Cisco Systems

Intelligent Government - The Next Wave

Transforming the purpose, practice, and performance of **Government**

Cisco Public Services Summit @ Nobel Week 2002

Summary of Key Points

- Electronic government (or e-government) combines three elements – improving organisational performance, improving service delivery, and improving participation and citizen engagement.
- The implementation of e-government is about improving the underlying relationship between governments and the individuals, families, and communities to whom they are ultimately accountable. That relationship is in urgent need of repair and renovation. E-government is fundamentally about restoring and sustaining trust. The touchstones for successful implementation of e-government are accessibility, equity, responsiveness, and efficiency.
- The first phase of e-government has seen governments at all levels around the world use the Internet and Web-based technologies to become more efficient at providing information and some basic forms of interaction and transaction (the "cost and convenience" model). That phase is not complete and still requires considerable investment in technology, skills, and institutional capacity to lift service quality, access, and reliability and to demonstrate results. However, a second phase of e-government has already started.
- The second phase of e-government moves from a focus on information and basic transactions to transforming the processes and performance of government.
- This second phase is about removing barriers within government to provide a more integrated, citizen- or customer-centric experience of dealing with, and contributing to, government and the process of decision making. Three themes for this second phase of e-government are process and cultural change, driving from strategy to execution (and measuring benefits and results), and investing in the right infrastructure. To present seamless, citizen-centric, and intention-based tools and solutions, governments have to work in some key areas as if they were a single enterprise. Governments must adopt common and shared platforms for the core technology, applications, and networks on which digital government will run. The key is to create a common strategy and a single architecture to guide the evolution of digital government solutions.
- The dominant business model for the next phase of e-government will be the "networked virtual organisation" that draws government agencies and organisations in the business and community sectors into more complex patterns of collaboration that rely on complementary skills and resources and shared systems, processes, and knowledge.
- Realising the benefits of investing in this next phase of e-government will require both a distributed and a whole-of-government approach. Standards, operating platforms, and some applications (human resources, payments, and security, for example) will need to be consistent across agencies and government systems. Agencies will create solutions that make it easier for customers and citizens to access services and information across a single agency or across a whole government system.
- This second phase will dramatically intensify the clash between technology and culture. The technical capacity to reflect rising citizen demands for a more responsive, integrated government will drive institutional, organisational, and process change that will test many entrenched habits that characterise the leadership, systems, and skills of modern government. Some of those habits reflect important institutional features of modern, accountable government, including the need for checks and balances in the overall system and a degree of fragmentation that underlies the distribution of power, resources, and accountability.
- The next phase of e-government will witness more experiments in the third element – improving participation and citizen engagement. This is the most difficult element to achieve and requires changes that challenge contemporary practices of participation, transparency, and accountability in government and public policy. In the end, e-government does not guarantee better government. Sound policy, smart and ethical people, high standards of probity, and effective process remain the hallmarks of good government.

1: Introduction

It is ironic that a century ago, it was the Progressive movement that sought to bring the latest modern industrial trends in efficient production, process control, and open, accountable performance management to the patronage-ridden inefficiencies of government.

Now, progressive thinking about government – harnessing the transformative potential of the Internet and other information communication technology (ICT) innovations – seeks to dismantle much of that machinery (although not some of its key values) and replace it with the institutions and instincts of the networked society.

This paper sets out some thoughts about the direction and potential of the next phase of e-government. While the paper is grounded in experience from Australia, New Zealand, and the Asia-Pacific region, it draws on developments, insights, and ideas from around the world. It reflects the experience gained from the Cisco Systems Internet Business Solutions Group (IBSG) as it builds a wide and growing global public sector practice.

The application of the Internet and ICT to the work of government at all levels in Australia and New Zealand has already had a significant impact. During the past five years, phase one of e-government has witnessed a primary focus on making the delivery of government information and services more efficient and less costly. That focus has had two dimensions. One, the most basic, is about creating a more efficient flow of information from government to customers and citizens. The other has been to gradually introduce a capacity to conduct more and more of the basic interactions and transactions with government on the Internet or over the phone.

In Australia, the federal government claims success in achieving a 1997 commitment "that all appropriate government services will be online by 2001." Prime Minister Howard reported in February 2002 that more than 1,600 government services are now online at the national level. A new portal has been introduced (www.australia.gov.au) to further improve the presentation of, and access to, information and services in key themes and functional areas. In its recent report, Booz Allen Hamilton noted that Australia, along with Sweden, Canada and the United States have governments who use the Internet most.

