

# Architecting Resilience

## Perspectives from Public Sector Leaders

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*Public sector decision makers are under enormous pressure to deliver results in difficult and uncertain times. This paper offers a brief assessment of the situation they face, drawing on interviews with 114 public sector leaders around the world. It is the first in a series of white papers that describes how the public sector can enable greater resilience and productivity using secure, distributed networks.*

The years since the global financial crisis began in 2007 have been difficult for public sector managers around the world. The first-order impacts of the crisis are obvious: declining tax revenues, difficult and urgent policy decisions on what to cut, and increasing citizen needs for public assistance. But beyond the demands of crisis management and rising austerity, there is a growing and unsettling sense of vulnerability to powerful transitions associated with rapid demographic shifts, new threats such as cybercrime, and the persistent implications of global climate change.

To better understand how public sector leaders are responding to diminished resources and expanding threats, the Cisco® Internet Business Solutions Group (IBSG) Public Sector Practice interviewed 114 senior-level decision makers in public sector institutions around the world. We kept these interviews deliberately broad and qualitative in nature, asking interviewees initially to identify the top 3-5 opportunities and challenges they currently face.

Despite obvious differences across regions and roles, a powerful narrative, based on the concept of *resilience*, emerged from a number of these conversations. This storyline was so compelling that it became the focal point of our research. Three propositions capture the key themes:

1. **Pervasive transitions.** Today's public sector is confronted by external transitions of almost immobilizing complexity—transitions over which officials can exert little control but through whose consequences they are nevertheless expected to navigate. Moreover, there is a growing sense that in their current form, many public sector institutions and practices are poorly suited to adapt to these transitions.
2. **Resilience.** Confronted with these often-unavoidable transitions, public sector organizations are increasingly seeking to cultivate resilience—the ability to adjust, adapt, and thrive in changing circumstances. In turn, resilience requires substantial growth in productivity and investments to unlock innovation in public services and across the processes and institutions upon which leaders rely to make tough decisions about competing priorities.
3. **Distributed networks.** The ability to increase resilience, productivity, and innovation will depend on cultivating and drawing upon distributed networks to link people, data, communities, and decision makers for more effective collaboration.

## 1. Pervasive Transitions

The most obvious challenge facing most public sector agencies is the fallout from the global financial crisis. Consequent reductions in public sector finances have crippled public agencies, which find themselves with fewer resources to address the growing needs of a public grappling with rising unemployment and diminished prospects.

As one state-level executive from New York noted:

*We are in a period of declining revenues and fixed and rising costs. We cannot go back to the well by raising taxes or taking on more debt. This is becoming a real problem for continuing to run state government. And we don't see the problem going away anytime soon.*

But the problem goes well beyond the financial reality of deficits. Even as resources decline, the nature of citizen demands continues to evolve, necessitating new strategies and, sometimes, new investments. One European public healthcare executive described the situation as follows:

*The second wave of the economic crisis is hitting the public sector, meaning major cost reductions (for example, getting rid of 7-8 percent of staff in my organization), while at the same time meeting the same expectations for quality and standards. But the other major challenge is that we face a systemwide change in what we have to do and produce. For example, we see a major decrease in acute admissions and surgery (hence, in the demand on the capacity built up), yet a huge increase in chronic condition treatment and geriatric-related cases. We have to adapt, move from traditional focus, and increase our market in the new environment.*

This quotation, though specific to healthcare, is echoed in comments from a number of public officials. As if continuing to do “more of the same” with fewer resources were not difficult enough, agencies are simultaneously being asked to deliver an increasingly broad range of services to meet the changing needs of their citizens.

Meanwhile, governments face an “off-balance-sheet liability” in the form of human capital losses as a large cohort of employees approaches retirement age. One French executive bemoaned this fact:

*There is a coincidence between, on the one hand, shrinking budgets, and at the same time the loss of experience and knowledge through retirement, and dissatisfaction with the level of skills coming through with new recruits. Investment is needed to extract and pass on that knowledge, at the same time as budgets are being cut. This is true in the public AND private sectors—particularly in Western, developed economies (for example, France), where experience, process skills, and even soft skills are disappearing. It's causing serious tensions—even increased suicide rates in some areas.*

This is an unsettling convergence indeed. At the very moment when demands on government are outstripping financial resources, public sector agencies are losing access to human capital, and there are concerns about how to replace them with people whose skills, capabilities, and culture match the new performance demands of a modern public sector.

