GOVERNMENT DESIGNED FOR NEW TIMES

A GLOBAL CONVERSATION

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McKinsey&Company

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We at McKinsey believe that government matters—and never more so than now. In every country in the world, government constitutes a large percentage of the economy, provides the foundations for the private-sector dynamism that propels successful economies, and, as we have seen in recent years, acts as the bedrock of stability in times of crisis. It is a critical enabler of citizen prosperity, health, and security, and increasingly it achieves these aims not through a one-way transfer of government services but through a partnership that engages the full resources of citizens and their communities.

Governments need to respond to major forces that demand new answers—including changing demographics, rapid technological innovation, and increasing public-sector complexity. Much will ride on the skill with which political and civil-service leaders respond. These challenges demand rigorous analysis of facts and evidence. Government administrations will need to build new institutional and individual capabilities that go way beyond what existed even a decade ago. This will include an ability to orchestrate and lead coalitions across the public, private, and nonprofit sectors.

McKinsey has served governments and public-sector agencies for many years, and we continue to do so today, in every part of the world. However, we are determined to do more to help advance a rich dialogue on government success. That is why we have created a dedicated center of expertise: the McKinsey Center for Government (MCG). Its mission is to help leaders understand the forces that are driving change, design strategies for success, and develop the tools and capabilities needed for effective execution. Uniquely, the center will forge a dialogue within government at all levels—from prime minister through agency leaders to departmental officials—and among governments around the world. MCG will take a global perspective at all times and work in partnership with practitioners and other organizations engaged in this vital work.

I am delighted that the center will be led by Diana Farrell. Diana led the McKinsey Global Institute, our economic think tank, before leaving our firm to serve in government for two years. Her experience and commitment to public service make her well placed to lead the team and to establish global connections in the field. I believe that this collection of articles from leaders and experts is an exciting way for MCG to begin what we intend to be a global conversation.

Dominic Barton
Global Managing Director, McKinsey & Company

INTRODUCTION

This publication marks the start of what we hope will be a global conversation about government. McKinsey & Company works with governments in more than 85 countries, and we frequently are surprised at how little mutual awareness there is of the approaches international peers are taking to common problems. Of course, both the context and the solution required are always unique, but in recent years we have begun to see strong patterns emerge. With that in mind, we have drawn on our global reach to bring together perspectives from around the world—a core mission for the new McKinsey Center for Government.

We asked the contributors to *Government Designed for New Times* to write about the issues and ideas they feel most passionate about. The essays cover a broad swath of terrain, including transformation of government, innovation in public services, and new competencies required for success. They represent a range of perspectives, and in all cases, reflect the views of the writer rather than those of our firm.

We sought a diversity of contributors—political leaders and civil servants, economists and policy experts, generalists and specialists. Tony Blair, former prime minister of the United Kingdom, and Göran Persson, former prime minister of Sweden, both led broad reforms and reflect on what it took to succeed. Other contributors comment on the work of government from the outside; for example, astrophysicist Neil deGrasse Tyson urges increased government funding for research and space exploration, and philanthropist Nicolas Berggruen argues for a new, middle way for governance.

Many contributors chose to highlight some of the most pressing challenges for government leaders today. For example, economists Douglas Holtz-Eakin and Coen Teulings cover the topic that dominates public discourse in the West—the fiscal imperative. Meanwhile, Hernando de Soto and Nandan Nilekani tackle two of the more profound challenges that underpin government in the developing world: property rights and identity. Others identify challenges that are universal. Xie Chengxiang, deputy mayor of Huangshi in central China, for example, writes about the strategy he used to provide affordable housing in his city of 2.6 million people.

Several broad, cross-cutting themes emerged from this rich mix of perspectives, from writers who approach their subjects from very different vantage points. In response to both growing complexity and ideological division, several writers see a primacy in **better evidence for decision making.** Mohamed Ibrahim calls for dramatically improving the collection of data in Africa and using it to make better policy decisions for eradicating poverty. Frank-Jürgen Weise, meanwhile, identifies six labor-market trends that the German labor agency is monitoring closely to ensure it can respond to evolving challenges.

Greater engagement and empowerment of citizens themselves emerged as another important theme. This recognizes that unequal access to services is no longer tolerated and that citizens around the world are calling for a greater role for themselves and greater transparency from government leaders. Matthew Taylor, a political strategist in the United Kingdom, sees huge potential to codesign and even coproduce services with citizens. Economist Daron Acemoglu uses the sweep of history to argue that the governments that are successful over the long term are those that primarily serve citizens rather than a political elite.

Several of our writers focus on the civil servants who do the work of government, viewing the **human-capital imperative** as crucial to any reform program. Singapore's Peter Ho argues that an increasingly complex world demands new skills and mind-sets within government, while Canada's Michael Fullan writes about leadership in the context of education.

Finally, it's clear that many of our writers have recognized that today's biggest challenges cross the boundaries of public, private, and nonprofit sectors. As such, they locate **government in a changing ecosystem** comprising new forms of organization and new forms of service delivery that are rooted in partnership. Parag Khanna writes about the growth of "parastatals," public/private hybrid organizations that are growing in size and importance. Susan Zielinski sees a broad alliance of public- and private-sector actors delivering modern transportation systems—an example of the growing importance of urbanization described by Wim Elfrink and Lu Mai.

These are themes that describe a new direction for public management in the 21st century. While the problems we face are daunting, the writers in this volume point to new ideas and innovative strategies for meeting those challenges—and for helping us to achieve the government we aspire to. We hope you'll join the conversation at www.mckinsey.com/mcg. This is just the start.

Diana Farrell
Global Leader, McKinsey Center for Government
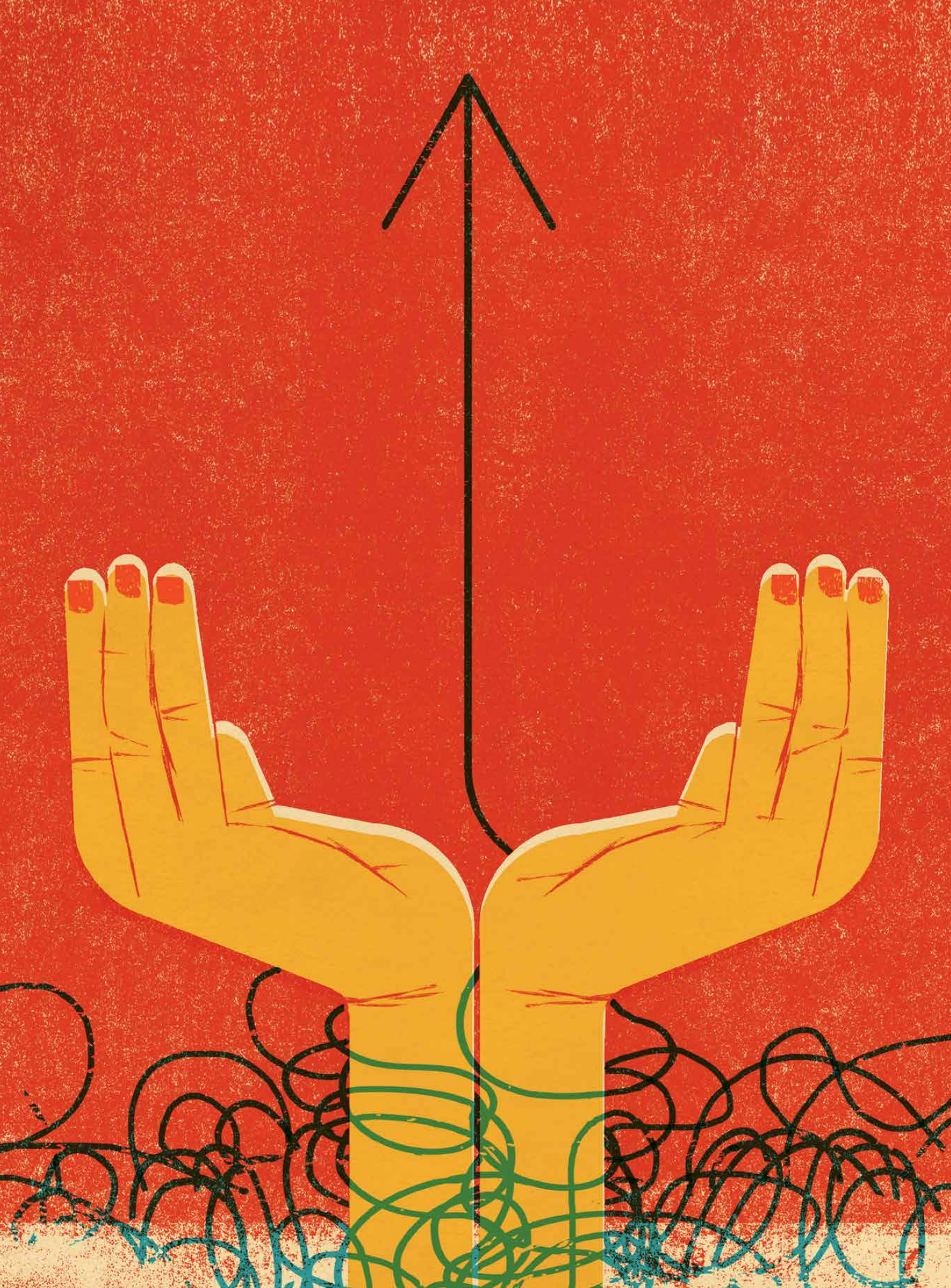
TRANSFORMING GOVERNMENT

LEADING TRANSFORMATION IN THE 21ST CENTURY

A former government leader looks back at what he learned in office. Among his lessons: think big, apply rigorous analysis, and don't be afraid to learn from the successes and failures of others.

TONY BLAIR served as prime minister of Great Britain and Northern Ireland from May 1997 to June 2007. He was also the leader of Britain's Labour Party (1994 to 2007) and a member of parliament (1983 to 2007). Since leaving office, he has founded a number of philanthropic organizations, including the Africa Governance Initiative.

An unfortunate lesson of being prime minister is that you are at your most popular when you are at your least effective, usually at the beginning of your time in office, and at your most effective when you are your least popular, toward the end. That is to say, you learn on the job. Over time you learn the lessons of how to make government work, how to achieve the systemic change that is essential for modern leaders. In this short essay I want to set out the five lessons I learned about leading government transformation.

First, the question of governance is absolutely central. It should be at the heart of the political debate—in both the developed and developing worlds. And it is not a debate, as people sometimes think, about transparency or accountability, although of course these are crucial; it's actually a debate about government effectiveness. So, for example, when I look at the work I am doing with my Africa charity—supporting the presidents of Rwanda, Sierra Leone, Guinea, and Liberia— or as quartet representative with the Palestinian Authority, the single most important thing they need is the capacity in government to get things done.

This focus on implementation has fundamental implications too for the nature of politics and political leadership today. Despite partisan divides, 21st-century politics is, in fact, increasingly post-ideological. The biggest challenges we face are similar in most countries: growing our economies in a way that creates opportunities for everyone, providing high-quality health and education services, ensuring safety and security. And

in most cases, the best solutions are already known. So the challenge for political leaders is no longer just about knocking down your opponents' arguments; it is about building up a system of government that delivers results.

The second lesson is that you have to aim for systemic change. The pace of change in the modern world is incredible, with the emergence of new powers, such as China, India, and Brazil; new technologies in communications, energy, and medicine; and new global challenges like climate change and the financial crisis. Only systemic change, as opposed to incremental or piecemeal reform, will allow government to keep pace in a rapidly changing world.

And the only way you will achieve systemic change is if you are prepared to "challenge the givens," as I call it. It's very easy when you come into government to take the system as a given and then ask, "How can we make it work more effectively?" Actually, what you very often have to do is to say, "Let's challenge that assumption; maybe the system doesn't have to be like that." For example, in the United Kingdom we had a problem with the management of rising immigration numbers. We needed to get them under control, but we were unable to get anywhere near bringing them down until we started to think about the system that we were operating, looking at every aspect of how the system was organized, its objectives, what information was collected, and how it was structured and led. Otherwise we were just flogging the system every day, and occasionally we would get the odd, incremental change. But until we changed the system we were not going to get something that really worked.

And that leads me to the third lesson: the best systemic change and delivery begins with the right conceptual analysis. One of the interesting things I discovered is that although

Only systemic change, as opposed to incremental reform, will allow government to keep pace in a rapidly changing world.

much of politics is conducted in a completely non-intellectual atmosphere, the best policy actually comes from a clear, rigorous intellectual approach. As prime minister, I looked for an unbroken thread between a conceptual analysis of what the problem was, then an orientation or direction in order to resolve it, and then a specific policy. That sequence was crucial: the specific policy had to flow from a policy direction, and the policy direction had to come from a conceptual analysis. For instance, toward the end of my time in office we had a major issue of social exclusion, which incidentally is still a huge challenge and was a big factor in the recent riots in the United Kingdom. I came to the conclusion that we had the wrong conceptual analysis of deprivation. If you analyze society today, it is not true that a rising tide will lift all ships. There is a group of people that resides completely outside the mainstream of any analysis, and unless conceptually you target them as individuals and families with severe and qualitatively different problems— different from people who might simply be unemployed, might simply be poor, might simply be homeless—then you are not going to get to the right answer. It was only through a better conceptual understanding—that social exclusion is in fact a very specific domain of policy—that we came to the right policy solutions.

The fourth lesson is something absolutely blindingly obvious, but crucial nonetheless: people matter. The actual people developing and enacting policy, the people you appoint,

matter. We need far greater interaction between the public and private sector. Many of the skills needed in government today are cultivated in the private sector. I think a lot of the best public servants would benefit enormously from spending some years outside government and then coming back in. And there is absolutely no reason that you should not have such an exchange between the public and private sector. That is why my Africa charity puts so much emphasis on helping African governments to attract the best private-sector talent. As African governments work to attract high-quality investments or get the best deal for their country from their natural resources, they need people with international commercial experience on their side of the table.

My final point is that governments around the world can learn from one another. And it's not a question of rich countries having all the answers. Many of the most interesting innovations in government—in technology, in new ways of organizing delivery, in new partnerships between the public and private sectors—are coming

from emerging and developing countries. For example, PROGRESA, the system of cash transfers for poor households pioneered in Mexico, is now being given a trial run in New York. Innovation can flow in all directions. So as political leaders we need to widen our view and try to learn not just from the usual suspects, the countries most similar to our own, but also from everyone trying to take on common challenges in new ways.

Globally we can get much better at learning from one another, which is why I welcome the efforts of the various research centers and government institutes around the world to identify and disseminate the best government innovations. It is also why I work through my charity, the Africa Governance Initiative, to support African leaders overseeing the transformation of their countries.

Prime minister was my first and only job in government. There is no training that can ever prepare you for the challenge. But I do believe there are lessons we can all learn about how to lead transformation in government, and I hope this essay and this anthology can make a small contribution to making life a little bit easier for future government leaders. I wish them well. ∎

François-Daniel Migeon

TRANSFORMING GOVERNMENT IN FRANCE

François-Daniel Migeon led significant reforms of government in France, to both improve efficiency and make the government more responsive to citizens. He also developed a new vision for government based on the central notion of "agility."

MCKINSEY INTERVIEW BY TONY DANKER

FRANÇOIS-DANIEL MIGEON leads the Direction générale de la modernisation de l'État (DGME), an interministerial body launched in 2007 to coordinate and support the transformation of French government. He is a graduate of the École Polytechnique. Tony Danker is an adviser to the McKinsey Center for Government.

Q: What were the objectives of the French government's transformation, and what has been achieved to date?
A: We had three major objectives: savings, quality improvement, and public-workforce reform. Our savings target was €15 billion over the period of 2009 to 2013, which includes a reduction of the civil service by 150,000. On quality, we focus on the idea of simplicity. We measure the perceived complexity of dealing with the administration, for both businesses and citizens, and aim to achieve real progress (but without specific targets) on reducing perceived complexity. The latest results show we've been decreasing the perceived complexity for citizens by 20 percent and the perceived complexity for businesses by 25 percent on priority "life events." For the workforce objective, there

are a number of programs. One is to reinforce mobility, making sure that staff could more easily shift from one place to another, and we have now passed a law to enable that. We also wanted to match civil-service reductions with increases in salaries for those who remain. The proposal was to give back half the savings to the workforce, and we've returned 55 percent to them.

One of the most fascinating elements is this idea of simplicity as the major metric for government quality. How did this come about?
When we began to explore how to measure quality, everybody was struggling, saying, "Well, we cannot define quality of service in the public sector. It is complex. It is so multidimensional." But when we gauged

THE SIMPLE LIFE A bride and groom kiss outside town hall in Caen, France. Recent reforms have been designed to make it easier to get licenses and permits for "life events" such as marriage.

married or opening a new subsidiary in your country. We made a list of approximately 50 life events for citizens and 30 for businesses, and we ran an opinion survey about them. First, we would ask, "Have you had this life event in the past two years?" If so, we then asked, "Do you believe that it was a simple experience, an OK experience, a complex experience, or a very complex experience?" Then we developed a figure for each life event, which is basically the complexity or simplicity of the experience. This is the number that has been shifting downward.

This metric had a real effect on the internal mechanics of administration. There is a tendency of different units in government to focus on their own internal departmental issues and challenges. This metric changes that for them, forcing them to focus on the perspective of the citizen. It has also been critical to achieving a high level of political support and relevance, because when you're speaking for the citizens then obviously you force the political body to respond, and you also force the different ministerial departments to think collaboratively.

Has the reform program changed the culture inside the government?
Absolutely, in several ways. First, departments are now starting to become autonomous. They have their own change agents who are able to manage these customer-centric programs, especially in the ministry of the interior, which launched the process first; now, three years down the road, it has the capability to sustain reform.

Second, there is now a level of interministry collaboration that we have never had before. Focusing on citizen metrics gives you a lot of leverage to put everybody around the table and say, "OK, friends, this is the collective answer that we need," so they cannot present the usual internal barriers to change. Of the more than 100 reforms dedicated to simplifying

opinion about the objectives of government reform, simplicity kept coming up. So that sparked the idea of turning this into a barometer that could be measured, on top of more traditional measures of public-service outcomes, which we also included.

Then we asked, "OK, how can we measure simplicity?" We concluded that we should start with what we called "life events" for both citizens and businesses. This might be getting

a process, I would say that at least two-thirds are interministerial. Once you do this, you also help ministries move beyond their own territorial view; you give them some headroom, I would say, to innovate.

Third, there is recognition of the importance of capabilities—and new capabilities, in particular. Civil servants develop change capabilities by running reform programs. But we also set up a special training school for these reforms; it is spreading the know-how and has spurred culture change.

We also learned about the importance of communication. In the beginning, the overall image of the program was poor, especially among civil servants, and this goes back to the fact that we are reducing the workforce. I think that if I had to do this again, I would really go for just one objective rather than three: in communications terms, having three attracted some cynicism from staff. The single, galvanizing message in this case should have been, "We want a sustainable transformation for a sustainable public service." That's our objective, to be sustainable, and to do that we need to increase quality, we need to take care of the workforce, and we need to have savings.

Where did you look for inspiration when you were constructing the transformation program?
At the beginning of the program, we had two main inputs. One was a series of audits from think tanks and consultants proposing ideas. The other source was citizens. We conducted focus groups, which gave us a description of citizens' experience with the administration and new ideas for innovation and simplification.

Now, when we seek innovation, we add two more sources. First is civil servants themselves; we run campaigns to get their contributions for improvements. We ran an early, Internet-based campaign around this notion of simplification. We would offer

a three-month window for staff to bring forward their ideas and put them on this Web site, and then we moderated it, engaging with each idea to convert it to an actual proposition or proposal for reform. Basically, we had a pipeline of ideas with something like 20,000 people coming to the Web site, generating about 2,000 proposals or ideas, and that helped us design 30 of the 100 simplification reforms we launched.

This is very much part of a broader vision you have for the future of government. Can you say more about it?
To actually support the transformation process, we sketched out a vision of the type of administration we would like to have. It sounded very conceptual when we did it, but it is basically focused on the notion of agility.

Agility is the ability to quickly and efficiently react to current needs. During the crisis in 2008–09, we had a liquidity challenge among the banks and the business sector, and the administration had to intervene to make sure that the money market would be more fluid. We very quickly set up a key project team that could instantly take the right initiative. When the job was done, the team was disbanded. It should not take a crisis for us to develop agility in government.

An agile administration is capable of coordinating all of the actors—public and private—with a forecasting role, to anticipate the major social changes (demographic, technological, sociological, and economic) that weigh on public-service demand in the medium term. Then it evaluates existing policies and mechanisms systematically and regularly in order to be able to design more effective, more relevant, and better targeted approaches. It is also an administration capable of involving citizens, representatives, businesses, and volunteer groups with diverging interests to define a shared vision of tomorrow's public service. ∎

Frank-Jürgen Weise

BEHIND THE GERMAN JOBS MIRACLE

Germany's federal employment agency went from a bloated laggard to a lean, best-in-class service provider—just in time to help cushion against job loss during the downturn.

FRANK-JÜRGEN WEISE is chairman of Germany's federal employment agency, Europe's largest public body, with more than 1,000 local offices, including employment agencies, job centers, and branch offices. He began his career in the German armed forces, where he studied business management as part of his officer training.

The year is 2003. Unemployment in Germany has hit 4.5 million, a rate of 10.5 percent. The federal employment agency (Bundesagentur für Arbeit, or BA), Germany's largest government agency, with more than 90,000 employees at that time, stands accused of doing little more than tallying this figure. It is perceived as a bureaucratic monstrosity, so inefficient that it struggles to survive on the budget provided by taxpayers' unemployment insurance premiums. It is seen as a black hole, completely dependent on government handouts.

To deal with the situation, the Social Democrat–Green Party coalition government, led by Chancellor Gerhard Schröder, passes the "Hartz laws,"[1] initiating what may be the most substantial labor-market overhaul ever undertaken in Germany. "Challenge

and encourage" is the motto under which job seekers—including welfare recipients, who had previously been invisible in unemployment statistics—will be mobilized, using all of the measures at the government's disposal. The goal is to integrate customers into the workforce faster and in a more targeted way, shortening the duration of unemployment and accelerating the hiring process. More intensive mobilization measures, along with work incentives and entitlement cuts, are designed to encourage the unemployed to reenter the workforce.

Under tremendous political pressure, the BA was forced to undergo a dramatic transformation from a legalistic administrative body into a modern, performance-driven service provider. Extensive process overhauls and structural reorganization were necessary

for the BA to become a highly effective broker between supply and demand. Reforms had to be comprehensive, yet sustainable. And, as we know today, they had to be crisis proof.

It was a complex process. During the initial phase, from 2004 to 2006, management approaches and structures were revamped, with a new emphasis on impact, profitability, and decentralized decision making. Acting on the maxim that structure follows strategy, the agency focused primarily on advisory services and job placement in designing structural reform. Anything that was not a part of this core business was outsourced.

In each of the main 178 local employment agencies, workflows were more closely tailored to customer needs. As part of the new customer-centered business model, job seekers were directed to the appropriate staff in a more straightforward way and, more important, appointments for advisory services were scheduled. As a result, waiting times of an hour or more and overflowing corridors became a thing of the past. New profiling tools were introduced, enabling agency staff to pursue individualized approaches that focused on customer strengths.

Alongside these reform initiatives, it was essential to establish transparency of outcomes and processes, internally and externally. Absolute clarity about the market, customer impact, in-house workforce potential, and finances was necessary to give momentum to the new management approaches. Three key considerations guided policy decisions on advisory services for both job seekers and employers: how long will it take? What will it cost? What value will it have?

A new system based on targeted outcomes and the introduction of strategic-management mechanisms helped propel the BA to success during the second phase of the reforms, from 2007 to 2009. In addition, the BA was able to bring an element of competition to local agencies by mapping heterogeneous
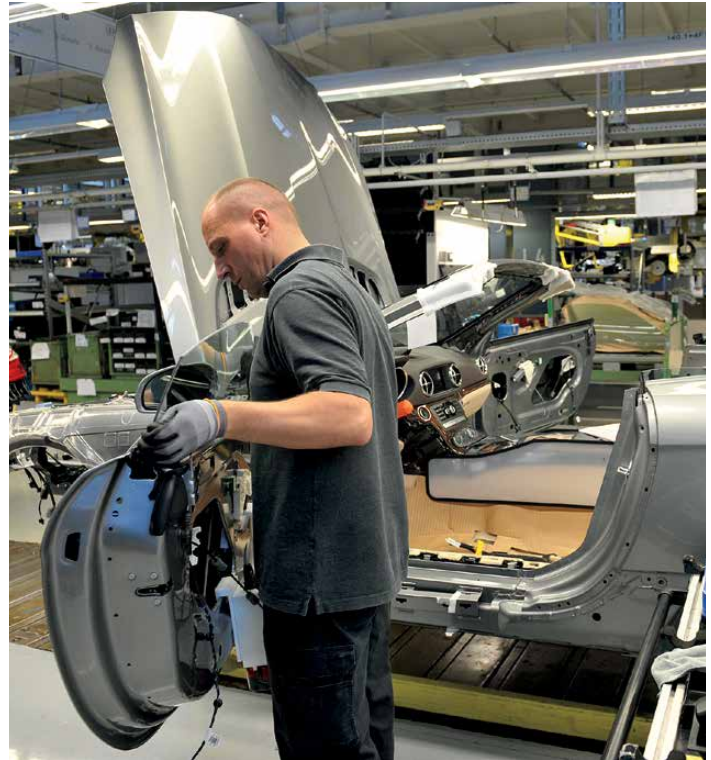
labor markets into clusters. Internally, the introduction of explicit goals for all managers underlined the principle of "target-based management."