The continued relevance of and public trust in government relies on maintaining a direct relationship with the citizen.

Washington State Digital Government Plan

The report[1] provides some valuable insights into the policy and process framework within which mature and effective e-government performance is evolving. Key issues include strong government leadership, a dual focus on front end service delivery and back-end integration and a clear, actionable strategy. Noting the lack of sufficient attention to evaluating the actual results and performance of e-government, the report notes that Australia is putting considerable effort into exactly this challenge. Preliminary findings from the DMR Consulting 'e-government benefits study' commissioned by the National Office for the Information Economy indicates significant cost savings to users and government providers from online services and a desire for a more integrated level of service across different government agencies, greater online transaction capacity and better clustering of services.

In New Zealand, an e-government strategy was launched in 2000, focusing on some key priorities, including the construction of a single online "gateway" for government services (www.govt.nz). Objectives included better service, cost effectiveness and efficiency, an improved reputation for New Zealand, and greater participation by people in government. The strategy focused on three key principles – convenience and satisfaction, integration and efficiency, and participation. Early foundation projects included providing an appropriate security environment, developing an agreed-upon metadata framework, and establishing government-wide Web portal strategies and guidelines. In December 2001, a revised strategy was published in light of agency initiatives already implemented, and a new government portal was launched in July.

An April 2002 study by Cap Gemini Ernst & Young on e-government in Europe showed the progress that had occurred since October 2001, the time of Cap Gemini's last report. In the 2002 report, the availability and interactivity of public services on the Internet had risen by ten percentage points to 55 percent. The study – carried out in as part of the European Commission's "Benchmarking eEurope" initiative – measures twenty basic public services in the 15 European Union (EU) member states, plus Iceland, Norway, and Switzerland.

http://europa.eu.int/rapid/start/cgi/guesten.ksh?p_action.gettxt=gt&doc=IP/02/901|0|RAPID&lg=EN

Recent research by Taylor Nelson Sofres provides some evidence that e-government is catching on with customers and citizens. They report that the number of people around the world going online for government information and other resources grew from 26% in 2001 to 30% this year.
http://www.emarketer.com/news/article.php?1001828&c=newsltr&n=lead&t=ad

In the United States, the Office of Management and Budget (OMB) is driving a 24-initiative e-government strategy. These are some of the areas it is tackling (the descriptions and financial analysis come from the OMB itself):

- *Eligibility Assistance Online* – Provides a portal for identifying government benefit programs and determining eligibility. Expected government value: US$4 million in savings and 75,000 fewer customer service calls each year.
- *EZ Tax Filing* – Creates an easy, free, and secure method for citizens and businesses to file taxes online, reducing data errors and enabling refund checks to be delivered sooner. Expected government value: Fewer errors, lower call-center volume.
- *Government to Business* – Online rulemaking management calls for a government-wide "e-Docket" system to provide anytime, anywhere access to the rulemaking process for citizens; includes a public comment site. Expected government value: $9.75 million in savings by consolidating space and costs for 57 rulemaking agencies; could avert $1 billion in spending for development and operational costs.
- *One-Stop Business Compliance Information* – Provides a single, cross-agency business compliance portal, compiles regulatory information and tutorials for businesses, and includes plans for online permitting. Expected government value: $10 to $20 million in savings.
- *e-Grants* – Creates a single grant portal to simplify the application process for grant recipients and grant-making agencies, increases awareness of grant opportunities, and consolidates grants management. Expected government value: $1 billion in savings in federal funds currently devoted to grants administration; $20 million in postage costs.

1 International e-Economy Benchmarking: The World's Most Effective Policies for the E-Economy, Booz Allen Hamilton/INSEAD, London, November 2002

- *Wireless Public Safety Interoperable Communications (Project SAFECOM)* – Coordinates public safety and law enforcement communication, establishes interoperability between public safety networks, and eliminates redundant wireless communications infrastructure. Expected government value: Billions of dollars saved through consolidated, interoperable communications infrastructure, overhead, maintenance, and training.
- *E-Authentication* – Provides a common method of establishing identity through an authentication gateway, and establishes interoperable authentication options for all e-government initiatives. Expected government value: Reduced costs by eliminating redundancy in electronic signature technology and policy operations.

