11 billion annually if all medical payment transactions in the United States were handled electronically via direct deposit.<sup>7</sup> Improved communication among caregivers can reclaim the nearly 30 percent of time staff spend looking for people needed to do their jobs. Investments in supply chain and asset management can reduce some of the 20 percent excess inventory in expensive medical items hospital staff hoard because they cannot find them when needed.<sup>8</sup> This type of fundamental improvement will be needed to free resources, expand insurance coverage, and address the cost burden of both an aging population and medical innovation.

CIOs can help their companies manage healthcare costs by implementing ICT to achieve operational efficiencies and to reach more patients with limited resources. Imperatives that have technological components include:

- **Information exchange:** Requires a secure, safe, and reliable network.
- **Productivity:** Requires significant technology to improve how medicine is practiced and delivered (such as mobile devices for communicating with staff and locating colleagues and supplies, and network platforms that connect clinicians to scarce expert resources such as specialists to provide remote care).
- **Patient-centered care:** Patients will expect more personalized and customized care, more access to their own information, and the ability to interact with care providers and

payers, much as they interact with other business or service organizations. In addition, value-based<sup>9</sup> purchasing will place increased emphasis on the patient experience.

Healthcare organizations will have to treat more patients with less, regardless of what happens in Washington, D.C. CIOs must view the impact of government's role in the enterprise as a strategic imperative rather than react to government mandates simply as expense managers. Those who use technology to improve productivity and effectiveness sooner rather than later likely will not suffer government penalties. If CIOs begin the journey after mandates have been established, their organizations will fall behind.

## Automotive

The automotive industry crisis, which erupted in late 2008, is part of the global financial downturn. There is no doubt in automobile executives' minds that their business model—based on the 100-year-old, capital-intensive Ford model—is broken. The fact that governments had to intervene is more of a consequence than a cause. Governments across the globe—from France, Germany, and Italy to Japan and the United States—loaned money to automakers, exceeding billions of dollars. The industry is not out of the woods yet.

Faced with the realization that their outdated business models must evolve, automakers are challenged not only to meet customers' increasing demands for product diversity, but also to adhere to government regulations for green standards. Simply put, the auto industry culture has to change—not just in Detroit, but around the globe. Doing so requires a vision that redefines the boundaries of the industry through increased information sharing and partnerships, and by focusing on areas that promote differentiation.

From an IT standpoint, there are two things CIOs can do today to define and support a new culture and redefine industry boundaries:

1. **Provide an ICT platform for collaboration and communication:** Cisco, for example, is defining a new company culture using Unified Communications technology to conduct large, internal company events virtually, such as its annual global sales meeting. A communication and collaboration platform is successful if everyone is aligned and has the same vision. There is a need in the auto industry not only to manage a different culture, but also to manage the aspiration to create a more growth-oriented experience. The Chevy Volt<sup>10</sup> from General Motors and the LEAF<sup>11</sup> from Nissan are two examples of innovative aspirations—in this case, the aspiration to build electric cars.
2. **Implement IT systems that provide more virtualization, security, and flexibility:** These systems can be seamlessly integrated with those of external partners that provide larger parts of the manufacturing process, and can support innovative third-party technology for the next energy platform (electric, hydrogen, fuel cell, compressed air) or car design (weight reduction and self-driving and connected cars).

Selling cars—not buying ICT—has been the top priority of CEOs because they have been fighting for their companies' survival. Therefore, the challenge for CIOs will be in building an ICT platform while saving money. Most OEMs have cut costs this year and know that they need to provide a more constructive vision that focuses on growth and innovation. This is starting to happen in the United States with Chrysler's plans for the "connected vehicle."

From an ICT standpoint, CIOs need to establish a business model that streamlines, rationalizes, and standardizes ICT costs, and then invests those savings in innovative technologies to support transformation.

