The Government Executive Series

Technology in Government: Riding the Waves of Change

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foreword_

Governments historically have progressed in an evolutionary rather than revolutionary way. Change typically happens at a measured pace – looking across the government landscape over time you will see many improvements carved out of deliberate progress. Yet, we are struck by how many of the government executives we encounter cite the need for more immediate change, particularly in several priority areas ranging from becoming more constituent-centric to achieving greater integration and collaboration across all levels of government. Our experience shows that improvements in these areas are absolutely essential; that citizens benefit mightily when the changes are effectively undertaken and that societies suffer if the changes take too long.

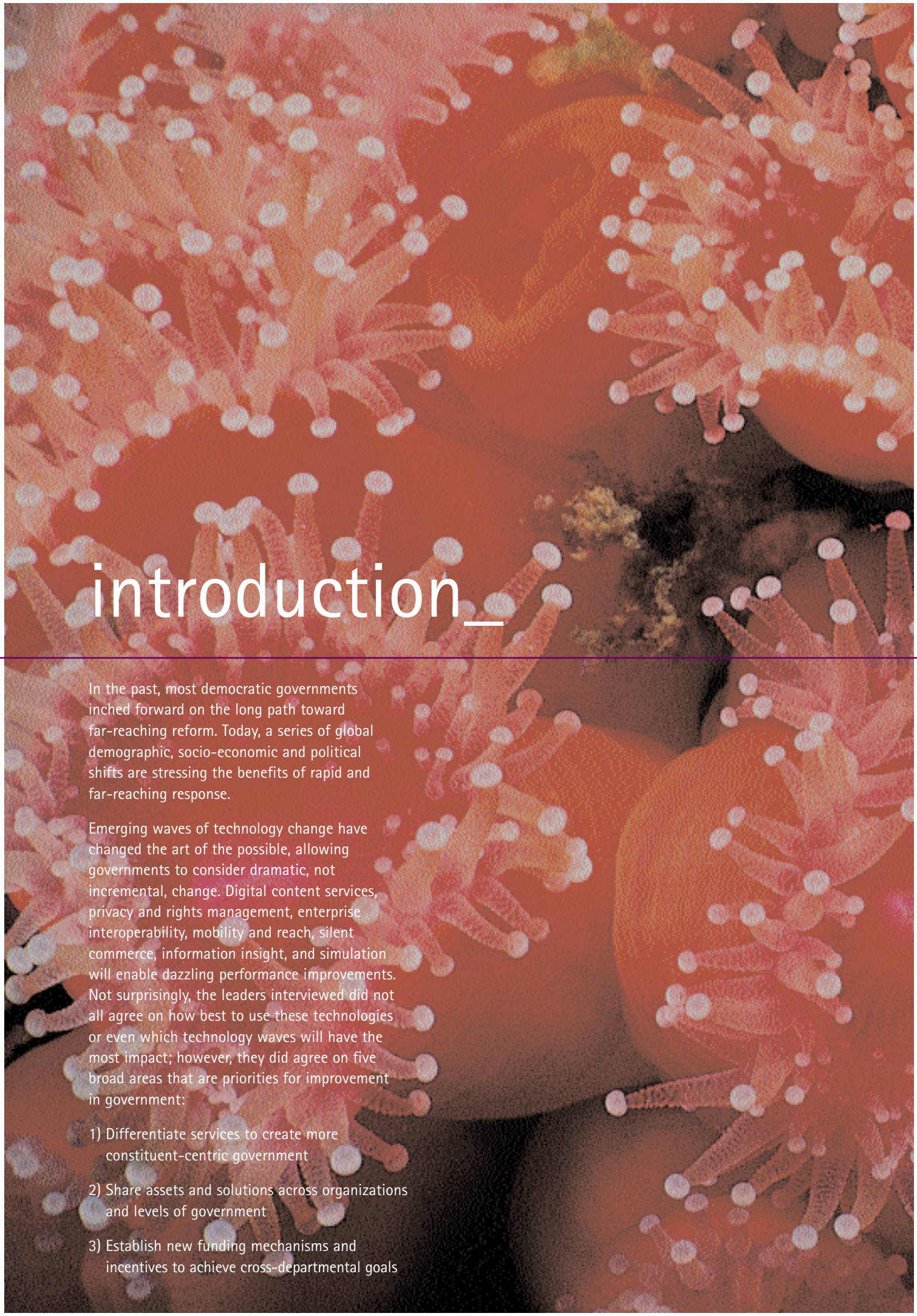
Accenture believes that emerging waves of technology change are opening up breathtaking new opportunities for governments to launch rapid and radical improvements in effectiveness – generating benefits for constituents in a here and now timeframe. These potential improvements would far outstrip the progress governments have made thus far in moving services online as part of the eGovernment revolution. We believe that these changes will happen. After many years of encountering technology roadblocks to progress, forward-thinking executives now see these technology waves as a creative force to deal with mounting issues. But it will take courage and vision to ride these waves.

Accenture undertook this study to understand the role technology waves will play in how governments are coping with current pressures on a national level. Our findings are the result of a careful review of more than 150 current and emerging technologies. The Accenture Institute for Strategic Change also conducted in-depth interviews with 70 political leaders and top government executives representing 10 countries around the world. We combined the findings from this research with the insights and perspectives of the Accenture government practice to create this report. We believe that this report will help government executives and politicians to identify technology waves of change that they can use to improve effectiveness in the face of mounting pressures. We hope that it will help these same people create a roadmap for accomplishing dramatic technology-enabled changes ahead.

Vivienne Jupp

Lis Astall

"Emerging waves of technology change are opening up new opportunities for radical improvements"



introduction_

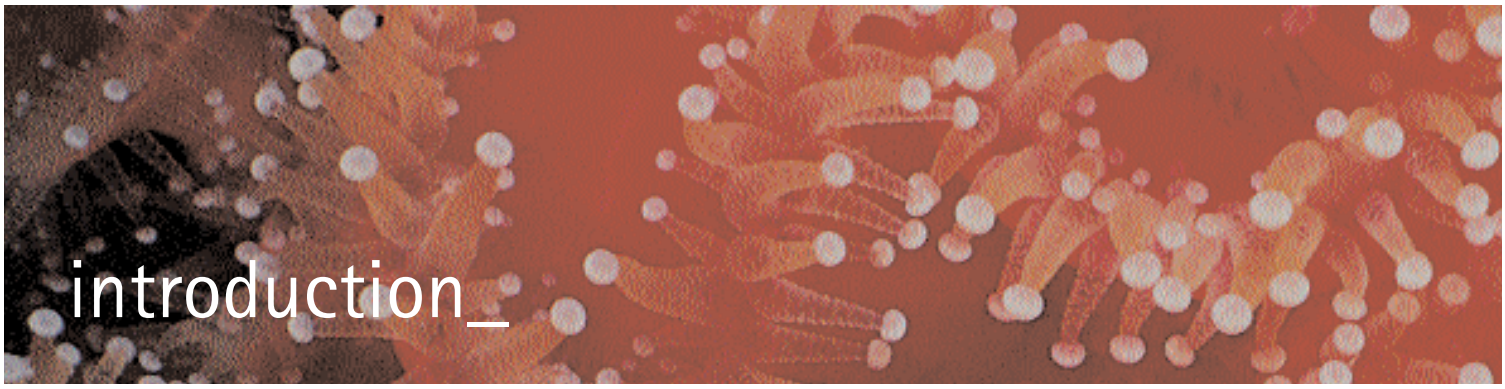
In the past, most democratic governments inched forward on the long path toward far-reaching reform. Today, a series of global demographic, socio-economic and political shifts are stressing the benefits of rapid and far-reaching response.

Emerging waves of technology change have changed the art of the possible, allowing governments to consider dramatic, not incremental, change. Digital content services, privacy and rights management, enterprise interoperability, mobility and reach, silent commerce, information insight, and simulation will enable dazzling performance improvements. Not surprisingly, the leaders interviewed did not all agree on how best to use these technologies or even which technology waves will have the most impact; however, they did agree on five broad areas that are priorities for improvement in government:

1) Differentiate services to create more constituent-centric government

2) Share assets and solutions across organizations and levels of government

3) Establish new funding mechanisms and incentives to achieve cross-departmental goals



introduction_

4) Improve services by taking a consolidated view of constituents' information

5) Foster prosperity by developing a robust national technology infrastructure

Public officials' efforts to date in these five areas have begun to pay off in improved management practices and greater efficiency. But they have not gone far enough. Sixty percent of the public officials interviewed are *discussing* future directions, but not yet taking action. This slow march of progress, while eventually effective, is causing governments to miss out on very real benefits right now. Governments are thus left with a choice: to maintain the status quo or embrace new models of change. We believe the case for new approaches is a strong one. Governments could be seizing the low-hanging fruits of opportunity – generating new sources of revenue, customizing citizen service and enhancing public safety are just a few examples. How? By moving away from incremental progress to radical leaps forward. Accenture foresees three dramatic changes, enabled by emerging technology waves, that democratic governments should pursue now:

- **Establishing dynamic connections**, or providing integrated and comprehensive touch points between governments and their constituents to enable intelligent interactions. The primary characteristics include a single, integrated face for government interactions; a practical set of channel choices, two-way flows of meaningful information, convenient services that are embedded in everyday activities; and an agile network of intermediaries for service delivery.

- **Embracing policy speed-to-market**, or radically accelerating the processes of policy formulation and implementation in order to improve outcomes. Policy speed-to-market brings together in a single network the politicians and constituents who shape policy, the executives who oversee its implementation, and the agency staff and programmers who capture it in IT systems and business processes. It also injects unprecedented intelligence into decision-making processes along the way. Policy speed-to-market is characterized by fact-based development, agile implementation and the rapid spread of government innovations.

- **Engaging constituents** as integral stakeholders in the everyday activities of government. Using new processes and powerful tools, citizens and businesses will leave behind the traditional arm's length relationship with governments to embark on a closer collaboration. Governments will ask constituents to contribute their specialized expertise to inform government policy-making. New technologies will improve communications among government organizations and between public officials and citizens. And constituents will take responsibility for paying for the services and resources they use. Technologies including silent commerce and mobile communications will help enable constituents to accept new levels of responsibility and accountability for common resources.

"Sixty percent of the public officials interviewed are discussing future directions, but not yet taking action"

Methodology and Report Structure

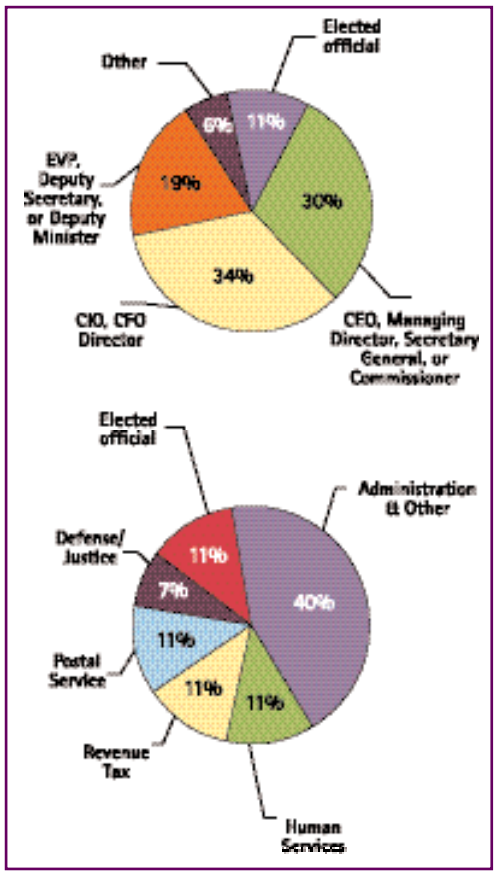
Our objective for this research and analysis was to understand the role technology waves will play in how governments are coping with what we see as the most salient pressures exerting themselves on governments today. We conducted a two-pronged research effort. First, Accenture's Growth and Strategies group, in cooperation with Accenture Technology Labs, reviewed more than 150 current and emerging technologies, grouping the most potentially influential into categories called *waves of technology change*. Accenture believes that no single technology will make a substantial difference by itself. However, combinations of technologies will give rise to forces that are powerful enough to enable dramatic leaps forward in government effectiveness. Each wave represents the spectrum of like technologies that in combination represent a significant change agent for government.