In a commentary of the program he is charged with implementing, OMB E-Government Director Mark Forman explained that the e-government efforts are not cosmetic, not simply putting up Web content – something he calls "Web enablement." He states that the federal government already has plenty of Web content, with more than 33 million Web pages and 22,000 Web sites. Referring to Web sites that merely put a new face on old processes, Forman says, "We do not do Web enablement. Web enablement locks in poor customer service for us."

Rather, Forman claims the projects are about “backstage fixes” – for example, integrating multiple agencies' systems to streamline the process of applying for an economic development grant, which today could require a community to file more than 1,000 forms with 250 federal bureaus. "Pretty soon you'll see better service, but it's not because there's a prettier Web site. It's because we've fixed the redundancy,” he says. These experiences around the world reinforce that the next phase of e-government has already started, and the focus of e-government has shifted. Now, as well as maintaining and extending the scope and range of online “government to citizen” and “citizen to government” transactions, the not-so-glamorous challenge is to use the technology to transform the role, functions, and performance of government. In making that shift from transaction to transformation, the impact of the e-government revolution begins to spread beyond the operational tasks and functions of government to the very foundations of democracy itself.

1.1 The Fundamental Issue

Underlying the e-government revolution has been an explicit attempt to repair the relationship between the people, institutions, and processes of government at all levels, and the individuals and communities to whom they are, in the end, accountable.

Many who were trying to work with government experienced lumbering, unresponsive, and even hostile institutions and processes trussed up in red tape, seemingly bent on doing all they could to make the lives of customers and citizens tedious, complex, and frustrating.

More serious, though, was the pervasive sense that the foundation values on which the relationship between the governed and the governments depend had started to crumble. Irrefutable evidence emerged that the trust and respect in which that relationship ultimately finds its only sure foundation were rapidly eroding. In the end, if it is to be of any lasting value, e-government has to be a major part of the response to that crisis.

To deliver on its full promise of creating not just a quicker and smarter government, but perhaps inventing whole new forms of governing, e-government needs to drive forward to the second, transformational stage – here we are likely to see the most benefit from the e-government revolution:

- A better – more equal and more genuinely collaborative – relationship between governed and governments. This is how one analysis emphasis this central dimension:

  > But governments must understand that e-government initiatives have an impact on every aspect of their organisations. Aside from offering information and a variety of services, they must be able and willing to reorganise their entire administrative system to provide true transparency. Even more challenging is the task of using new technologies to allow citizens to take part in decision-making processes. "Participation" and "transparency" are essential if citizen-centric government is to work. And how well governments grasp the integration of these elements will largely determine how much value e-government brings to citizens worldwide
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  > 21st Century Literacy Summit White Paper, AOL Time Warner Foundation/Bertelsmann Foundation, March 2002

- A more sophisticated and sustainable combination of lower costs, greater efficiency, and higher-quality services and programs.
- A smoother experience for citizens interacting with governments, reflecting new levels of transparency and therefore a growing sense of trust and confidence.
- A capacity to render complex systems simple, intuitive, and accessible to end users.

One area where these challenges are beginning to show is administering government grants. In the United States for example, the Department of Health and Human Services (HHS) is seeking help in launching a Web portal for electronic grant applications, one of the Bush administration's 23 cross-agency e-government initiatives. The idea is to handle federal grants across government swiftly and electronically instead of on paper. HHS is the lead federal agency in the effort to streamline the process. http://www.fcw.com/fcw/articles/2002/0114/web-hhs-01-18-02.asp. Using a product called MetaGrants, an Australian firm, Wizard Information Systems, is tackling exactly the same challenge, with whole-of-government grants administration strategies being implemented in the Australian Capital Territory (ACT) and emerging in New South Wales and other state jurisdictions.