By basing policy decisions on economic efficiency, the BA markedly improved its financial standing. Although there was a €1 billion deficit on the balance sheet in 2005, the BA had accumulated reserves of €16.7 billion by the time the 2008 financial crisis hit. This was the start of the third phase of reforms, focused on preventing unemployment and expanding local and regional networks and partnerships. The accumulated reserves provided the liquidity necessary for Germany's unique policy reaction to the economic crisis, which included more aggressive intervention in the labor market in the short term. This was a basis for what

FIT FOR WORK An auto worker puts the finishing touches on a door in a plant in Bremen, Germany. An overhaul of the government employment agency helped Germany hold onto jobs during the current downturn.

[1] Named after Peter Hartz, chairman of the commission charged with drafting the reform plans.

international observers termed the "German jobs miracle." Moreover, unemployment-insurance premiums were reduced from 6.5 percent to a fixed rate of 3.0 percent, lessening the burden on employers and employees by approximately €25 billion annually. Yet the BA remained agile and responsive. It was the only branch of the social-security system to achieve a reduction in labor costs.

Six trends will determine the BA's future mission

In the current reform phase, the BA must rise to the challenges posed by the labor market of the future. The agency is now drafting a position paper, "Prospects for development—BA 2020—Promoting employment in a changing world," which is a step toward anticipating developments throughout the industrialized world. The paper highlights six trends that will drive the future demands of the labor market and outlines action areas for the BA for each trend.

Life and work will become more mobile, more flexible, and more volatile.
People will make more short-term plans—even with regard to employment—and will expect and demand more from their jobs. Flexible, mobile, and team- and project-based working styles will become the norm. The future labor market will have to absorb sudden, dramatic shocks, and increasing volatility will demand swift, flexible responses to achieve balance in the market.

A demographic shift is coming.
The workforce is aging and at the same time undergoing structural changes. By 2020, the size of the German workforce will decrease by approximately 3.5 million employees. Since future employers will be forced to hire from a smaller applicant pool, they will require more advisory services from the

BA. In addition, service offerings must be more closely tailored to customer needs.

Job opportunities will be distributed more unevenly. Unskilled workers will be increasingly at risk of losing their foothold in the workplace. Acquiring, maintaining, and developing professional skills will become more important. Disadvantaged groups in the labor market will need more than just support in addressing shortcomings in education or training. The BA aims to tap into the potential of migrants, older people, and women to meet the demand for labor.

Markets will become even more global.
The global economy and its labor markets are more intertwined than ever before. Accordingly, German employers will invest more in international recruiting. Similarly, German job seekers will be free to look for work throughout the European Union. The BA has taken on the challenge of the "Europeanization" of labor-market policy and will be more directly involved in European labor- and education-policy initiatives.

Our information society will evolve rapidly. Multimedia technologies will become ubiquitous as a result of a broad social consensus. Knowledge will spread in a more virtual fashion. In the labor market, both employers and employees will need to demonstrate more initiative and act more independently. The BA is responding with a multichannel strategy that, depending on the customer's needs, provides access to a variety of services. Additionally, the BA will continue to promote targeted network strategies and partnerships with all market participants.

Public funding will remain scarce. Debt ceilings and curtailed budgets will limit financial flexibility and will increasingly force

institutions to consolidate spending. The BA will emphasize the need for unemployment insurance to finance itself and to remain ready to react to crises as swiftly and appropriately as in the past.

The BA intends to closely track these trends and will modify its strategy as necessary. It is currently expanding and personalizing its advisory offerings with the goal of providing customers with services precisely tailored to their needs. With the rise of online access, for example, customers are becoming increasingly connected to employment agencies. The main goal is to establish new channels of contact that more accurately target customers' requirements.

At the same time, though, the BA will maintain and deepen its personal relationship with customers. Advisory offerings, such as skill analysis and networking management, will be further improved, and job seekers can be assured of continued access to face-to-face advising and job counseling.

Employer services in local agencies will become more professional and more performance oriented. By developing new skills and strategies and maintaining a sound financial standing, the BA will continue to innovate and drive German labor-market policy. ∎

MEASURING SUCCESS

By the end of 2011, the reforms at the BA had paid off with quantifiable results.

- **Shorter duration of unemployment.** The average BA customer was unemployed for approximately 136 days, down from 164 days in 2006.
- **Lower unemployment.** Total numbers of unemployed people fell from 4.5 million to 2.9 million.
- **More jobs filled.** The number of job placements more than doubled, from 240,000 to 510,000 per year.
- **High customer satisfaction.** In surveys, both job seekers and employers gave the BA high marks, with scores of 2.1 for employers and 2.2 for job seekers, on a scale from 1 (best) to 6 (worst).

DESIGNING A TECH-ENABLED GOVERNMENT

Tim Brown, *CEO, IDEO*

Interviewed by Rik Kirkland

Q: If you were sitting down with a policy maker, how would you advise him or her to think about the business of government? Does technology present any opportunities?

A: It's really clear that mobile technology should change the relationship citizens have with their government because of the ability to have a constant dialogue. Businesses are doing that today very, very successfully. They're acquiring data and using it to see patterns that tell them how they might serve their customers differently. Government should be doing the same thing.

We're seeing some interesting first steps. Government databases are being launched that will allow people to do things with that data and build businesses from that data. It's a great first step. But inside the operations of government itself, we should be making more use of some of this technology.

More of what we're coming to call big data?

Yes; it's the combination of big data and mobile devices as a way of acquiring data about people, but also giving citizens access to that data.

And there are ways of using data that could be extremely helpful in showing governments more clearly how the world operates—how systems are working, the productivity of the world they exist in, or what their citizens are actually doing.

In business, there are often a lot of assumptions and intuitions that are used to manage. You can use data analysis to say, "Hey, this is how your business actually works. Don't you think, if you look at this, that you should be doing some things differently?"

I think there are a lot of those assumptions made in government, maybe even more because the wishful thinking that goes on in politics makes it even harder to see the world as it really is.

Clear analytics could be extremely, extremely valuable. ∎

Rik Kirkland is a partner at McKinsey & Company.

> **Mobile technology should change the relationship citizens have with their government.**

Michael Fullan

TRANSFORMING SCHOOLS AN ENTIRE SYSTEM AT A TIME

Improving education is at the top of many governments' agendas. Recent large-scale efforts yield useful lessons for relatively quick whole-system reform.

MICHAEL FULLAN is professor emeritus of the Ontario Institute for Studies in Education of the University of Toronto. He is currently special adviser to the premier and minister of education in Ontario. Fullan has published widely on educational change and leadership. His most recent book is *Change Leader: Learning to Do What Matters Most.*

The deliberate attempt to use "change knowledge" to bring about whole-system reform in schools is barely 15 years old. By change knowledge, I mean ideas and strategies that cause the system to move forward in performance, especially when it comes to raising the bar and closing the gap for all students. By whole-system reform, I mean all schools in the state, province, or country, and all levels from local to intermediate and state.

My colleagues and I began to get some clear ideas of the do's and don'ts of large-scale reform when a group of us evaluated the literacy-numeracy reform that was launched by the United Kingdom in 1997—large scale to be sure, as it addressed the performance of the over 20,000 primary schools in England. We drew four lessons from this partially successful reform effort, two negative and two positive.

First, on the negative side, we found that depending too heavily on targets turns out to be a distraction. England had set as targets 80 percent for literacy and 75 percent for numeracy from a starting base of some 60 percent. They did progress to about 75 percent, but then for various reasons leveled off and declined in subsequent years. Overreliance on quantitative targets turns out to be a temporary boost at best. Second, a negative approach to accountability—name, shame, and improve—also turns out to be of questionable use in the mid to long term.

On the positive side of the equation, two components did turn out to have strong value. One was *focus* and the other was *capacity building*. Focus meant selecting core educational-improvement goals and staying with them relentlessly. Capacity building

consisted of strategies that systematically developed the skills, resources, and motivation of individuals and groups to put in the effort to get results, as well as to sustain that improvement effort.

During this same period, stimulated in part by the introduction of the Programme for International Student Assessment (PISA) from the Organisation for Economic Co-operation and Development (OECD), governments around the world developed an interest in the state of school-system performance and how to improve it. Biannually since the year 2000, PISA has been assessing the performance of 15-year-olds in literacy, math, and science starting with the 30-plus OECD countries and then rapidly expanding to the current number of close to 70 countries. The question is now front and center: how do you improve all systems in reasonably short periods of time, such as 6 to 10 years?

In this short article, I do not attempt to answer this question in detail. Rather, my goal is to give some directional advice and illustrate what that advice looks like in practice. There are at least four dilemmas that must be continuously addressed:

1. The *accountability* dilemma
2. The *policy-overload* dilemma
3. The *capacity-building* dilemma
4. The *sustainability* dilemma

The key to understanding accountability is to realize that no system that relies primarily on external control can be sustained. Therefore policy makers must design, monitor, and improve systems that ensure built-in accountability on the part of the implementers. The idea is to achieve forms of accountability that are based on both internal commitments to the users of the system and on commitments to the public. We have found that effective accountability is first a function of good data used primarily as a strategy for improvement, second a degree of "nonjudgmentalism" that

reduces the culture of blame, third widespread transparency about results and about what's working and not working, and last a drive to intervene in order to build capacity for progress.

Policy overload happens when governments fall into the trap of developing plans that are too complex, too vague, and contain too many priorities. Policy overload results in a lack of focus, fragmented priorities, and a sense of an endless stream of ad hoc initiatives. Successful reform plans are designed as much for the implementers—that is, the teachers and school and district leaders—as they are for the planners themselves. The overall plan must be actionable, reasonably clear, and lead to widespread ownership.

The centerpiece of all successful whole-system reform cases is capacity building—the development of individual and group efficacy when it comes to new skills, resources, and motivation. Put another way, all the failures we observed had a weak capacity-building core. In fact, governments tend to underestimate the need for capacity building or try to address it in weak, individualistic ways. The bottom line for those engaged in whole-system reform is that the core strategy must focus on thorough and widespread capacity building, especially the collective capacity of groups.

The fourth issue is sustainability. If a transformation program addresses the first three dilemmas successfully, it is most likely well on its way to greater sustainability. Focus, integrating accountability and capacity building, and developing widespread leadership relative to the agenda all contribute to greater sustainability. Widespread leadership includes leaders developing other leaders to carry out the core agenda.

There is no single model for addressing whole-system reform. Particular models will vary according to the starting point and context. For example, if a system has extremely

low capacity and is very large in size, as is the case for many developing countries, it will call for certain approaches that are more direct at the early stages. Below I address the core attributes of the whole-system reform model we developed in Ontario, which has achieved widespread success since 2004. The value of this model has been documented by several external case studies, and the model is based on a good deal of research and evidence from around the world.

The Ontario case

Ontario is Canada's largest province, home to over 13 million people and a public education system with roughly 2 million students, 120,000 educators, and 5,000 schools. As recently as 2002, this system was stagnant by virtually any measure of performance. In October 2003, a new provincial government (Canada has no federal agency or jurisdiction in education) was elected with a mandate and commitment to transform it.

Improvements began within a year, and some eight years later, the province's 900 high schools have shown an increase in graduation rates from 68 percent (2003–04) to 82 percent (2010–11), while reading, writing, and math results have gone up 15 percentage points across its 4,000 elementary schools since 2003. Fewer teachers and principals leave the profession in the first few years, and achievement gaps have been substantially narrowed for low-income students, the children of recent immigrants, and special-education students. In short, the entire system has dramatically improved.

In brief, the strategy consisted of assertive goals and high expectations from the government, combined with a commitment to partner with the education sector in order to develop capacity and ownership in the service of student achievement. The key factors were:

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1. Relentless and focused leadership at the center (in this case, the Ontario government)
2. A small number of ambitious goals, specifically higher levels of literacy and numeracy and improved high-school graduation rates
3. A positive stance toward the schools, districts, and teachers
4. A core strategy of capacity building to improve the quality of instruction
5. Transparency of results and use of data for improvement purposes
6. A nonpunitive approach to accountability
7. Learning from implementation, by disseminating best practices both vertically and across schools and districts
8. Fostering leadership at all levels to drive and support items 1–7

The conclusion to be drawn is that systems will be successful if they focus on a small number of key strategic elements, deploy them in concert, build capacity on the part of the implementers, persist with the process over time, and monitor and learn as they go in relation to actual results and effective practices. ∎

AN "A" FOR IMPROVEMENT A science teacher holds class in Toronto. High-school graduation rates in Ontario, where the city is based, climbed almost 15 percent after the province enacted sweeping reforms.

UNLEASHING GOVERNMENT'S 'INNOVATION MOJO'

Todd Park, US chief technology officer, wants to combine technology with open-data initiatives to tap into the many talented innovators and entrepreneurs across the government.

MCKINSEY INTERVIEW BY ERIC BRAVERMAN AND MICHAEL CHUI

TODD PARK became chief technology officer of the United States in March 2012. Previously, he served as CTO of the US Department of Health and Human Services (HHS), where he launched programs such as the consumer Web site HealthCare.gov and the Health Data Initiative, which encourages the development of innovative applications using publicly available government data. Eric Braverman is a principal in McKinsey's Washington, DC, office; Michael Chui is a senior fellow with the McKinsey Global Institute and is based in the San Francisco office.

Q: Innovation is a big part of your new role. But some would say the US government is not known for innovation—and we're in an election year, which may be a difficult time to get things done. Do you see innovative things happening in the government right now?

A: There's an extraordinary amount of innovation happening in the US government, and I'd say the single biggest driver is that the government is embracing the idea of open innovation—unleashing the power of the private sector, the academic sector, the nonprofit sector, and the public in general to get a lot more done than if the government tried to do everything itself. There's a rapidly growing array of stories we can tell along those lines.

One story is the Health Data Initiative, which I was fortunate enough to cofound in

2010 with a team at HHS and the Institute of Medicine. We wanted to emulate what the National Oceanic and Atmospheric Administration had done with weather data: making it available in downloadable, machine-readable form, which led to all kinds of products and services—weather Web sites, weather apps, weather insurance—that have benefited the American people and contributed to economic growth and jobs.

There's a lot of data in the vaults of HHS and its sister agencies—data on everything from the health of our communities to the quality of our health care providers, to information about drugs, to Medicare claims data. The idea was to do three things: first, make data available that's never been made available before, either to the public or to qualified entities, all while rigorously protecting privacy.

Second, put out data in forms that are usable for developers. A lot of the data that HHS had made publicly available was in the form of books, PDFs, or static Web sites; we had to turn it into liquid, machine-readable data that could be accessible via application-programming interfaces.

Third, educate entrepreneurs and innovators that the data exists and is accessible. To do this, we used tactics that were relatively unconventional for the government: code-a-thons, meet-ups, and gatherings called "Datapaloozas" that we began hosting in 2010.

You used the term "liquid data," which presumably means downloadable data that can be used by third parties. What are some examples of data that is publicly available but not liquid?
Here's a good example: at HHS we had an online directory of all the community clinics in the United States. You could go to the Web site and put in your zip code and pull up an HTML page listing the community clinics in your area. Third-party developers

We used tactics that were relatively unconventional for the government: code-a-thons, meet-ups, and gatherings called "Datapaloozas."

could, in theory, write a crawler [program] to extract and scrape that data—but any of us who've actually built crawlers know we do not want to use them for mission-critical activity. So we made the data available in a downloadable file, and now third-party developers can upload that data into their platforms.

There's a mobile and Web app called iTriage, for example, that lets you enter your symptoms; then it identifies the best local provider and helps you book an appointment with that provider. iTriage uploaded our directory of community clinics, and within a year 115,000 citizens got connected to community clinics through iTriage.

A lot of what you've just described involves changing the behavior of government and of citizens. What were some of the most successful techniques and incentives you used to do that?
I think the Datapaloozas were key. The approach we took at HHS was to convene a group of 40 leading minds in the technology and health care arenas, and we put a pile of data in the room and said, "If you had this data, what would you do with it?"

Over the course of about eight hours, they brainstormed different applications and services. At the end of the meeting, we challenged them to come to the first Health Datapalooza—90 days later—and see if they could actually build what they had just brainstormed. The two criteria for products and services at Datapaloozas are that they must provide concrete value and have a sustainable business model; the Datapalooza is not meant

The lean start-up model is the best risk-management methodology you could adopt; the cost of failing is exceedingly tiny.

to showcase stuff that's purely academic or theoretical. Well, these innovators showed up 90 days later with more than 20 brand-new or upgraded products and services.

The Datapalooza had two important effects. One, it inspired entrepreneurs and innovators to get involved. Two, it gave us ammunition to liberate more data. Some folks within the government were adopting a "wait and see" attitude about data liberation. They weren't ideologically opposed—it's just that they said, "We've got a lot to do, so why should we invest in this?" We invited them to the Datapalooza, and when they saw that in 90 days these amazing innovators had taken open data and turned it into fully functional new products and services to advance their mission, they were blown away.

Let's talk about how you scale this. Many agencies might say, "I'd like to make my data liquid, but I have a lot of other priorities. How and where do I start?"
HHS expended an extremely modest level of effort and resources to engage in the activities I just talked about. The data was already in our vaults. As for marketing, we're not talking about Super Bowl ads—it's meet-ups, it's code-a-thons, it's Datapaloozas.

About 20 new or upgraded apps and services debuted at the 2010 Datapalooza, 50 at the 2011 Datapalooza, and this year 230 companies have thrown their hat in the ring. The total taxpayer dollars spent building all these offerings? Zero. We didn't give anybody a grant. We didn't procure any of this stuff. We just took data that we already had, put it into

the public domain, made it machine readable, and in a very inexpensive fashion let people know it was there. American entrepreneurs and innovators did the rest at blinding speed.

We constantly talk about "Joy's Law," named after Sun Microsystems cofounder Bill Joy, who once famously said, "No matter who you are, most of the smartest people work for somebody else."

Let's look ahead. You've been in this role for a couple of months. What's at the top of your agenda?
We're going to clone the Health Data Initiative in other sectors, such as energy, education, and public safety. For example, we just launched Safety.Data.Gov with 700 data sets that relate to all aspects of safety: transportation safety, product safety, community safety, consumer safety, industrial safety. We hosted our first Safety Data Jam with 40 innovators.

So a big chunk of your agenda is replicating the Health Data Initiative. Anything else?
Yes—fanning the flames of entrepreneurship in the government by using a philosophy called "lean start-up." Government is obviously not a start-up, but initiatives to effect change are best thought of as start-ups: you want a small interdisciplinary team, and you want to go to market with the simplest possible thing that consumers will actually use so that you can start learning from actual experience and then iterate rapidly. Cycle times of updating your product are days or weeks—not months—long.

Contrast this with the traditional mode of making change happen in a large organization, which is the "waterfall" process: spend six months coming up with some brilliant strategy, another six months doing a great operational plan, then six more months building a great systems plan. A year and a half later or more, you launch an aircraft carrier that sinks immediately.

The mode of operation I used at HHS was not waterfall—it was the iterative, rapid-prototyping process. It worked incredibly well.

Many private-sector entrepreneurs would say that to make this iterative approach successful, you have to be comfortable with failure.
Absolutely. And I can say this from experience: if something that takes 18 months and costs a ton of money results in failure, that's catastrophic. But if four days of effort by a three-person team doesn't pan out, that's completely acceptable, right? The lean start-up model is the best risk-management methodology you could adopt; the cost of failing is exceedingly tiny.

I actually think what's even more dangerous than catastrophic failure is mediocrity. At least you can recognize catastrophic failure, whereas a lot of waterfall processes don't do us the favor of failing—they just produce something mediocre and deeply entrenched. It's ironic that we use the waterfall approach precisely because we think it'll help us manage risk, when it's probably the riskiest approach to making change happen: I'm going to wait 18 months to engage with my customer? That's crazy!

Let's say you're successful with this group of innovators from within and outside government. How will you then build the capabilities of government employees so that they are able to say that they can do this themselves?
Well, there are tool kits about how to do lean start-up. We also think mentoring—from folks who have experience doing lean start-up in both the public and private sectors—will be a critically important element of the experience.

But my hypothesis is that it's less about training and more about signaling—giving people permission to do what they intuitively understand is the smart thing to do. There are many talented innovators and naturally gifted entrepreneurs in the US government; they don't think the way government currently runs is sane or optimal, and if given the signal that they can do it in a different way, they will. It's helpful to give them case studies, prin-ciples, tools—but frankly they already know how to do this. You just have to unleash their mojo to do so.

That's what I want my legacy to be: to demonstrate that government can act in lean-start-up mode to make change happen, and to unleash the innovation mojo of the many talented innovators across government. ∎

GOVERNMENT DESIGNED FOR NEW TIMES

In a fraught world, policy makers cannot allow partisan divides to get in the way of crucial reforms. By drawing on successful strategies employed elsewhere and adapting to current needs, governments can—and must—do better.

DIANA FARRELL is a director in McKinsey's Washington, DC, office. She is the global leader and cofounder of the McKinsey Center for Government.

Rarely has the need for effective government been greater than now—and rarely has the ability to produce it been more constrained. After the recent wave of storms and disasters—both natural and financial—the need for leadership and a concerted response from national capitals is acute. Adding to the pressure, many governments are managing the implications of an unprecedented degree of fiscal and monetary intervention. They are preoccupied with the urgent tasks of getting banks to lend again and demonstrating fiscal credentials to the bond markets. The crisis mode of the past few years endures in several countries, while in others there is no more than cautious optimism.

Leaders must confront long-term, fundamental questions too: from the size and role of the state to how best to stimulate growth; from profound and surging demographic imbalances to tackling growing unemployment and welfare bills; from deciding on the extent and nature of regulation necessary to protect the public to forging a new relationship between citizens and government services. Thus, many governments confront a daunting paradox: an expanded set of major policy imperatives in a constrained and almost precarious fiscal position.

On these subjects, however, there is little agreement. The policy debate is becoming more polarized at arguably the worst possible time. There is a real risk that in the face of big choices and much disagreement, paralysis reigns. Leaders thus spend their energy on policy fights and battles for the hearts and minds of the public—at the expense of making progress.

It is in times like these that government matters most.

Our research shows it is possible to make huge strides in addressing critical challenges, even without resolution of the many ideological and policy dilemmas. From government spending to tax collection, education improvement to health outcomes, and welfare reform to job creation, we see the potential for meaningful improvement, to do more and better with less. What is needed is government management by design, built to fit these difficult times: government that identifies the most critical, solvable problems, reorganizes where necessary to deliver the right solutions, and abandons the tools and approaches that no longer work.

In this effort, governments can draw heavily on the mission-driven mind-set of employees—a real comparative advantage for the public sector over the private sector. Too often leaders insufficiently tap into this valuable asset. And leaders can do far more to mine information on what is working elsewhere. International peers, often trying to solve exactly the same problems, provide invaluable road maps and lessons. Unlike the private sector, where companies spend millions of dollars trying to understand secret competitor strategies and replicate them, the public sector is an open environment, and thereby easier to mine for successful practices and lessons learned.

Government by design

Political leaders rarely campaign for office on a platform of government effectiveness. For some it fails to capture their imagination or, they suspect, the imagination of voters. For others, tackling the bureaucracy is perceived as high risk and low reward compared with passing new laws in the legislature. Yet few succeed without achieving some reform. Many departing presidents, prime ministers, and cabinet secretaries reflect on how the

engine of government itself was at the very heart of their successes or failures.

What it takes

To truly transform government requires fresh thinking and a substantial investment of both resources and political capital: business-as-usual or modest or occasional improvement is inadequate. Those that have achieved sustainable and significantly higher levels of government performance did so by explicitly designing and executing multiyear reforms that push beyond everyday initiatives designed to improve management capability. In our research, we identify 40 such programs that have been enacted around the world in the past two decades. There were a number of objectives these programs were designed to achieve: significant fiscal consolidation, better outcomes across multiple public services, and economic growth. (See chart on next page.)

Analyzing these programs and interviewing the leaders involved reveals a valuable set of lessons for other government leaders facing major challenges. The first is being clear and ambitious about what the government is trying to achieve. Many transformations achieved what appeared to be impossible targets. Sweden, for example, moved from an 11 percent deficit to a fiscal surplus in the 1990s, having been close to default and an International Monetary Fund (IMF) bailout. A second lesson is the need to make big—not incremental—shifts in the amount of time, energy, and resources required. On average, the programs in our sample lasted for six years, with a staff of 1,300 involved in each.