In the second prong of this research, The Accenture Institute for Strategic Change conducted in-depth interviews with 70 political leaders and top government executives representing 10 countries around the world (see Exhibit 1). The nations included were Australia, Canada, France, Germany, Ireland, Japan, New Zealand, Spain, the United Kingdom and the United States. Our interviewees represent the perspectives of a wide range of government departments and functions. We then combined the insights and perspectives of the Accenture government practice with the research findings to produce this report.

This report comprises research results, analysis, and Accenture's recommendations.[1] The report first describes the salient pressures on government today, as well as five areas that government executives see as priorities for improvement in light of these pressures. It also discusses the upcoming waves of technology change that Accenture believes will allow governments to develop the flexibility to enact change rapidly.

Next, the report presents our recommended response to what the research revealed. It focuses on three dramatic changes, enabled by technology, which we advocate as holding the greatest potential for delivering radical improvement in the areas cited by the research sample. Finally, the report analyzes the implications for politicians, executives, and agencies that implement these three dramatic changes.

Exhibit 1: Participants include elected officials and senior executives from a range of Government agencies



[1] This report draws heavily on the research and analysis presented in the Accenture Institute for Strategic Change working paper, "Radical Reform in Government: Using Technology to Build Trust." The working paper is forthcoming at www.accenture.com/isc.

mounting pressures provide incentive for radical change_

In the past, it took a painful national crisis to drive significant government change. The turbulence was often contained within the borders of one nation. In the absence of such an event, nations remained free to modernize at a pace that suited them, implementing new services and administrative efficiencies in small doses.

This is government today: changes happen with majestic grace rather than dazzling speed. Yet today, a series of global demographic, socio-economic and political shifts are gathering force, giving governments good cause to consider dramatic, not incremental, change. These structural pressures are not new, and although they vary in momentum from country to country, they are consistent across geographies:

- **Fiscal and demographic constraints are requiring governments to do more with less.** Slowing economic growth and the drive to reduce debt are forcing governments to carefully guard resources and show proof of value for their money spent. At the same time, ageing populations are demanding greater support and services, even as their contribution to the economy declines. A recent United Nations conference in Madrid announced that

"most governments continue to provide anonymous, one-size-fits-all offerings splintered across organizational silos"

the numbers of adults aged 60 years and older will grow from 600 million to almost 2 billion by 2050.

- **Intensifying global competition is raising expectations for government services**. Globalization and the pervasiveness of satellite and network communications has greatly increased the intensity of competition for the hearts, minds and currency of the consumer citizen. This marketplace battle has taught consumers to expect compelling, convenient and personalized services. Yet most governments continue to provide anonymous, one-size-fits-all offerings splintered across organizational silos. The trend toward eGovernment has resulted largely in static information published online, with few governments having true electronic interaction capabilities.

- **Declining engagement among mainstream constituents is causing governments to seek ways to reconnect with the people they serve**. Voting levels in many industrialized democracies have dropped dramatically, as mainstream constituents opt out of their political systems. In Canada, for example, the percentage of voting-age citizens who participate in parliamentary elections has fallen steadily between 1984 and 2000, dropping from 68 percent to 55 percent[2] (see Exhibit 2).

- **Globalization is requiring governments to balance local and international obligations, while competing for commercial investment**. Policy decisions about issues like defense, the environment and energy resources, which were once made at a national level, have been thrown onto a global stage. Governments must now pursue solutions to their pressing domestic problems through multilateral cooperation.

[2] Source: International Institute for Democracy and Electoral Assistance

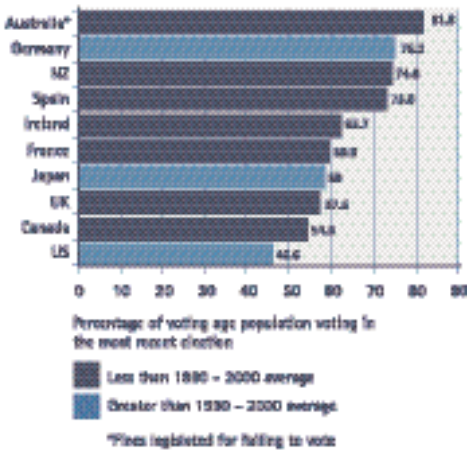
mounting pressures provide incentive for radical change_

In addition, economic globalization is putting nations in competition for businesses and knowledge workers.

- **A skills crisis is threatening to siphon away talent and knowledge**. With some government departments facing retirements that could claim up to 50 percent of their executives within the next five years, key competencies could evaporate. Meanwhile, public service struggles with an image problem and inflexible hiring practices that hinder recruitment and retention of tomorrow's government leaders.

- **Unpredictable disruptions will affect priorities and divert resources toward re-establishing orderliness**. Regardless of the source of the disruption – from terrorism to foot and mouth disease to fuel crises – governments are on point to establish and maintain order. No matter what the longer-term agenda, citizens and businesses will demand that governments devote scarce resources to providing basic protections.

Exhibit 2: Voter turnout is falling



governments progress, but not far or fast enough_

As pressures build, politicians and executives worry about their national governments' ability to adapt and thrive. In light of the pressures, the majority of the research respondents agree upon five areas as priorities for improvement. They recognize that governments should be moving forward to:

1) Differentiate services to create a more constituent-centric government

2) Share assets and solutions across organizations and levels of government

3) Establish new funding mechanisms and incentives to achieve cross-departmental goals

4) Improve services by taking a consolidated view of constituents' information

5) Foster prosperity by developing a robust national technology infrastructure

Some executives are already considering or taking action. Exhibit 3 captures not only their level of agreement with the directional theme, but the extent to which they have begun to act on it in their organizations. Each of these five areas is explored further in the sections that follow.

governments progress, but not far or fast enough_

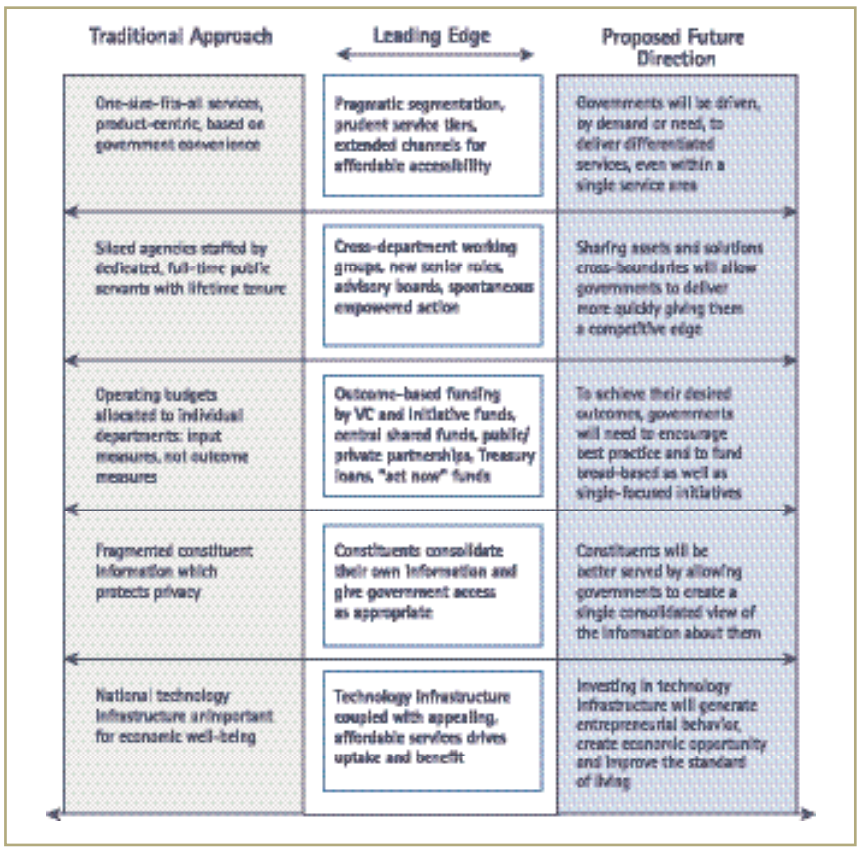
1. Differentiate Services to Create a More Citizen-Centric Government

Our interviewees assert that governments have been accustomed to providing one-size-fits-all services. As one public servant confided, "Government is the only organization left that feels it's OK to treat its customers like a bunch of nobodies."

Leading-edge government executives and politicians understand that this approach is lacking. In great numbers, executives are trading in their agency-centric service models for customer-centric ones. Instead of focusing on disjointed services that are convenient for governments to provide, they want to build customer-managed relationships that ensure customers receive consistently differentiated, and wherever possible, personalized service. They will take advantage of new technologies to create end-to-end services that are tailored to their constituents' individual requirements and demands. 44 percent of the government officials interviewed include improving service to citizens as one of the objectives they are personally pursuing. Specifically, they foresee tiers of services optimized for the characteristics, needs, and preferred

"executives are trading in their agency-centric service models for customer-centric ones"

Exhibit 3: Leading organizations have already made progress toward more effective practices



channels of each individual constituent (see Exhibit 4). At the same time, to ensure convenience is affordable, the leaders recognize their need to make hard choices about which services are offered through each channel and encourage citizens to use the channels that are most cost effective. This approach creates benefits for constituents and governments alike. Constituents get what they want and governments operate more effectively.

The governments interviewed have made uneven progress toward the goal of constituent-centric services. Some are segmenting constituents and organizing offerings around life events – often called intentions – to tune services with actual needs. Many are exploiting new, Internet-based delivery channels. However, all of our interviewees counsel that they will need to coordinate new channels with the face-to-face, telephone and fax contacts that people are already using.

Executives admit that the road to constituent-centric services is not entirely smooth. They want to leverage powerful new technologies that will yield greater efficiencies. At the same time, they do not want to leave anyone behind, asserting that all citizens are entitled to high service quality and accessibility, regardless of economic background, demographic profile, or geographic location. Bertie Ahern, An Taoiseach [Prime Minister] of Ireland, commented in a written response to our questions, "It is important that technology not be a barrier to access where the very people who most need access can become vulnerable to a digital divide." Most politicians and executives are enticing citizens – not forcing them – to use the new channels. Accenture's recent study of CRM in Government found that many agencies are reluctant to use customer segmentation techniques to target services toward particular needs: "Customer segmentation ranked low among all agencies, both in importance to agency mission (40 percent) and in agencies' intention to develop it as a capability within the next two years."[3] As a result, some governments expect that channel costs will actually increase in the short-term.