Definitions and Assumptions – Some Common Themes

Despite variable quality and inevitable delays and setbacks, this second dimension of the e-government agenda has been shaped by some widely shared expectations. Here are some definitions:

E-government is a way for governments to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of the services, and to provide greater opportunities to participate in our democratic institutions and processes. [E-government: A vision for New Zealanders]

E-government is the continuous optimisation of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media. [Gartner Research Note, May 2000]

What is e-government? Simply stated, it is the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners, and employees. (Deloitte Research: At the Dawn of E-Government: The Citizen as Customer)

E-government refers to the delivery of government information and services online through the Internet or other digital means…digital democracy offers the potential of more efficient public sector service delivery that enhances citizen accountability and governmental responsiveness. [State and Federal E-Government in the United States, 2001, Darrell M. West, Brown University]

…what we believe should be the next phase of e-government – breaking down bureaucratic barriers to create functionally oriented, citizen-centric government Web presences designed to give citizens a self-service government. Overall, however, the work of rebuilding and transforming government for the digital age is only just beginning. [Breaking Down Bureaucratic Barriers: The next phase of digital government; Andrew Leigh and Robert D. Atkinson, Progressive Policy Institute, November 2001]

Digital government means imbuing all of our systems with the ideals of citizen-centricity that permeate to the core of business transformation. It means making government information available in digital form so as to facilitate back-end interoperability between government agencies, integrating services across them to give citizens and businesses a seamless experience. (Steve Kolodney; Uncharted Territory; CATALYST, Autumn 2001).

Important insights about what e-government is, and what it potentially might deliver, emerge from some of the key ideas shared in those definitions. They all agree, for example, that e-government is about:

- Convenience
- Improving democratic institutions and processes
- Cost-effectiveness
- Accountability
- Improving delivery and transforming governance
- Responsiveness
- Delivering citizen-centric services and programs

E-government is about more than simply doing things more quickly, cheaply, or simply. It is about a fundamentally new way to define and arrange the tasks, functions, and resources of government to improve the quality and value of the relationship between government and citizen. That implies a second phase with demands and potential outcomes that are as dramatic as they are likely to be contentious and difficult to deliver.

1.2 The Three Elements of E-Government - A Basic Model

The push to integrate the Internet and Web-based technologies into government combines three separate, but connected elements – improving organisational effectiveness, improving the quality of service delivery, and improving the quality of citizen engagement.

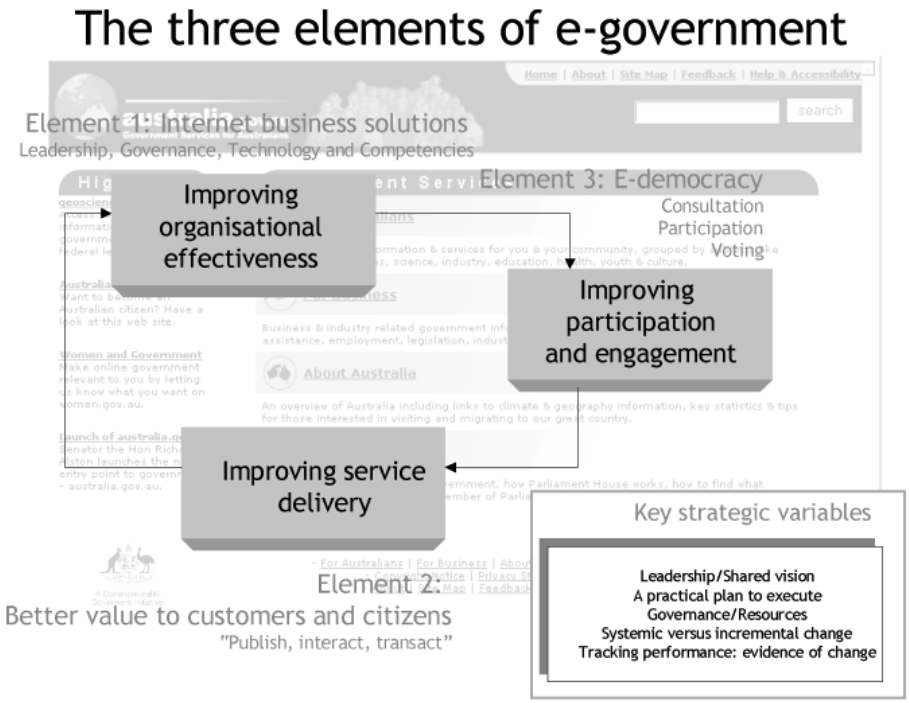


Figure 1:
The three elements of e-government

Improving Organisational Effectiveness

How can the Internet and Web-based solutions deliver to government agencies the kinds of organisational benefits that companies in the private sector are clearly enjoying – lower costs, higher productivity, and better quality?

Improving Service Delivery

How does the Internet provide new ways to lift the quality, range, and impact of government services, moving increasingly from simply providing information and a limited capacity to interact with customers and citizens to a capacity for more complex transactions?