Fit for purpose

Beyond this clear focus and investment of time and resources, government by design also means investing in those capabilities needed for success. Some of these are common and enduring across the public, private, and nonprofit sectors, such as

Transformation programs around the world

Dozens of governments have undertaken ambitious programs to remake themselves. Here's what some have achieved:

The Netherlands (2003–2007) Administration burden cut by more than 25%

Sweden (1993–1998) Reduced budget deficit by 12%

Finland (2005–2015) Ongoing program aimed at reducing FTEs by 14%

Ukraine (2010–2014) Ongoing program, has contributed to increasing GDP growth by ~3%

Canada (1994–1999) Reduced budget deficit by 10%

Malaysia (2003–2007) Reduced crime rate by 30%

Virginia (2003–2007) Reduced budget deficit while increasing quality of services

Australia (1996–2006) Repaid government debt and reduced budget deficit by 4%

UK (2003–2007) Improved quality of services in several areas, especially education and health care

New Zealand (1984–1994) Decreased government costs by ~1.3% of GDP while improving quality of services

Morocco (2005–2015) Ongoing program aimed at increasing industrial output by 46%

France (2007–2012) Achieved government savings of $20 billion

Poland (1989–1992) Achieved strong economic growth over this period

Turkey (2001–2005) Achieved strong and healthy growth of 7% per year

employing best practices in technology and operations, organization and human resources, and budgeting and finance, as well as operating across geographic and stakeholder boundaries and making use of large data sets for better performance and policy. Other capabilities will be specific to the government sector, including risk management in regulation and client differentiation for welfare-to-work interventions.

Increasingly, the intense pressure for reform, combined with a new operating environment, makes innovation a critical capability. In many areas, government agencies around the world are reimagining how services are delivered (for example, through one-stop shops and e-portals) by providing greater data availability and through mobile services that allow citizens to get instant help and support. They are also migrating to a new paradigm

where nonstate actors—private companies, nonprofits, and citizens themselves—play an increasingly important role in designing and executing policies and services.

Finding answers to the solvable management questions

Governments that are willing to reform and build these crucial capabilities are better able to achieve major breakthroughs in the most fundamental policy areas, even in the absence of new policy or legislation.

Fiscal management

Take fiscal management, arguably the most daunting of all issues today. According to the IMF, most governments in countries that are members of the Organisation for Economic Co-operation and Development (OECD) need to improve their deficits by 4 percent or more of GDP to achieve long-term debt targets.[1] Of course much of this involves policy debate. Entitlement reform, public-spending reductions, and increased taxation are highly charged political issues. However, operational reforms designed to improve efficiency can make a meaningful difference now and set the stage for more successful policy implementation over time. In particular, spending reviews undertaken agency by agency—even if initially focused only on noncore functions such as technology, procurement, or travel—can yield meaningful savings that will increase credibility and flexibility as fiscal constraints increase. Similarly, improved tax collection, drawing on international best practices, can produce real revenue growth within the existing tax structure.

Spending reviews. A number of governments are taking a more strategic and evidence-based approach to achieving fiscal sustainability by launching multiyear spending reviews. These reviews help to establish priorities and clear paths to deficit reduc-tion. Almost without exception, the spending reviews uncover huge opportunities for improving effectiveness, decreasing costs, and increasing revenue by improving the efficiency of administrative, noncore activities. To size the prize, consider that our global benchmarking research indicates that operational expenditures represent 35 to 40 percent of total government expenditure; on average, 19 percent of GDP for OECD countries. Within that operational expenditure, roughly a third is spent on overhead functions, representing 6 to 7 percent of GDP in OECD countries.

To date, we have reviewed ten countries that have conducted such spending reviews during the past five years and discovered that there is currently little standardization in approach. Several governments have imposed top-down spending cuts, from the center to agencies, while others have developed a bottom-up understanding of the potential savings opportunities. Of those using a bottom-up approach, New Zealand and Denmark have used clear baselines and intragovernment or external benchmarks to estimate the savings potential—even though this is clearly an opportunity to drive success.

Drawing on benchmarks from different governments, we estimate a potential to save 5 to 10 percent of operational costs through overhead categories without compromising core programs. This represents a savings in the range of 0.3 to 0.7 percent of GDP—some 10 percent of the adjustment that countries are required to make in order to achieve their long-term debt targets. This is a significant contribution, given that it requires no compromise on core programs, no reduction in social programs, and no additional costs to taxpayers. And it ultimately sets the stage for better policy implementation in the future.

Tax collection. Meanwhile, as governments grapple with increasing social obligations and projected declines in the relative size of labor

[1] International Monetary Fund Fiscal Monitor, April 2011.

workforces, tax administrations are under even more pressure to collect every dollar of tax payable. They need to ensure that every dollar they spend collecting taxes yields the maximum benefit for citizens. Tax administrations also have broader significance: the interface and effectiveness of a tax administration often becomes a watermark of public confidence in a government.

In this quest, tax administrations can learn a great deal from one another. But our in-depth research at federal tax administrations in 15 OECD countries uncovered wide variability not only in the performance of tax authorities across countries but also within countries across different functions—submissions processing, examinations, collections, and taxpayer service.

We estimate that, in aggregate, the tax administrations in our study can collect an additional $86 billion in direct tax revenues if they adopt the practices of the top third. Four major design elements stand out as avenues for achieving improvements: proactive demand management that smooths tax collection across the year and avoids the end-of-year bottleneck, sophisticated taxpayer segmentation to prioritize which taxpayers to target with which approaches, streamlined operations, and rigorous performance tracking. And these savings apply only to direct taxes.

Balance-sheet management. Beyond undertaking spending reviews and improving tax collection to manage the operating budget, governments have a major opportunity to take an end-to-end capital-management approach to their balance sheets at both the agency and government-wide level to improve fiscal health. This includes identifying and measuring material risks, incorporating the knowledge of risk into operations, and ensuring the integrity of the internal assessments over time. Even simple ap-

proaches to changing the inflow of accounts receivable or outflow of accounts payable can yield meaningful improvements.

Jobs

Along with fiscal management, unemployment dominates the landscape across most of the OECD. Here, too, exist fundamental differences in ideology and vision on how to solve rising unemployment risk stasis. Stimulus programs and other legislative actions to increase growth and create jobs may or may not get through legislatures, but other government interventions to improve demand, supply, and the matching of skills to jobs can significantly improve the jobs picture.

Many governments are now adapting vocational education to better fit employment prospects, for example, by involving employers more closely in both its design and delivery. Employment agencies are doing a better job of matching supply and demand by improving their market information and by producing more comprehensive, specific, and up-to-date data on vacancies, job seekers, and required qualifications. They are also segmenting the job-seeker population to better understand which segments can be processed in quick and automated ways and which merit deeper intervention and support.

Regulation and enforcement

After a series of catastrophic events, government bodies that protect the public—such as industry regulators, law enforcement, and disaster-preparedness agencies—are being more closely scrutinized with regard to their actions, their impact, and their overall effectiveness. But they are not necessarily receiving larger budgets. In stark terms, society is asking whether regulators are most effectively anticipating the next threat and protecting the public. As with unemployment, the policy debate on this issue can become quickly polarized around the trade-off between more

protection for the public and consumers and the potentially negative impact of more aggressive regulation for economic growth.

Agencies can make great progress by focusing on optimal resource allocation and redesigning how they organize and plan. They can place more emphasis on outcome-based regulation and on predicting, preparing for, and mitigating "tail risk." The most significant assaults on the public's sense of safety and security have come from events that previously seemed unlikely. Tail events are difficult to predict because they often require multiple things to go wrong. Examples include the attacks of September 11, Hurricane Katrina's damage to the New Orleans levees, the financial crisis of 2008–09, and the recent earthquake and tsunami in Japan and the nuclear-power-plant meltdown that followed. But better risk-based systems can improve governments' ability to prevent and respond to such events.

Core public services

In fact, across core public services—in areas such as infrastructure, education, health care, and policing—government by design can also enhance outcomes and manage costs. In these areas, the political discourse is often dominated by significant and legitimate ideological differences. Despite that, governments that focus on what really works operationally in driving outcomes can reap gains. Governments that systematically embrace the latest proven project-management approaches and tools can dramatically improve the value of infrastructure investments, at the same time reducing errors and time to completion.

In education, for example, school systems can learn from peers at a similar stage of evolution or performance about the right levers to use for improvement—be it better use of pupil data, revision of standards and curricula, or a deeper professionalization of teaching careers. Likewise, the escalation of health care costs across all systems is provoking significant political debate. Yet the best systems are already beginning to make progress in health care productivity through a number of steps, such as the prediction of patients most at risk and the adoption of subsequent prevention strategies, delivery of care at home and in capital-light settings rather than in hospitals, and technology innovations to boost clinician effectiveness and efficiency. Government services can and should build on examples of success around the world.

There is a real prize for governments that can make progress even as the policy and fiscal environments threaten to thwart action. But to win, governments must adapt to fit the challenges of today, in part by applying best practices from around the world.

In challenging times, the government we need is rarely the government we inherit. Instead, government must be deliberately designed and managed to make progress on solvable problems. ∎

INNOVATING GOVERNMENT SERVICES

WHAT THE PEOPLE THINK WHEN THEY'RE REALLY THINKING

It's hard to get a reading on public opinion from people whose information consists of sound bites and headlines. Immersing citizens in the details of competing policy options can yield better results.

JAMES FISHKIN is the Janet M. Peck Chair in International Communication and the director of the Center for Deliberative Democracy at Stanford University. His most recent book is *When the People Speak: Deliberative Democracy and Public Consultation* (New York: Oxford University Press, 2009).

Most of the time, in most countries around the world, the public is not very attentive or well-informed about politics or policy. Social scientists have an explanation. They call it "rational ignorance." If I have one opinion among millions, why should I pay a lot of attention to complicated public issues? My individual views will not have much effect in a large community or nation-state. We all have other, more pressing concerns, areas of life where we can, we think, make more of a difference.

Most public issues involve complicated trade-offs that are difficult to capture in sound bites for a public that is barely paying attention. Yet most governments purport to be democratic and open to listening to the public in some way. How are governments to listen? What are they to listen to, when most of the public is unengaged and uninformed? Many efforts to solicit public input are open to capture by organized interests, mobilized groups, or paid advocates, all of whom are happy to take the opportunity to impersonate public opinion as a whole to serve some interest—perhaps for a public purpose, perhaps for a private one.

So what are governments to do about public opinion? Some poll incessantly. But polls of an inattentive public often give little more than an impression of sound bites and headlines. Sometimes they even convey phantom opinions or "nonattitudes." People just do not like to say they "don't know," even when that is the case; they will, almost randomly, select an alternative rather than admit ignorance. Philip Converse of the University of Michigan famously discovered this in the 1960s, and George Bishop of the University of Cincinnati illustrated it with polls about the fictional Public Affairs Act of 1975, about which people happily offered responses.

At least polls with random samples offer a picture of public opinion that is representative. Even this merit is lost in the current fashion

of eliciting Internet commentary or holding town-hall meetings with open invitations. When the Obama administration created a *Citizen's Briefing Book* and invited the public to select its top priorities online, voting showed overwhelming support for putting the legalization of marijuana at the top of the national agenda—in the midst of two wars and the Great Recession. There is a kind of paradox of openness. The most natural strategy for public input is simply to invite public comment from anyone who is interested. But such an open, unstructured process will reliably lead to unrepresentative results, open to capture by those who feel intensely. The rest of the public will be left out, and a distorted picture of public priorities will result. This happened with the briefing book, and it also happened with congressional town-hall meetings on health care reform, which were descended upon by impassioned groups in the summer of 2009.

When a random sample thinks

Deliberative Polling provides a simple solution to these conundrums. It takes scientific samples and engages them in ways that foster serious thinking about an issue—offering balanced and carefully vetted briefing materials, convening small groups with trained moderators, directing questions developed in the small groups to panels of competing experts, and collecting opinions before and after deliberation in confidential questionnaires, avoiding the distortion of social pressures for consensus. A sample of a few hundred people is large enough to be statistically meaningful and small enough to be practical, even when the incentives and expenses for gathering the people in the sample group are considered. This process has been tried about 70 times in 18 countries. The answers to more than two-thirds of the questions in these Deliberative Polls change significantly. Deliberative opinion is most often different

from the initial "top-of-the-head opinion" one gets in conventional polls.

Energy choices in Texas

In Texas, beginning in 1996, the Public Utility Commission (PUC) required the eight regulated electric utilities in the state to consult the public about how they were going to provide electricity in their service territories. All eight utilities did Deliberative Polls in conjunction with the PUC. The results were filed with the "integrated resource plans" for each territory. Averaging over the eight projects, the percentage of the public willing to pay more on their monthly electric bills to provide wind and solar power rose to 84 percent from about 50 percent. A similar jump occurred for willingness to subsidize conservation. These results were the basis for major policy changes that allowed Texas to move, step-by-step, from last among the 50 states in 1996 in the amount of wind power produced to first

TEXAS POWER Wind farms like this one in Olney have made Texas a leader in wind power. Support for conservation jumped when citizens deliberated on the issues.

in 2007. The public simply did not have good information on electric-utility matters before deliberation. The Deliberative Polls allowed the public to really consider the trade-offs and then provide policy makers with informed judgments from a representative sample.

Local budgeting in China
In Zeguo Township, Wenling City, China, local government is using Deliberative Polling to make budgeting decisions. They started in 2005, seeking informed feedback on how to prioritize infrastructure projects, and soon expanded the effort to collect opinions on the full range of budgetary decisions. These polls take place on a yearly basis and have spread to other parts of China.

In the first project, those polled were offered a choice of 30 infrastructure projects; local leaders pledged to implement the top ten supported by the public after deliberation. A sample of more than 250 citizens was recruited randomly and gathered for a full day of deliberation in an area school. Local teachers were trained to moderate the discussions, and each project had expert advocates who answered questions in the plenary sessions following the discussions. Local leaders had expected that the public would support the "image projects"—a fancy town square and some of the large highway projects. But the public's priorities after deliberation were clean water (sewage-treatment plants), a comprehensive environmental plan, and a "people's park" for recreation. These projects were all built, and the process became well-known in China. Just as it did in Texas, the Deliberative Poll provided representative and informed input and solved the problem of how to consult the public. The local government had previously held *kentan,* or "sincere, heart-to-heart," meetings. The Deliberative Poll was attractive because it provided a scientific way of consulting the public that represented the whole population, not just

the more intense groups or the more notable citizens. It was, in effect, scientific *kentan.*

Enlarging the process
In the last three years, I have worked with Reframe It, a start-up headed by my son, Bobby Fishkin, to combine Deliberative Polling with online annotation. The process was a winner of the *Harvard Business Review*/ McKinsey M-Prize for Management Innovation. The idea is simple. A Deliberative Poll of the relevant population is followed by online commentary from the entire population about the options, the briefing materials, and the results. Those online comments are rated by the random sample that has deliberated. In that way, the commentary process is not open to capture. An informed microcosm sifts the priorities. Then the options are reformulated by an advisory group in light of the highly rated comments, and the process culminates in a second Deliberative Poll on the new options.

This process worked well for considering employee issues within a large corporation, and plans are afoot to bring it to the public. It is unique among methods of consultation in providing representative and informed data from random samples with an opportunity for the rest of the population to deliberate. The commentary process helps ensure that the questions are the right questions. The deliberative process helps ensure that the answers are the public's most thoughtful answers.

Our political system was born with a vision of representatives deliberating and "refining and enlarging the public views," as James Madison said in Federalist 10. We have since seen that citizen participation has too often devolved into sound-bite manipulation and impression management—in effect, we have gone from Madison to Madison Avenue. With these deliberative experiments, we can show that the public can refine and enlarge its own views, if only we give it a good chance to think about the issues. ∎

Nandan Nilekani

FOR EVERY CITIZEN, AN IDENTITY

Nandan Nilekani is chairman of the Unique Identification Authority of India, which aims to provide digital identification numbers to all Indian citizens, allowing them to establish a legal identity, participate in the formal economy, and receive government services. So far, 200 million Indians have signed on.

MCKINSEY INTERVIEW BY ERIC BRAVERMAN AND MARY KUNTZ

NANDAN NILEKANI is chairman of the Unique Identification Authority of India (UIDAI). Previously, he was cochairman and CEO of Infosys Technologies, which he cofounded in 1981. He is the author of *Imagining India: The Idea of a Renewed Nation.* Nilekani earned a BA in electrical engineering from the Indian Institute of Technology, Mumbai. Eric Braverman is a principal in McKinsey's Washington, DC, office; Mary Kuntz is a contributing editor for McKinsey.

[1] *Progress for Children: A Report Card on Child Protection,* UNICEF, Number 8, September 2009.
[2] Application-programming interface, a set of tools and protocols for building software applications.

Q: Enrollment in the ID program began in September 2010, and today more than 200 million Indians are in it. Why have so many people enrolled?

A: Well, identity rights are very important for participation in the formal economy. Having a document that proves your identity is the basis for owning property. It's the basis for getting basic entitlements or pensions or scholarships. It's the basis for travel. India is becoming more of a migrant society—people are moving from villages to cities, from north to south, from central to coastal India. And when they move, they have to prove to the local establishments who they are, or else they can't open a bank account, buy a mobile connection, or get a job.

The West has fairly well-developed ID systems. In India, we have around 25 million births a year, but as recognized in the UNICEF report,[1] many births are unregistered and there is no equivalent of a Social Security number, as in the United States. Thus many Indians don't have any document that proves their existence vis-à-vis the state government. That's the basic problem we're trying to solve. But the game-changing dimension of our ID platform is that it's digital.

What impact has the program had on India's government?

It will have a huge impact on public-service delivery and, in turn, on residents' satisfaction with the way government works. The platform we created is an open API,[2] so other entities—say, banks and telecom companies—can embed our APIs to verify someone's identity before that person withdraws money or buys a SIM card for a mobile phone. So, for example, if a person is entitled to a pension, all the government has to do is say, "Send this amount to this ID number." That ID number translates into a bank account, and the money gets credited to the account. The government doesn't even have to know where the bank

Our goal is to have at least half a billion people on the system by 2014.

account is. Residents will be empowered because they'll be able to access public services from anywhere. We can authenticate a person online, so services can be delivered online, via mobile phones, or at physical service-delivery locations.

Bringing banks and telcos into such a consortium has raised concerns about privacy and civil liberties. How are you addressing those concerns?
We used a lot of design principles to make the ID system as privacy enabled as possible. For example, the information we collect from individuals is very simple: just the name, address, date of birth, and gender, with e-mail addresses and phone numbers optional. We also have biometric data, but we use this only to prevent duplication (to make sure a person gets only one unique ID number) and also for authentication. We don't share people's data with banks; the banks' data isn't shared with the ID system. So whether a person is withdrawing 100 rupees or 1,000 rupees is known only to the bank. You can think of it as a federated architecture, where each player knows only his or her part of the activity.

What does it take for a federated architecture such as this to work?
There are two big components to our system: the enrollment system and the authentication system. The enrollment system is a distrib-utable, scalable architecture; we have our technology platform running in about 27,000 locations. The enrollment data is encrypted and then sent to our database for issuing unique ID numbers, so that requires massive back-end computing facilities.

The authentication system, however, is cloud based. An authentication request—from a bank, for instance—would come over the mobile network. We verify that person's identity, and we send the answer back.

It sounds like big data plays a role in making this work.
You can't manage 27,000 enrollment stations, around 50,000 operators, and a million enrollments a day without big data. At any given point, we can say how many people enrolled, where they enrolled, how long each biometric capture took, how many retries the operator had to do per enrollee. We have that level of granularity in our performance data analytics so we can distinguish good operators from bad operators—which is important because we pay them based on how many people they enroll. Big data is crucial to performance management.

Also, we intend to publish our enrollment data after it has been made anonymous. If somebody wants to analyze enrollments by state, gender, or age, they can just download our data, which is machine readable. You can find out, for example, that a particular region is underserved, because the number of authentication requests from that region is low. As the system matures, there'll be more of this type of analysis. And again, it's a balance between enabling such analysis and protecting privacy.

How will you measure the progress of the ID program? In two years, what will you be looking for to declare it a success?
You're asking me to make forward-looking statements, something I avoided at my old job. But I'll make one now—our goal is to have at least half a billion people on the system by 2014, which will make this one of the world's largest online ID infrastructures. That's one metric of success.
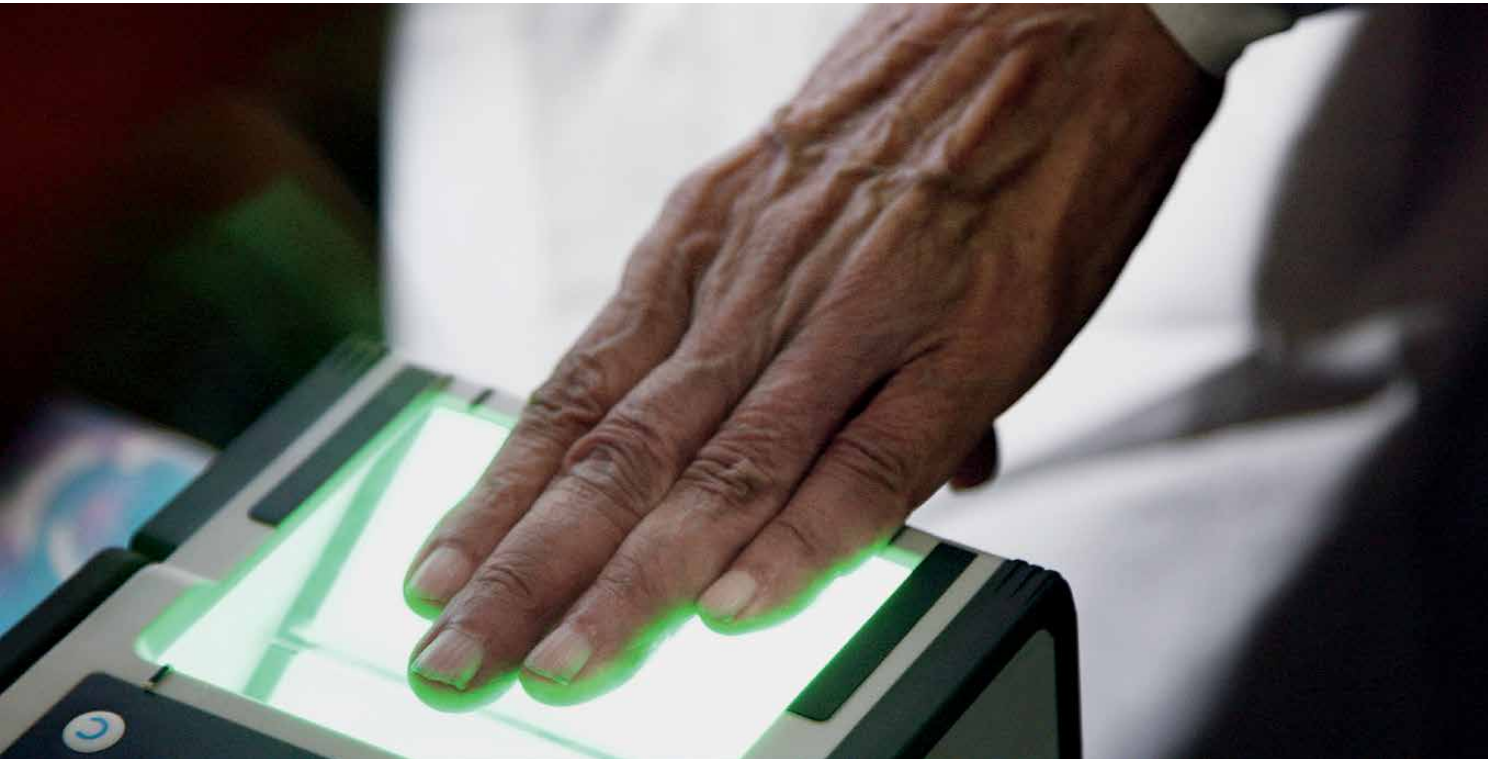
A second measure of success is to have two or three major applications of this ID infrastructure. The government can use it for electronic benefits transfer—that is, to pay out entitlements, pensions, and other benefits. The government can also use the system for subsidy transfers. Half of the $60 billion the Indian government spends on benefits and entitlements is for subsidies on food, fuel, and fertilizer. The government is looking into converting those subsidies into cash transfers—at least in the case of fertilizer and fuel—as opposed to offering the products at lower prices.

You mentioned your old job. What are some lessons for making major change happen that you have drawn from your experience as an entrepreneur?

One is the need for speed in implementation—the bias for action. Another is the ability, which is crucial in business, to recognize gaps and niches in the market.

But one area where the public sector is very different from the private sector is the amount of time you have to spend on consensus building and stakeholder navigation. In the private sector, you're answerable to your management, your board, investors, maybe financial analysts. In the public sector, the number of stakeholders is much larger— the federal government, state and city governments, the media, activists, the public— and they often have different agendas and ideologies. Navigating all this, while preserving the integrity of your approach, requires a lot of negotiation.

WHO ARE YOU, REALLY?
An Indian man scans his fingerprints to enroll in his country's digital ID program, which, for many, has provided the first legal proof of identity.

You've encountered opposition from certain interests. How have you dealt with that?
Obviously, a transformational change like this will meet resistance from certain groups. To overcome barriers, what we try to do, first of all, is to make the people our champions. The people who enroll in the system become the voice of the system. Part of our strategy is to link the ID to benefits because, fundamentally, the ID is optional. So we're taking a benefits-oriented approach— for example, if there's an immunization program that requires an ID, then all the children required will get the ID. Another part of our strategy has to do with speed of execution. We launched the platform in 14 months, and as you mentioned we've already enrolled 200 million people. A third thing is that we've tried to create a "coalition of the positive." A lot of people now have a stake in the success of this project. Banks and telcos, for example, have an interest in helping us make it work.