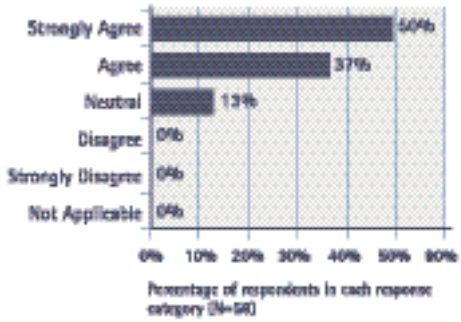
2. Share Assets and Solutions Across Organizations and Levels of Government

Focusing on the constituent often means working across government boundaries. Executives in neighboring agencies and levels of government may share responsibility for a single set of constituents – such as children or victims of crime – or a single outcome – such as safe streets. But organizational silos make collaboration very difficult. The result? Massive waste, as uncoordinated, uncooperative, or even counterproductive efforts multiply costs. The politicians and government executives interviewed realize that this must change. They believe in creating organizational bridges to coordinate service initiatives, speed up technology implementation, and reduce costs. Leaders are extending these bridges across national boundaries as well. Germany, for example, has offered its security standards for acceptance by the European Union. Ireland's Department of Agriculture is encouraging information sharing among EU countries.

Governments are far from institutionalizing these ideals today, but many are taking steps in the right direction. Forty-one percent of the politicians and executives interviewed describe concrete actions their organizations are taking to improve coordination. For example, they are conducting service inventories to identify areas of overlap and duplication and to pinpoint areas for collaboration. Some departments, working through word of mouth or

"the road to constituent-centric services is not entirely smooth"

Exhibit 4: Most public officials agree that differentiated services will be required



[3] "Customer Relationship Management: A Blueprint for Government," Accenture Government Executive Series report available at www.accenture.com.

governments progress, but not far or fast enough_

personal relationships, are reaching out to peers to shoulder difficult problems together. Others have set up more formal working groups to address management imperatives across departments – such as ageing workforces, compensation structures, or the coordination of technology standards.

For areas of nationwide concern – such as administrative reform, e-government, or service redesign – governments may charter new organizations that provide central coordination and oversight. For example, in the United Kingdom, Prime Minister Tony Blair commissioned an Office of the e-Envoy, an Office of Public Services Reform and a Performance and Innovation Unit to define and further focus agendas that touch every corner of the British government.

The battle is far from won. Rallying disparate teams around common goals takes enormous effort. Then, sustaining the momentum and accountability – sometimes in the absence of dedicated budgets and staff – is even more difficult. Skirmishes over turf remain typical. Mark Forman of the United States Office of Management and Budget explains, "People at the top understand the vision, and people doing the work want a modern, collaborative work environment, including e-enabled tools and processes. The difficult issue is getting senior managers to embrace the transformation."

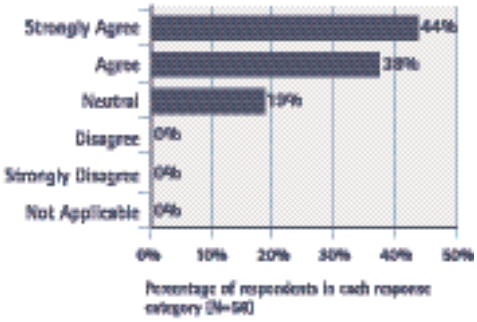
3. Establish New Funding Mechanisms and Incentives to Achieve Cross-Departmental Goals

Government funding processes have traditionally reinforced organizational silos, with department executives held personally accountable for their operating budgets. In addition, poor performers have been as likely as good ones to be funded year after year. Instead of simply funding departmental payroll, most of the public officials interviewed agree that money should be spent for results (see Exhibit 5). By aiming money toward the outcomes they want, governments can encourage the groups that most effectively achieve goals.

Some governments are already experimenting with new mechanisms for getting the most from their money. They are making pools of central funding available to agencies and departments that take the initiative to work together. They are seeding pilot programs to show that benefits can be achieved and to attract imitators. Finally, they are using new approaches – such as Managing for Outcomes (MfO) – to tighten the link between agenda and action. Rachel Hunter, the Public Service Commissioner in Queensland, Australia, explains, "Traditionally, any cross-departmental initiative was funded as an add-on. We can't afford to operate that way any more. MfO allows the government to buy results from its departments and agencies."

Innovative funding arrangements have also helped governments to enlist the private sector in achieving important goals. Outsourcing service delivery through public/private partnerships is becoming more

Exhibit 5: Many public officials agree that governments should provide incentives to follow best practices



common. Where it is managed effectively, it can improve both quality and cost. For example, Australia's Department of Employment and Workplace Relations reduced its spending by 44 percent and recorded $7 billion in savings since implementing in 1998 the Government's decision to outsource.

However, governments face thorny issues as they structure new funding arrangements. Transitioning work to the private sector threatens employees and often attracts union opposition. Creating an effective network of private suppliers also requires government organizations to cultivate new skills – in particular, the ability to manage flexible, long-term partnerships. Finally, many of the broad-based funding mechanisms that governments are beginning to implement blur lines of accountability and make some executives notably nervous.

4. Improve Services by Taking a Consolidated View of Constituents' Information

Some government executives and politicians believe that having a unified view of constituent information would create substantial benefits for governments and constituents alike. These benefits range from convenience – such as enabling a citizen's address change to be updated across all relevant government departments from one data entry – to radical new interventions. Progressive governments see consolidated information as a tool for being able to foresee constituent needs and prevent social ills. For example, protective agencies could focus on the criminals, not the crimes, with an eye toward prevention rather than solution.

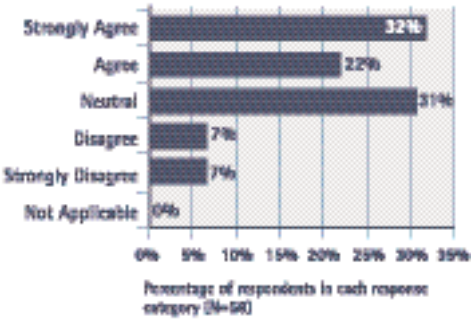
Most of the executives interviewed were so focused on the privacy and confidentiality issues that they were just beginning to contemplate information consolidation. Fully 14 percent of the officials interviewed disagree that consolidating constituent information would even be beneficial (see Exhibit 6). In some cases, they do not have the legislative authority to link up disconnected information fragments even if they so choose. "This is a cultural anathema," asserts one French government official. And simply connecting data stores will not yield benefit. Making sense of information – applying it to the right situations at the right times – is where the payoff lies. A few governments have focused on information sharing among groups of complementary services. One national CIO remarks, "We see information sharing occurring in clusters. We would see a health and services cluster, an education and employment cluster, and a business and tax cluster."

But a few leaders are pursuing an innovative new model, which achieves the benefits of information sharing without threatening privacy. Their approach: **put control in the hands of constituents**. One government executive explains, "The object isn't for government to own all the data. It's simply to have access to it when necessary and appropriate." A politician continues, "The only way to really get beyond the privacy debate is to give constituents complete possession of their own information. It becomes their responsibility, and if you want to use the data, you have to convince them there will be a worthwhile benefit. The decision will be theirs."

For example, Ireland chartered a new agency called Reach in 1999 specifically to make the nation's public service dramatically more effective in its dealings with constituents. By enabling a consolidated view of individual data, Reach will position the government to provide connected, personalized and convenient self-service. The key? A personal data vault. Customers will be able to enter personal data into the vault, and later choose to release it to the government when applying for a specific service. For example, a

"Progressive governments see consolidated information as a tool for being able to foresee constituent needs"

Exhibit 6: Public officials' views vary considerably about allowing government to create a single consolidated view of constituent information



governments progress, but not far or fast enough_

constituent may allow all government agencies access to address change information, to avoid contacting each one separately. According to director Oliver Ryan, Reach intends to begin building the technology this autumn and roll out the first services in 2003. Executives in other governments are watching the bold experiment with interest.

5. Foster Prosperity by Developing a Robust National Technology Infrastructure

The way governments have built information technology infrastructure is different from the way they have built other infrastructures in the past. With a few noteworthy exceptions – such as France's program to distribute Minitel throughout its households and businesses – governments did not correlate IT investment with increases in economic and social well being.

The rise of the Internet has largely changed that view. Eighty-four percent of the politicians and senior government executives interviewed agree that the rollout of new technologies is directly connected to the quality of life for their citizenry and the vitality of their business sector. They want high-speed, secure networks to deliver services and stimulate commerce among citizens and businesses. And they want it to reach everyone.

Many have mounted initiatives to see that essential technology infrastructures, like broadband, are built. Some of these are innovative public/private partnerships to wire the nation. As Paul Swain, the Minister of Information Technology and Communications in New Zealand, states, "We believe in a 'smart intervention' approach. The government wants to facilitate the even rollout of technologies that could improve the standard of living. Therefore, we work with the private sector, and do what we can to help make the numbers work out." In Ireland, a government initiative to extend broadband infrastructure across the country will provide local authorities with 90 percent of the funding they need to deploy metro area networks.

Governments acknowledge that much work remains. Leaders assert that IT infrastructure will be worthless without appealing content – services with a real value proposition for constituents. Early attempts have frequently fallen short of this goal, as agencies e-enabled the information they had rather than designing services constituents want. One executive admits that only one percent of his country's population is actively using government services online so far. Accenture's third annual eGovernment study recently ranked countries in terms of their ability to transact business electronically – not just present passive information displays. Even Singapore and Canada, the global leaders on this measure, have room to improve, according to the study.[4]

"Eighty-four percent of respondents agree that the rollout of new technologies is directly connected to the quality of life for their citizenry"

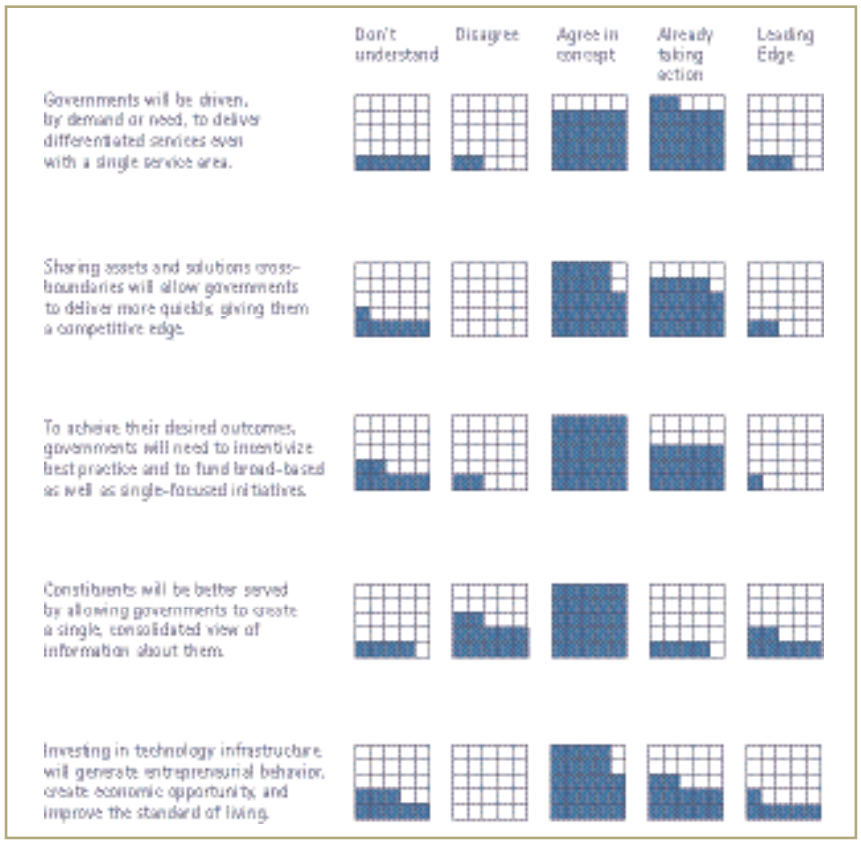
[4] "Realizing the Vision," April 2002. Accenture's third annual eGovernment survey. Report available at www.accenture.com.