Improving the Quality of Citizen Engagement

How does the Internet help to improve the quality of engagement by citizens in the policy process (and help to refresh the democratic project itself)? If the focus of this element is on e-democracy, the real concern is not so much with the "e" as with the "democracy."

Key Variables in the Challenge

This is the framework within which Cisco approaches the e-government challenge. The extent to which we expect to see successful execution of the e-government agenda will depend on some key strategic variables:

Leadership and a Shared Vision

Is it clear what governments and communities are trying to achieve? Is that vision of what is possible widely shared and acknowledged?

A Practical Plan to Drive from Strategy to Execution

Do governments have the implementation skills, action plans, and committed resources to make things happen?

The Right Mix and Level of Governance and Resources

What structures and processes are in place to guide, control, and accept responsibility for investment decisions, developing new skills and competencies, and ensuring accountability for results? Have budgets been approved? Is the decision-making and project management framework appropriate for scoping and executing Internet business solutions?

The Capacity for Systemic Versus Incremental Change

How do governments deal with the inherent conservatism of large public sector systems whose capacity for large-scale, transformational change is often limited by organisational, cultural, competency, and political constraints? How can the impulse for integration and collaboration secure practical results when the task is often not simply change within one sphere of government but, especially in highly federated systems like Australia, Canada, the U.S., and Europe, change within and between several spheres of government?

How does government harness the potential of new technologies without compromising important institutional checks and balances that, to some extent, build in a degree of fragmentation and separation?

The Ability to Track Performance and Measure the Results

How well are e-government initiatives tracked to understand what does and doesn't work? How are the successes communicated as they emerge?

2: Improving Organisational Effectiveness

The first element of e-government is improving the organisational effectiveness of the individual departments and agencies within government. It focuses on the success with which governments can embrace the benefits, already well established in the corporate sector and in smaller enterprises as well, of Internet business solutions.

Around the world, Cisco has a strong track record of working with government agencies of virtually every size and description to share the experience the company has gained and to help agencies discover the value of Internet business solutions.

Largely through the Internet Business Solutions Group, Cisco focuses its contributions in a framework defined by what is described as the four pillars of "net readiness:" An organisation's ability to achieve high levels of performance across all four pillars determines their ability (or 'readiness') to plan and effectively execute an Internet business strategy.

Leadership

Leadership in a very practical sense is the primary, central pillar of the "net ready" strategy. Cisco experience, and the evidence of customers worldwide, reinforces that leadership and a strong sense of shared direction are the starting point.

Governance

Many government agencies (and private-sector companies) have governance methods that are poorly adapted to the demands of shaping and executing an Internet business solutions strategy. Often, the way decisions are made, resources are allocated, and performance is measured are too slow or too cumbersome.

Technology

Technology, including the inescapable requirement for robust, scalable networks, is one of the four pillars. It is important, but not dominant.

Competencies

The fourth pillar looks at the range and mix of organisational and project skills within the organisation. If 90 percent of the success an organisation can expect to get from adopting Internet business solutions is vested in the capacity for "ruthless execution," then the absence of execution skills will be fatal. In this context, ruthless execution means breaking the implementation task into small pieces that can be developed and put into operation in 3-6 months. What Cisco tries to avoid is traditional projects whose scope and definition requires an implementation program that lasts for several years. That approach does not, in most cases, produce the results that organisations. It also undermines the motivation and momentum on which successful Internet business strategies rely for their impact and contribution to organisational performance.

Within those four dimensions, Cisco uses a range of business planning and diagnostic tools to create a vision for Internet business solutions, to identify the friction points in the business processes that currently drive agency operations, and to identify ways we can strip that friction out of the system. Friction points typically are found in the business processes that link the organisation to customers, citizens, partners or employees. The approach identifies what it is in those processes that causes friction in the relationship with an organisation or government agency. The process then goes further to establish some priorities, so that the vision and strategy can quickly turn to successful implementation in 30, 60, and 90-day segments of "ruthless execution."

3: Improving Service Delivery - The First Phase

The first phase of this element of e-government focuses on cost and convenience.

3.1 Delivering Benefits

The evidence that e-government works is increasingly compelling (according to an IBM analysis, governments are saving up to 70 percent of the cost of proving discrete services by moving them online).