One American federal executive noted:

*We just don't have the right skill sets to support this large of an infrastructure. So when I look at building these large investments in software or new technologies, figuring out how to build an integrated logistics program with a workforce that has never done this before is hard. We have to retool the workforce to make sure we have the resources to manage this.*

These themes and conflicts apply at every level of government—from national governments to cities and municipalities. As one mayor noted:

*For local governments, the biggest challenge is to manage growth of the city in an era of economic crisis, while anticipating a number of big trends: the need for “real” sustainability and real resilience, energy scarcity and distribution, fast-growing shortages on the labor market, the need for more technology innovation.*

These conversations made it clear that governments are finding it difficult to act nimbly in the face of these transitions. In the following statement, a U.S. state official could have been speaking for nearly any of the public sector officials whom we interviewed:

*Our government has too many departments, divisions, and organizations that share responsibilities and actions between them. There is a lack of integration between these organizations, leading to too many handoffs and wasted effort. We need to structurally integrate disparate departments and make work flow more seamlessly across them. Not only will this reduce costs, but will likely improve the quality of service we offer our taxpayers.*

Silos, stovepipes, disjunctures, duplication of effort, lost opportunities to share best practices—we heard these themes from nearly every person with whom we spoke. Even as threats gather on the horizon, public managers are losing faith in the ability of public institutions to respond and adapt.

In short, on the one hand, there is rising alarm at the recent convergence of diverse and unpredictable hazards: declining resources, rising demands, aging populations, social tensions, and more specialized issues such as cybercrime, rising food prices, climate change, and natural disaster exposure. On the other hand, there is also concern that our public institutions are incapable of anticipating and managing these threats.

And yet public leaders are far from the point of despair. In these conversations, we heard the outlines of a new agenda focused not on the impossible task of eliminating threats, but more realistically on investing in the capacity of public institutions to prepare for, anticipate, and respond to them. In other words, investing in *resilience*.

## 2. Resilience

Many of the transitions facing our respondents—and society at large—are exogenous, inexorable, and uncontrollable. In such an environment, resilience becomes a strategic imperative central to performance, effectiveness, and trust.

Our respondents made it clear that resilience requires organizations to have new conversations about how to navigate unpredictable and increasingly volatile circumstances. Resilience is not just a matter of doing more of the same with fewer resources. Rather, resilience requires adopting a new management posture, the contours of which became clearer in three interviews from different industrialized countries.

When asked about his top management priorities, one German federal official listed “how to deal with substantial budget restrictions within a rising portfolio of public duties,” “managing a rising amount of political and technological complexity despite often inadequate risk evaluation tools,” and “maintaining a climate of agility and innovation despite the natural tendencies in the public sector staff.”

The first of these answers is not unexpected, but the latter two are fascinating. Part of the challenge facing the public sector is a traditional lean operations problem: how to increase productivity to meet rising demand under severe budget restrictions. But our respondent’s priorities suggest the challenge is more complicated. Managing well involves responding to complex risks and uncertainties that the public sector is not yet equipped to characterize and understand. Moreover, solving the productivity challenge while addressing the demands of a more complex universe of issues will undoubtedly require “agility and innovation”—capabilities that do not often arise naturally in public sector environments.

The chief executive of a British municipality highlighted the difficult choices facing leaders:

*We’re trying to transform an area with low levels of prosperity to turn it into a place where people want to live and work. That means putting a lot of effort into things that are 5-10 years out, which in turn poses challenges because it’s hard to see evidence of impact in the short to middle term. In an environment with limited resources, how do we continue to innovate and improve when we have less? Death by 1,000 cuts, doing everything less well? Or using every crisis to spark an opportunity?*

In this municipality, focusing only on productivity improvements will fail to transform a community into a place where people want to live and work. The answer, of course, is that the public sector has no choice but to innovate. Longer-term transformation—and the cultivation of a resilient community—is difficult, if not impossible, without innovation. In this community, forgoing innovation is essentially a vote for failure. A basic equation emerges from these insights: resilience in the face of volatile and predictable change demands both more innovation and increased productivity.

A federal official in Australia who has been grappling with questions of resilience for some time sees resilience as integrally linked to decision making:

*Rising demand and falling revenues mean a rethink of what “public services” mean and how they are designed and developed. Managing broader policy challenges such as aging, health, infrastructure, and so forth are especially tough, as the revenue base is tanking in most states. But how do governments say “no” to rising lists of new priorities? There is very nervous anticipation within government and the public service about how these “perfect storm” issues will impact the shape and purpose and function of the public sector itself. We are not used to these kinds of resilience conversations; we’ve been used to assuming government will provide, one way or another. That isn’t working, but the problems and the stresses on individuals and families are not declining. Something has to give, or something has to change . . . which is giving rise to new discussions about resilience, how we handle the shocks and changes, and how do you sensibly engage people in conversations that are not just about creating “shopping list” demands for governments to do more?*

In this view, there is a critical link between the capacity to respond to new and disruptive changes, and the capacity to engage stakeholders in novel forms of collaboration. This is obviously difficult in institutions that are highly stovepiped, or that lack the capacity and culture for effective engagement with, and participation by, citizens. Resilience turns out to be closely related to the ability to collaborate in setting priorities and identifying solutions.

These reflections from the front line of public leadership highlight several dimensions of resilience. Resilience obviously involves finding ways to deliver services with unexpectedly diminished resources, which requires substantial increases in *productivity*. However, creating resilient communities requires *innovation*—not as an afterthought or a post-crisis priority, but as an operational necessity. Finally, resilience seems to demand institutional practices capable of collaborative decision making and prioritization under conditions of deep uncertainty.