Government's Efforts to Cope with Growing Pressures Fall Short

Public officials' progress in these five areas is varied. Some initiatives are beginning to pay off in improved management practices and greater efficiency. Constituents are pleased with pockets of improvement in service quality. In the United States, for example, the American Customer Satisfaction Index asserts that customer satisfaction with the Internal Revenue Service increased 22 percent between 1999 and 2001. Coordinating local and global activities is becoming easier as high-performance networks link governments' internal dealings to those around the world.

Despite these promising moves, governments' progress has not gone far enough. Sixty percent of the public officials interviewed are discussing future directions, but not yet taking action (see Exhibit 7). Many of the organizations that are taking the initiative are pursuing gradual improvements, even as the intensity of external pressures accelerates. As a result, the gap between delivery and expectations continues to widen. One executive confides, "We're getting better, but not fast enough. We still can't keep up with the 'Have it your way' mentality."

Exhibit 7: Many government organizations are beginning to move in new directions



new technologies hold stunning potential_

Some executives are convinced that emerging waves of technology change will enable the results they desire. One executive explains, "Five years ago, my dreams ran a long way ahead of what technology could enable. The evolution of computing has gone to the point where I can do everything I want to do, provided I can get access to the resource. There are no more excuses." Coupled with thoughtful approaches for use, new technologies can offer striking progress in organizational performance and effectiveness. Leaders are considering how to apply major technology waves to the daunting challenges ahead (see Exhibit 8).

1) Digital content services distribute content over next generation networks. This first technology wave encompasses the planning, creation, management, distribution and operation of content-intensive, multimedia services running on high-performance networks. Today's government portals provide an early example of this technology's potential, which also includes software that enables content from multiple channels to be combined and personalized. In Australia, the government-sponsored www.jobsearch.gov.au has taken a step in this direction, becoming one of the top ten most-visited portals in the country. The

"new technologies can offer striking progress in organizational performance and effectiveness"

Web site lures citizens with a combination of public sector jobs and employment tools, while including thousands of listings contributed by the private sector.

2) Privacy and rights management protect online government interactions. This wave of technology change gives citizens and businesses the confidence they need to fully embrace electronic exchanges with their governments. While digital signatures and biometrics establish unique, irrefutable proof of identity, security and encryption guarantee safe transfers of information and money. Germany was the first nation to give digital signatures the same status as written signatures; the standard has since been modified and embraced on a European basis.

3) Enterprise interoperability allows real-time integration across organizations. This technology wave includes those tools, such as middleware, that can link together all applications and information across an organization and its partners – up and down supply channels. Transaction information flows real-time, traveling through object routers and peer-to-peer networks and creating seamless connections. Instead of building unwieldy data models or massive new databases from scratch, disparate data can now be combined heuristically – allowing information about a single constituent to be aggregated without requiring a unique identity number. In Ontario, three ministries are moving toward this model through collaboration with a private sector consortium that will help them to integrate justice-related IT systems. The groups hope to achieve new levels of coordination and increase the effectiveness of their overlapping efforts through the newly created system linkages.

Exhibit 8: Waves of technology change range from mature to emerging

new technologies hold stunning potential_

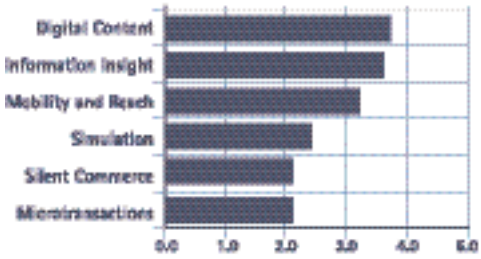
4) Reach and mobility allows anyone, anytime, anywhere access to information and services. Reach and mobility enable people to use network-based services with an always-on connection from any convenient location. The technologies span an array of access devices, such as cell phones, personal digital assistants (PDAs), and digital televisions as well as personal computers. They also include alternative connectivity platforms such as Bluetooth, broadband, and the GSM and WAP protocols. In one regional administration in Spain, executives are exploring possibilities for notifying citizens about programs such as child immunization campaigns – via their mobile phones.

5) Silent commerce makes objects intelligent and interactive, creating new business value. Technologies such as radio frequency data tags, global positioning, digital ink and other sensors can enable new commerce capabilities by linking them with data storage and retrieval over a ubiquitous network. In particular, they allow governments to support microtransactions that include automatic, pay-as-you-go deductions for activities such as peak-hour road travel. Singapore, for example, uses this technology to bill motorists automatically when they drive through congested city streets at rush hour. Governments have initially embraced the tracking possibilities of silent commerce. The United States Defense Logistics Agency is implementing radio frequency data tags and automation solutions to provide an end-to-end view of its distribution network. The goal? Mae DeVincentis, the organization's CIO, explains, "This will help us to ensure that we get the right items to the right place at the right time to meet increasingly time-sensitive combat logistics support requirements."

6) Information insight unlocks dramatic business value from far-reaching data sources. In contrast to today's awkward and complex data-mining queries, information insight permits instant and relevant queries from widely distributed and diverse sources, including new data types such as video, audio and various sensor-generated values. By exploring new data, data relationships, and trends, information insight enables politicians and government executives to make better, fact-based decisions. Canada Post recently completed the implementation of a customer relationship management program that, combined with new tools, enables it to view and segment its 141,000 commercial clients. This intelligence will prove crucial as the Post targets and launches new revenue-generating services.

7) Simulation enables interactive scenario planning and anticipates future developments. This wave of technology change includes tools that draw on all of an organization's data and information, then combine them with human and artificial intelligence to create future scenarios. Using simulation, governments can build complex, interactive models of virtual trends, demographics and processes – both to anticipate and influence future

Exhibit 9: Government executives expect emerging technologies to help improve government effectiveness



Interviewees rated the importance of each of these technologies for making government more effective on a scale of one to five. Privacy and rights management was not rated by the interviewees. In other exhibits, Microtransactions is grouped with Silent Commerce because it facilitates small payments for pay-as-you-go services.

developments. Nicolas Tenzer, director of France's General Office for Planning, explains a pressing need: "As a government, we need a way to simultaneously manage drastically different projects and processes, from commando teams making a rapid response to operational efforts lasting several months to long-range strategic initiatives. And we need to manage this integrated view while anticipating future events."

These technology waves can enable dramatic change, and the executives interviewed agreed that some of these advances would be important (see Exhibit 9). But as executives have learned from experience, they will only get results when they couple technology implementation with other key elements: leadership, clear agendas, innovative value propositions, capable execution and sustained commitment. What will lead the way to radical improvements in government effectiveness is not just the technology, it is the ability to use it. With the right leadership, these waves might even add up to an entirely new way to live and work that Accenture calls "Reality Online" (see Sidebar).

"Executives will only get results when they couple technology implementation with leadership, clear agendas, innovative value propositions, capable execution, and sustained commitment"

new technologies hold stunning potential_

Sidebar: Reality Online

In the next five years, advances in artificial intelligence, material science, life science, biological science, physics and chemistry will converge with those of IT to create a world in which objects can sense, reason, communicate and act; where for every physical entity or event, there is a virtual, cooperating double and where the time between stimulus and response approaches zero. We call this concept, which is bigger than any single wave of technology change, Reality Online.

"Smaller, faster and cheaper" – the fundamental law of IT advances – gives us processors small enough and cheap enough to embed in the most commonplace of objects. Tagging and tracking technology spawns opportunities to tighten the supply chain, ensure worker and consumer safety and provide new levels of quality and customer service. Over the next five to ten years, these isolated instances of sensation, intelligence, communication and action will, of course, become smaller-faster-cheaper, but more importantly, they will proliferate and interconnect – evolving from simple, single purpose gadgets to complex interrelated systems.

As sensors and wireless communications proliferate, we will now be able to access reality online: "see" the location and condition of key assets and ensure their quality and safety. When we combine ubiquitous access to the virtual world with the addition of sensation to the physical world, we will rapidly approach a world in which every physical object or event, has a complementary virtual double.

Applications might include superimposing a virtual double of an airplane onto the physical view via heads-up display. This augmentation of reality will include altitude, airspeed, cross winds, and radar indications of nearby aircraft, complementing the physical view and providing the pilot better support than either view could alone. In another example, workflow management systems will facilitate the efficient execution of complex, collaborative processes (such as a procurement transaction down the entire length of a supply chain) by representing various steps and events virtually and communicating status, progress and issues to the participants.

Ageing populations mean larger numbers of individuals who suffer from Alzheimer's Disease and other conditions that impair their cognitive skills. Silent commerce services will help provide affordable care for these people. They will wear RFID tags to alert care-givers when they fall down or wander beyond a defined perimeter. And they will take advantage of Internet-enabled sensors to refill their prescriptions and their refrigerators automatically. These technologies will notify care-givers if the individual's diet or drug compliance needs attention.

Rather than a miraculous breakthrough in analytical techniques, our ability to gain faster or deeper insights will be buoyed by our ability to tap into and connect newer or more current sources of data. As reality goes online, our work and our lives increasingly will be conducted with real time operation and interaction.

While affording truly dazzling opportunities, reality online presents a general challenge of information overload and a specific challenge of customer and cultural sensitivity. If reality online harbors a million high-value answers, do I know what questions to ask? If today's business environment is already rife with unused, warehoused data, reality online will permit us to fill our warehouses with even more, potentially useless information. The challenge is to use modeling and simulation to organize this information into useful, actionable insights and abstractions. If it can be done, we will have an opportunity to complete the revolution that was begun with the Internet.

three radical changes promise practical impact_

What will it take to achieve the breakthroughs that government executives desire? Accenture foresees three radical changes, enabled by emerging technology waves, that democratic governments can pursue to move forward:

1) Establishing dynamic connections that provide integrated and comprehensive touch points between governments and their constituents

2) Embracing policy speed-to-market – radically accelerating policy formulation and implementation in order to improve results

3) Engaging constituents as integral stakeholders in the success of government processes and outcomes

These broad initiatives provide the purpose, structure and context for making practical use of emerging technologies. Exhibit 10 arrays the waves of technology change to reflect their impact on the three radical change initiatives.