Other countries are experimenting with digital-ID programs and are trying to scale them. What advice can you give these countries?

They should have a scalable architecture right from the beginning. We could scale to 27,000 enrollment stations in one year because we built an entire ecosystem— there was a software platform, a hardware platform, a training platform for operators. We had many partners so that the load would get shared. We did a lot of things architecturally to drive scale.

But what's equally important is that we expect to see a lot more innovation because of the platform's open API. That's the best way to do this: the government builds the platform but makes it open so that individual creativity and entrepreneurship can build more solutions.

Ultimately, what we'd like to accomplish in this role is to create a thriving application ecosystem around the platform. Over the next few years, we'd like to see more apps developed by both the public and private sectors—and the fact that so many people are enrolled in the system will, we hope, spur more developers to build applications. We want to create a virtuous cycle between applications and enrollment. We also want to make sure that there's a sustainable organization that can continue to deliver on the promise of this transformational project. ■

Matthew Taylor

CITIZENS: THE UNTAPPED RESOURCE

Seeing citizens as sources of innovation and coproducers of services, rather than just consumers, opens new possibilities for a more productive government.

MATTHEW TAYLOR is chief executive of the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA), a London-based nonprofit organization dedicated to finding innovative solutions to social challenges. Prior to this appointment, he was chief adviser on political strategy to the prime minister.

Here is a question I often ask public-sector audiences but to which I rarely get a correct response: which public service has, over the last decade or so, been through the most radical shift from being delivered to essentially passive users to being coproduced by provider and consumer?

The answer is refuse collection. Recycling rates in England still lag behind many other European countries but they are rising quickly. Between 1997 and 2009, the proportion of household waste recycled or composted rose fivefold from 8 percent to 40 percent. Although the cost to local authorities has also risen, higher recycling is an affordable national objective because more and more householders now accept a significant degree of responsibility for managing their rubbish.

The evolution of refuse collection shows a route down which more public services need to travel. Even before the credit crunch and subsequent squeeze on spending, we here at the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA) had identified what we termed the social-aspiration gap. This lies between the broad hopes most citizens have for the future and the trajectory on which current attitudes and behaviors have set us. To be sure, effective policy and technological advances are important to closing this gap, but equally important is enabling citizens to be active partners in building the future to which they aspire.

Generally, democratically accountable governments and their citizens share objectives. We all want children to do well at school, vulnerable elders to be safe and treated with

Matthew Taylor

POWER FROM THE PEOPLE These crushed cans are ready for processing at a London plant. Recycling rates in the UK have climbed—along with citizen engagement.

dignity, our neighborhoods to be pleasant and secure. Yet in both the old, paternalistic way of thinking and the more modern consumerist model, the assumption tends to be that these are outcomes that the state should provide as entitlements. As the gap between what we want and expect and what is affordable grows, this way of thinking has to change.

After all, we know that one of the most important determinants of a child's educational attainment is parental engagement; that eating well, staying fit, and following medical advice is much more significant to the nation's health than surgical survival rates are; and that no police force can cope if a community lacks the basic social norms and responsible behaviors that underpin public safety. This is why the RSA has suggested a new way of measuring the effectiveness of public services: higher social productivity is achieved when

government agencies enable people to make a greater contribution to meeting their own needs individually and collectively.

In case this seems too abstract or idealistic, the field of social care provides another example. Ten years ago, the demand of many disabled adults and their carers for more choice and control over the services they received was a problem for public-sector managers. But now the majority of these clients are allocated their own budgets, giving them either direct access to cash payments or control over how a budget held in their name is spent. The grants may be modest but people can use their resource entitlement in the way that best suits them; perhaps paying family or friends to provide flexible care and support or clubbing together with other clients to purchase bespoke activities. One group of clients living in a mental health facility, for example, bought gym equipment to share and to provide a focus for socializing. Also, some of the money local authorities used to spend on dividing up fixed services among clients can now be channeled to direct payments.

The example of direct payments highlights an important aspect of the social-productivity way of thinking: seeing clients and citizens not just as a source of demands that must be managed but also as assets that can be exploited for good. David Halpern, who is currently an adviser to Prime Minister David Cameron, has described what he calls the "hidden wealth" that lies in the space between the state and the market. This is a society or neighborhood's capacity for resilience, compassion, trust, and creativity, driven not by profit or regulation but by shared values and aspirations.

To engage and empower people, local agencies need a nuanced and multidimensional understanding of citizens and service users. Mapping community assets is also an important tool for service designers in the pursuit of greater social productivity.

New UK-based companies like Participle and Think Public, as well as more established global giants like IDEO, are developing novel solutions to long-standing problems. A recurrent theme in their work is how better to engage and mobilize citizens as active partners in generating public value. One impressive example, from Participle, is South-wark Circles, a system serving a deprived borough in South London. Based on extensive community engagement, the service, which received seed-corn funding from the local authority, combines paid staff, volunteers, and an affordable membership scheme for elders and caregivers to fill the gap in support for older people at home that has been left as shrinking services concentrate on those most acutely in need. Services might include computer lessons, gardening, or routine home repairs. Participle now has public funding to scale up Circles across London and in many other parts of the UK.

Arguably, there is no shortage of new ideas for more effective public-service interventions; the harder challenge is turning these into viable social business propositions. In England, the government is hoping that the creation of a new £600 million Big Society Capital fund to back new business ideas can mesh with the growing use by public agencies of contracts for services that are paid for based on results to generate a vibrant social-enterprise sector.

Still, perhaps, the hardest part of realizing the potential of social productivity is creating

Higher social productivity is achieved when government agencies enable people to make a greater contribution to meeting their own needs.

the necessary culture shift. A senior UK politician tells the story of a local primary school that tried every form of intervention to tackle a long-standing problem with the mathematical attainment of boys from Bangladeshi backgrounds. It was only when in desperation they brought the boys' parents into school that they stumbled onto the solution. It turned out the boys' fathers didn't have the confidence to help their sons with math homework. After a few lessons with the dads, the boys' attainment was flying high. Many schools see parental engagement as a chore, marginal to teaching and learning, but as this case study demonstrates, seeing children's education as a shared goal and widening the school's span of influence to the broader community provided a simple and cost-effective solution to what had seemed an intractable problem.

Around the world, there are hundreds of great examples of this more holistic, upstream way of thinking about social problems and solutions. If we are to close the aspiration gap, we need the goal of greater social productivity to be at the very heart of public service strategy. ■

Susan Zielinski

THE NEW MOBILITY

As the world urbanizes, developing efficient transportation systems will be critical. To meet the challenge, policy makers will need to develop new skills and mind-sets.

SUSAN ZIELINSKI is managing director of Sustainable Mobility & Accessibility Research & Transformation (SMART), a cross-disciplinary initiative at the University of Michigan that advances sustainable transportation systems in an urbanizing world. Previously she cofounded and directed Moving the Economy, a Toronto-based organization focused on sustainable transportation and economic development.

Imagine moving seamlessly from a wired, low-floor hydrogen bus, which you board from the sidewalk outside your home, to a sporty shared vehicle and then to an elegant, high-speed train or a plane or a green cab or a free bike or the parking lot where your own electric car is parked. Imagine you can use any combination of these modes, all door-to-door, all supported by mobile-phone applications or connection-point kiosks that give you information for each mode in real time, as well as integrated electronic fare-payment options, all hooked in to the cloud. Or perhaps you decide to skip the commute altogether and take advantage of telecommuting, tele-shopping, tele-banking, or tele-education instead, at home or at a shared neighborhood office. This will not only save you hours in the day but also 20 percent of your usual carbon dioxide emissions for the weekly commute for each day you work virtually.

This kind of connected transportation grid is starting to emerge in cities around the world, spurred by a rapidly urbanizing population that requires more diverse options that are connected and "smart." It allows users to customize their multimodal trips for maximum efficiency. This is the "new mobility" revolution. And managed well, it can offer a powerful platform for regional development, sustainable community building, and economic transformation.

In practice, it's not unlike your customized communications portfolio, in which your laptop or tablet connects to your desktop, camera, TV, printer, search engine, and more, all talking to each other seamlessly regardless of who made them. It doesn't mean tossing out your desktop computer—it just means merging it with a more diverse and connected portfolio, allowing you to choose the best option for each task.

Beyond the obvious convenience and cost savings, a host of other benefits are beginning to reveal themselves in this world of new

mobility. Because the first step is to better utilize and connect what's already there, the initial level of implementation can happen right away, and may be as simple as mapping the existing grid, distributing the map to users, and making the connections easy to find on the street with signage and other "wayfinding" supports.

From there, engaging the right players in connecting existing options, identifying gaps, and collaborating on solutions can lay the groundwork for redesigning or even overhauling big region-wide systems such as IT infrastructure, land use and development, and urban design. But even when leadership, policy, and land use aren't optimal, it's possible to make significant improvements simply by using readily available information technology. This is key in a world where the need for sophisticated transportation solutions is growing quickly and public policy and land use are not keeping pace.

As the new-mobility grid evolves, some of the greatest benefits to cities and regions will be economic. Innovative small enterprises are already beginning to grow up around the new-mobility ecosystem. For example, companies that offer fractional-use services such as car share, bike share, and customized shuttles, as well as mobile-phone journey-planning apps and multimodal fare-payment technologies, are finding innovative ways to profit from the new-mobility grid. Meanwhile, established players are already mining the opportunities offered by the fast-growing next-generation transportation market: witness the urban-mobility initiative from Ford Motor Company, developed in partnership with SMART, the University of Michigan's sustainable transportation project, as well as smart-city businesses from Cisco Systems, IBM, and more. As industry clusters that cater to the emerging global transportation market form, they can also enhance regional competitiveness and spur job creation.

To reap the full benefits of the new-mobility revolution, city leaders and policy makers will need to embrace and nurture the transition. In such a complex and shifting space, there's no single best practice or strategy, but there are some general approaches that can inform policy and action.

First, leaders need to expand their view of transportation policy beyond Corporate Average Fuel Economy standards, highways, and even land use and urban planning to include the whole suite of areas related to the complex future of transportation in an urbanizing world. This includes information technology, finance and economic development, housing, energy, infrastructure, tourism, communications, education, social services, health, and more—all areas that are key to developing the new-mobility grid.

TIME TO RETHINK TRANSPORT? Cars and trucks were stuck for ten days when road repairs brought traffic to a halt on a highway north of Beijing in 2010.

Policy should be developed with the user in mind. The goal should be to provide access, not movement for its own sake. We can attempt to improve transportation by adding infrastructure—for example, adding yet more lanes to the interstate—but increasingly such strategies are self-defeating (witness Beijing's ten-day traffic jam last year). Often, it will make more sense to provide access through simple proximity—by bringing the things we need closer to where we need them. We can reduce the length of trips or eliminate trips altogether through better urban planning and design and through local production and distribution of goods, even food. Technology is another way to reduce travel; tele-services, for instance, allow people to work, shop, bank, learn, and get medical advice from almost anywhere. Shifting the overarching goal of transport policy to accessibility not only focuses on the needs of people rather than the mode or particular system, it also opens up a whole new set of innovation opportunities.

In transportation as in many other areas, technology and innovation are beginning to outpace the capacity to make policies that apply to them. As such, governments should take a more nimble approach to policy making that supports frameworks for collaborative and regionally customized solutions and provides platforms for innovation, entrepreneurship, and economic conversion, rather than creating a rigid set of rules and regulations that become obsolete before they are even enacted.

Governments should support the development of capabilities related to new mobility, including systems thinking, multi-stakeholder project management, understanding new technologies and services, and entrepreneurship.

Policy makers need to rethink how to finance transportation to support a more realistic balance between operations and capital funding. Our current capital emphasis favors large and expensive infrastructure, even when it may not represent the optimal or most cost-effective solution for users or regional economies.

New mobility is already changing the way we move and live. And for governments that seize the opportunity, it can be a vehicle to vibrant, sustainable, and equitable communities and economies. Carpe diem. ∎

Peter Shergold

A SOCIAL CONTRACT FOR GOVERNMENT

Increasingly, social and human services are paid for by governments but delivered by not-for-profit organizations. It's time to manage the process better.

PETER SHERGOLD is chancellor of the University of Western Sydney and serves on private, public, and NFP boards. He was formerly secretary of the Department of the Prime Minister and Cabinet in the Australian Public Service.

One of the most important innovations in government in recent years emerged from one of the most mundane aspects of public administration: the procurement of goods and services. Changes in the standard models of public procurement have transformed Western liberal democracies in the last generation by introducing public-private partnerships that have brought governments new sources of funding and expertise. These partnerships are the cornerstone of the contract state.

The contract state first emerged when governments, eager to reduce or defer borrowing requirements for infrastructure projects, forged partnerships with private-sector players to build toll roads, ports, transit systems, and other complex, big-ticket projects. Under these arrangements, the private-sector partner was assigned a long-term flow of

funds (sometimes from users, often directly from taxpayers)—as well as the risk. To make the arrangement attractive to private investors, governments often agreed to tax breaks and guaranteed annual revenues or taxpayer subsidies. Now the contract state has evolved to another level, with partnerships formed for the delivery of social and human services, though in this instance the partner is usually a not-for-profit (NFP) organization.

In many developed democracies, and at all tiers of government, NFPs are now routinely contracted to deliver public services. The welfare goals of the state are increasingly delivered through market mechanisms on the basis of competitive tendering and service agreements. Both secular and faith-based nongovernmental organizations are paid to deliver government activity. They deliver

UNLEASHING
SOCIAL SERVICES
The Cape York
Australian
Aboriginal Academy
in Queensland, a
not-for-profit orga-
nization, provides
educational ser-
vices to indigenous
children.

support in areas such as health, aged care, disability, social housing, out-of-home child care, unemployment services, and education. In large measure, these out-sourced arrangements have been driven by economics. There is no doubt that delivery through NFPs has generally been more cost-effective than provision by public servants. In part this is because salaries are generally lower for community workers than public servants. A second advantage of outsourcing is that service quality— or "customer service"—has been enhanced. NFPs offer value for money. This is to some degree a result of community workers having a natural empathy for the people to whom they deliver services.

There are challenges, however, that governments need to address if they are to realize the full potential of the new contract state. NFPs are able to deliver services more cheaply than governments partially because their social mission attracts charitable donations

of time (volunteering or pro bono assistance) and money (philanthropy or social invest-ment). Too often that means that the commitment and goodwill of community organizations are negotiated into service agreements that do not represent the full cost of delivery. In effect, although it is rarely transparent, NFPs subsidize the delivery of government services, which is an inher-ently unstable and unsustainable proposition. That detrimental result may be offset to some extent by the state providing "charities" with beneficial tax statuses relative either to the private or public sector.

The rise of the new contract state is at least in part a response to inflexible bureaucracies. Horizontal demarcations continue to bedevil whole-of-government approaches, particu-larly when administrative and financial re-sponsibility is shared among different federal jurisdictions. Outsourcing the function to an NFP is a way to sidestep that silo mentality. It is often only NFP organizations, funded to deliver a diversity of services by a range of government agencies, that are able to truly put the citizen-client at the center. Indeed, much of their time is spent applying for mul-tiple grants and contracts and then integrat-ing them in a way that responds to the various disadvantages that face the clients they serve.

Unfortunately, the most significant potential benefit of outsourcing has seldom been realized. Creating a competitive market for public services should have driven innova-tion. Different community organizations should have been encouraged to develop their own distinctive approaches. That aspiration has been stymied by the public administra-tors who oversee contract management and narrowly construe public accountability for expenditure of public funds. They have tended to focus on process compliance rather than performance in assessing the outcomes, imposing an unnecessary burden of red-tape

on NFP deliverers. Rather than being actively encouraged to demonstrate differentiation, NFPs find themselves constrained by procedural guidelines designed to minimize political risk. Outsourced providers are pressured to become quasi-government agencies delivering services in standardized ways determined by the government contracting departments.

The irony is that a process that should have encouraged NFPs to operate along commercial lines, earn income, and accumulate surpluses through contractual delivery of government services, has actually made these organizations increasingly dependent on government. Their important advocacy role has been undermined, either by explicit contract conditions or self-imposed censorship. The rich expertise born of their community experience remains largely unappreciated and untapped. In short, the transformative potential of public-community partnership has been held back by governmental risk aversion, bureaucratic managerialism, and lack of vision. Outsourcing continues to be governed by contract instead of collaboration.

What can be done to reinvigorate the NFP partnership and realize the full potential of these arrangements? The first requirement is for governments to get serious about promoting partnership. Many governments have now set out principles of cross-sectoral cooperation, based on mutual respect and trust. However well-meaning, such "compact" documents are inconsequential unless mechanisms exist for their monitoring, evaluation, and public scrutiny. Collaboration needs to be built into the structures of public service. The NFPs that deliver government services should be empowered to influence the policy parameters, administrative guidelines, and contractual conditions under which they operate. The attitude on the government side should be one of building a relationship, not managing a contract.

Governments need to get serious about promoting partnership.

The second requirement is for governments actively to promote public innovation, which will require a greater tolerance for risk. Funding pilot projects and providing grants for social innovation are necessary but not sufficient. Inventiveness must be extolled. Creating "design laboratories" may uncover new approaches to the wicked problems of public policy, but they must focus on more than the pet projects of one or two internal champions. A far better solution is to place community organizations within the structures of government, engaging them in discussions of public policy. NFPs should be participating members of the task forces and interdepartmental committees through which public services do business. NFPs cannot be partners from the outside.

The third need is to develop better metrics by which to measure the public returns on investment in human services. Too frequently government treasuries regard spending on welfare as mere expenditure. The longer-term benefits of government intervention are poorly understood and rarely identified, undermining the incentive for funding preventative interventions. The "success" of unemployment services, for example, is judged by the number of job seekers who are placed into work. The beneficial impact is generally calculated in terms of increased workforce participation and workplace productivity, expressed very often as a reduction in welfare costs and increase in tax revenues.

NFPs know better. Taking as their focus individuals in need of assistance, they appreciate the multiple barriers that their clients need to overcome to join the workforce.

Governments need to find new vehicles to bring together the private and NFP sectors in ways that reduce the rising costs of publicly funded human services.

They also understand the manifold benefits that can be derived from effective intervention. People in employment are more likely to have stable family structures, better health, improved access to housing, and higher levels of civic participation. They are more likely to contribute to the creation of social capital and display more pro-social behaviors. Their children are likely to be better educated, more effectively nurtured, and less likely to become welfare dependents as adults.

The oft-espoused commitment of governments to evidence-based policy needs to be informed by all the parties involved in program delivery. Collaboration between the public and community sectors must be based upon a calculation of the *full* returns on investment, not a slice of short-term benefits based on the functional and jurisdictional barriers by which public bureaucracies are still organized. The growing expertise of mission-driven NFPs in undertaking social audits of their activity and assessing (even monetizing) social returns on investment (SROI) needs to be harnessed. SROI methodologies often present a more persuasive assessment of impact than traditional government evaluations, which compare the (full) costs and (limited) benefits on a program-by-program basis.

Finally, governments need to find new vehicles to bring together the private and NFP sectors in ways that reduce the rising costs of publicly funded human services. Governments can encourage private-sector social investments by providing a supportive tax and regulatory regime for NFPs. Better still, they can facilitate the creation of private capital to support social enterprises that can deliver public benefit. The new financial instruments variously called Social Impact Bonds (United Kingdom), Pay-for-Success Bonds (United States), or Social Benefit Bonds (Australia) are good examples of the kinds of innovation that are required. In these cases, the government enters into an agreement with an NFP to deliver public services in a manner that reduces overall expenditure, for example, by lowering the rate of prisoner recidivism. The NFP can offer bonds to investors in which returns consist of government payments based on the extent to which the venture meets agreed-upon government targets.

Properly structured, bonds offer a win-win-win solution. Governments benefit from an injection of private capital into human-services programs and are able to transfer risk to the NFP ventures. The NFP is able to attract sufficient funding for it to scale up its mission-driven activities and to deliver services without public micromanagement. Finally, the socially responsible investor has a means for seeking both social and financial returns.

Until now the transformative potential of public-community relationships and the contract state has been constrained. NFPs have too often been thought of merely as outsourced providers rather than collaborative partners. If governments and their public services can move from contract managers to innovation facilitators, bold new forms of democratic governance will become possible. ■

Wim Elfrink

THE SMART-CITY SOLUTION

Wim Elfrink, chief globalization officer at Cisco, leads the company's smart-city work. He believes that urbanization based on networked cities can help the world meet its demographic challenges. This article is based on an interview with McKinsey's Rik Kirkland.

WIM ELFRINK is Cisco's executive vice president of emerging solutions and chief globalization officer. He leads the company's Smart+Connected Communities Initiative, which uses technology to transform physical communities into connected communities to enable economic, social, and environmental sustainability. Rik Kirkland is a partner at McKinsey & Company.

Our rapidly urbanizing world faces an enormous demographic imbalance. Over the next few decades, Europe, and to some extent the United States and China, will be aging and shrinking, even as India, Africa, and the Middle East see their populations expanding. At the same time, we still have three billion people in the world who have no access to water, electricity, health care, and education. And we are moving from a global population of seven billion to nine billion.

Clearly cities are the key to whether we successfully meet this massive transition challenge and achieve growth that is both sustainable and inclusive. And the critical enabler is going to be technology. What was once a visionary notion is now the new normal: technology is really as essential as the three utilities—water, gas, and electricity.

If you want to revitalize an old city, or if you are erecting a new greenfield city, technology has to be built in. Today many leading cities have a ten-year plan that includes a master information and communication technology (ICT) plan. A city without an ICT master plan is simply not relevant anymore.

The goal, of course, is to view technology as part of a holistic, services-oriented approach to revitalizing cities. Right now, in most places, whether you move into a new apartment or buy an old one, you have to rip the ceiling out to get wireless in and buy various devices. But imagine what would happen if everywhere you went, as with electricity or water, that technology were simply built in? Suddenly the only thing to worry about would be how to provide the new services that consumers will increasingly demand: assisted living for the

What was once a visionary notion is now the new normal: technology is really as essential as the three utilities—water, gas, and electricity.

older population, safety and security, parking services, medical services (we already know that 80 percent of doctor visits don't require physical interaction), and access to public services in general. When you get to a critical mass, the data on the benefits is so compelling: a 50 percent reduction over a decade in energy consumption, a 20 percent decrease in traffic, an 80 percent improvement in water usage, a 20 percent reduction in crime rates. The concept of smart cities really sells itself.

How can we accelerate this transition? Here's a statistic that underscores both the problem and the potential: worldwide spending on infrastructure and construction is about $2 trillion a year, and ICT spending is just 1.5 to 2 percent of that. But over the next decade, we will continue with advances in cloud computing, big data, and open data, and we will see 50 billion devices connected through machine-to-machine communication, which will foster the industrialization of the Internet. Intel predicts that in a decade, the Internet of Things will be a $1.5 trillion-a-year business—just from a technology point of view. But on top of that there will be another $2 trillion annually in new services. So we don't need to increase ICT's share of global infrastructure spending from today's levels to reap the benefits. We just need to ensure that our investments are smarter and move technology from being an afterthought to having it embedded in our urban master plans.

That said, we still face huge hurdles. Politicians face short-term election cycles, while the benefits of this kind of investment are longer term. Hence, in addition to articulating the vision for their cities, politicians need to score quick wins and generate budgets for the parts of their vision that demonstrate immediate benefits. Construction is one of the world's most conservative industries. It's the only vertical industry that hasn't really made any productivity improvements over the last 30 years. There are too few global standards. Look at electricity with the long-standing variation between 110 and 220 volts and multiple outlets. We still can't agree on a common standard. We need better protocols and global open standards, like those that enabled the growth and connectivity of the Internet. We need to create new ecosystems, in effect whole new industries to enable some of these benefits. Consider parking. In Paris, as in many cities, the average citizen spends four years of his life trying to find a parking place. But what if you could drive in off the highway, and your navigation system would guide you to a free parking place? It would reduce congestion and carbon emission. That is beginning to happen in cities like San Francisco and Chicago. But getting these projects off the ground requires the right regulatory framework and collaboration among a lot of industries in order to provide everything from the sensors in the street to the apps in your car or mobile device.

Happily we are starting to see real success stories. In every case, success requires five elements. First, thought leadership. Without a mayor with a long-term vision and passion, you are simply not going to get there. Second, you need smart regulation that updates standards for the 21st century and creates positive incentives for change. For example, in Australia, regulation requires every building to have a water tank under it to store water—even in buildings that are water-usage neutral, which is simply a waste of resources. San Francisco uses Urban EcoMap, an Internet-based tool that provides its citizens with information

on carbon emissions from transportation, energy, and waste among neighborhoods, organized by zip codes. The tool helps them to make sustainability part of their decision making. Third, we need global open standards. Fourth, we need public-private partnerships, which offer a way around that short-term election-cycle trap by leveraging public goods to foster private investment, save money, and create new long-term benefits. In Chicago, for example, Mayor Rahm Emanuel has created an infrastructure trust, and he is asking private companies to come in, invest, and get concessions for 10 or 20 years to operate facilities.

Others are making great strides by transforming big data into open data. In Washington, Apps for Democracy, a not-for-profit organization created by Mayor Vincent C.

Gray, is an open community platform developed for submitting 311 (non-emergency) service requests to the city. The first edition of Apps for Democracy yielded 47 Web, iPhone, and Facebook apps in 30 days—a $2,300,000 value to the city at a cost of $50,000.