- In Singapore, getting an import/export licence used to take 15-20 days after filling out 21 different forms. The government introduced TradeNet, an online system that asks for one online form and delivers the licence in 15 seconds.
- In Arizona, driver licence renewals (an especially popular application in first-phase e-government around the world) cost $1.60 on line, compared to $6.60 in person. In that case, the state government partners with IBM, who maintains the system and receives two percent of the fee – it costs taxpayers nothing.
- In Western Australia, the introduction of the Government Electronic Marketplace (GEM) has already cut the costs of procurement from $AUS100 to as little as $5 per item, offering up close to $AUS100 million of savings.
- A recent Australian study by APT Strategies looked at 100 federal government agencies and claimed it could account for $AUS300 million in cost savings from introduction of various electronic service delivery innovations, using online tools and services. The study also noted that 40 percent of agencies do not monitor for accurate visitor statistics, thus failing to properly account for, and pass on to citizens and customers, those cost-reduction benefits.

The other benefit is summed up in the catch-cry that e-government was about getting people "online, not in line." Many initial e-government applications focused on activities where traditionally, citizens had to spend a lot of time queuing either physically, on the phone, or in the traditional mail system, to complete simple and basic transactions.

But even within the confines of e-government's first wave, serious challenges started to emerge. As the new applications were rolled out, Cisco realised how important it was to have "back-end" databases and data management systems that were reliable, accurate and easily connected.

The Web site itself was little more than the shop window, attracting people in only to create frustration for them and for the agencies because the behind-the-scenes work on the quality, accessibility, and integration of the data on which the transactions relied had not been done.

Similarly, governments soon worked out the importance of investing in process change and institutional reform. As the pressure to move quickly intensified, public agencies, like their private sector counterparts, discovered the importance of fashioning robust governance structures to lead, resource, and evaluate their strategies. A degree of strong, central, and single-minded control, combined with a shared policy and operational vision and strategy across government, soon emerged as the basic prerequisite not only for making progress, but also for entrenching sustained change.

Three requirements provide the keys to success:

- Strong, consistent, and visible political and bureaucratic *leadership* – doing it well demands a significant investment of political and managerial capital, not least to sustain the essential process reform and institutional redesign that lies at the heart of effective e-government.
- The right *technology infrastructure* – robust networks that can be scaled to meet the demands of new levels of data traffic and connectivity, systems that can yield data that can be trusted and quickly linked and combined in new and more complex ways, and much-improved privacy and security systems that give people the sense of confidence they needed to conduct business over the Internet.
- An acceptance of the need for sometimes-radical *culture change* as "mainframe" government was replaced by the habits and instincts of a networked, citizen-centric government.

3.2 E-Government Implementation

In the latest of three recent studies of comparative performance of e-government around the world, Accenture ranked 23 countries in terms of overall "maturity" – the level at which a country has established an online presence. The top-three countries were the same as a year ago, with Canada in first place, Singapore a close second, and the United States third. http://news.cnet.com/news/0-1007-200-9761225.html

Other key findings included:

- In overall maturity rankings, Australia ranks fourth behind Canada, Singapore, and the United States. Too many online services require manual intervention to complete, and the report notes "relatively slow progress in developing services at the interact and transact levels." ATO and Australia Post are leading the way in terms of transactional capacity.
- Governments are becoming increasingly sophisticated in the way they articulate and implement their e-government strategies – but there is still plenty of room to improve, even among the so-called leaders.
- There is some separation between the infrastructure aspects of e-government and the social and policy issues.
- Leading areas in government for e-transformation include revenue (tax and customs) and postal services. Not surprisingly, the business case in these areas tends to be fairly compelling, given the focus on collecting more efficiently. By the same token, justice/safety is the sector lagging most conspicuously behind (generally, Australia is ranked as the leader in this sector).
- Last year's "new big thing" was CRM; this year, the study finds more evidence of practical implementation. In particular, the study notes the rapid spread of intentions-based portals as an increasingly common tool to provide better and more targeted service.
- This year's "new big thing" is uGovernment (picking up on Accenture's uCommerce concept – ubiquitous, untethered, unbounded). It refers to the way in which government can harness the rapid spread of wireless technology. Evidence of applications is still pretty thin (Singapore's Supreme Court uses Short Messaging Service [SMS] to mobile phones to alert people to times of trials, sessions, etc.).
- The most impressive progress in e-government is being made by countries adopting a "think big, start small, scale fast" strategy.
- The study presents major evidence of a new concern with public-private partnerships that go beyond traditional outsourcing models, and with governance issues.