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Dynamic Connections Provide Just Enough Touch

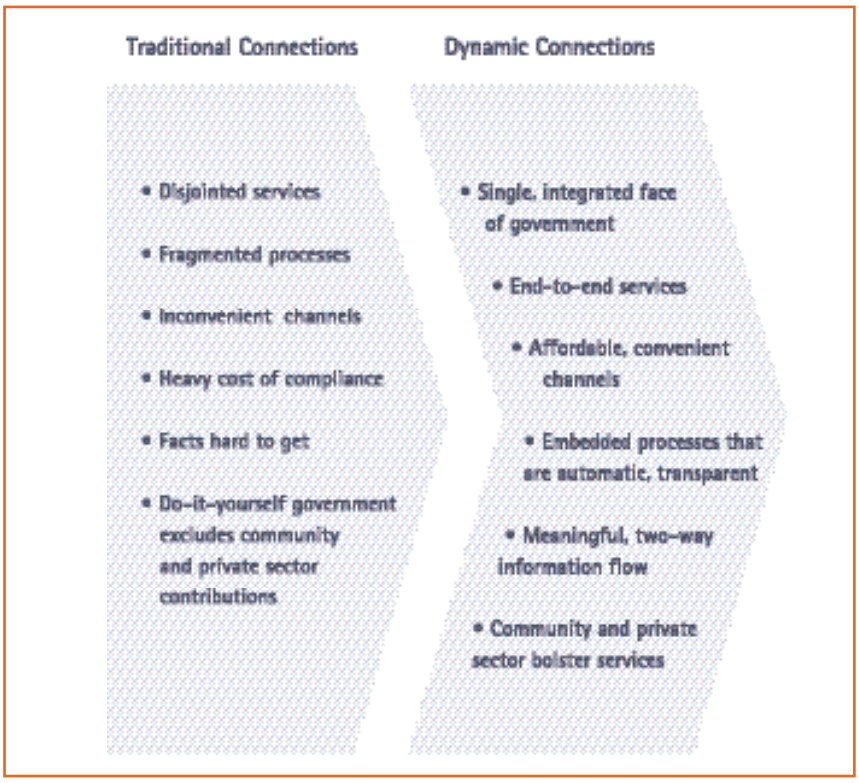
Constituents connect with their community and their nation in many ways for many reasons – to help someone in need, to serve in the military, to pay their taxes, to offer their feedback on new ideas, to get assistance, to take advantage of public services, and to learn more about important issues, among others. The connections – both the channels for getting in touch and the services that flow across them – must go beyond the simple, secure, end-to-end services and convenience that constituents have come to expect (see Exhibit 11). They must also include:

- **A single, integrated face for government interactions**. As governments balance an increasing number of channels – from offices to interactive TV menus – they will ensure consistent and integrated interactions at every touch point. How? Coordination of all public sector departments, levels and delivery agents will end the need for constituents to deal with multiple silos or fragmented processes. In the past, the idea of

"Coordination of all public sector departments, levels, and delivery agents will end the need for constituents to deal with multiple silos or fragmented processes"

Exhibit 10: New technologies in three areas will enable step-change

Exhibit 11: Dynamic connections dramatically improve service and constituents' opportunities for influence



bringing the pieces of government together for the citizen seemed to call for the rewrite and data redesign of all government systems – an impossibly complex and expensive undertaking. But the growing maturity of Enterprise Application Integration (EAI) tools and the ability to concentrate massive amounts of inexpensive processing power and bandwidth have together shown an alternate path – the soft join. New enterprise interoperability will enable governments to bring all of their resources and information to bear to any door the constituent chooses. For example, registering a new business will involve one form and one fee per country, regardless of whether an entrepreneur relies on a call center or the Internet to do it. On the back end, transparent to the constituent, the government will parcel and route appropriate information and fee components to various departments across relevant local, regional and national entities.

- **A practical set of channel options**. Governments will not be able to support every possible interaction through every channel. Instead, governments will analyze the facts, including service quality, usage patterns, satisfaction levels, and the cost of delivery when deciding which services to offer on which channels, when and where. Of course, governments will continue to honor a basic threshold of service accessibility and quality for all citizens. But this baseline will transcend the "one office in every town" mentality. Governments will instead consider innovative uses of alternative technologies that offer high penetration across demographic, economic and geographic lines, such as interactive television, mobile telephone messaging, integrated voice response and ATM machines.

- **Convenient services that are embedded in everyday activities**. Dynamic connections will enable governments to move transactions

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and processes to the point of least friction. What do we mean by moving them to the point of least friction? Most convenient for the constituent? Germany's BundOnline initiative identified 400 federal services that it intends to bring online by 2005. A senior postal executive states, "We want to integrate financial transactions into our mail distribution process. Using mobile devices, our letter carriers should be able to enable seamless financial settlement when they bring an item to a customer's front door."

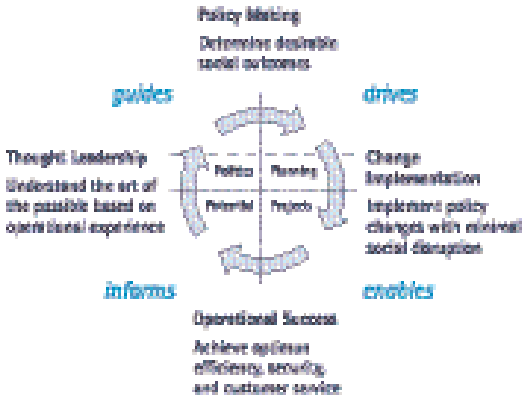
The principles of embedded services will apply whether a nation leans toward having more government or less. For example, several nations' tax departments have eliminated the need for pay-as-you-earn taxpayers to file any forms at all with the government: all taxes are calculated and collected by employers. France's approach to tax reform streamlines processes. Its COPERNIC program will allow taxpayers to opt for direct access to fiscal information in government databases, according to Director Gilles Grapinet. Taxpayers can then remotely declare and pay their income taxes.

Moving forward, constituents will choose to embed some of these processes directly into their private routines. For example, a citizen might tap government systems for data about his or her projected social security income as part of a complete personal finance analysis. This information will give citizens the ability to do comprehensive retirement planning – consolidating information about corporate pensions, government pensions and privately managed investment holdings.

- **Service portfolios that go beyond intentions-based offerings**. In a dynamic connections model, governments and constituents will finally unlock the potential of information stores splintered across countless organizations and databases. Both groups will get help from systems that understand natural language and software agents that do some of the hard work to directly summon key data in real time. This will not eliminate the need for people to make sense of what they find, but it will give them facts with which to work. Governments will manage portfolios of services that range from responsive point solutions based on constituent intentions to proactive interventions that bring multiple services to bear just in time.

- **An agile network of intermediaries for service delivery**. As dynamic connections open up process options, governments can tap new alternatives for service delivery. For example, according to Masamichi Kitani of the Tokyo Metropolitan Government, Tokyo's Waseda Shopping District neighborhood contracted with another municipality – located up the coast – to provide emergency response services by boat in the event of a devastating earthquake that prevents access by land. Governments can even step out of service delivery entirely. An early example exists in Catalonia, Spain, where the regional authority has

Exhibit 12: Cycle of effective policy reform



decided to completely separate the delivery of government services. It forged an alliance with municipalities and local administrations, and created a new company called CAT 365, which will develop a platform and eventually deliver all government services in the region by Internet, face-to-face, and telephone channels.

Through dynamic connections, governments can overcome some of the critical pressures they face. By streamlining channels and shifting service delivery to private providers, they will improve constituent satisfaction with services, reduce spending, and drive down hidden costs of compliance that sap an economy's strength.

Policy Speed-To-Market Radically Improves Policy-Making and Results

Policy speed-to-market means accelerating the processes of policy formulation and implementation in order to improve results. Instead of making and implementing policy in years, governments will do it in months or weeks. This change weaves together policy stakeholders in an entirely new approach to policy formulation and implementation (see Exhibit 12). The result? The quality of policies dramatically improves. Senator Ian Campbell of Australia recounts one experience: "With my guidance, we recently implemented a financial services reform act. Using the Internet, we adopted an entirely new approach. We made sure that the people being regulated could look at our process in real time, advise us, and give their feedback on content. The community is now actively involved in drafting laws – it's a revolution. Lawmaking is becoming a partnership in which the regulated body or person must collaborate."

Policy speed-to-market brings together in a single network the politicians and constituents who shape policy, the executives who oversee its implementation, and the agency staff and programmers who capture it in information technology systems and business processes. It also injects

Exhibit 13: Policy speed-to-market makes government more responsive

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unprecedented intelligence into decision-making processes along the way (see Exhibit 13). Policy speed-to-market is characterized by:

- **Fact-based policy development**. Information insight combined with new, faster feedback will help to craft policies that are grounded in social and economic reality. Over time, simulation tools will provide stakeholders with models for projecting the impact and repercussions of policy versions before an approach ever wins approval. With rapid prototyping and release-management, the process of policy-making will look more like software development than the traditional legislative approach. Releases will be tightly monitored, with a fast-moving and collaborative approach to assessing policy requirements, creating a prototype, testing the implications, and finalizing policies. Governments will capture data about specific policy results to improve their approaches in real time.

- **Agile policy implementation**. Politicians, constituents, and government executives will increasingly understand the relationship between policies and the time and resources required to implement them. For example, a politician will calculate that a proposed change to a social program will take six months longer than expected to roll out, pinpoint the sources of delay, and alter the policy appropriately. One executive offers an example of how the Internet is changing his government's approach: "We're learning to take account of implementation issues earlier in the development of policy, so the ease of doing something electronic will make a difference to the policy itself. Not just the timing, but the actual policy."

  In addition, policy makers will reclaim control over implementation from their programmers and junior staff by leveraging rule-based policy tools. New software will ensure that policy stipulations spelled out in natural language can flow directly into a system that enacts them, without having to be interpreted by a technical third party. The government of Australia has already commissioned the creation of one such tool. According to Wayne Gibbons, Deputy Secretary of the Department of Employment and Workplace Relations, "We're at the point where you can go from policy conception to implementation in two or three months. Within a year or two, we'll be able to accommodate concurrent development."

- **Rapid spread of government innovations**. As governments analyze the results of policy decisions based on solid facts and data, they will know what worked, and they will know why. The traditional means of sharing innovations across national borders – sending a delegation on a fact-finding mission – will be replaced as governments open up institutions and research centers to teach courses on how to replicate their success stories. A few enterprising governments, by the request of other countries, will be brought in to implement and operate policy solutions in areas from education to health, either as consultants or outsourcers.