That brings me to the fifth element, which is creating new ecosystems—bringing four to five companies together, inspired by a government initiative, to solve a big problem. Europe is leading the way, especially when it comes to revitalizing older cities. The economic regeneration of Barcelona is one of the largest transformational projects under way in Europe at the moment. The city's revitalization agenda has so far created 45,000 jobs and attracted around 1,500 new companies. In Amsterdam there are more than 100 Smart Work Centers that offer high-end working

A NEW KIND OF CITY
South Korea's Songdo International Business District was built from the ground up to be wired and sustainable.

facilities and aim to reduce travel and pro-mote efficient and sustainable ways of work-ing. These Smart Work Centers are a show-case of the future of work and virtualization.

How different will the world be in 20 years as all this plays out? I think about how my own life has changed. I was 12 when we got a black-and-white television at home. I was 20 when I took my first plane ride; 30 when I got my first cell phone. I was 40 when I used my first VPN connection and 50 when I first used video conferencing over TelePresence. My ten-year-old son wanted a mobile phone, and when I told him he had been too young, he asked me how old I had been. End of argu-ment. He cannot imagine that I lived 30 years without a cell phone. If I'm not careful, I can become a prisoner of my own experiences, and then I won't think outside the box. With the pace of change accelerating, we're likely to hit new inflection points even faster.

While cities will play an ever-increasing role, just think about how technology as an enabler is already affecting rural life. Today in India people often have access to ICT before

they have water or electricity. One of the most used apps in rural areas there is to make your cell phone a lamp, because there's no electric-ity. During the day you can recharge it via a solar panel in the village. And that is, in turn, leapfrogging access to health care, education, and eventually work. Technology will empow-er diverse demographics across continents. Right now, there are illiterate people in rural India doing video surveillance for retail stores in the United States. They can observe and press a button if they see strange behavior.

Now imagine what's ahead as we continue to improve our connectivity and move from five billion people with cell phones to seven billion. As technology enables a host of new services over common platforms, we're going to see whole new industries arise and new waves of innovation. The future of competition will be among cities, and the ones that thrive will be those that have overall sustainability—economic, social, and environ-mental. From a sustainability point of view, it's a good thing for the planet. And it's prob-ably the only way out. ∎

BUILDING THE WORLD'S INFRASTRUCTURE

Karan Bhatia, *senior counsel, international law and policy, General Electric*
Interviewed by Rik Kirkland

Q: We see numbers like $20 trillion in investment needed over the next couple of decades to build the infrastructure that the world's growth requires. Any thoughts about the most promising ways forward?
A: The demand for infrastructure is ever growing. And indeed, you're seeing already the weakening of infrastructure because of a failure to maintain it. Particularly in developed markets, it's a constraint on growth. That's got to be addressed if we're going to build our way out of the economic malaise we find ourselves in now globally.

The challenge is how to do it. When you're debt constrained, fiscally constrained, the obvious approach that everybody looks at is public-private partnerships. And certainly, we think there is more that can be done there, but there are political challenges, particularly in places like the United States. We think of ourselves as a fairly private sector–oriented country with respect to infrastructure, but we're really not. Congress and others have played a larger role than they're going to be able to play in future. And so we need to see what we can do with regard to creating a policy and political environment that is going to allow those sorts of public-private infrastructure regimes to succeed.

What are some of the areas where the process gets stuck?
Sticking points would start with the permitting, whether for a new power plant or a new port. Just look at the challenge we've had in the nuclear business alone. It's a testament to how difficult it is to grow the infrastructure in areas that may make complete sense to economists or policy observers but in which there are political challenges. So it starts there. It continues through to the financing and making sure that the returns on investment are there to be able to sustain progress.

I believe that opening up a global infrastructure market is going to be key. Some of the experts in infrastructure are companies outside of the home market, be it New Zealand companies investing in the United States or Spanish companies investing in Latin America. There needs to be a recognition that having a global perspective on how to resolve some of these key infrastructure problems is going to be an important piece of the puzzle. ∎

Rik Kirkland is a partner at McKinsey & Company.

Opening up a global infrastructure market is going to be key.

TEACHING FOR THE NEW MILLENNIUM

Digital technology offers a better alternative to the traditional classroom—especially in parts of the world where schools and classrooms barely exist.

SALMAN KHAN is the founder of Khan Academy, which provides free online courses. Khan, the child of Bangladeshi and Indian immigrants, was raised in New Orleans. He holds degrees in math and engineering from MIT and an MBA from Harvard Business School. From *The One World Schoolhouse: Education Reimagined,* by Salman Khan. Copyright © 2012 by Salman Khan. By permission of Grand Central Publishing. All rights reserved.

The way we teach and learn is at a once-in-a-millennium turning point.

The old classroom model simply doesn't fit our changing needs. It's a fundamentally passive way of learning, while the world requires more and more active processing of information. The old model is based on pushing students together in age-group batches with one-pace-fits-all curricula and hoping they pick up something along the way. It isn't clear that this was the best model 100 years ago; it certainly isn't anymore. When and where do people concentrate best? The answer, of course, is that it all depends on the individual. Some people are at their sharpest first thing in the morning. Some are more receptive late at night. One person requires a silent house to optimize his focus; another seems to think more clearly with music playing or against the white noise of a coffee shop. Given all these variations, why do we still insist that the heaviest lifting in teaching and learning takes place in the confines of a classroom and to the impersonal rhythm of bells and buzzers?

Technology has the power to free us from those limitations, to make education far more portable, flexible, and personal; to foster initiative and individual responsibility; to restore the treasure-hunt excitement to the process of learning. Technology offers another potential benefit as well: the Internet can make education far, far more accessible, so knowledge and opportunity can be more broadly and equitably shared.

In 2004—somewhat by accident—I started experimenting, and the experiment that took on a life of its own was my posting of math lessons on YouTube. My basic philosophy of teaching was straightforward and deeply personal. I hoped to convey the sheer joy of learning, the thrill of understanding things about the universe. Furthermore, I wanted to do this in a way that would be equally helpful to kids studying a subject for the first time and for adults who wanted to refresh

their knowledge. Can watching video lessons or using interactive software make people smart? No. But I would argue that it can do something even better: create a context in which people can give free rein to their curiosity and natural love of learning, so that they realize they're already smart.

By the middle of 2012, the new entity I ended up starting, Khan Academy, had grown well beyond me. We were helping to educate more than six million unique students a month—more than ten times the number of people who have gone to Harvard since its inception in 1636—and this number was growing by 400 percent per year. Our videos had been viewed over 140 million times and students had done nearly half a billion exercises through our software.

The mission statement that has guided Khan Academy since day one is this: to provide a free, world-class education for anyone, anywhere. Admittedly, this is a rather grandiose ambition. It probably springs in part from the fact that I myself am the child of immigrants and have seen with my own eyes places like Bangladesh, India, and Pakistan, where the inadequacy and unfair distribution of educational opportunity is a scandal and a tragedy (and pre-Katrina New Orleans, where I was born, wasn't much better). But if my internationalist perspective is partly a function of personal history and emotion, it is also a matter of simple practicality.

Lack of education and the poverty, hopelessness, and unrest that tend to go with it are not local issues but global ones. The world needs all the trained minds and bright futures it can get, and it needs them everywhere. Contrary to many people's assumptions, I believe that computer-based, self-paced learning can be delivered very cheaply. It can be deployed in thousands of communities where tens of millions of kids currently have no educational access at all. Consider an analogy with cell phones.

The world needs all the trained minds and bright futures it can get, and it needs them everywhere.

Cell phones have changed life everywhere, but they have positively revolutionized it in the developing world. Why? Because the developing world had so few landlines. For most people there, cell phones aren't just an add-on, they are it. As with telephones, so with education—the more egregiously that people were underserved before, the more revolutionary an improvement they will experience.

Let's start with cost. If school districts in poor countries can't even afford secondhand textbooks, pencils, and blackboard erasers, how can they possibly afford up-to-the-minute video lessons? The answer is that the lessons, in their most basic form, could be delivered virtually for free.

India loves its Bollywood movies, and even in the most remote rural villages, there is almost always someone with a first-generation DVD player and a television set. Thanks to grant money that Khan Academy has received, we already have video lessons translated into Bengali, Hindi, and Urdu (as well as Portuguese, Spanish, and several other languages) and copied onto DVDs, to be distributed free of charge.

Admittedly, just having students *watch* the videos is not ideal; with DVDs alone, they would not be able to do self-paced exercises or have access to a great deal of feedback. Even so, video lessons on DVDs would ameliorate the teacher shortage and give kids in the world's poorest areas a cheap approximation of what the wealthy have.

But say we aim higher. Say we aim *ridiculously* high. Say we aim to give kids in poor rural villages around the world virtually the

GOODBYE, MR. CHIPS? Digital technology opens new ways of learning that are more personal and portable than the traditional classroom.

300 days a year. The cost is thus less than *two cents per student per day.* Can anyone tell me in good conscience that this is more than the world can afford? Even more, the technology will only get better and cheaper from here on out.

Realistically, cheap tablet devices alone do not suffice to re-create a Silicon Valley–style virtual education experience. There remain the questions of Internet connectivity and the gathering and use of data regarding students' progress. These are logistical challenges that will vary in different locations, but the general point I want to make is that with some imagination and technological savvy, the challenges can be met far more cheaply than is usually acknowledged.

Bandwidth-hogging videos can be preloaded on devices and user data could be transmitted over cellular networks. If there is no cellular connectivity, information regarding students' work and progress could be downloaded from individual computers, copied onto flash drives, and carried in a truck to central servers. They could be carried on a donkey! Not everything in high-tech education has to be high tech. There are hybrid solutions right in front of us—if we are open to them.

Coming back to cost, cellular Internet connectivity can be had in India for as little as $2 per month. So our per-student expense has now increased to $11 per year ($44 per year per device with Internet that can be shared by four students). Let's further suggest a worst-case scenario in which not even this meager amount can be procured from public or philanthropic funds. What then?

Certainly in a place like India, the price of educating the poor could be covered by the middle class and the well-to-do—not by taxation, charity, or under any sort of compulsion, but by giving prosperous families themselves a much better deal on education. Let me explain. In much of the developing world, especially in both South and East Asia,

same experience as kids in Silicon Valley. This is preposterous, right? Well, I believe it can be done.

Consider: inexpensive tablet computers are coming onto the market in India for under $100. If such a computer can be expected to run for around five years, the annual cost of owning this device is $20. Now the Khan Academy curriculum is designed so students can get what they need in one to two hours a day of following lessons and working out problems; this means that a single tablet could be used by four to ten students a day. Even taking the more conservative number, the cost is $5 per student per year. Now let's give our students some downtime and some sick days, and posit the computer is used

school is regarded not primarily as a place to learn—the rigid conditions don't allow for much of that—but rather as a place to show off what you know. The actual learning happens before or after school, through the use of private tutors. Even middle-class families tend to see tutors as a necessary expense, and private tutoring is in fact the way many teachers end up making something approaching a middle-class income. As teachers of advanced subjects are in short supply, tutoring in calculus or chemistry gets pretty pricey.

What if families were offered an alternative that was far less expensive, far more comprehensive, and designed in accordance with a proven international standard? In other words, what if they were offered low-cost access to computer centers that offered Internet-based, self-paced learning? This might be bad news for the private tutors, but it would be good news for everybody else. Middle-class families would spend far less for quality education; kids would have the benefit of a complete, tested curriculum rather than the hit-or-miss teaching of tutors whose own understanding might be less than world-class.

Supported by the fees of those who could afford them, the centers would be free to the poor and the currently unschooled. The beauty is that the middle-class kids, still attending conventional classes, would use the center in the early morning or the evening. The kids (and the adults, for that matter) without access to other education could use the facilities during the day.

Now, as a sworn enemy of one-size-fits-all approaches, I'm not suggesting that this scheme would work everywhere or that it couldn't be improved upon. But I am convinced that the basic model—providing high-quality, low-cost education to the affluent and middle class and using the revenues to make the same services free to the poor—has a place in how we finance our educational future. In a perfect world, such schemes would not be necessary; governments and societies would see to it that everyone had access to quality education. In the real world, however, with its blatant inequities and tragic shortfalls of both money and ideas, new approaches are needed to prop up and refresh a tired system that works for some but fails too many. The cost of wasting millions of minds is simply unacceptable. ∎

Xie Chengxiang

HOMES FOR THE URBAN POOR

Huangshi, a city of 2.6 million in central China, faced a challenge. An influx of rural migrants and the decline of its core mining industry had led to scores of slum settlements. To cope, deputy mayor Xie Chengxiang innovated a process for creating thousands of housing units and getting them on the market.

MCKINSEY INTERVIEW BY EADIE CHEN

XIE CHENGXIANG is deputy mayor of Huangshi of Hubei province. Previously, he was the director of the Central Geological Exploration Fund Management Center. He holds a master's degree from China University of Geosciences. Eadie Chen is the director of strategic engagement, Urban China Initiative.

Q: Why was affordable housing issue a policy priority in Huangshi?

A: China is urbanizing very rapidly. The number of city dwellers is rising in tandem, which means more living spaces are needed. China started its market reform of the housing industry 15 years ago. This greatly energized the housing market, but it also led to a surge in housing prices that exceeded what many medium- to low-wage earners in urban areas could afford.

In recent years, the housing issue has become the most stringent problem affecting people's lives in China. It is also a serious problem threatening social stability and economic development. This challenge looms especially large in Huangshi. We have been feeling pressure from both the central government and local residents to take action.

In its heyday as a mining city, Huangshi experienced prosperity and development. However, as resources were exhausted and the reform of state-owned enterprises took hold, many mining enterprises went bankrupt or were restructured, and a large number of workers were laid off. Many of those workers ended up in makeshift houses. These houses gradually evolved into the current shantytowns, similar to the slums in other countries.

Meanwhile, as the industrialization and urbanization process picks up speed, new urban residents, such as rural migrant workers and newly employed college students, have emerged in large numbers. This rapidly rising urban population has further intensified the housing problem in Huangshi.

Statistics show that in Huangshi, there are 164 shantytowns occupying an area of about

two million square meters. They are inhabited by more than 12,000 households, over 80 percent of which are low income.

Infrastructure and public services in these shantytowns are very poor and the crime rate is much higher than in other areas. These slum settlements also widen the gap between rich and poor in the city.

Many residents living in these shantytowns are unhappy and are demanding access to low-cost housing. For example, in recent years, at the annual National People's Congress and Chinese People's Political Consultative Conference (the two highest-level annual conferences to review government performance and set agendas for the new year), we have received a lot of proposals calling for us to do something about the lack of housing. Because China has had several decades of fast growth, both central and local governments have developed healthy fiscal profiles. We are financially capable of resolving this problem.

The central government has been driving home a message to the local governments that more effort is needed to improve the living conditions and well-being of the people. These efforts are also a new engine for China's domestic consumption and economic growth.

The State Council decided to build 3.6 million units of affordable housing throughout China between 2011 and 2015. The units will be available to 20 percent of the country's urban households by 2015. The central government also set targets for local governments. The Ministry of Housing and Urban-Rural Development and the China Development Bank named Huangshi a pilot city for the construction of public rental housing. So we are feeling pressure from both the top levels of government and the grassroots to take action.

What are the biggest challenges?
Getting the initial funds to start the program was the first challenge. We set up a state-owned company called Zhongbang Urban

Housing Investment Co., Ltd. (Zhongbang literally means "a city for the mass" in Chinese) to act as the financing and management platform.

The Huangshi city government injected the funds earmarked for the public-housing program—totaling 135 million yuan ($21.4 million)—into Zhongbang along with the 6,000 mu (4 million square meters) of land that had been set aside. The city also offered some tax and fee exemptions to Zhongbang. Using these funds and assets as collateral, Zhongbang was able to borrow from China Development Bank, which, as a bank charged with financing public-policy efforts, offers loans at below-market rates.

FROM SHANTY TO HIGH RISE Affordable housing is a challenge the world round. In China's Huangshi, apartment towers offer an alternative for some slum dwellers.

Zhongbang's registered capital has increased from the initial 135 million yuan ($21.4 million) to 500 million yuan ($80 million); total assets have increased from 200 million yuan ($32 million) to 2 billion yuan ($320 million), with 650 million yuan ($103 million) raised in total. With this package of funding sources, the public-housing program was successfully launched using Zhongbang's platform.

Then we faced the challenge of how to make the program financially sustainable. Again, we worked out a package solution. First, tenants are allowed to buy housing property by installment, based on their income. This accelerated the recycling of funds. The selling price is usually set at half the market price.

We also allowed Zhongbang to manage the commercial-development projects, mainly retail businesses, in the public-housing zones. This will generate extra revenues for Zhongbang.

Adding together the favorable bank loans, the rental revenues, and the central and local government subsidies, Zhongbang can operate the program in an almost self-renewing and sustainable way, though capital challenges still exist.

Finally, we had to ensure a fair distribution of the units and create effective supervision. Luckily, Huangshi has a relatively small floating population. This makes it easier for us to align with banks and tax offices to collect individual financial data. We have been updating the information network to make sure that the lower-cost houses are distributed to those who are in real need. We also use community groups and the Internet as supervising devices. We always make public the list of people receiving subsidized housing. In addition, the qualification of tenants will be reviewed every two years to make sure that those who are no longer low income either move out or pay market prices.

More important, we have adopted a system to separate rent from subsidy. Tenants actually pay market-level rents, but they receive various government subsidies according to their income levels. Once they are no longer qualified to receive subsidies, they will have to pay the market price on their own.

What are your metrics for measuring success?
Ultimately, the measurement should be whether the people in the city feel better about their living conditions, whether they gain more confidence in the local government, whether the central government acknowledges our achievements, and whether the improved situation will help local economic development and investments.

Since 2009, Huangshi has constructed 18,730 units of affordable houses for public rental. They cover 1.03 million square meters, transforming the 16,312 households occupying 570,000 square meters in various shantytowns and significantly alleviating the housing difficulty facing urban families. This is ten times more than the total affordable houses that were built in Huangshi in the ten years leading up to 2009. We can say that we have achieved an interim success.

According to the public-rental-housing construction plan, Huangshi will create 45,000 more units of public rental homes covering 2.4 million square meters in the next five years. The units will be divided into 46 subprojects with a total investment of 5.9 billion yuan ($940 million).

The housing will be available to all citizens without access to housing including residents requiring resettlement after the razing of shantytowns and other substandard housing. Thus, through our innovative housing program, Huangshi struck a balance between economic development and social development, as well as between current investments and future benefits. ∎

HOW ESTONIA BECAME E-STONIA

Estonia's comprehensive e-government platform fundamentally changes how citizens access basic, daily services from both the public and private sectors. —*Elana Berkowitz and Blaise Warren*

In Tallinn, the capital of Estonia, the ancient spire of St. Olaf's Church towers over a walled medieval city of cobblestone streets and buildings dating back 800 years. But behind Estonia's medieval doors, citizens are accessing one of the most advanced and comprehensive e-government systems in the world, in a country with one of the highest rates of Internet connectivity (at over 75 percent). How did this tiny nation become a digital innovator? After becoming independent from the Soviet Union in 1991, Estonia, with a population of approximately 1.3 million, had to find a way to develop its country and economy. With little in the way of banking, communication, or public-sector infrastructure, the country had room to chart an independent course. The result: a system that allows access to more than 160 online services, including unemployment-benefit applications, filing for parental leave, property registration, notary services, digital medical records, and prescription-drug renewals.

The Estonian e-government system has two key aspects. First, its data architecture allows agencies and private-sector entities using the system to largely retain their own records instead of combining all of the data on centralized servers. Second, access is provided through a secure, nationwide electronic ID system. Users swipe their physical ID cards through a reader (now preinstalled on all new computers or available for purchase for €3–€4) and then enter their personal ID numbers. Recently, Estonia added mobile access via smartphones.

Those concerned about privacy can opt out of sharing their data online with little difficulty. An Estonian patient's health records, for example, are by default available for viewing by any doctor. The benefit of this is that doctors can look across people for common conditions and cures, not just within their patient base. But anyone who dis-approves of this default can opt out—preventing one or all doctors from viewing certain medical records, or allowing only their personal doctor to view their records.

Estonia's e-government platform will almost certainly continue to evolve: Liia Hanni, program director of the E-Governance Academy and a former member of Estonia's parliament, says, "In Estonia, we can add e- to almost every affair of life." ■

Elana Berkowitz and Blaise Warren are consultants in McKinsey's Washington, DC, office.

WIRING THE WALLED CITIES Estonia's Tallinn, with the ancient spire of St.Olaf's in the background, has changed with the times. Behind the turrets is one of the most sophisticated e-government systems in the world.

BUILDING NEW COMPETENCIES

FISCAL MANAGE- MENT FIX: SIMPLE MATH— AND A VERY BIG STICK

The US budget process has been hijacked by partisan politics. The solution? No paychecks for Congress or the president until they agree on a budget.

DOUGLAS HOLTZ-EAKIN is president of the American Action Forum and was a commissioner on the congressionally chartered Financial Crisis Inquiry Commission. He has also served as chief economist of the President's Council of Economic Advisers and as director of the Congressional Budget Office. Holtz-Eakin has a BA from Denison University and PhD in economics from Princeton University.

The greatest threat facing the United States is its large debt, which is projected to grow even larger over the next decade. The political gridlock in the presence of this debt problem has produced one downgrade of the federal government's bonds already. To avoid another and fix the US federal government, all that is needed is arithmetic: addition. Subtraction. Sum. Difference.

Specifically, a statute should require that the House of Representatives and the Senate pass, and the president sign, an annual budget that carries the force of law. That is, it should be a requirement that the federal government add up all types of spending, subtract all sources of revenue, and commit as a whole to the difference—the deficit and its contribution to federal debt.

The requirement to determine annually all types of spending and comprehensive sources of revenue is the single best way to bridge the current partisan divide and improve the quality of federal fiscal policy. It is the silver bullet for politics and policy.

At present, the president submits an annual budget request, but it is no more than that. There is no binding requirement for Congress to act on it in any way. Indeed, often it is deemed "dead on arrival" in Congress. More generally, the fact that Congress can ignore the president's budget permits the White House to treat it as an opportunity for political messaging, with no policy intent or operational significance. The system permits US presidents to bypass the obligation to provide any fiscal leadership.

At the other end of Pennsylvania Avenue, the Budget Act of 1974 calls on the House and Senate each to pass an annual budget resolution, reconcile the differences in a conference, and pass the result. Sometimes this happens. But there is no real penalty for failing to adopt a budget resolution, and increasingly Congress does not. Since 2000, Congress has adopted a concurrent budget resolution

only seven times, a bit over half the time. In particular, Congress tends to avoid budget resolutions in election years.

The result is that the United States does not have a fiscal policy, that is, a deliberate stance on the composition and level of federal outlays and receipts. Instead it has fiscal outcomes: the president proposes, the House acts, the Senate acts, and the results have no coherent relationship with the various types of spending and revenue.

From a policy perspective, the results have been abysmal. Gross federal debt now exceeds the size of the US economy, and an explosion of spending over the next decade is projected to drive it northward. The core source of this spending is the social safety net. Medicaid, Medicare, and Social Security are currently running cash-flow deficits that will expand as the baby-boom generation retires. These programs will fall under their own financial weight unless reformed. Simply put, the current approach to federal budgeting is a policy failure.

At the same time, this approach exacerbates the political divide. The White House has no need to meaningfully engage Congress, and the House and Senate face no dictate to bridge partisan divides and produce a joint budgetary framework.

Neither the policy nor the political failure should be permitted to continue.

Instituting a legal requirement for a federal budget raises a number of issues: what it would accomplish, how it would be enforced, and what complementary changes would be needed.

The policy accomplishment is straight-forward. The budget would constitute an agreed-upon plan by Congress and the executive branch for spending priorities over the subsequent decade, as well as a corresponding plan for tax and deficit finance of that spending. Notice that the requirement to pass a budget does not impose any limitations

Instituting a legal requirement for a federal budget raises a number of issues: what it would accomplish, how it would be enforced, and what complementary changes would be needed.

on the underlying fiscal policy—no balanced-budget requirement, spending limits, or tax requirements. But the requirement to pass such a budget would carry with it an inevitable discussion of these crucial issues. Further, in the process, every program and initiative would come under scrutiny in the competition for budget resources.

The political ramifications are equally large. In the absence of one party controlling the House, Senate, and White House, each annual budget would require the kind of bipartisan negotiation and compromise that is missing at present. It simply would not be possible to take a nonnegotiable, partisan position and let the budget outcomes just evolve. Regular negotiation and compromise would build greater comity among members from different parts of the ideological spectrum. It would still be possible to stake out preferred positions at the start of the annual negotiations, but the climate of poisonous stalemate would have to become a part of history.

Of course, the Budget Act of 1974 contains many deadlines—for the president's budget, the budget resolution, and the appropriations process—that are regularly ignored. To make sure that this budget law sticks, a greater incentive is needed: money. Specifically, it should not be legal to pay congressional or White House salaries unless a budget is in place for that fiscal year. Period. As the October 1 deadline approaches, members of Congress, the president, and their respective

CRISIS AVERTED—
AGAIN
Senate Majority
Leader Harry Reid
returns from the
Senate Chamber
after reaching a
deal on the federal
budget on April 8,
2011, that prevent-
ed a government
shutdown.

staffs would face a cutoff in pay unless the budget is passed. There is no more targeted incentive imaginable, and the politics of eliminating this provision would ensure its survival.

