

As e-government enters the difficult and dangerous territory of cross-boundary transformation, what does this mean in terms of CIO leadership?

A Sobering Challenge

TO CREATE VALUE, PEOPLE NEED CAPACITY AND DESIRE.

In creating e-government, we've used capacity provided by the continuously growing power of Moore's Law and Metcalfe's Law (the value of a network increases exponentially with the number of nodes). Computing that cost \$100,000 when I worked for New York City Mayor John Lindsay would have cost less than 20 cents in 1967 had today's technology been available. Damn impressive, eh?

Of course, value comes not from technology alone. We need to apply the capabilities of IT to create new production and organizational capacity. Over the years, applications shifted in focus from the centralized beast in the basement — mainframes — to a decentralized revolution of the masses — PCs — and most recently to the Internet as the source of network-delivered services — “online, not in line.” While we've used technology for many valuable things, the most important benefit for the public has been easier access to services.

BY JERRY MECHLING | PHOTOS BY KELLY LADUKE



Jerry Mechling's 30-year career in government and technology got its start in the 1960s working for New York City Mayor John Lindsay.



What incentives made networked services possible? Note that two stakeholder groups made it happen: the technology community that built the infrastructure, and the public that invested and then learned their part in the electronic services dance. Boiling it down to CIOs and the public is, of course, a huge simplification.

The movement to online hasn't always been easy. We've put serious financial resources and leadership into it, and received great value from it. Online government has been well received, and as it's spread, has made society more productive. We've come a long way since the 1960s.

At the same time, however, it's important to realize online government has been pretty much a consensus effort. The *distribution* of government services changed dramatically, but production remained rather constant. As a result — and unlike the case with many other economic, social and political changes — there has not been a powerful opposition to overcome.

Unfortunately that's already changing.

Rough Ride Ahead

So far, e-government has worked mostly with technical workers and the individuals using or directly providing online services. Not much has been demanded of the vast number of workers in other segments of the value chain. Distribution changed. Production didn't.

For the future, however, change is needed throughout the value chain. We are moving to coordinate larger communities of interaction, getting them to work together in new ways. For example, it won't be just changing the

few steps involved in reporting aggregated health data to the public. It will also be changing the countless steps involved in sharing medical records and analysis among doctors, nurses, clinics, hospitals, pharmacies, patients, insurance companies, the government and the public.

For the next e-government phase, the unit of change is becoming much larger, extending to entire industries — such as travel, international trade and health care — and to policy communities such as environmental protection, criminal justice and education.

Such change is extremely “cross-boundary,” meaning that many independent organizations must work together. Almost everything — at least at first — will require negotiation. For cross-boundary change, there is a difficult ambiguity about who has jurisdiction to resolve disputes. It's a frontier with all the newness, excitement, innovation and disorganization that it implies.

Look briefly at a few examples:

Integrated service delivery to the public: Some jurisdictions are creating new one-stop organizations to handle all channels of interaction with the public: face-to-face, telephone, mail and Internet. Jobs are changing and people are being reassigned.

Integrated administrative services inside government: Some jurisdictions are adopting enterprisewide, even jurisdictionwide, systems for human resources, accounting, budgeting and performance management. Again, jobs are changing, redundant jobs are being cut and workers reassigned.

Health-care reform: Some jurisdictions are attacking the many information-related inefficiencies in health care, and given that 16 percent of the gross domestic product is allocated to U.S. health care, this is a huge target. A key problem for reform is reaching the vast majority of patient-doctor transactions that occur in practices with fewer than six doctors. Procedures and staff in these practices will need to change.

Homeland security: Different jurisdictions and institutions are seeking to integrate information for better analysis and security. This is a huge cross-boundary problem that raises major concerns about privacy, equity and security.

Environmental protection: Several jurisdictions and sectors of the economy are developing GIS, GPS and other applications to capture and share information about environmental issues. In the new data-sharing community, how will we resolve issues about standards and accountability? How will we fund what needs to be done?

Lifelong education: Multiple institutions in the increasingly knowledge-based global economy see educational reform as essential. Education is becoming a critical lifetime concern for individuals, institutions and entire societies.



Public engagement: As we venture deeper into a digital world, the problem with democracy is not just voting, but also figuring out how diverse interests and capabilities can engage in the “conversation” that seeks to define public interest. Technology options abound, but all raise issues of the power balance among executives, legislators and the public.

Economic development: With market-based units under increased competitive pressure and free to move about the world, technology is key in determining where companies and jobs locate; regions need to cooperate to strengthen their comparative advantage in a global context.

These examples all require coordination across agencies, jurisdictions and sectors of the economy. The unit of change is larger than the individual, larger than the work group, and larger than a single program or agency. We must change the behavior of communities of interacting individuals and agencies, often engaging thousands, hundreds of thousands or even millions of people.

Size alone makes this difficult. More than that, however, it’s clear the changes required won’t be a consensus cakewalk. Jobs will change. Careers will change. Status and relationships will change. Some people will see themselves as worse off, perhaps dangerously worse off, even completely without a role in the new order. In such situations, people are rightfully anxious. As e-government moves to the future, reform becomes a game of musical chairs. When the music stops, people must find new chairs, and some won’t be able to do so.

E-government to date is thus quite different from e-government for the future. Taking advantage of cross-boundary transformation will require wise leadership in the face of serious anxiety and opposition. Conflict is coming with the new territory. To resolve those conflicts and succeed, we need good governance. When the Articles of Confederation couldn’t hack it, we created the Federalist Papers and the Constitution. What shall we create for e-government?