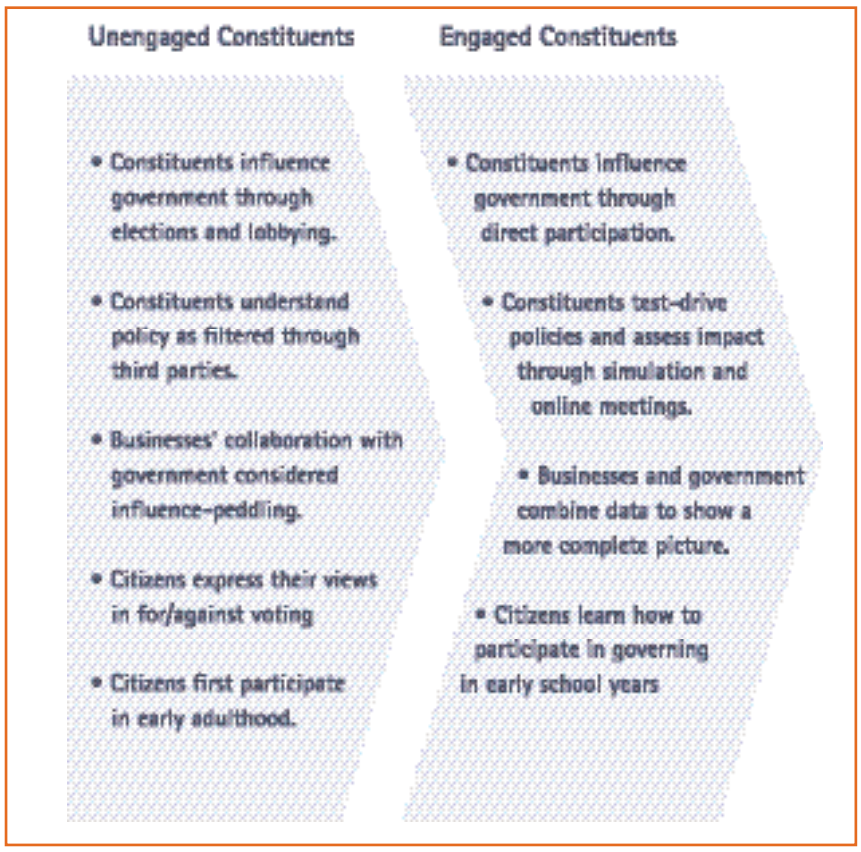
"Politicians, constituents and government executives will increasingly understand the relationship between policies and the time and resources required to implement them"

Engaged Constituents Become Stakeholders in Government Processes

Using new processes and powerful tools, citizens and businesses will leave behind the traditional arm's length relationship with governments to embark on a closer collaboration. Using new processes and powerful tools, citizens and businesses will contribute their specialized expertise to inform government policy-making. New technologies will improve communications among government organizations and between public officials and private citizens. And constituents will take responsibility for paying for the services and resources they use. Technologies including silent commerce and mobile communications will help enable constituents to accept new levels of responsibility and accountability for common resources (see Exhibit 14). Engaging constituents involves:

- **Improving communication among government organizations and with constituents**. Government organizations will work more closely together to streamline their processes and strengthen their communications networks. This will position them to invite more constituent input in the form of suggestions and expert advice, leading toward more open governance. While the public sector will not permit this transparency for its most sensitive activities – including foreign policy and national security – open governance in other areas will multiply possibilities for constituent participation. Dave Walker, Comptroller General of the United States, formed a group of auditors general from 14 countries around the world to share best practices. Walker explains, "We convene two days each year to exchange knowledge and experience, because

Exhibit 14: Engaged constituents take new responsibility for their well-being



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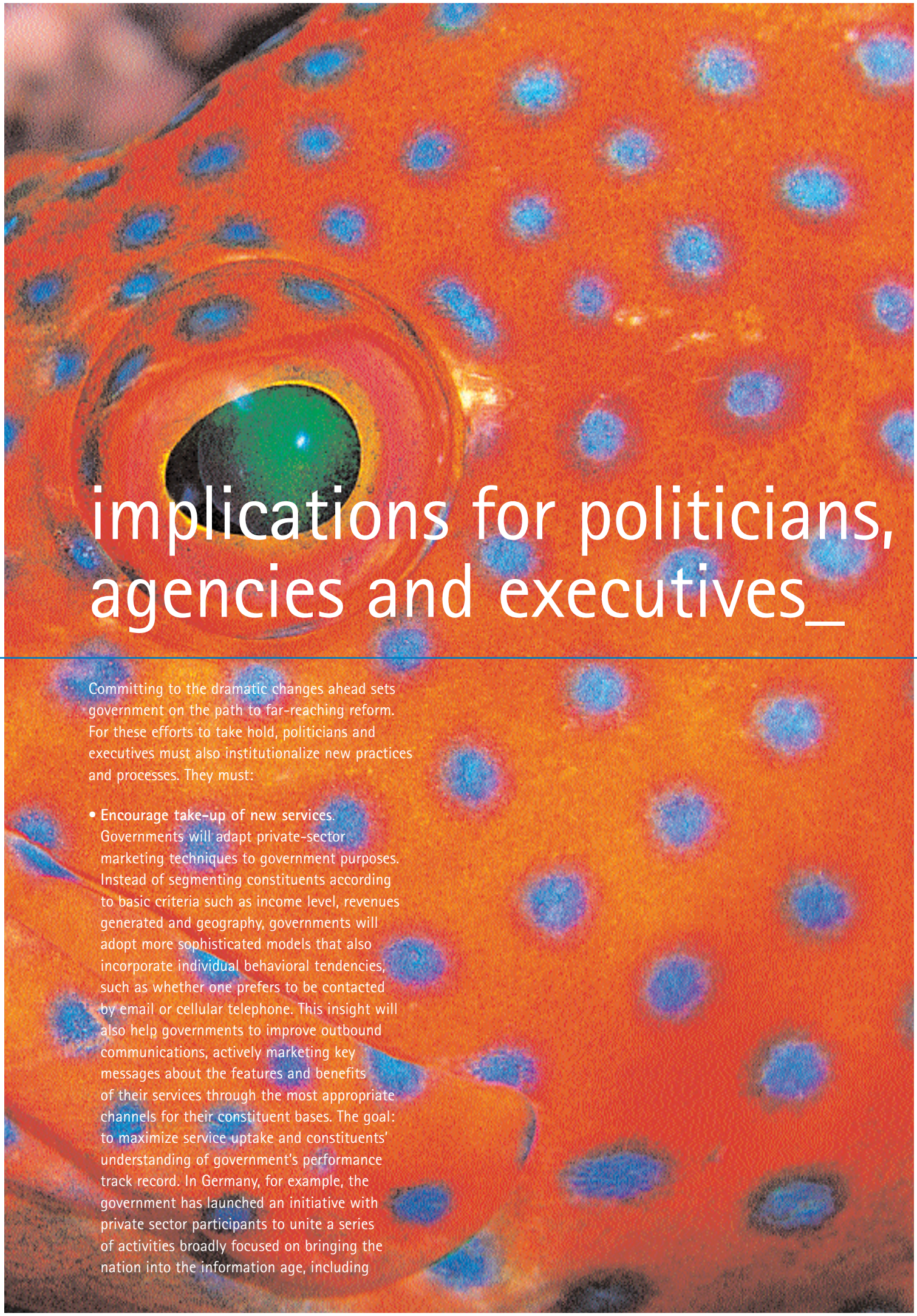
the trends in our strategic plans are global trends and the challenges are shared challenges."

- **Building expert networks that tap knowledge for national benefit**. As constituents re-engage with their governments, highly targeted volunteer networks will emerge. Opt-in databases will capture the specific capabilities of citizens and businesses willing to assist in times of crisis. In the case of a major natural disaster or terrorist strike, governments will spontaneously contact and assemble "crisis cells" that draw on a wider base of specialized expertise than has ever been possible. In turn, a higher percentage of constituents – compelled by personalized calls for help – will pitch in. Over time, governments will increasingly use this national knowledge inventory to influence educational direction and understand their readiness to capitalize on emerging economic or social opportunities.

- **Asking constituents to pay as they go**. Constituents will become more directly engaged in government because new technologies will enable individuals to pay directly for their fair share of common resources. Through microtransactions and silent commerce technologies, governments will bill constituents for the services they actually use. Although most governments are just beginning to appreciate the inherent possibilities of the silent commerce technology wave, Accenture anticipates important benefits. For example, citizens who insist on taking their personal automobiles through crowded city streets during rush hour will be automatically billed for the privilege. National park visitors can be charged the appropriate fee for upkeep on the trails they have actually enjoyed. Through simulation models, governments can charge each business for the toll it takes on the environment – be it air or water quality, depletion of natural resources, or simply the garbage it generates.



implications for politicians, agencies and executives_

Committing to the dramatic changes ahead sets government on the path to far-reaching reform. For these efforts to take hold, politicians and executives must also institutionalize new practices and processes. They must:

- **Encourage take-up of new services.** Governments will adapt private-sector marketing techniques to government purposes. Instead of segmenting constituents according to basic criteria such as income level, revenues generated and geography, governments will adopt more sophisticated models that also incorporate individual behavioral tendencies, such as whether one prefers to be contacted by email or cellular telephone. This insight will also help governments to improve outbound communications, actively marketing key messages about the features and benefits of their services through the most appropriate channels for their constituent bases. The goal: to maximize service uptake and constituents' understanding of government's performance track record. In Germany, for example, the government has launched an initiative with private sector participants to unite a series of activities broadly focused on bringing the nation into the information age, including

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encouraging women to study information systems, promoting technology deployment in schools, and giving lower-income citizens access to the Internet. Brigitte Zypries, secretary of state in the Ministry of the Interior, states, "This is an investment in entrepreneurial behavior in Germany."

- **Let constituents into government boundaries...** Government's consultations with client groups are nothing new, but they should increasingly be oriented toward including constituents in the process where they can help. The Canada Customs and Revenue Agency has worked with a variety of client organizations to help build a network of volunteers who now assist citizens with their tax filing. The program has contributed to what CFO Stephen Rigby characterizes as "a significant improvement in our filing processes, with involvement growing by leaps and bounds." In the United Kingdom, a People's Panel of 5,000 members of the public, functions as a test group for service improvements.

- **...while government executives and politicians get more time with local constituents**. Today politicians struggle to stay in close touch with their constituents at the same time that they play an active role in shaping national agendas. Powerful new communications technologies will enable them to be in both places at once. Virtual voting and debate will enable them to shape national policies without giving up face time with the people they represent. This will increase the relevance and local feel of national government. In addition, government workers can be drawn from all parts of the nation. Canada, for example, is analyzing the potential of telecommuting to enable workers from across the nation – not just Ottawa – to take government positions.

The effects of dynamic connections, policy speed-to-market and engaged constituents will result in fundamental change across all government departments. But the exact impact will vary. The type of relationship that characterizes a government agency's interactions with constituents – service-based (human services), protective or financial (revenue) – will determine the areas of greatest opportunity. Postal groups, reflecting a mix of public and private sector characteristics, will also take a unique direction. Technology waves of change including digital content services, reach and mobility, and silent commerce will provide the tools for realizing these new roles (see Exhibit 15).