Finally, the advent of regular scrutiny of each budget item would permit the elimination of two of the most destructive and subterranean practices. At present, Congress regularly includes a conference report along with bills, often adding specific directives that exceed the authorization included in the law itself. In addition, Congress annually demands of agencies an operating plan, which again becomes a vehicle for specific instructions on spending that are not contained in the law.

Both practices engender congressional micromanagement that makes it difficult for the administration to manage agencies and programs. This is at odds with the framers' intention that Congress legislates and the administration executes programs. With the annual opportunity for Congress to engage the administration on the funding and intentions of each program, such tools should not be necessary.

The federal government is inefficient, torn by partisan rancor, heavily indebted, and headed toward even worse. But that is because it is allowed to be, and to still borrow and fund programs that fit political aims. Requiring an annual budget would provide incentives in the search for efficiency and require negotiation and bipartisan compromise. It would not rule out deficits, but they would arise from a plan. ∎

Coen Teulings

WHY POLITICIANS PREFER AUSTERITY TO LONG-TERM FISCAL REFORM

Long-term structural reforms may be exactly what Europe's economies need, but elected officials find them hard to carry out. A Taylor rule for fiscal policy could help to change that.

COEN TEULINGS is the director of the CPB Netherlands Bureau for Economic Policy Analysis and an independent adviser to the Dutch government and parliament. He holds a PhD in economics from the University of Amsterdam.

Some months ago, I attended a conference in Stockholm on the euro crisis. It was organized jointly by the IMF and the Swedish Ministry of Finance and drew a large group of ministers, civil servants from the European Commission and from several member states, heads of fiscal-watchdog groups, and economics professors from both sides of the Atlantic. Throughout the two-day conference, most of the economists argued against trimming budgets in the short run, fearing that such measures would lead to further weakening of demand in an already weakened economy. In their view, the budgetary problems should be solved by a long-run policy of structural reforms of the labor market, health care, and the pension system.

In the final panel of the conference, Anders Borg, the Swedish minister of finance, challenged this common wisdom. In his view, the carefully researched pleas for postponing belt tightening neglected the political reality: such consolidation must be done straight away because delaying it would just spoil the opportunity for budgetary reform. Politicians lack the ability to commit today to austerity measures to be implemented tomorrow. Hence, the only option is to take action straightaway. All arguments in favor of longer-term structural reforms were merely theoretical games not suited to the rude reality of politics. In contrast to most of the economists, the politicians among the audience agreed.

Clearly, despite all their research and evidence, the economists failed to convince the European politicians. Why? I offer three explanations.

First, the experience of the 1970s is still fresh in the memory of most European politicians. After the first oil crisis, in 1973, growth declined structurally. Many policy makers misinterpreted the structural decline as just a cyclical phenomenon that could be addressed with a standard Keynesian expansionary policy. Half a decade later, growth

still had not returned to its pre-crisis level. Instead, sovereign debt had exploded. When the second oil crisis hit, in 1979, most countries had no fiscal space left for a new round of Keynesian spending. The result: most European economies experienced a deep recession. Out of fear of repeating that mistake, politicians today prefer to rein in budgets and address the fiscal gap immediately.

A second, related reason is that economists have failed to adequately address this worry on the part of politicians. For quite a while,

the topic of fiscal policy and fiscal multipliers received little attention. Only after the Great Recession that followed the demise of Lehman Brothers did research into this area once again begin to flourish. By and large, that research shows that fiscal multipliers are big—much bigger than we thought previously, providing a strong argument for avoiding fiscal tightening. The only problem is that it does not provide an answer to this simple question: if it's a mistake to tighten today, why wouldn't the same argument

QUICK TAKE

THE AGE OF SCIENCE

Shimon Peres, *president of Israel*
Interviewed by Rik Kirkland

Q: What's the biggest change in the world in the last 20 years?
A: The last two decades have witnessed the greatest revolution since Genesis. States have lost their importance and strength. The old theories—from Adam Smith to Karl Marx—have lost their value because they are based on things like land, labor, and wealth. All of that has been replaced by science. Ideas are now more

important than materials. And ideas are unpredictable. Science knows no customs, no borders. It doesn't depend upon distances or stop at a given point. It's unmeasurable, unpredictable, unprecedented.

Science creates a world where individuals can play the role of the collective. Two boys create Google. One boy creates Facebook. Another individual creates Apple. These people changed the world without political parties or armies or fortunes. No one anticipated this. And they themselves did not

know what would happen as a result of their thoughts. So we are all surprised. It is a new world. You may have the strongest army—but it cannot conquer ideas; it cannot conquer knowledge. ∎

Rik Kirkland is a partner at McKinsey & Company.

apply tomorrow, and the day after tomorrow, and so on, postponing budget tightening forever? Economists have created the Taylor rule for monetary policy, which provides a simple formula: increase the interest rate by more than one percentage point for every percentage point that inflation rises above the target rate. Strangely, economists have not yet developed an equivalent for fiscal policy, though CPB Netherlands Bureau of Economic Policy Analysis is currently working on one. That rule will likely stipulate that budgetary policy should sail between the Scylla of having to consolidate during a recession and the Charybdis of an exploding sovereign debt. As long as such a rule is missing, politicians won't trust advice to postpone austerity, because they do not understand why the same advice would not apply tomorrow.

The third reason that politicians do not want to rely on advice advocating structural reforms to improve the long-term sustainability of the government budget is more complicated. Short-term consolidation is easy to explain and appears to provide results that are easily verifiable by voters. Voters understand that a budget deficit requires fiscal tightening, so pursuing such a policy adds to the credibility of a politician: "These are harsh policies, but they are needed to clean up the mess left by our predecessors." Voters reward politicians who do not mess up the government budget.

The beneficial effect of structural reforms on an economy is much more difficult to monitor for voters. First of all, the effect takes more time to materialize than the effect of straightforward fiscal consolidation. Moreover, it is less certain, since it depends on behavioral responses of individuals to these reforms. For example, raising the official retirement age might raise future employment, but it might also just increase unemployment or early retirement. The size of these behavioral responses is often hard to predict.

The biggest problem of structural reforms is that even if they have a positive effect on the economy, they may not reduce the government's budget.

But the biggest problem of structural reforms is that even if they have a positive effect on the economy, they may not reduce the government's budget. Reforms that remove barriers to entry in a particular market, such as licenses for driving a cab, are a good example. These licenses allow incumbent cab drivers to capture rents at the expense of the employment of other cab drivers as well as the price customers have to pay. However, that is only part of the story. Since a cab license is an admission ticket to a pool of rents, it can be traded on the market. The price of a license is equal to the net discounted value of all future rents. Hence, by selling it, the current owner of the license extracts the current value of all future surpluses, from the moment of sale to infinity. The buyer has little to gain from his monopoly power: he captures rents, but these rents are just enough to cover the capital cost of his investment in buying the license.

Now, consider a politician who wants to make markets more competitive by removing entry barriers to specific markets. He liberalizes the cab market. This is in effect a transfer of wealth from the current pool of cab drivers to all future generations, who don't have to pay as much for their taxi services and who can benefit from greater employment in the taxi industry. Quite often, removing entry barriers is therefore equivalent to a transfer of wealth from current to future generations. In that sense, this policy has the same effect in the intergenerational distribution of wealth as raising taxes today to reduce the sovereign

debt. Like abolishing barriers to entry, raising taxes is a transfer from current to future generations, since it reduces the implicit tax liability of future generations. The reverse of this argument might also explain why entry barriers are installed so often, time and again: they are an easy way to relax the budget constraint of the current generation by extracting wealth from future generations.

There is a limit on how much pain politicians can inflict on current generations. In the end, these are their voters. Since both consolidation of the government budget and structural reforms (by removing barriers to entry) are transfers of wealth from current to future generations, they can do either the one or the other, not both. Consolidation can be monitored by voters more easily and will therefore be better rewarded by voters. The benefits of structural reform, meanwhile, are more difficult to assess and as a result voters will be less enthusiastic about pursuing them. Faced with this choice, politicians will pick consolidation over structural reform, even though structural reform is likely to be more conducive to future growth. ∎

Lu Mai

THE URBANIZATION SOLUTION

China faces a range of pressing challenges, from inequality to pollution. Managing the growth of its cities is one way to meet those challenges.

LU MAI is secretary general of China Development Research Foundation. Previously he was director of the Experimental Area Office for Rural Reform. Lu has an MA in public administration from Harvard University and a BA in economics from Beijing College of Economics.

Ever since China started pursuing a policy of reform and opening-up of markets three decades ago, it has experienced rapid economic takeoff and has made its entry into the ranks of middle-income countries. In 2011, China's per capita gross domestic product reached $5,400, using current exchange rates. That figure would be even larger using the World Bank's purchasing-power-parity formula. So, in light of its economic and social progress, China now qualifies as a middle-income country.

At the same time, however, China faces some serious challenges, such as socioeconomic inequalities, an imbalanced economic structure, corruption, environmental and ecological degradation, and more, all of which are intertwined and represent stumbling blocks in China's path toward becoming a sus-

tainable and equitable high-income country. China needs to address these problems with strategic skills as early as possible.

So, is there an entry point that allows China to tackle these challenges with a systematic policy package? The answer is yes. The answer is urbanization. As one of the most crucial processes of social change in modern China, China's urbanization was artificially suppressed for quite a long time before it gained momentum in the mid-1990s.

Urbanization, on the one hand, creates huge opportunities for China in many sectors, such as narrowing urban-rural gaps, reducing regional disparities, expanding domestic demand, rebalancing the economy, developing civil society, improving governance, utilizing resources more efficiently, and controlling pollution. However, China is not taking full

BEIJING, OLD
AND NEW
China's rapid
urbanization over
the past 20 years
has been an
important part
of its economic
growth, dramati-
cally changing
the country's city-
scapes.

advantage of the potential of urbanization to help cope with its challenges due to a series of institutional constraints.

For example, while more than 150 million rural migrants work and live in cities, they cannot have local urban registered residences because of the current household-registration system. Hence, they are excluded from the local public-service system. This in turn increases the vulnerability of migrant workers and their families and contributes to the fragility and inequality of the economy as a whole.

It should be an urgent strategic choice for China to forge ahead with urbanization and carry out a series of reforms to facilitate it. First, market-oriented reforms should be deepened. Urbanization is primarily a market-oriented process, which accumulates and restructures capital, technology, and other assets and diverts them into productive channels. The government should speed up the introduction of efficient markets for labor, capital, and land, spur the development of technology, and strengthen intellectual property rights. Urbanization is also a process that allows the government to tap its full potential. In the interest of comprehensive and long-term social development, the government should adopt various policy measures to reduce market failures, such as clarifying property rights, adopting antimonopoly measures, and protecting the environment.

Second, China's household-registration system should be gradually reformed. The government should make a 10-to-20-year plan to further loosen the regulation of

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urban household registration that allows ten million migrant workers and their families to officially settle down in cities annually and have the same access to public service as their urban counterparts. Land utilization and intergovernmental transfers should be in line with the number of migrant workers moving into cities. Moreover, the central government should encourage local governments to reform household-registration policies to favor urbanization.

Third, the central government should play a more active role in promoting urbanization. It needs to create a nationwide urbanization strategy that takes urban planning, institutional reforms, and financing into account comprehensively, so as to guarantee that urbanization proceeds in an orderly manner.

Next, the master urbanization plan should be refined. Both central and local governments should formulate scientific plans for urbanization that take into account population flow, middle- and long-term resource demand, and environmental constraints and then put those plans into place. To protect resources and the environment, planners should encourage urban agglomeration.

It should be an urgent strategic choice for China to forge ahead with urbanization.

The government should intensify its efforts to develop transportation networks and related infrastructure shared among many cities.

Finally, social management and public governance should be improved in the process of urbanization. Urbanization should encourage not only economic restructuring but social and political reform. The government should encourage the emergence of civil society, perform its due functions in public affairs, and welcome supervision from the civil society. The reform of political democratization should be accelerated to grant more rights to urban and rural residents and offer citizens more chances to participate in decision making on public affairs. This could offer a safeguard against corruption and ensure that the fruits of development are more widely shared. ∎

HOW TO TAME A BUDGET CRISIS

Almost 20 years ago, Sweden faced an economic and fiscal crisis, recognizable to many in Europe today. Here's how the government enacted the difficult reforms that brought it back to prosperity.

GÖRAN PERSSON was finance minister of Sweden from 1994 to1996 and prime minister from 1996 to 2006.

In the present euro crisis, many references are made to the Swedish experience in the early 1990s. Clearly, there are similarities: a real-estate bubble, bank bailouts, falling consumption, a recession, double-digit budget deficits, a weak market for state bonds, spiking interest rates, and the skyrocketing cost of debt maintenance.

As the new government took office in October 1994, Sweden was caught in the vicious circle that many European countries face today. Four years later, in 1998, Sweden had a budget surplus, solid growth, decreasing unemployment, and a reelected government. Even today, Sweden is one of few European countries with a national debt that's less than 40 percent of GDP and a balanced budget.

Every country, of course, has a unique set of issues and requires a unique solution.

Still, there are lessons from Sweden that have a bearing on the situation today, both regarding personal leadership and the design and implementation of reforms.

Leadership

In my experience, any politician facing a large budget consolidation must have three personal and nonnegotiable commitments:

1. **Show true leadership.** Someone has to take the lead and create momentum. That is a political kamikaze mission, impossible unless you are truly ready to put your job at stake. The desire to do right must be greater than the ambition to cling to power. Ultimately, you must accept that you have a personal responsibility to foster public respect for the political system and protect the strength of the democracy.

2. Create impact. This issue is not really one of economics but of politics. It is easy to understand what needs to be done. The challenge is to do it, continuously building the majorities needed for the number of years required to implement the program. Having genuine impact takes reflection, it takes skill, and it takes endurance.

3. Communicate. You cannot count on popular support, but you must maintain the respect of the people. Communication is key. Be transparent. Find ways to describe the situation so that people understand why you're taking the steps you're taking. Stick to your messages. Just as important: don't get trapped in wishful thinking. Be conservative in any forecast you make so that any surprises are positive, and don't ever pretend it won't hurt—it will.

Five cornerstones of reform

In addition, there has to be a rigorously structured plan. The turnaround of the Swedish economy contained five cornerstones that are usually found in the most difficult reform approaches, programs that are large, necessary—and unpopular.

1. Get a reality check. Naturally, the first phase of every large reform has to be a thorough analysis. What is the situation we're trying to address? What problems do we have to solve? What do we know, what do we believe, and what additional knowledge can we find? The problem with this process of analysis is that almost everyone, including the experts, has a vested interest—based on ideology, personal implications, or pecuniary reasons. At this stage, policy makers need to question every conclusion, even those that originate with their own agencies, in order to develop a conviction that will withstand the tough scrutiny of everyone from professors to blue-collar workers.

A successful reform program must also address the domestic cultural and political logic.

I believe that the more transparent the formation of this analysis is, the better. A public discussion will both make conflicting interests examine other arguments and make citizens more aware of the problems and thus more open to reform.

Maybe the most important thing to understand is that you won't have perfect understanding. I have seen many politicians become paralyzed by the search for the perfect solution. And while they analyze, the problem grows and eventually someone else—the opposition, interest groups, the market—will take the initiative. Then it is virtually impossible to drive reform.

2. Construct a reform program. To push through a genuinely unpopular reform, such as a budget consolidation, the reform must do two things: offer a solution to a crisis and include safeguards to make sure the crisis does not recur. In Sweden, the immediate budget measures, tax increases, and cuts in social insurance programs, pensions, and public services were combined with structural reforms, including a new budget law ensuring better control over expenditure, a sustainable pension system, improved wage formation, and liberalization of state monopoly markets such as telecommunication and electricity.

Both parts of the program—the direct action and the structural change—reinforced each other. In the short term, the structural reform contributed to trust in the long-term ability to maintain a balanced budget, bringing interest rates down. Actually balancing the budget gave the government the maneuvering room to enact the difficult structural reforms.

A successful reform program must also address the domestic cultural and political logic. In Sweden, a key enabler was a strong focus on a fair distribution of burdens. With the egalitarian set of values that characterize Sweden, solidarity was important. It is always the families that already have problems making ends meet that will take the largest blows from any austerity package. They have limited savings, small margins, and are often recipients of public transfers. They often have young children or they are retired. In both cases, they are more dependent on public services such as child care, elder care, and schools than the population at large. With these factors in mind, we carefully analyzed the distribution of burdens in the various parts of the reform program; from the beginning, we described to the public exactly how the burdens would be shared, and we did so with each budget we presented.

3. **Get the mandate.** The first two cornerstones are relatively simple. Again, the difficult thing is rarely to understand, but rather to do.

Every democratic politician has his or her power as a mandate, ultimately from the voters. It is formed around power centers, such as trade unions or employers' federations, media, and specific individuals or companies. These centers must be understood, faced, and involved. It is an illusion to believe they will all agree to each unpopular decision, but it is essential to understand the consequences and have an idea of how to counteract or influence any major challenges they can create. Creating a common definition of the crisis and its components, as well as including critical power centers, makes it harder for such groups to launch full-scale confrontations.

The most important mandate, however, is in parliament. Regardless of whether you lead a majority or minority government, you must have solid support for the measures you take, and you have to ensure that the mandate lasts over a long period. To muddle through with one compromise at a time will quickly erode any momentum the reform might have had. And if you don't have support you can rely on, you will constantly be searching for new partners, which takes time. Even worse, with every change of partner, the measures you enact will deviate further and further from the original plan.

A solid majority must be based on a common understanding: "Yes, it will be difficult, and popular support will diminish, but in the long term, the electorate will reward those who do the right things for the country and deliver. And in order to deliver, we have to stick together—no matter what happens."

During the Swedish budget consolidation, the Social Democratic government gained tremendously from cooperating with the Centre party. It was this broad coalition—based on trust rather than written agreements—that finally persuaded investors to trust us to deliver.

4. **Execute.** Execution is, in essence, a matter of good management. It is impossible to control all parts of the implementation, and there is rarely time to construct detailed instructions for every part of the administration in the state, regions, and municipalities. Further, many of the agencies and authorities run highly professional and complex operations. Making centralized decisions on exactly how to meet new budget requirements is discouraging and will ultimately lead to many poor decisions. Instead, it is important to ensure that the administration is motivated and has clear targets. All those who are responsible must have the freedom to execute but at the same time be accountable for the results of their actions.

The entire administration must understand the reasons for the reforms, the targets, and the importance of everyone contributing. As a leader, you have to stand up, be clear

and open, meet the inevitable criticism, take action when managers do not deliver, and explain why, perhaps many times. You have to be compassionate with the people affected but firm in standing up for the measures taken and the path chosen. That is why communication is so important.

This is not a one-night show. Most large reform programs last for many years and consist of thousands of decisions and hundreds of bills to parliament. There will be many critical articles in the media and many disappointed people that you have to face during execution. It takes endurance. It takes a strong central team. It takes delegation.

5. **Shift to a new agenda.** Almost all politicians in democracies have entered into politics for a single reason: they want to do good. They have different ideas of what good is, but that is their motivation—improve the world, their countries, and the people they serve. In a company, you can motivate staff with bonuses or other material incentives. That is impossible in politics. To endure a lengthy, unpopular reform program, it is almost a prerequisite to combine execution with planning ahead for more constructive and positive reforms once the austerity measures have done their work.

When the largest hurdles are passed and the momentum is still strong, it is time to communicate new ambitions. In late 1996—two years into the Swedish budget consolidation program—we started to refocus the rhetoric from austerity to fighting unemployment and prioritizing schools and health care once we achieved a balanced budget and solid growth.

By defining a new agenda, it became clear to everyone that the target in itself was not austerity, but jobs, education, and health. It was a light in the tunnel for the people who had endured years of austerity. It also served as new fuel for the administration, motivating them not to stop halfway through, but rather to finish the job and create a solid surplus that could be used for future improvements.

On the other hand, had those cheerier goals been brought forward too early, they would have destroyed the consolidation altogether. You can't reduce the number of nurses and at the same time say that more money will be put into health care in a couple years' time. That would confuse voters, upset investors, and jeopardize everything achieved.

No silver bullets

Each crisis is unique and requires a unique program. Still, many failed reforms can be explained by the lack of one or more of these cornerstones. Many politicians have known very well what to do but failed in execution. Many have had the mandate from the people but missed the majority in the parliament. Many have—despite a majority in parliament—failed to motivate the administration. And many have failed to fully achieve their goals because they lost their political mission while pushing through unpopular decisions and either lost momentum or lost an election.

It is difficult to take a holistic approach under the extreme pressure of a budget collapse or other crises. But doing so is of tremendous importance. If politicians fail to deliver on the difficult issues—not only sovereign-debt reduction but also innovation and growth, ecological sustainability, global trade, and decent distribution of wealth and income—then political power will deteriorate. Ultimately, democracy will become shallow and vulnerable. ∎

COPING WITH COMPLEXITY

Crises are erupting around the globe with increasing frequency. Governments must learn to cope—increased risk and complexity are here to stay.

PETER HO is a senior adviser for the Centre for Strategic Futures in Singapore. Previously, he was head of the civil service there and held numerous other government appointments. Ho earned both a BA and an MA from the University of Cambridge.

The great acceleration

Governments aim to produce good outcomes for the nation and for individuals. But the best intentions can be derailed by black swans, unknown unknowns, and wild cards—like the eurozone crisis, the 2011 Japanese tsunami and ensuing nuclear meltdowns, the financial and economic turbulence of 2008–09, SARS in 2003, and September 11.

Unfortunately, such shocks seem to be occurring with increasing frequency. What has been described as the "Great Acceleration" provides an important explanation for this situation. Since the middle of the 20th century, change has accelerated at an unprecedented global scale. Population growth has surged. Combined with rapid urbanization, that growth has generated enormous consumer demand. The effort to meet this demand

through industrialization and mass production has had a huge but unpredictable impact on the earth's ecosystem. Globalization resulting from and combined with technological innovation has accelerated change on all fronts—political, economic, and social.

As a result, our operating environment is growing in complexity. Events and trends in various spheres interact with one another in complex and sometimes mystifying ways. We will be surprised time and again because complexity creates interdependencies that are inexplicable, emergent, and difficult to predict. Shocks occur because we do not have enough tools to identify emerging threats, challenges, and even opportunities in such a complex environment.

We cannot avoid surprise altogether. There will always be black swans and sudden

disruptions to current situations. But reducing the frequency and the amplitude of such shocks is possible and should form a central imperative of government in the future.

The first step is for governments to acknowledge the complexity in their operating environment. There is a real danger of national failure—if not collapse—when governments ignore complexity and operate as if all problems are amenable to simple policy prescriptions.

Unfortunately, the evidence of the last half-century suggests that many governments will opt to take this path, whether out of political expediency, because of cognitive failures, or simply because they lack the tools to deal with complexity. Avoiding this path requires fundamental changes to the mind-set, capabilities, and organization of government.

The whole-of-government mind-set

Complexity generates "wicked problems"—large and intractable challenges with many dimensions and multiple stakeholders that do not necessarily share convergent goals. The most vexing wicked problems today—such as climate change, energy security, global pandemics, sustainable development, and cyberthreats—have causes and influencing factors that are not easily determined ex ante. In our increasingly interconnected and globalized world, such wicked problems do not manifest in isolation. Their impact can be felt in multiple dimensions and geographies.

Developing policies and plans to deal with such wicked problems requires the integration of diverse insights, experience, and expertise. People from different organizations, both from within and outside government, have to come together to pool their knowledge in order to discover potential solutions. Mechanisms need to be set up to enable the sharing of information and to strengthen collective action. This is the whole-of-govern-

ment approach, which injects diversity into the policy process, recognizing that insight and good ideas are not the monopoly of single agencies or of government acting alone.

While the whole-of-government approach is an imperative, it is not easily achieved without a basic change of mind-set. Governments, like all large, hierarchical organizations, tend to optimize at the departmental level rather than at the organization level. This is because information flows most efficiently within vertical departmental silos rather than horizontally across departments. Departments tend to reward people for their contributions to the agency, rather than for their contributions to the larger whole-of-government.

In Singapore, the whole-of-government approach has been most evident in the economic arena. Over some 25 years, a succession of four comprehensive economic reviews has seen the public and private sectors coming together to produce far-reaching policy recommendations for Singapore's long-term economic competitiveness.

But whole-of-government remains a work in progress. It requires emphasis, support, and constant attention from the top. Successive heads of civil service in Singapore have therefore made it their core business to promote the whole-of-government mind-set.

ANOTHER BLACK SWAN Catastrophes like the 2011 Japanese tsunami are tail events that have far-reaching effects in a globalized world, adding greater complexity to the job of governing.

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Capabilities for managing complexity

In a complex operating environment, governments should be adaptive, emergent, and able to navigate situations characterized by multicausality and ambiguity. Governments will often have to make big decisions and develop plans and policies under conditions of incomplete information and uncertain outcomes. It is not possible to prepare exhaustively for every contingency. Instead, a "search and discover" approach should be adopted. The military calls this approach observe, orientate, decide, act, or OODA, a recurring cycle of decision making that acknowledges and exploits the uncertainty and complexity of the battlefield.