Two lessons can be learned from the auto industry crisis:

1. **Anybody can sell, everyone is vulnerable.** No one is immune to this crisis. All car manufacturers are faced with a growing disconnect between providing a wide range of richly featured, personalized, environmentally friendly vehicles and dealing with an antiquated legacy supply side that is both inflexible and oversized.
2. **Financing will be harder to come by.** Companies will need to invest frugally because bankers will require less risk and a more robust business case. Most governments across the globe will want to leave the lending business as soon as possible because it is expensive and they, too, have budget constraints.

Going forward, some governments are planning to impose—or are already implementing—regulations requiring OEMs to build cars locally, thereby stimulating local employment. These types of regulations could stop the industry from evolving. If they are to evolve, OEMs must create a vision that is growth-oriented and produces employment in a way that justifies some degree of change. This is happening in the United States, where the Michigan auto industry has stated its intentions to become the “Silicon Valley” of the connected vehicle concept.

If companies do not change and continue shutting down plants, governments will withhold further support—at least until car companies provide a positive vision.

The auto industry crisis is systemic and requires a different culture to produce change. CIOs can drive change using ICT to help companies create and support a new culture, one that is vastly different from that of the early 20th century.

## Conclusion

The inevitable reality, with or without specific legislation, is that government intervention in the private sector will create public-private partnerships and solutions. CIOs must expand these partnerships, becoming strategic leaders to influence positive change and viewing technology not as an expense, but as a strategic tool to demonstrate how work can be done differently, efficiently, and profitably.

For more information, please contact:

Wes Frye  
Public Sector Practice  
Cisco Internet Business Solutions Group (IBSG)  
[wfrye@cisco.com](mailto:wfrye@cisco.com)  
+1-212-714-4295

Marc Girardot  
Manufacturing Practice  
Cisco Internet Business Solutions Group (IBSG)  
[mgirardo@cisco.com](mailto:mgirardo@cisco.com)  
+33-15 804-3027

Kaveh Safavi, M.D.  
Healthcare Practice  
Cisco Internet Business Solutions Group (IBSG)  
[kasafavi@cisco.com](mailto:kasafavi@cisco.com)  
+1-773-695-8324

## Endnotes

1. <http://www.energy.gov/recovery/index.htm>
2. Ibid.
3. Smart Grid Investment Program, Funding Opportunity Number: DE-FOA-0000058, Initial Announcement, CFDA Number: 81 122-Electricity Delivery and Energy Reliability, Research Department Analysis, U.S. Department of Energy, Office of Delivery and Energy Reliability, June 25, 2009.
4. "Clinical Information Systems: Achieving the Vision," Raymond, B. and C. Dold, Kaiser Permanente Institute for Health Policy, 2002; "Correlates of Electronic Health Record Adoption in Office Practices: A Statewide Survey," Simon S.R., Kaushal R, Cleary P.D., et al, Journal of American Medicine Information Association, Vol. 14 (1), pps. 110–7. 2007; "Examining the Adoption of Electronic Health Records and Personal Digital Assistants by Family Physicians in Florida," Menachemi N., Perkins R.M., van Durme D.J., Brooks R.G, Informatics in Primary Care, Vol. 14 (1), pps. 1–9, PMID 16848961, 2006.
5. <http://www.ajhp.org/cgi/content/abstract/57/19/1759>  
EHRs comprise electronic health information about individual patients or populations that can be shared within and across different healthcare settings by being embedded in network-connected, enterprisewide information systems.
6. <http://archinte.ama-assn.org/cgi/content/short/167/13/1400>
7. [http://www.nuesoft.com/media/Washington\\_Post\\_Healthcare\\_Tech.pdf](http://www.nuesoft.com/media/Washington_Post_Healthcare_Tech.pdf)
8. "Global Healthcare Information Trends," Kaveh Safavi, M.D., IBSG Healthcare Practice, 2008.
9. Value-based purchasing is based on the principal of paying providers not just for the work they do, but also for the results (value) patients receive.
10. <http://gm-volt.com/about/>
11. <http://www.nissanusa.com/leaf-electric-car/#/car/details>