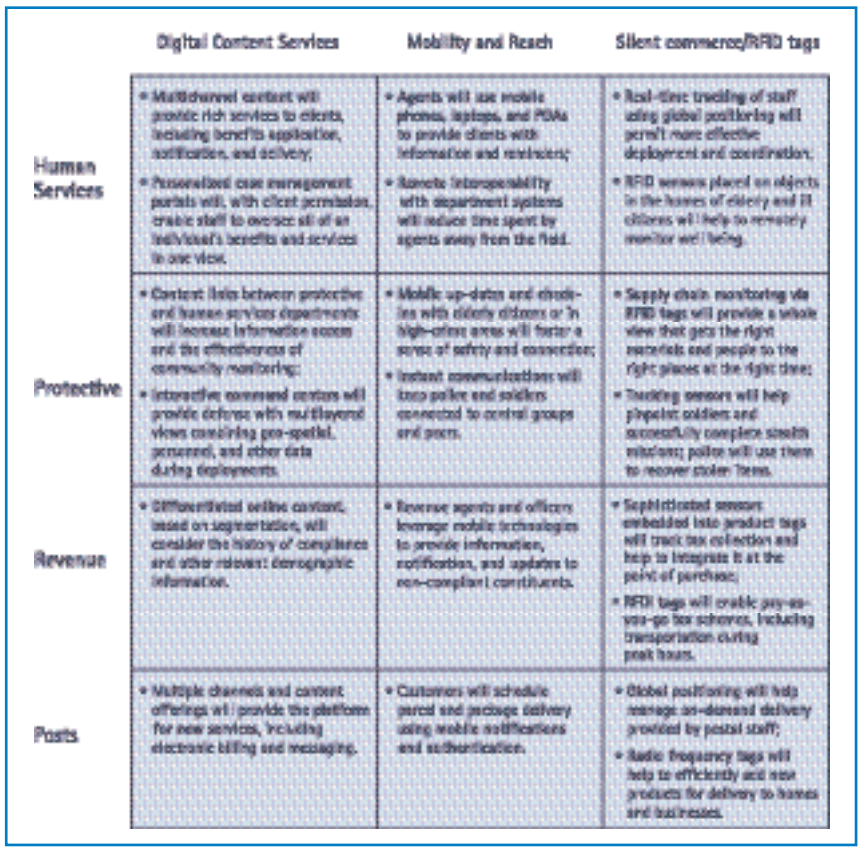
Service-Based Departments Will Focus on Improving the Quality of Life

Health, human services and education focus primarily on the delivery of critical services to ensure the social welfare of citizens. Contact is more frequent and direct than in most other departments, although it is typically limited to specific life periods. Thus, the greatest efficiencies in these departments will come from improving customer focus.

- **New customer insight will revolutionize responsiveness**. Comprehensive views of customer needs and behaviors in the past, present and future will shift services from episodic to just-in-time. Constituents will have the opportunity to opt-in to a "whole view" that enables government to reach across departmental silos and tailor service portfolios to them on an holistic basis, potentially to the point of early intervention. For example, welfare recipients might agree to a far-reaching suite of services intended to return them to the workforce, managed across educational, employment and health department boundaries. Hospitals discharging elderly patients after an extended hospital stay could instantly sign up patients for meal delivery, visiting nurses and counselor visits as part of the checkout process. To deal with its ageing population's pension needs, UK government executives are discussing new approaches that incorporate both public and private sector programs into a single coherent plan. This initiative will also address citizens' desires to take a stronger role in managing their own pensions and savings where possible.

- **Process clarity will optimize service delivery**. As service-based departments become interoperable and transparent, officials will gain a clear picture of which groups are delivering services the most effectively and with compelling results. Armed with a fact-based scorecard, they can consolidate overlapping services. They can also consider which intermediaries might improve service delivery even further, comparing the potential performance of private firms and public/private partnerships.

Exhibit 15: Technology waves will enable progress in a range of government departments



implications for politicians, agencies and executives_

When comparing the costs and benefits of delivery mechanisms, governments can also design incentives that vastly increase volunteer participation. Volunteers may receive special tax credits in exchange for the benefits the city will realize by the services they provide.

- **Education will embrace local, regional, and global curricula.** Leveraging dynamic connections, local school districts will reach out to high-performing peers in other regions or countries to assemble innovative, best-of-breed curricula. A French immersion program in an American elementary school will use video and network connections to receive instruction directly from an école primaire in Toulouse. In addition, a specialized history teacher in Toronto will teach her signature class to networked students in schools from Halifax, Nova Scotia to Victoria, British Columbia. Important international organizations will examine the possibility of regional curricula; for example, an EU-wide course offering streamed into the classrooms of each municipality.

- **Command centers will enable national health management...** National command centers, through interoperability and simulation, will draw directly from the anonymous, aggregated data of health providers and social services agencies to establish a clear, integrated view of wellness. Specifically, these centers will generate rich, interactive maps that track the incidence and evolution of issues throughout their domain. By analyzing health information in concert with geo-spatial and other data, command centers will be able to contain and treat critical challenges with precision; for example, tying a cluster of rare cancer cases to the seasonal run-off from an abandoned industrial site. The national mapping will also improve responsiveness, guiding health systems to launch crisis cells spanning a handful of communities or convene long-term, national task forces.

- **...while new tools help citizens to take charge of their own preventive care**. Governments will develop, package and provide citizens with interactive tools for managing personal health throughout their lifetimes, based on complex simulations. Citizens will choose the amount of information they want to enter – from personal health data to family history – and use the tools to manage everything from check-up reminders to recommended screening tests as they age. By increasing citizens' ability to manage their health, the nation can improve its standard of living and minimize the burden to the system as the population ages.

Revenue Departments Will Embed Processes in Daily Life

Revenue organizations maintain broad contact with a great number of constituents. Yet, citizens and businesses often perceive these organizations with distrust – because they take money away – and discomfort – because they require time-consuming administrative processes. But future dramatic changes will result in a

profound change of both the perception and the reality of revenue departments. As Dave Dally, the business design director of the UK Inland Revenue, says, "Our ambition is to be an organization which exists to enable people to comply with their obligations and to claim their entitlements, as well as to regulate."

- **Embedded processes will allay revenue's administrative burden**. Technology waves of change such as enterprise interoperability, privacy and rights management and silent commerce will help to seamlessly integrate revenue collection into many of the daily events of citizens and businesses. More revenue authorities will follow the example of Ireland, where many pay-as-you-earn taxpayers never need to file any tax paperwork because employers automatically compute and resolve all appropriate payments. In addition, authorities will seek to integrate taxation at the point of transaction for even the smallest purchases and payments. Peter Wilson of the Australian Tax Office asserts that "tax consequences should be integrated into economic events, whenever and wherever they happen."

- **Automation will boost compliance**. As tax collection becomes an invisible part of daily life, evasion increasingly will mean serious criminal misconduct, not mere negligence. With most of the revenue organization focused on tax policy regulation and implementation, the job of enforcement will shift to a group with that core competency. This could be a specialized operation within the revenue department, it could be combined with other financial enforcement operations from, for example, customs, or it could be outsourced to a third party.

- **Information insight will connect revenue collection with social and economic outcomes.** Dynamic connections will enable citizens and businesses to see exactly how their taxes are being spent, broken down by departmental outlays and according to specific outcomes. As constituents become more engaged, the infrastructure will arise for them to exercise greater choice and influence over those decisions. Revenue will become a value-added intermediary in helping citizens and businesses to understand and influence their greater contribution to the economy and society.

Protective Departments Will Join Forces and Anticipate Dangers

In the operations of departments focused on protecting constituents, including defense, security and justice, direct contact with constituents remains infrequent, uncommon, and sometimes involuntary. The changes will enable protective services to prevent some disruptions and to respond more effectively to others. Sophisticated modeling and predictive capabilities will help target early intervention, defuse emerging dangers, and respond to disruptions as they occur around the globe.

- **Supply chain clarity will increase response effectiveness across the board**. Given the high volume of physical assets protective departments handle, supply chain management is critical. With a clear view into the location and flow of all materials – from the manufacturer's warehouse to the hands of soldiers or police – all protective departments will improve their ability to bring the right resources to bear at the right time and in the right place. For law enforcers, these same tracking capabilities will also enable mapping of criminal activity and trends. The police will be able to deploy patrols and enlist the supplemental help of volunteer and community groups in the most effective balance possible.

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- **In defense, collaborative simulations will help to identify new threats.** By enlisting new technologies and processes, protective departments will increase their focus on foreseeing emerging dangers. Interoperability across department groups and levels of government will increase the intelligence of their models. Growing collaboration across national borders – through careful linking of sensitive information, protected by airtight security protocols – will coordinate effective responses to issues requiring regional or global orchestration.

- **In justice, focus will shift from solving crimes to stopping criminal behaviors**. As a result of dramatic changes, justice departments will better balance their requirements to efficiently uphold laws and react to infringements with the opportunity to actively defuse criminal behaviors. Paddy Tomkins, Chief Constable of Lothian and Borders in the United Kingdom, explains, "We want to exert less effort on investigating each individual crime and more on understanding the criminals, particularly the five percent of them responsible for 50 percent of British crime. This will bring a disproportionate benefit for preventing crime altogether." To intervene effectively, police, educators, human service workers and revenue departments will have to mount joint efforts aimed at social outcomes like public safety, expanding the role for community watchdogs, public/private partnerships, and programs aimed at the root causes of crime.

Postal Groups Will Rationalize and Create New Opportunities from Infrastructure

For postal groups, waves of change will bring opportunities to achieve new efficiencies in extensive, expensive delivery infrastructures. More importantly, as letter mail declines, this backbone will provide a foundation for new services and business opportunities. Frequent interactions with businesses and citizens, combined with a broad network of physical locations, will become assets as postal services seek to expand services beyond the traditional core of mail.

- **New business opportunities will build on the postal infrastructure in domestic markets**. Postal services will unlock new business potential by achieving full transparency and visibility across their supply chains, across the delivery infrastructure and to the customer's front door. Katsuyuki Okada, the director of Japan's postal division, asserts, "We can do a lot more to optimize the traditional delivery process. Currently, packages often arrive when customers are not available. By using the Internet or mobile technologies, we can make deliveries much more client-focused by scheduling them for a specific date and time. The goal is to shift the service paradigm from a bus schedule, in which letter carriers show up regardless of whether there is mail to deliver, to an on-demand model."

  Combined with sophisticated segmentations of senders and

receivers, postal services will be able to create targeted service portfolios that leverage traditional strengths, such as differentiated delivery schemes and formats. Mark Thomson, managing director of e-enterprise at Consignia, the UK's postal group, explains, "One of our goals is to provide targeted online billing applications. We want to build on our trusted role in this area so that, as paper billing recedes, we are still able to serve as the value-added intermediary."