In this regard, nonlinear methods like scenario planning, policy gaming (the civilian analogue of war-gaming), and horizon scanning (the process of detecting emerging trends, threats, and opportunities) should be part of the government toolbox.

Governments must also deal with the risk that naturally results from operating in complexity. There will always be threats to national outcomes, policies, and plans. But there is little by way of best practices to systematically address or ameliorate these threats. So the government of Singapore is developing from scratch its unique Whole-of-Government Integrated Risk Management (WOG-IRM) framework—a governance chain that begins with risk identification and assessment at the strategic level, progresses to monitoring of risk indicators, and finally arrives at resource mobilization and behavioral changes to prepare for each anticipated risk.

Organizing in the face of complexity

Resilience is the ability to cope with strategic shock by adapting to, or even transforming with, rapid and turbulent change. It is going about our daily business while operating in an environment of flux. Resilience is a key characteristic of governments that operate effectively in a complex environment.

Resilient governments must go beyond an emphasis on efficiency. Lean systems that focus exclusively on efficiency are unlikely to have sufficient resources to deal with unexpected shocks and volatility, while having the capacity to make plans for an uncertain future filled with wicked problems.

This is not an argument for establishing bloated and sluggish bureaucracies. Rather, one important idea is for resilient governments to have a small but dedicated group of people to think about the future. The skill sets needed are different from those required to deal with short-term volatility and crisis. Both are important, but those charged with thinking about the future systematically should be allocated the bandwidth to focus on the long term without getting bogged down in day-to-day routine. They will become repositories of patterns that can be used to facilitate decision making, to prepare for unknown unknowns, and perhaps to conduct policy experiments through policy gaming or other simulations.

To this end, the government of Singapore set up the Centre for Strategic Futures (CSF) in 2009. The CSF promotes a whole-of-government approach to strategic planning and decision making; works on leading-edge concepts, like WOG-IRM and resilience; promotes fresh approaches for dealing with complexity, like policy gaming; and encourages experiments with new computer-based tools and sense-making methods to improve horizon scanning. Although a small outfit, the CSF is a catalyst for strategic change in the government and its agencies.

A flexible, adaptive, whole-of-government approach is the way of the future. Governments must gear up to operate in an environment marked by complexity, where they will have to experiment, manage risk, fail, learn, and then pick themselves up to start over—and, hopefully, do better. ∎

Mohamed Ibrahim

BETTER DATA, BETTER POLICY MAKING

In Africa, the eradication of poverty is the number-one goal. Sadly, there's little data to measure the continent's progress.

MOHAMED IBRAHIM is founder and chairman of the Mo Ibrahim Foundation, which supports good governance and leadership in Africa. Previously, he founded Celtel, which operates mobile networks in Africa. He holds a BS in electrical engineering from the University of Alexandria and a PhD in mobile communications from the University of Birmingham.

Governing is about delivery. The challenge of government is to improve the quality of life of citizens. "Are you better off today than you were four years ago?" has been a recurrent refrain in quadrennial American presidential campaigns and is a question that is just as relevant in the African political context. To meet this challenge, a government has to come up with a clear and coherent set of ideas—a vision—and use available resources and instruments as efficiently as possible to produce the results that citizens expect. The risk taking involved in articulating and defining a progressive vision for the future is what defines great leadership. Achieving that vision as effectively as possible requires effective risk management—in other words, good governance.

In defining a national vision, leaders employ their ideologies and are elected, or not, accordingly. However, the successful implementation of that vision cannot be ideologically driven. It requires sound public policy that is transparent, accountable, and effective.

I would suggest that the best way to improve government is to improve government's ability to manage risk and produce results. This could be achieved by a shift toward data-based policy making. While this may sound self-evident, the lack of good statistical data in Africa is illustrative.

Five years ago, my foundation began to publish a comprehensive index of governance (the Ibrahim Index of African Governance, or IIAG) to address exactly this deficit. We were able to identify approximately 100 measurable indicators that accurately capture

If the reduction of poverty is not the definition of success (and is not being assessed accordingly), then what are the billions of aid dollars going toward?

governance performance. This may sound impressive, until you consider that we were seeking variables to measure everything from national security to personal safety, from public management to gender equity, from physical infrastructure to democratic participation, and from education and health to welfare at the rural level. Moreover, after scouring all available data for consistency (including from the World Bank), we were unable to include poverty in our index. This is due to the extreme patchiness of the data— we could find no single consistent measurement that covered a minumum of 35 African countries and had been taken at least twice over the past decade.

Since the the primary goal of development must be the alleviation and eventual eradication of poverty, this deficit raises serious questions. If the reduction of poverty is not the definition of success (and is not being assessed accordingly), then what are the billions of aid dollars going toward? And if the reduction of poverty is the primary goal, why is no one measuring it adequately to see if all those funds are being used effectively? Similarly, how can African citizens and governments properly assess their progress and make informed electoral decisions and promises? I wonder how Western governments would fare running an election campaign with no access to public-opinion polling?

I have long advocated for increased investment in national statistical offices and other data-gathering institutions. This is a point

that bears repeating. For African governments the paucity of good data is further complicated by the weakness of institutions, particularly the civil service. This is exacerbated by the fact that the poor public perception of civil service ensures that the best and brightest young people are more apt to seek work in the private sector. This means that it is even more important that the civil service have access to the necessary resources to guide its decision making.

Data-driven policy making would also have the additional benefit of allowing for a more rational public debate on sensitive topics. In Africa and beyond, the increased economic migration that comes with the economic integration of countries is a source of inflated rhetoric and conflict. Be it the Tanzanian fear of the country's businesses being subsumed by dynamic Kenyan entrepreneurs or the British working class feeling displaced by Eastern Europeans, the fear is the same and fueled by the failure of politicians to make a data-based case for immigration and to articulate the economic costs and benefits of not embracing further regional integration. African leaders are not articulating clearly enough to their citizens that an entire continent with a collective GDP that is less than that of Brazil has no future other than through integrating its markets.

Even Africa's reserves of natural resources must be understood in context. For example, Africa is by far the largest global producer of cobalt. Yet global cobalt sales in 2011 totaled less than $380 million. Furthermore, the potential benefit of these resources requires better public management than has been the case to date.

Similarly, the demography of Africa poses a huge opportunity but also a huge challenge. By 2020, 200 million young Africans will enter the job market. The political stability of much of the continent will depend on the ability of the different governments to meet

this supply with appropriate demand. For all Africa's natural-resource potential, it is this human-resource base that will determine its future prosperity.

All of this points to the necessity of robust data. It is as difficult to design policies without data as it is to measure the outcomes of those policies. But data alone is not sufficient. In just five years, the IIAG has increasingly become a tool for policy makers, citizens, and civil-society organizations to assess the impact of policy interventions, guide resource allocation, and learn from the successes and failures of other countries in the region. Yet it is just one small contribution, and for each government that welcomes it as a policy-mak-ing tool, several others view it with suspicion. Clearly a shift of mind-set is required on the part of some policy makers so that the index is seen not only as a way to critique but also as a tool to strengthen government. In this regard, we still have much work to do.

We need to work to strengthen both the supply and demand sides of governance data. Then we will see the kind of progress in Africa that its citizens have a right to expect—through the formulation and implementation of public policies and discourse that are rooted in an empirical understanding of where the continent is and where it needs to go. That, in my view, is the single best idea for government in Africa. ∎

A HARD REALITY In Kayelitsha, on the edge of Cape Town, an estimated 70 percent of the population lives in shacks. Could policy based on real data help to turn the tide?

UNDERSTANDING GOVERNMENT IN NEW TIMES

THE SERVANT STATE

The strongest governments will be those that serve the people rather than a political elite—but guarding against the potential to backslide requires constant vigilance.

DARON
ACEMOGLU is the
Elizabeth and
James Killian
Professor of
Economics at MIT.
Acemoglu received
a BA in economics
from the University
of York and a PhD
in economics from
the London School
of Economics. His
most recent book,
*Why Nations Fail:
The Origins of
Power, Prosperity,
and Poverty*, which
he cowrote with
James Robinson,
was published in
March 2012.

Twenty years ago this spring, Los Angeles was shaken by riots after four police officers were tried and acquitted of the beating of Rodney King, a young African-American. On March 3, 1991, King had been driving intoxicated and disobeyed police orders. Unarmed and on the ground after being hit by a Taser stun gun, King was struck repeatedly with batons and suffered a fractured facial bone and broken right ankle, among other injuries. It remains one of the best-known cases of police brutality in the public memory, but the problem continues to recur—in the fall of 2011, for instance, protesters with the Occupy movement endured harsh police measures in many US cities.

These episodes may seem far removed from the famous—and ongoing—debate over the role of the state in the economy and society.

This debate revolves around the contrast between the night-watchman state, which is entrusted with the minimal enforcement of law and order, and the interventionist or "nanny" state, which is supposed to regulate and provide incentives to improve the allocation of resources and influence social behavior. Both perspectives implicitly accept Max Weber's definition of the political state as the entity that has the "monopoly of legitimate violence" in society. This monopoly has implications: the state and its agents have the power to coerce, and it is an unfortunate part of human nature that this power will be misused in every society.

The abuse of this power is at the root of what James Robinson and I have called *extractive institutions* in our book *Why Nations Fail: The Origins of Power,*

Prosperity, and Poverty. Extractive institutions benefit a politically powerful elite by taking resources from the majority of society. To accomplish this, elites must use the coercive power of the state. This power was on display when Spanish conquistadors reduced the native population of South America to servant status in *encomiendas* or to forced labor in the *mita* system in the mines of Peru and Bolivia. It was this power that enabled English, French, and Spanish colonists to create plantation societies based on the ruthless exploitation of slave labor in the Caribbean. It was also this power that formed the foundation of the apartheid state in South Africa, which lasted until 1994, barring black Africans from almost all skilled occupations and giving them little choice but to work as cheap labor in white-owned mines and farms. In these societies, it was crucial that the elite could exercise the state's power without significant constraints, making its agents feared among the general populace.

By contrast, many societies, beginning in Europe more than 300 years ago, have developed what we have called *inclusive institutions,* which create a more equal distribution of political power, as well as constraints on the exercise of that power by politicians and elites. These inclusive political institutions underpin inclusive economic institutions, which provide incentives for investment and innovation and create a more level playing field in the economy and society. Inclusive institutions don't just make for a better society: ultimately, they're more sustainable and in some sense stronger than extractive institutions—in part because the lure of unencumbered power granted to the elites by extractive institutions creates frequent struggles with would-be elites seeking that power for themselves.

The societal advantages of inclusive institutions notwithstanding, the relationship between state and citizens in almost all societ-

Inclusive institutions don't just make for a better society: ultimately, they're more sustainable.

ies is still one of domination by the former over the latter. The United States may have broadly inclusive institutions, but many citizens fear the police and other branches of the government. In fact, in recent years, thanks to the alarm over terrorism, the state's power to monitor and coerce citizens has increased, while the ability to monitor state abuses of power seems diminished. The hierarchical relationship between the state and citizens is not confined to the police and security forces. Bureaucrats often make major decisions affecting businesses and lives that leave citizens with little recourse.

This innate power of the state means that even relatively inclusive institutions can backslide into extractive ones. Inclusive institutions will often be challenged because, even when there's a fairly equal distribution of political power, those who are able to take control of the state can use its coercive capacity to change economic and social rules for their benefit—and to silence dissent and protest against their takeover. Consider Venice, which became one of the richest places in the world in the tenth century, based on, for its time, uniquely inclusive institutions. Venice's political system—featuring a parliament and a Great Council—gave voice to a broad cross-section of society, while its economic institutions encouraged long-distance trade through new forms of contracts and technology. But at the end of the 13th century, a group of established families started taking control of the Great Council. They used this monopoly of political power to create entry barriers against potential competitors and even banned the innovative contracts that had fueled Venetian

A KING'S RANSOM
This 1596 engrav-
ing shows Incas
gathering gold
to pay Pizarro
for the return
of their king—a
vivid example of the
powerful extracting
resources from the
less powerful.

growth. As extractive institutions took hold of Venetian society, its prosperity withered. Notably, as this transition took place, the coercive capacity of the state increased, and for the first time, it built a police force ready to repress protests and demands placed upon its elites.

As the Venetian example demonstrates, inclusive institutions exist in a precarious balance: the state must accumulate enough power to enforce property rights and maintain some basic degree of law and order, but without being able to impose a climate of coercion on citizens. And it must not succumb to elite takeover, though its coercive capacity is always a desirable target for elites.

Perhaps it is time, then, to remove the Weberian state from atop the social hierarchy in order to strengthen the resilience of inclusive institutions. Perhaps it's time for the servant state, an entity whose agents are no longer feared and are less able to coerce. This does not mean removing the power of the state to intervene and regulate but more strongly enshrining the notion that state power emanates from the citizens, who should monitor it more closely and reclaim that power when it is abused.

How can this be achieved? It requires a two-pronged approach. First, we need a change in attitude, among regular citizens and the judiciary, supporting a society-wide agreement that the police and other agents of the state are no different than, say, our dentists. We respect and listen to our dentists, but if we decide that dentists are not performing their jobs adequately, we can walk out. Although citizens cannot easily walk out

from the country in which they live, if their rights are more strongly protected and their voices more clearly heard, they should be able to demand due process and the dismissal or even prosecution of state agents who are misbehaving. Our current laws allow for this, but only imperfectly.

Second, we need to use technology to make this change in attitude influence behavior. It was a private citizen, George Holliday, who made the videotape of Rodney King's beating, which drew attention to the incident. While the case ended in a verdict that many found improper, it was the presence of technology that allowed police behavior to be recorded and that thrust the issue into the public eye in the first place. Such technology is now pervasive; video recordings also produced evidence of police brutality against Occupy protesters in the fall of 2011. Technology, which is being increasingly used by the state to monitor its citizens, can thus be used to monitor the agents of the state. Citizens can then use the society-wide agreement on the accountability of a state's agents to its citizens to process and act on this information.

There are several policy reforms that can help with this objective. Making more real-time data about the behavior and performance of the government, bureaucrats, and police officers available to citizens is an obvious first step. Another is streamlining and facilitating Freedom of Information Act requests, which can be used, for instance, to ensure that agents of the state with a record of misusing power are not promoted to positions of greater responsibility. More controversial, but perhaps equally important, citizen oversight could replace internal investigations in some cases. Protections for whistle-blowers against the state and the police could be strengthened. And finally, the state itself could develop and disseminate technologies for citizens to monitor its actions—a bit like the way it provides defense lawyers to accused parties.

The resulting servant state would do more than just reduce particular abuses of power. The diffusion of power to citizens would lower incentives for elites to capture states and would act as our best guarantor that the power of the state will not be used to silence the protests and grassroots movements that rise up when some elements of society try to turn inclusive institutions into extractive ones. ∎

Parag Khanna

THE RISE OF HYBRID GOVERNANCE

Parastatals occupy a vital middle ground between public agencies and private-sector organizations. They're powerful, opaque, and proliferating around the world.

PARAG KHANNA is director of the Hybrid Reality Institute, senior research fellow at the New America Foundation, and visiting fellow of LSE IDEAS. His most recent book is *Hybrid Reality: Thriving in the Emerging Human-Technology Civilization* (coauthored with Ayesha Khanna). Soenke Ziesche, a researcher at the Hybrid Reality Institute, contributed to this article.

The age of hybrid governance is already upon us. China today is a hybrid of 19th-century communist ideology and 21st-century capitalist practice, yet it stands on the cusp of becoming the world's largest economy. Asian state capitalism is actually a centuries-old European practice dating back at least to the government of Victorian Britain, which gradually brought the British East India Company under its direct supervision and control over the course of the 19th century, absorbing all of its colonies and wealth. Could China's state-owned companies and banks today—with their expansive operations and lending across the developing world—be the East India Company of the 21st century? As much as this article is about the future of governance, there are always important echoes from the past.

More and more entities occupy the middle ground between state-owned and fully privatized, especially in emerging markets. What was taboo under the "Washington Consensus" is today the norm, particularly sizable government stakes in leading industries, whether in the form of ownership, management, subsidies, or other forms of preferential treatment. More fundamental than this shift in the regulatory environment is an evolution in the very nature of the players. The many variations that occur when public not only meets private but blends with it are what we can call "hybrid governance": government-sponsored entities with multi-stakeholder management, publicly financed corporations that compete in the international marketplace, federally chartered bodies with substantial private investment, and other

combinations. In other words, public-sector skeletons with private-sector DNA. Many of the most prominent state-owned enterprises, sovereign wealth funds (SWFs), and special economic zones (SEZs) exemplify elements of this increasingly visible public-private fusion that goes beyond the traditional division of labor between public- and private-sector roles toward a more active, if blurry, cogovernance among them.

The return of parastatals

Today we are witnessing a massive proliferation in the number of new parastatal entities around the world.[1] Parastatals are wholly or partially publicly owned but often privately managed; they include wealth funds, extractive companies, utilities, administrative and judicial centers, export-processing zones, and urban-development authorities that run—with little or no democratic scrutiny—some of the most important pools of money and sites of growth. It is precisely in authoritarian-capitalist China and the petro monarchies of the Middle East that one finds the greatest number of parastatal entities. Power diffusion continues even in the shadow of strength.

Over the past two centuries, parastatals have come and gone in waves. In the post-Depression West, a wave of nationalizations created parastatals that became an institutionalized form of unemployment insurance, providing jobs in excess of productive needs. Operating in closed domestic markets with little shareholder scrutiny, many became bastions of mediocrity and corruption. In the 1980s, Margaret Thatcher's Britain led a global movement away from purely state-run enterprises and privatized widely to curb subsidies, reduce inefficiencies, and improve services.

Recent decades have witnessed a gradual revival of parastatals that foreshadowed their present surge. They gained access to international capital markets and have leveraged investment to expand operations. By floating shares on exchanges, contracting with auditing firms, establishing independent boards of directors, restricting subsidies from the government, and improving recruiting standards and managerial incentives, parastatals have been able to make themselves competitive with the private sector even if most are still less efficient.

Rather than disappearing, therefore, parastatals appear to have expanded their scope and mutated their forms. South Africa and India each have dozens of parastatal vehicles spanning functional fields such as the postal service, energy, railways, telecoms, health care, alcohol, gambling, and education. Britain's BBC; Australia's ABC; the United States' Fannie Mae, Freddie Mac, and Overseas Private Investment Corporation; Brazil's Petrobras; Russia's Gazprom; Qatar's Al Jazeera; and China's China Mobile are all publicly financed but independently operating entities. Today there are very few, if any, areas of governance that have not been placed in the custody of parastatal entities that undertake commercial activities on the government's behalf.

There are very sensible reasons that parastatals have assumed such prominence in governance today. First and foremost, legacy institutions are broken. Frustration has grown around the inability of traditional ministries to manage investment, infrastructure, manpower, and other fundamental concerns. Today it is such ministries that serve as "unemployment insurance" the way parastatals did in the post-Depression era. By contrast, today's parastatals are now accorded the higher-profile tasks such as strategically spending currency reserves (as SWFs do) and raising private coinvestment for mega-infrastructure projects. To secure the capacity to meet these responsibilities, governments now place their top talent at parastatals and recruit internationally, further elevating their

[1] Such bodies are variously referred to as government-owned corporations, state-owned companies, state enterprises, publicly owned corporations, government business enterprises, or quasi-governmental nongovernmental organizations (QUANGOs).

THE SPEED OF
PROGRESS
The Delhi Mumbai
Industrial Corridor,
an autonomous
parastatal and
one of the world's
biggest infrastruc-
ture projects,
aims to bring high-
speed rail links to
the region.

status as the key locus of effective governance. In short, parastatals are the entities everyone wants to do business with because in places where politics is an opaque void or a byzantine labyrinth, they "get things done."

Second, the new parastatals are a response to the speed and demands of globalization, which requires faster-paced bodies that are more responsive and more technocratic to harness capital flows while asserting national political control. Emerging markets in particular need to correct for the market failure by which private capital prefers the stability of developed markets. State-owned enterprises, national oil companies, SWFs, and urban-re-development projects are the most visible and well-endowed examples of parastatals seeking to master the demands of globalization.

China's State Grid Corporation and Japan Post Holdings rank among the top ten largest companies in the world and can rely on public financing to keep them afloat despite massive inefficiencies. (Chinese state-owned enterprises, or SOEs, still represent an estimated 65 percent of the economy, while Kazakhstan's joint-stock Samruk Kazyna accounts for more than half of GDP through its more than 100 constituent companies.) The parastatals CNPC, Gazprom, and Petrobras are also among the largest companies in the world today, competing with Exxon, Shell, and BP for contracts worldwide. Such giants not only have public support but also support the public: Saudi Aramco generates approximately 90 percent of government revenue, while Gazprom's tax payments generate 10 percent of Russia's GDP. Statoil and Petrobras, by listing on international exchanges, have gradually raised sufficient capital to become world leaders in deep-water exploration. These examples demonstrate how, unlike the SOEs of the past, today's parastatals don't fear international linkages, are happy to encourage diverse minority ownership, and embrace competing aggressively internationally.

Like national oil companies, SWFs have also existed for decades (for example, the Kuwait Investment Authority was founded in 1953) but recently acquired far greater prominence as some of them climbed toward $1 trillion in assets under management. Arab and Chinese SWFs' nimble acquisition of large shares of prominent Western banks and advanced technologies, as well as their increasingly diversified allocation toward other emerging markets, makes them financially oriented and diplomatically important players. Indeed, the lack of clarity over whether they are purely financial or also strategically motivated has raised concerns and barriers, even in countries seriously in need of foreign direct investment. Collectively, these types of parastatals have been crucial for rising

powers to capture the commanding heights of international finance. Their recruitment of top investment-banking and private-equity talent and riskier international investments are a major departure from decades of more conservative asset management by central banks.

Parastatals have also been crucial for quickly achieving the level of international regulatory harmonization that international investors demand. This is the niche filled by SEZs, special administrative zones, and free zones. In 1980, Shenzhen became China's first SEZ, quickly leveraging foreign investment to rise up the value chain in manufacturing and now in services and technology. Also in the 1980s, the United Arab Emirates launched Jebel Ali Free Zone Authority, which catapulted the emirate into the top tier of global logistics and trans-shipment hubs. The side-stepping or suspension of national laws in the interest of harmonizing to international standards remains a key driver of the establishment of SEZs from Mozambique to Vietnam. But the Gulf petro states remain the most prolific creators of new parastatals. The Dubai International Financial Center, for example, has now had domestic commercial disputes referred to its independent courts due to its higher standards of professionalism and efficiency. Parastatals can thus be productive bridgeheads of global rules into local arenas, bending the latter ever more toward the former.

Because the vast majority of foreign investment in emerging and frontier markets remains in capital cities, urban redevelopment has become another key arena of parastatal activity. One of the great examples of city-region success comes from the once deeply troubled separatist Basque region of Spain. At the height of political tension with Madrid in the early 1990s, Basque authorities created an umbrella parastatal called Metropoli-30, which convened leading

Parastatals have also been crucial for quickly achieving the level of international regulatory harmonization that international investors demand.

industrial and political figures to launch a total overhaul of the province's shipping, rail, urban-infrastructure, and cultural strategies. The result is visible not only in the gleaming Guggenheim Museum in Bilbao but also in an overall standard of living that is considered the best in all of Spain. This example proves that fiscal autonomy can matter much more than political sovereignty.

Where urbanization, infrastructure, and advanced technology come together in so-called smart cities, a diverse range of parastatals have emerged. For example, Songdo International Business District in South Korea is chartered by the municipality of Incheon, but the largest shareholder in the futuristic real estate is an American commercial developer. By contrast, the Skolkovo district of Russia is entirely government owned. All smart cities seek to partner with corporate investors and academic institutions to build an effective ecosystem. Indeed, without technology partners such as IBM and Cisco, such instant cities would just be high-end housing projects. Whether or not these city projects are owned privately or by the government, they must be jointly managed in order to succeed. It is no wonder then that mayors are increasingly referred to as the "CEO of the city."

Perhaps the world's most ambitious infrastructure project at the moment is the Delhi Mumbai Industrial Corridor (DMIC), which aims to build an entire new artery of cities, railways, airports, expressways, power projects, and innovation clusters on a 1,400 kilometer stretch across seven states, firmly linking India's two most important cities.

Given low investor interest in India today, creating an autonomous parastatal unit such as DMIC—whose main offices occupy a hotel suite rather than a government building—was an essential prerequisite to bring the largest investors, such as the government of Japan and India's major conglomerates, on board.

Is hybrid governance better governance?

It should come as no surprise that parastatals have emerged to unite whatever political will exists in the public sector with whatever resources can be corralled from the private sector. The post–Cold War period has witnessed dozens of ineffective and populist democracies, from Argentina to Greece to Thailand, as well as postcommunist states and postcolonial states still struggling with ossified public sectors.

There is no doubt that the current wave of parastatals has dramatically improved the efficiency of governance and thus represents to some extent the triumph of technocracy over democracy. The question thus becomes what impact will they have on accountability. Indeed, to a large extent each parastatal has a unique bureaucratic structure and legal mandate that makes its authority specific yet opaque and its management structure clear but detached from democratic oversight. Even if parastatals do not reflect a deliberated "will of the people," at their best they can be stewards of Rousseau's "general will," improving hard and soft infrastructure and building companies that mobilize and empower struggling societies. On the other hand, at times they can also crowd out a genuinely inclusive private sector in favor of corporate monuments manipulated by "bureau-garchs" for personal gain.