Governance: Allocating Authority

Cross-boundary reforms often start informally, on a largely voluntary basis. For example, the U.S. Environmental Protection Agency (EPA) started more than a decade ago to work with states on how they managed environmental data. Negotiations defined what data was needed, who would gather it, and who would be allowed to edit and release it to the public. Compromises were made, and new work procedures made it easier to measure environmental activities and conditions over space and time. As work reforms went forward, Internet standards such as TCP/IP, HTML and XML evolved to make communications and collaboration

easier. Over the years, the scope, scale and efficiencies of environmental data management grew dramatically.

For some communities and problems, however, voluntary or informal collaboration is not good enough. Keeping the community together and working effectively may require faster decisions. It may require full-time employees working in explicitly defined jobs and institutions. It may require significant allocations or reallocations of money. It may require new standards and infrastructures.

These governance issues have become increasingly important within the environmental data management community. In response, efforts have emerged to formalize authority. After cooperating informally for several years in developing the National Environmental Information Exchange Network, the EPA and states have established more explicit relationships. A leadership committee and an operations committee now exist with specified authority to manage the network’s growing workload.

As different communities face similar issues — much as the colonies struggled under the Articles of Confederation — what structures should they consider? When consensus decision-making can’t keep up with the demands, how can communities resolve conflicts and hold together?

In the private sector, companies and industries respond to such issues because of pressures for efficiency. While governments also like efficiency, they tend to be driven more by concerns for equity and legitimacy. Politics lie at the heart of government reforms. Constituents who influence elections command attention. Thus, as e-government moves to the territory of cross-boundary transformation, good analysis must include political analysis. The efficiencies offered by technology-enabled reforms must align well with the larger forces on the political scene.

Here are four key tasks for successful cross-boundary transformation:

Identify communities ripe for change. Which IT-based reforms within which communities of interaction should be the top priorities in terms of risk versus return? For this we need not just a “business case,” but also a “public value case.” We need to spot cross-boundary opportunities for better efficiency, equity and legitimacy. We need to understand how to mobilize support and keep the citizen/customer at the center of attention and value creation. If we fail to analyze the right issues, including the political dimension of those issues, we won’t be able to make good choices.

Develop organizational models for a cross-boundary world. When informal cooperation isn’t enough, what authority structures should be considered? For example, how should we organize technology staff within government? When and



how should we establish cross-boundary organizations — perhaps like the statutory boards of Singapore, the Crown (state-owned) corporations of Canada, or new units such as the Department of Homeland Security? When and how should we create public/private groups like the National Automated Clearing House Association’s committees that developed the QUEST standards for distributing government financial assistance through the banking network? When should we outsource activities that are no longer part of government’s strategic core?

Develop cross-boundary funding models. Given economic and demographic trends, governments need new revenue and budget models. Budget analysis typically fails to look for multi-agency, multi-year innovations, yet these are the big targets for a cross-boundary future. Also, even though government revenues have been falling off a cliff, we have yet to seriously explore how information technologies could open up new possibilities for low-cost fee and tax collection systems. Digital government needs bold new funding models.

Develop standardized yet flexible information infrastructures. What makes IT so attractive is its ability to benefit from both innovation and standardization. Start small and scale fast. With standards as a critical tool for cross-boundary coordination, how do we avoid moving too late, or too soon? How do we balance the rights of private actors — intellectual property — against the rights of the community — fair use? How do we get efficiencies of scale, yet remain flexible?

Cross-boundary transformation is inherently difficult. What makes it doubly difficult is the fact that, for many leaders, the bloom is off the technology rose. E-government was the future five years ago. But for the many reasons we know too well — the dot-com bust, a major recession, the rise of terrorist threats and concerns about national security — e-government no longer holds front-burner status in the policy kitchen.

As a result, we must pull new groups together to analyze and act on the emerging new cross-boundary options. We need to work on these problems not just as state people, not just as federal people and not just as technology people, but as appropriate mixes that can work together on a cross-boundary basis. We need to engage generalists within government. We also need to reach out to the general public, mobilizing support beyond the insiders. For serious cross-boundary reforms, we need new leadership, organizations, budgeting authority and infrastructure.

Simply Too Hard?

While “online, not in line” has been a great ride, the “cross-boundary transformation” ride will be considerably rougher. Given the difficulties, can we responsibly just duck it? Is it reasonable to think cross-boundary transformation is simply too hard? Can we avoid the opposition raised by institutional integration by working instead on virtual integration that won’t be nearly so heavy-handed or resisted?

To a degree, yes we can. And we should. We should continue to improve customer service through virtual integration and new technologies. We should pursue broadband and wireless and “three clicks to anything” that provide room for relatively safe progress.

As another dodge, it’s also true that if we wait long enough, market pressures rather than government leadership will create some of what we are talking about here.

The great risk for the future, however, is that painful dislocations in the global economy may lead to a protectionist nightmare. Trying to stop the world or ignore what’s going on out there won’t work. It may perhaps look safer between now and the next election, but it will only look safer for the very short run.

And we can’t really afford the road to economic stagnation and collapse. We couldn’t afford it in the 1780s either. Then we avoided coming apart at the seams by arguing through the Federalist issues and agreeing painfully to our new Constitution. We resolved huge conflicts by agreeing on governing principles and authority. There was no guarantee at the time that new governance would work. In fact, it came very close to not working.

So may it be also for the future of e-government. Success with cross-boundary transformation will need to be won. It is not guaranteed.

That’s a sobering challenge, but I remain optimistic. The future will be different, difficult and very interesting. I personally would like to stay tuned, and preferably, fully engaged. ☺