### 3. Distributed Network Architectures

Our interviews revealed a profound frustration with the shortcomings of many institutions and practices in the public sector. Many bemoaned the lack of collaboration among siloed subunits of larger organizations, as well as the difficulty of achieving meaningful citizen engagement. These frustrations clearly reflected the sense that the capacity to harness broadly distributed knowledge, capabilities, and insights could add significant value—if only they could be accessed and organized efficiently.

If resilience involves a combination of productivity gains, more effective innovation to address new threats, and much better ways of engaging stakeholders in conversations about prioritization, distributed networks of people and information have an important role to play. Given that data, knowledge, capabilities, insights, and political support are broadly distributed, public sector institutions need equally distributed networks to engage and aggregate these assets.

Distributed networks enable resilience in a number of ways. At one level, they support better decision making by enabling more effective management of data from many sources. This is what one European administrator had in mind when he noted:

*We have set up strategic committees in nearly all ministries. These entities are producing high-value recommendations; their work is synthesized by an institute that reports to the prime minister. They provide remarkable prospective analysis. This work is based on the remarkable statistic framework of the government, but could be significantly improved if we had better access to consolidated data. We all know that current technologies should allow us to gather data much more rapidly and permit comparisons which are not always easy today, due to the lack of consistency between diverse public databases."*

At another level, distributed networks can enhance the value of data by enabling multiple analyses and interpretations. As the CIO of a major U.S. city noted:

*One of my top priorities is getting a unified, citywide website, including effective and consistent use of social media (and obligatory record retention laws). City government is a commission-styled government, which leads to a lot of siloing of content, data, and design/information architecture across bureaus. We ought to be*

*mobilizing local software developers to utilize and lead the demand for more open data from bureaus and regional government agencies.*

In other words, the tools and habits of connection and collaboration, enabled and accelerated by distributed networks, can help unlock value that would go unexploited if left in separate, siloed government agencies. Designing and provisioning distributed networks of users and developers is a first step toward transcending the limiting features of some public sector organizations, potentially yielding innovative solutions to citizen problems.

A Dutch national administrator began to imagine how distributed networks could reshape services even more fundamentally:

*The biggest challenge we face is how to really involve the public and give them more responsibility to care of themselves (rather than us take care of them), and do this in a positive way. We have an old democratic system, where councils are elected every four years and are supposed to represent the people. This was invented 100 or so years ago, and experience shows that it isn't working. People do not feel connected with councils. We need to get back to people being more active, more participative in actively looking after their own interests, and redefine roles as a result. I don't know where this will end, but it is related to every part and subpart of what we do—working, living, education, and so on. The signs are everywhere that we need to do better. This applies for people and politicians, professionals and organizations. In the area of well-being and care, for example, professionals in the field have to become more aware of how they work. At present, professional decisions are made “somewhere,” and people have to take what is offered. Instead, we have to make them think more about consumers—what they really need—and reinvent services accordingly.*

And finally, our Australian interviewee, who had called for “new discussions about resilience” to address the new challenges facing government, mused on the critical question of how to create the political space for resilient and adaptive decision making:

*There are some “exquisite” choices that now need to be made here. How do politicians get “cover” for these difficult decisions? We need to take the community into the discussion about trade-offs. What kind of processes will help with that task—citizen referenda, citizen juries?*

## Conclusion

These interviews revealed a web of surprisingly consistent concerns, priorities, and ideas, covering topics as diverse as open data, fiscal retrenchment, and aging populations. From these insights emerges a provocative narrative. The challenges of government are becoming greater, less predictable, and more distributed. If not managed well, these challenges will constrain governments' ability to deliver services and meet their policy objectives. In these uncertain and unpredictable times, then, cultivating resilience assumes extraordinary importance. Developing resilience requires understanding that many of these shifts are uncontrollable, and demands a response that combines greater productivity and more effective innovation. Being successful in each of those domains increasingly draws on the habits and tools of deep collaboration. These, in turn, rely on a new mastery of the art of



distributed networks, which may well prove to be the critical differentiator between governments that succeed and fail in adapting to the demands of a rapidly changing world.

This narrative poses as many questions as it offers answers. We conclude with these unsettling questions, from another state-level executive from Australia, about the practical implications of translating a new agenda of resilience in the public sector into reality:

*How do we encourage public sector leaders to accept that the need to attract ideas from outside the formal policy process, and more bottom-up, implies different ways of working? How can policy leaders escape some of their constraints and escape the limits of the traditional policy expert model? How do they create the systems and markets that actually provision that new way of working and help to build new instincts and reflexes? How can policy processes generate a portfolio of approaches, ranging from the traditionally risk-averse approaches to ways that can be comfortable with responses that deliberately test out different, and therefore likely to be riskier, options? How do policy leaders become more comfortable with "letting go"?*

For more information on the ideas in this paper, please contact:

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