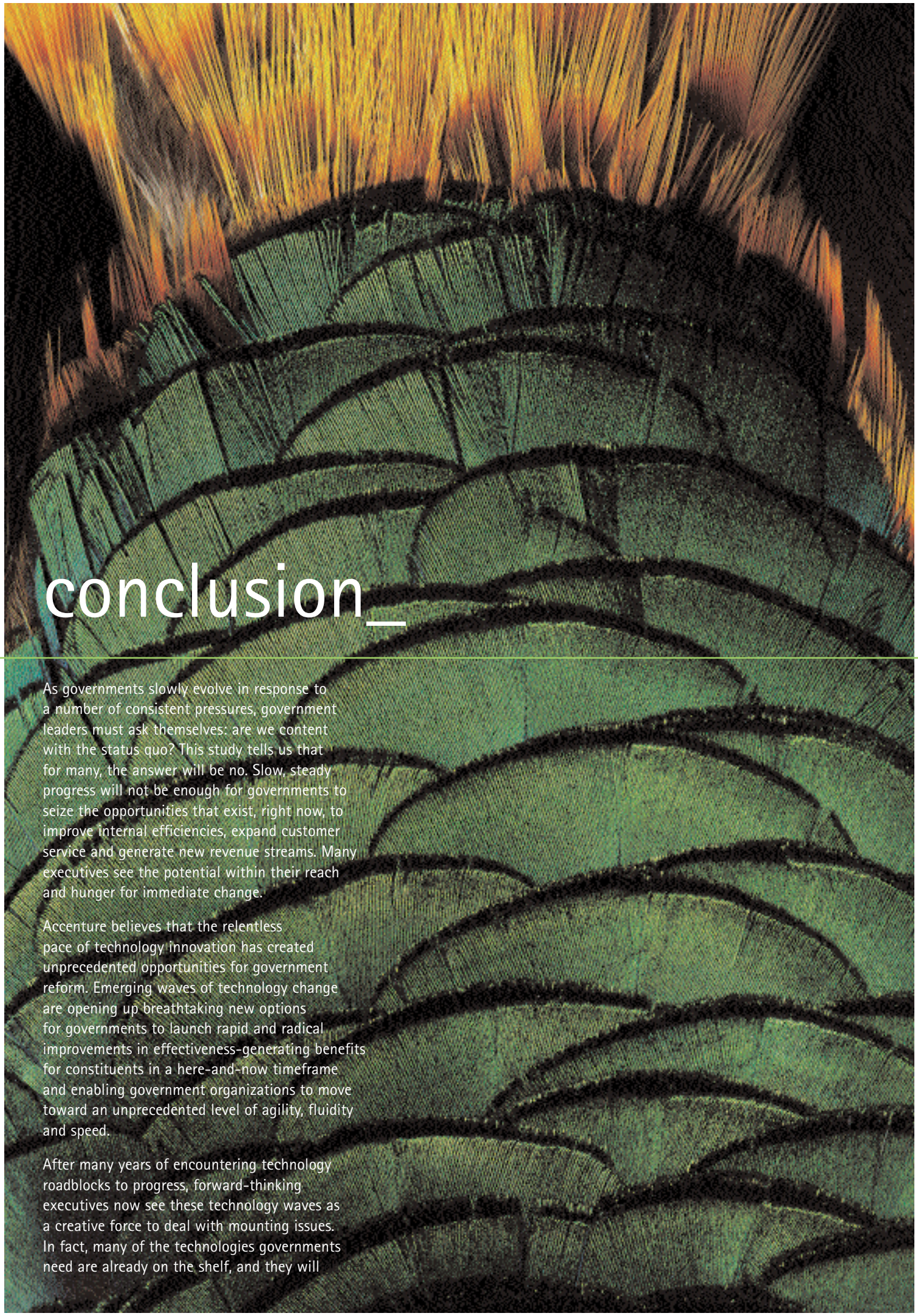
Posts will also transform their physical offices into important assets, inviting other government departments to consolidate their operations under one roof. Declan Byrne, General Manager of Ireland's An Post Transaction Services, says, "We want to use our offices as a conduit between government and consumers. We see our outlets from electronic form distribution to authentication services, through both our clerks and self-serve devices."

Posts will also increasingly look to private sector partners to help define innovative new offerings. In Toronto, Canada, the post is piloting a service that allows consumers to receive goods to a secure container with keyless entry, in order to successfully deliver on the first attempt.

- **Mail carriers will become high-powered customer service experts**. As the face of the postal service's growing suite of services, mail carriers will fill many roles in addition to logistics – customer service representative, salesperson, and guide-helping constituents to understand and purchase from a portfolio of offerings. Governments that close physical offices but continue to distribute departmental forms through postal representatives will need to train these staff as government service generalists, essentially making them mobile help desks. Commercially-oriented posts that strike partnerships to bundle the products and services of private firms may instead train carriers to cross-sell and up-sell at the point of customer contact.

- **Postal leaders will increasingly collaborate and compete on a global level**. As globalization unfolds, collaboration among postal services will multiply as groups seek to establish uniform infrastructure. But competitive opportunities will also grow, as inefficient postal systems become targets for leaner, more aggressive peers. Some governments will invite in high-performing posts as outsourcers for national mail delivery. For example, Canada Post's success in developing an efficient postal infrastructure has led to agreements with the governments of Lebanon and South Africa to relocate teams and rebuild a similar capability in these developing countries.

"Posts will also increasingly look to private sector partners to help define innovative new offerings"



conclusion_

As governments slowly evolve in response to a number of consistent pressures, government leaders must ask themselves: are we content with the status quo? This study tells us that for many, the answer will be no. Slow, steady progress will not be enough for governments to seize the opportunities that exist, right now, to improve internal efficiencies, expand customer service and generate new revenue streams. Many executives see the potential within their reach and hunger for immediate change.

Accenture believes that the relentless pace of technology innovation has created unprecedented opportunities for government reform. Emerging waves of technology change are opening up breathtaking new options for governments to launch rapid and radical improvements in effectiveness-generating benefits for constituents in a here-and-now timeframe and enabling government organizations to move toward an unprecedented level of agility, fluidity and speed.

After many years of encountering technology roadblocks to progress, forward-thinking executives now see these technology waves as a creative force to deal with mounting issues. In fact, many of the technologies governments need are already on the shelf, and they will

"Government leaders are on point to apply these technology tools in partnership with citizens and businesses"

gather momentum as enabling waves as more organizations adopt them. For those who are ready to step beyond incremental progress, these technology breakthroughs will help.

Government leaders are on point to apply these technology tools in partnership with citizens and businesses. To ride the waves of technology change, however, government leaders need both a vision and the courage to apply them. Some public officials have already accepted this responsibility, and are moving forward. Dynamic connections, policy speed-to-market and engaged constituents are three technology-enabled step changes that will give their new vision substance. The improvements they will achieve will far outstrip the progress governments have made thus far in moving services online as part of the eGovernment revolution. We are all watching their efforts with great anticipation.

list of report participants_

The following is a partial list of the 70 politicians and senior government executives interviewed for our report, representing ten countries around the world. We appreciate and value the contributions of all the individuals we interviewed, and we want to acknowledge that participation in this research study does not indicate an endorsement of Accenture or of the findings of this report, either by the individuals named or the organizations and governments that they represent.

Australia

The Hon. Ian Campbell, Senator for Western Australia

Wayne Gibbons, Deputy Secretary, Department of Employment and Workplace Relations

Rachel Hunter, Public Service Commissioner, Queensland

John Rimmer, Chief Executive Officer, National Office for the Information Economy

Peter Wilson, Assistant Commissioner, Australian Taxation Office

Dr. Robert Wooding, First Assistant Secretary, Portfolio Strategies Division, Department of Health and Ageing

Canada

Michelle d'Auray, Chief Information Officer, Government of Canada

Howard Dickson, Assistant Deputy Minister, Information Management, Department of National Defence

John Fleming, Deputy Minister, Ministry of Community, Family and Children's Services, Government of Ontario

Jean-Guy Fleury, Assistant Secretary to the Cabinet, Management Priorities and Senior Personnel, Privy Council Office

Cal Hart, Vice President of Business Transformation, Canada Post Corporation

Phil Lemay, Executive Vice President, Business Development, Canada Post Corporation

Joan McCalla, Corporate Chief Strategist, Management Board Secretariat, Government of Ontario

Stephen Rigby, Chief Financial Officer and Assistant Commissioner, Finance and Accounting Branch, Canada Customs and Revenue Agency

France

Dominique Bocquet, Consultant for the Minister Delegate, Ministry of Foreign Affairs, Cooperation and Francophone Countries

Gilles Grapinet, Director of the COPERNIC Program, Direction Générale des Impôts, Ministry of the Economy, Finance and Industry

Nicolas Tenzer, Director, General Plan Commissariat, Evaluation and Modernization Service of the State

Germany

Helmut Ahlborn, Head of Budgeting, Ministry of Finance, Sachsen-Anhalt

Hans-Hinrich Coorssen, Head of Budgeting, Finance Authority, City of Hamburg

Dr. Karl-Peter Schackmann-Fallis, Secretary of State, Ministry of Finance, Brandenburg

Klaus-Peter Schmidt-Deguelle, Adviser to Federal Ministry of Finance

Brigitte Zypries, Secretary of State, Ministry of the Interior

Ireland

Bertie Ahern, Prime Minister

Colm Butler, Director, Information Society Policy Development, Department of the Taoiseach

Declan Byrne, General Manager, PostTS-An Post Transaction Services, An Post

John Hynes, Secretary General, Department of Social, Community and Family Affairs

Philip O'Reilly, Assistant Secretary General, Director of IT Group, Department of Agriculture, Food and Rural Development

Oliver Ryan, Director, Reach

Brendan Tuohy, Secretary General, Department of Public Enterprise

Japan

Hidetaka Fukuda, Director, IT-Industry Division, Commerce and Information Policy Bureau, Ministry of Economy, Trade and Industry

Keiji Furuya, Senior Vice Minister, Ministry of Economy, Trade and Industry

Shuichi Inada, Director of Advanced Information Systems and Software Division, Information and Communications Policy Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications

Masamichi Kitani, Senior Director, Office of Information Technology, Tokyo Metropolitan Government

Yasuhiro Maeda, Assistant Councilor, Information Policy Planning, Network Policy Planning, and E-Government Planning, Ministry of Economy, Trade, and Industry

Seiko Noda, Member of the House of Representatives, Liberal Democratic Party and former Minister of Posts and Telecommunications

Katsuyuki Okada, Director General, Postal Department, Postal Services Agency, Ministry of Public Management, Home Affairs, Posts and Telecommunications

New Zealand

Russ Ballard, Chief Executive, Land Information New Zealand

Brendan Boyle, Director, E-Government Unit, State Services Commission

Ron Grindle, Strategic Designer, Inland Revenue Department

David Henry, Chief Electoral Officer, Ministry of Justice

Colin MacDonald, General Manager, Business Development and Systems, Inland Revenue Department

John Rimmer, Chief Executive Officer, National Office for the Information Economy

Hon. Paul Swain, Minister for Information Technology, New Zealand Parliament

Murray Young, General Manager, Strategy and Capability, Accident Compensation Corporation

Spain

Francisco Gómez Ferreiro, Director General, General Treasury of the Social Security Administration, Ministry of Labor and Social Affairs

Jaime Ignacio González, State Secretary for Public Administration, Ministry of Public Administration

Alejandro Halffter, Director General, Department of Quality of Services and New Technologies, Madrid Regional Government

Adolfo Jiménez Fernández, Secretary General, Iberian-American Organization for Social Security

list of report participants_

Miguel Sanromà, Director General, PuntCAT, Catalunya Open Administration

Antoni Vives, Secretary of the Generalitat, Government of Catalunya

United Kingdom

Justine Brewood, Change Director, Court Service

Dave Dally, Business Design Director, Inland Revenue

Andrew Mitchell, former Minister for Social Security

Geoff Mulgan, Director, Performance and Innovation Unit, Forward Strategy Unit

Andrew Pinder, E-Envoy

Mark Thomson, Managing Director of E-Enterprise, Consignia

Dr. Wendy Thomson, Prime Minister's Adviser on Public Services Reform, Office of Public Services Reform

Paddy Tomkins, Chief Constable, Lothian and Borders Police

United States

Mae De Vincentis, Chief Information Officer, Defense Logistics Agency

Jeff Flake, Congressman, House of Representatives (R-Arizona)

John Nolan, Deputy Postmaster General, United States Postal Service

Dick Posthumus, Lieutenant Governor, State of Michigan

John Reece, Deputy Commissioner for Modernization and Chief Information Officer, Internal Revenue Service

Dave Walker, Comptroller General of the United States, General Accounting Office

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Michael von der Schulenberg, Director for Management and Finance, Organization for Security and Cooperation in Europe

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