Alongside the other form of hybrid governance in vogue today—public-private partnerships—parastatals give rise to a schizophrenia about the relationship between public and private. It is only half in jest, therefore, that futurist Peter Schwartz likes to call Singapore "the best run company in the world." Indeed, up to 60 percent of Singapore's GDP is linked to companies owned wholly or partially by Temasek and associated holding companies. Ultimately, the measure of their utility and desirability will be performance. Parastatals should be studied more closely to determine which most successfully blend public mandates and capital with private investment and management to bring about the most successful outcomes for nations and citizens.

Parastatals have clearly become the tool of choice for governments to modernize governance and manage globalization. Despite the lack of public scrutiny, they have proven to be effective vehicles for harnessing scarce financial and managerial resources. Furthermore, as international competition for investment intensifies, increasing numbers of states are likely to take the path of parastatals to promote their attractiveness to the outside world. Governance has never ceased to be a competitive arena. Exporting parastatal models—whether Singapore's land-management authority, Rotterdam's port, or Songdo's smart city—is a new economic and commercial field. Parastatals are spreading faster than any other institutional form because they have been necessary and successful in the absence of alternatives—and are competitive today, even against more democratic options. ■
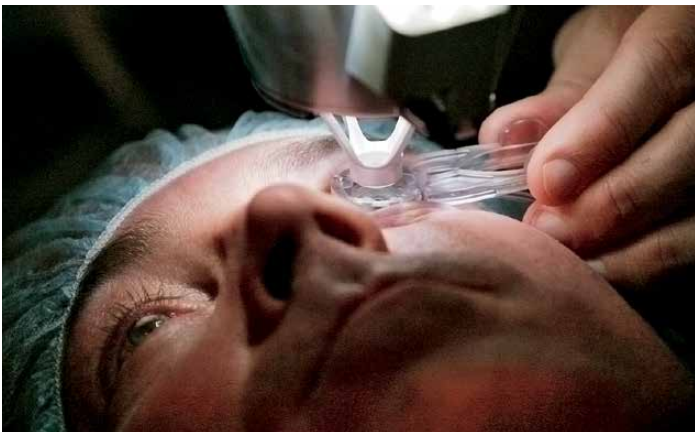
Neil deGrasse Tyson

WHY EXPLORATION MATTERS— AND WHY THE GOVERNMENT SHOULD PAY FOR IT

Giant research efforts like the one that put a man on the moon produce the kinds of technology that can lift an economy and protect citizens in times of war or disaster. It takes a government-size budget to fund those efforts, but the payback can be enormous.

NEIL DEGRASSE TYSON is an astrophysicist with the American Museum of Natural History in New York City, where he is also the Frederick P. Rose director of the Hayden Planetarium. Tyson has authored ten books and served on two presidential commissions on the future of space exploration. This essay is adapted from his most recent book, *Space Chronicles: Facing the Ultimate Frontier*.

Twentieth-century America owed much of its security and economic strength to national support for science and technology. Some of the most revolutionary (and marketable) technologies of the past decades have been spun off research done under the banner of US space exploration: kidney-dialysis machines, implantable pacemakers, affordable and accurate LASIK surgery, global-positioning satellites, corrosion-resistant coatings for bridges and monuments (including the Statue of Liberty), hydroponic systems for growing plants, collision-avoidance systems on aircraft, digital imaging, infrared handheld cameras, cordless power tools, athletic shoes, scratch-resistant sunglasses, virtual reality. And that list doesn't even include Tang.

Although solutions to a problem are often the fruit of direct investment in targeted

TO THE GALAXY AND BEYOND! Research for space missions like Apollo 14, above, has led to important technologies, including LASIK eye surgery.

the goal of saving the world from cancer or hunger or pestilence.

Today, cross-pollination between science and society comes about when you have ample funding for ambitious long-term projects. America has profited immensely from a generation of scientists and engineers who, instead of becoming lawyers or investment bankers, responded to a challenging vision posed in 1961 by President John F. Kennedy. Proclaiming the intention to land a man on the moon, Kennedy welcomed the citizenry to aid in the effort. That generation, and the one that followed, was the same generation of technologists who invented the personal computer. Bill Gates, cofounder of Microsoft, was 13 years old when the United States landed an astronaut on the moon; Steve Jobs, cofounder of Apple, was 14. The PC did not arise from the mind of a banker or artist or professional athlete. It was invented and developed by a technically trained workforce that responded to the dream unfurled before them; they were thrilled to become scientists and engineers.

Yes, the world needs bankers and artists and even professional athletes. They, among countless others, create the breadth of society and culture. But if you want tomorrow to come—if you want to spawn entire economic sectors that didn't exist yesterday—those are not the people you turn to. It is technologists who create that kind of future. And it is visionary steps into space that create that kind of technologist. I look forward to the day when the solar system becomes our collective backyard—explored not only with robots but also with the mind, body, and soul of our species.

When I stand in front of eighth graders, I suppose I could say to them, "Become an aerospace engineer so that you can build an airplane that's 20 percent more fuel efficient than the ones your parents flew on." But imagine if instead I said, "Become an aero-

research, the most revolutionary solutions tend to emerge from cross-pollination with other disciplines. Medical investigators might never have known of X-rays, since they do not occur naturally in biological systems. It took a physicist, Wilhelm Conrad Röntgen, to discover light rays that could probe the body's interior with nary a cut from a surgeon.

Why not ask investigators to take direct aim at a challenge? My answer may not be politically correct, but it's the truth: when you organize large-scale, extraordinary, inspiring missions, you attract people of extraordinary talent who might not happen to have been inspired by, or attracted to,

space engineer so that you can design the airfoil that will be the first piloted craft in the rarefied atmosphere of Mars." "Become a biologist because we need people to look for life, not only on Mars but also on Europa and elsewhere in the galaxy." "Become a chemist because we want to understand more about the elements on the moon and the molecules in space." When you put that kind of vision out there, my job as science educator becomes easy, because I just have to point them to it and the ambition rises up in the students. The flame gets lit, and they're self-guided on the path.

NASA's current budget sits just below $20 billion—sounds large. But the National Institutes of Health has a $30 billion budget. That's fine. They ought to have a big budget, because health matters and everyone wants to live a long and healthy life. But most high-tech medical equipment and procedures—EEGs, EKGs, MRIs, PET scans, ultrasound, X-rays—work on principles discovered by physicists and are based on designs developed by engineers. So you can't just fund medicine; you have to fund the rest of what's going on. Cross-pollination is fundamental to the enterprise.

What happens if you double NASA's budget? The vision becomes big—it becomes real. You attract an entire generation, and generations to follow, to science and engineering. Nowadays, everyone who spends even a minute thinking about the next few decades knows that all emergent markets in the 21st century will be driven by science and technology. The foundations of every future economy will require this. And what happens when you stop innovating? Everyone else catches up, your jobs go overseas, and then you cry foul: they're paying them less over there, and they're giving huge subsidies to new industries, and the playing field is not level. Well, it's time to stop whining and start innovating.

Today, cross-pollination between science and society comes about when you have ample funding for ambitious long-term projects.

Let's not just talk about inspiration. Let's talk about true innovation. People often ask, "If you like spinoff products, why not just invest in those technologies straightaway, instead of waiting for them to happen as a secondary or tertiary benefit?" The answer: it just doesn't work that way. Let's say you're a thermodynamicist, the world's expert on heat, and you're asked to build a better oven. You might invent a convection oven or an oven that's better insulated or one that permits easier access to its contents. But no matter how much money I give you, you will not invent a microwave oven, because that came from another place. It came from investments in communications, in radar. The microwave oven is traceable to the war effort, not to a thermodynamicist.

That's the kind of cross-pollination that goes on all the time, and yes, it's wacky. It's surprising. There's no reason it should happen. But it does. And that's why futurists get it wrong more often than not—they observe current trends and just extrapolate. They don't see surprises. So they get the picture right for about five years into the future, and they're hopeless after ten.

If you double NASA's budget, whole legions of students will fill the pipeline. Even if they don't become aerospace engineers, scientifically literate people will rise up through the ranks—people who might invent stuff and create the foundations of tomorrow's economy. But that's not all. Suppose the next terrorist attack is in the form of biological warfare. Who are we going to call?

Not the Marines. We want the best biologists in the world. If there's chemical warfare, we want the best chemists. And we would have them, because they'd be working on problems relating to Mars, problems relating to Jupiter's ice moon, Europa. We would have attracted those people because the vision was in place. They wouldn't have become lawyers or investment bankers, which is what happened in the 1980s and 1990s.

So this $40 billion starts looking pretty cheap. It becomes not only an investment in tomorrow's economy but also an investment in our security and in our dreams. Our most precious asset is our enthusiasm for what we do as a nation. Marshal it. Cherish it. ∎

THE RESEARCH IMPERATIVE

Ray O. Johnson, *senior vice president and chief technology officer, Lockheed Martin Corporation*
Interviewed by Rik Kirkland

FUNDING THE NEXT BIG THING The California Academy of Sciences incorporates solar panels into its roof—a start but not a solution. Finding new sources of sustainable energy and meeting other complex challenges will require government to play a big role.

Q: Given the economy and the budget deficits, governments are under huge fiscal pressure right now. What are some issues that should be priorities, even under these conditions?
A: One of the issues will be research and development. As the fiscal pressures take effect, the challenge will be how to keep research and development alive, making sure that we invest in the future and take advantage of some of the big changes that are going to be happening in material science, biotechnology, and big data.

How do we make sure that government keeps investing? The challenges we face are huge, and solving them requires commitment. Energy, for example, that's a good one. Cybersecurity is another good one. We're getting

to the point—with cloud computing, mobility, and the Internet of Things—that everything has an IP address, and that change opens up a surface area for attack that is just unbelievable. It's a concentration of data that makes for a big target—difficult to get to, but a very big target. So there will be challenges for the government and for the private sector. It is going to take big money and entail big risk, and really only governments can take on those kinds of challenges. As governments meet their fiscal-pressure demands, keeping the focus on the future and not just on the present will be important. ∎

Rik Kirkland is a partner at McKinsey & Company.

BUILDING A NATION OF OWNERS

Hernando de Soto is the president of the Institute of Liberty and Democracy (ILD), a think tank based in Lima, Peru, that advocates for property rights in developing nations.

MCKINSEY INTERVIEW BY RIK KIRKLAND

HERNANDO DE SOTO is founder and president of the Institute for Liberty and Democracy. A native of Peru, de Soto was educated in Switzerland, where he pursued a career in business before returning to Lima. He is the author of *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else.*

Q: Tell us about your mission at ILD and why you think it's so important.

A: ILD specializes in something very broad—namely, how do you go from having a society where the majority of trade, business, and assets are controlled through customary or unconventional systems, rather than through law? How do you take that society and move it to the rule of law?

Now, that's something you did, of course, in the United States and Europe, but that was in the 18th and 19th centuries. But that's where we are today—not in terms of auto-mobiles and all that, because we've got the same machines you do. Technology gets shared a lot, but societies can be left behind over time. Or only part of the society moves into the rule of law and the rest is out-side, which then means that it's the rule of law for a few who predominate over the anarchy of the informal economy—the rest of us.

So we've learned to move people from one sector to the other on the basis of some very interesting successes in Peru and a couple of other countries. We're basically 18th- and 19th-century specialists because that's when this phenomenon happened in the United States and in Europe. In Japan, it happened in the 20th century.

What you have to remember about this is that we are the majority. There are seven billion people in the world, and we who are outside the legal system are five billion. So this is no marginal phenomenon. It's a big deal. And it applies not only to third-world countries. It also applies to the former Soviet Union, and it applies to Ukraine, which

believes that about 75 percent of its economy is outside the legal system.

You're doing some work in the Middle East. What is the situation there?
When the market comes in, it results in a division of labor, and people understand that they can't just operate at a family level, that they need to collaborate at a broader level. You have to specialize. That's what the industrial revolution was all about. People become interdependent over large areas. When that happens, it means that they're ready for the rule of law. That's happened to all of us who, one way or another, consider ourselves Westerners.

Before the rule of law, you went to your village authorities to settle disputes. When they couldn't respond anymore, the rule of law came in to replace what the old institutions could no longer do.

And so that's where we think the Middle East has gone. It has crossed a threshold. There's no way that it can go back. It has to build, now, the rule of law.

And how do these entrepreneurs get a voice? Is that an opportunity?
The problem is that Western society has a view of what entrepreneurs or businesspeople are. You might identify that view with Wall Street, and the people on Wall Street are not used to a very important insight into third-world countries—specifically, that often the majority of your society is actually made up of entrepreneurs, albeit illegal ones. Albeit poor ones. So these social organizations go in and try to help, for example, the people whom they conceive to be the poorest and the most downtrodden. They say, "We're out here to help the unemployed." Well, what if there are no unemployed? In many of these countries I've been to, people would say, "These are the unemployed." Then you'd go and talk to those people, and they're not unemployed. They're
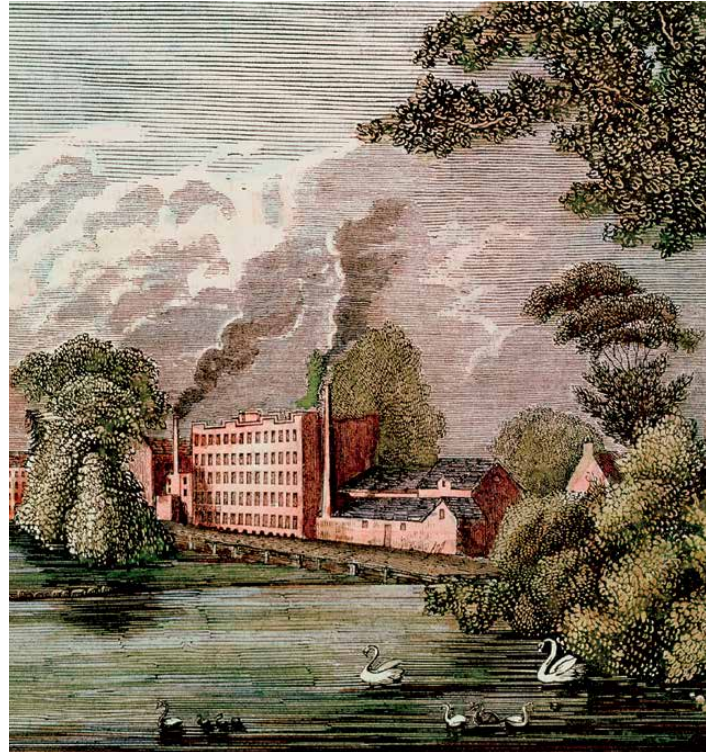
legally unemployed. But illegally they've got a business.

It's very simple if you're poor in a third-world country. If you don't make an income in the first month, you're dead in the second month. It's very hard to be unemployed in a third-world country because life takes place at another level.

I want to go back to the Middle East for a second. What are some signs of progress that you would like to see?
I'd like to see that the political body recognizes that the poor are an enterprising poor. That they're not the problem; they're the solution. After the Arab Spring, the United States says, "We're going to give about another billion or two billion dollars." And the International Monetary Fund (IMF)

THE INVENTION OF PRIVATE PROPERTY
The industrial revolution brought property rights and the rule of law to the West.

I'd like to see that the political body recognizes that the poor are an enterprising poor. That they're not the problem; they're the solution.

says, "We might just do another billion as well." That already makes three billion. That's a lot of money. But the value of informal assets in Egypt, in just buildings and land, is nearly $400 billion. That's 99 times more than the United States and the IMF are promising to give. The poor really are the solution because they've built things. But by the way, they're paperless—that is, outside the legal system. Imagine that they're on paper.

Let's say that this office building in New York City is worth $100 million, and I want to buy it. We all agree that $100 million is a good price and we sign a contract, and then I say, "The title please." And you say, "No title, but all the neighbors know that it's ours." How much is it worth then? It might go down to $10 million; it might go down to zero. So all of these assets that we're talking about are paperless assets. What happens when all of a sudden these assets can be transferred or moved, and you know that when you buy something it involves a transfer of control from the other person to you?

I think the effect is enormous. That's what the story of the industrial revolution is. So what I would like to see in the future is that everybody stops talking about this as if it's a charity problem. It's a social, political, economic transformation issue. It's the

industrial revolution—not understood as chimney stacks, but understood as the moment when human beings decide that they're not going to live under the feudal system, the patrimonial system, and that the times of the tribes are over.

We are now the good society of the world, and we're interdependent, and that's going to bring us a lot of wealth, but we have to deal with one another. I think that the most important thing that can happen in terms of politicians getting together to discuss these issues is that we actually find out what our people are really doing.

Property rights force you to do that. It's how you create a public memory, because if you don't know who is where and who owes what to whom, you can't trace the relationships between people. Nothing works until you know where things are and how you can locate them. In the United States, your memory systems were probably one of the most interesting things that you ever did. And now everything is digital, so you can combine it. You were doing that already with books and print. What you've done is you've accelerated. You need a public memory. But you see, the big problem is that those who are developed have forgotten where they came from and what great steps they had to take to get to where they are now.

The way I see it is that property creates the interest of people to provide information and to create that memory. That's the way they're going to safeguard what they control. You've got to put it on record. And once it becomes cheaper to put things on record than not to have them on record, you build up knowledge. ∎

Nicolas Berggruen and Nathan Gardels

A MIDDLE WAY FOR GOVERN- ANCE

Western governance has transparency and accountability but lacks continuity. Eastern governance has long-term discipline but lacks public participation. Each can improve by learning from the other.

NICOLAS BERGGRUEN is the founder and president of Berggruen Holdings, a private investment company, and the Nicolas Berggruen Institute, a think tank devoted to addressing governance issues; NATHAN GARDELS is a senior adviser to the Nicolas Berggruen Institute and is the editor of *New Perspectives Quarterly.* He has been a media fellow of the World Economic Forum since 1986. Berggruen and Gardels are coauthors of *Intelligent Governance for the 21st Century: A Middle Way Between West and East,* forthcoming from Polity Press.

New times require new methods of governance, and our own troubled era is no exception. The great economic and technological convergence that is the consequence of "Globalization 1.0" has also given birth to a new cultural divergence: the wealthier emerging powers are asserting their individual cultural norms, looking to their respective historical foundations as they define themselves against the waning hegemony of the West. If "Globalization 2.0" is to be successful, it must accommodate both greater interdependence and greater pluralism.

Unfortunately, none of the existing governance models, including Western liberal democracy, is adequate to the task of ensuring a peaceful and prosperous Globalization 2.0. Our world today requires levels of technical expertise, long-term planning, legal and regulatory consensus, and cosmopolitanism that are not consistent with nation-based democracy as currently practiced in the United States and elsewhere. At the same time, the emerging neo-Confucian mandarinate of China, and some similar state-dominated models, cannot hope to remain stable—or to lend stability to the developing global order—without finding ways to attract and channel the free consent of the governed, who increasingly are demanding the dignity of meaningful participation. We need, in short, to find a middle way, both in theory and in practice.

Globalization 2.0 means, above all, the interdependence of plural identities instead of one model for all. The once regnant Western liberal democracies must now contend on the world stage not only with neo-Confucian China but also with Turkey's model of an Islamic-oriented democracy with a secular frame, a model that has been a beacon for the newly liberated Arab street. Historically, a power shift of this magnitude often ends in collision and conflict. But given the intensive integration that the post–Cold War round of globalization has wrought, this power shift

MORE SEATS
AT THE TABLE
The G-20 brings
a diverse group
of cultures,
economies, and
political systems
to bear on the
world's problems.

also presents entirely new possibilities for cooperation and cross-pollination across a plural cultural landscape.

We are thus at a historical crossroads. How we govern ourselves in the coming decades within and among nations will determine the shape of the 21st century.

Much hangs on our ability to balance the need to recognize and respect distinct cultures and the need to embrace intense global interdependence, all while responding to the demands for greater participation in the political process. Our ability to manage those conflicting needs will make the difference between dynamic and stalled societies and determine whether clash or cooperation emerges as the global modus operandi.

That balance might be called "intelligent governance," a middle way that devolves

power and involves citizens in a meaningful fashion while fostering legitimacy and consent for delegated authority at higher levels of complexity. Devolving, involving, and decision division are the key elements of intelligent governance. These are the factors that can reconcile knowledgeable democracy with accountable meritocracy.

Striving for intelligent governance does not mean imposing a one-size-fits-all template. Different political systems are at different starting points, and each must reboot according to its own cultural preferences and needs. While China needs more citizen participation and meritocratic accountability to achieve balance, the United States needs to depoliticize its democracy, finding a system in which governance for the long term and the common good is insulated from short-

term populism and a special-interest political culture. China needs to lighten up, while the United States must tighten up. In Europe, the institutional infrastructure necessary to complete integration—a strong but limited political union—must be invested with democratic legitimacy, or it will fail to attract the allegiance of European citizens over the medium or long term.

At the global level, the Group of 20—the main mechanism of adjustment for the global power shift currently under way—must be invested with legitimacy by nations and their publics. Otherwise, it will never acquire the political capacity to provide the global public goods—a reserve currency, stable trade and financial flows, security, nuclear nonproliferation, and a united front against climate change—that no one hegemonic state or club of states can provide in the plural world of Globalization 2.0.

In our own work, through the Nicolas Berggruen Institute and its associated councils, we have focused on California, the Group of 20, and the European Union, all settings where the problems are acknowledged and the desire for solutions is shared, but the existing governance structures are inadequate to the tasks.

Californian voters, beginning in 2005, responded to partisan paralysis in the legislature by voting for open primaries, redistricting by citizen commission, and the use of a simple majority vote on budgets. We initially sought to extend this movement through the Think Long Committee, founded in 2010. This was a high-powered group of eminent citizens with broad experience in public affairs, labor, and business. At our first meeting (at Google headquarters), Arnold Schwarzenegger, California's governor at the time, shared the table with Gray Davis, the governor he had ousted. Soon Jerry Brown, the state's current governor, was working with the committee as well. The name of the group

Striving for intelligent governance does not mean imposing a one-size-fits-all template.

revealed its main objective: to introduce a depoliticized, nonpartisan, and long-term agenda as a corrective to the partisan rancor and short-term, special-interest political culture that has come to dominate California's political life. The Think Long Committee's "blueprint to renew California," introduced in a report published in 2011, seeks to install a new civic software. Recommendations include incorporating commonsense practices such as a "rainy day" reserve fund and multiyear budgeting; instituting two-year legislative sessions, with one year dedicated to oversight; aligning the skills and educational outcomes of California's educational institutions with the needs of the state's cutting-edge technology industry; and speeding up regulatory approval to foster job creation. Many of these initiatives will be put before the public for a vote in statewide referenda, beginning in November 2012.

The Group of 20, in which Europe, Japan, and the United States—the old G-7—are joined by Brazil, China, India, Mexico, South Africa, Turkey, and others, is, in effect, the mechanism of adjustment from Globalization 1.0 to 2.0. The advanced economies of the old G-7 are unable to provide global public goods such as open trade, stable financial flows, and a global reserve currency, while the emerging economies, with China in the lead, are not yet able to do so. Moreover, unlike the G-7, the G-20 brings together a broad mix of cultures and economic and political systems. Figuring out how to govern these new, interdependent plural identities, in which economic convergence and cultural divergence are taking place simultaneously, is an unprecedented

challenge. To help meet this challenge, we formed a council of former world leaders from advanced and developing countries, top thinkers, and technologically savvy "disrupters." This group has focused on debating issues of global governance and offering its best counsel to current heads of state—notably a given year's president of the G-20. It also operates as a bridge between Asian, particularly Chinese, governing elites and those in the West, hoping to ease the transition to an interdependent world from one held together by Western dominance. Such broadened political participation can help ensure that the provision of global public goods will not fall victim to national (and nationalist) rivalries.

In a sense, Europe faces the same set of challenges as the G-20: how to share sovereignty in a way that also promotes national well-being in the long term—notably by providing Europe-wide public goods—and thus garner the support of the public. As with the G-20, greater authority is required for the coordination and management of interdependence at the systemic level, even as citizens at the national and local levels must be able to increase their influence over their own fates. Our Council on the Future of Europe seeks to address these issues by gathering a small group of Europe's eminent and experienced political figures to debate and design the institutions that would govern a federal Europe and then plot a way forward. The technocratic management of the euro must be complemented by political reform that brings democratic engagement at the Europe-wide level, rather than relegating it to nations. As Martin Sandbu recently put it in the *Financial Times,* "In Europe, national self-determination can no longer trump democracy."

Our efforts are at least as much tactical as strategic, seeking to alter by degrees the public debates and private political discussions that are gradually shaping our future, while keeping our eyes firmly on the long term. A certain modesty is required, as the stability and prosperity of an interdependent world will never be secured by intellectual dominance—or any other sort of dominance. The conundrum of interdependence without a common identity cannot really be solved. It is proving difficult enough on a European scale; on a global scale, it must remain a distant idea. What is possible, however, is to use what we know about governance to prevent technocracy from smothering freedom, and to keep democracy from negating political styles and structures that have proved to work. If prosperity and diversity are to coexist, we need to get governance right. ∎

AUTHOR INDEX

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