3.3 E-Government in Asia-Pacific

According to the 2001 Wescott review, governments in the Asia-Pacific region "are only in the initial phases of adopting information and communications technology to improve financial information and reporting, streamline the delivery of government services, enhance communication with the citizenry, and serve as a catalyst for empowering citizens to interact with the government." The review goes on to identify six stages of e-government, with examples drawn from across the region to illustrate what they each might mean and look like.

Stage 1	
Setting up an e-mail system and internal network	Enterprise resource planning (ERP) systems that integrate human resources and financial management information.
	Most common e-mail systems are a stage one initiative.
	Some e-commerce and workflow management systems.
Stage 2	
Enabling interorganisational and public access to information	Enabling better interorganisational coordination and public access to information. [REDUNDANT TO STAGE 2 TEXT]
	Public Web sites.
Stage 3	
Allowing two-way communication	Phone, fax, and e-mail details on Web sites to allow people to respond and send messages.
	Internet-based technologies to facilitate meetings and collaboration (videoconferences, for example).
Stage 4	
Allowing exchange of value	Using ICT to support more convenient ways for citizens to conduct business with the government (welfare claims, tax forms, visa applications, and license renewals, for example).
Stage 5	
Digital democracy	Applications that empower civil society organisations and those that allow citizens to vote and otherwise express opinions over the Internet.
Stage 6	
Joined-up government	Using Internet and other technologies ("smart cards," for example) to help citizens get seamless service without needing to know which government agencies are responsible.

Table 1:
Stages in e-government implementation (Westcott 2001)

The Wescott review notes that e-government and new technologies will not solve corruption and institutional weakness issues. There is no substitute for political will, ethical watchdog agencies, proper incentives for honest behaviour, and effective sanctions for dishonest behaviour and rule-making and regulatory processes that are transparent and rigorous.

Within the region, the analysis argues that the way forward for e-government should combine:

- Fitting the technology to user requirements and the real objectives of the activity
- Matching new technology with reformed rules and processes
- Effective public management practices and internal controls
- Effective protection for data and systems integrity
- An integrated strategy that avoids piecemeal solutions that add up to a "chaotic and even dangerous system"

3.4 A Focus on Cost, Quality, and Access

As we make the transition to a new phase of e-government – recognising that much still needs to be done to deliver on the promise of the first phase – the three driving motivations for all of this hard work remain both consistent and compelling.

The first motivation is cost. This dimension can be viewed two ways. One is to see the Internet as another in a long line of instrumental technologies that governments can use to reduce costs by doing less. The other is to recognise the legitimate concern of governments at all levels to take unnecessary costs out of their systems and processes and to dramatically lift productivity. That means lowering costs and maintaining or improving quality.

The second motivation is quality. Governments everywhere are looking to use the new technologies to significantly lift the quality of what they do. This is partly about the responsiveness of the services and programs they develop and deliver. It is also about the extent to which those programs and services are designed for citizens and customers and not for the agencies who deliver them. It is about convenience and availability, and about addressing the need for greater transparency (and therefore accountability) in the way the government operates. It is about making the business of doing business with government as simple, intuitive, and productive as possible.

The third motivation is access. Governments are still driven by the need to ensure that people and communities have fair and equitable access to the resources and opportunities they need to flourish and progress. From basic government and public services to more sophisticated education, business, and leisure systems, there remains a concern for equity and opportunity. E-government has to have some smart ideas to offer about including those whose skills and resources make it hard to benefit from the new technologies.

As these three attributes drive the evolution of e-government, they reinforce the importance of a fundamental concern with security and privacy, as well as a reliable, robust, and standards-based infrastructure that turns the logic of the networked society into the practical business of secure, reliable connectivity.

4: Improving Service Delivery - A Second-Phase Agenda

The experience still for many people is either of no Internet connection and online experience of government, or experiences that remain slow and cumbersome and highly variable in their content and reliability. Even the shift from simply posting static information to providing the capacity for complete interactions with government online is not complete. Front-end Web sites and home pages often betray a considerable lack of "below-the-line" process reform and the continuing lack of robust network infrastructure to link the public face of e-government to the databases and back-end data systems on which it ultimately relies. The fact remains that much of what passes for e-government offers an online experience that fails to deliver depth, reliability, and simplicity.

The recent UN study on benchmarking e-government reinforced the point that doing the first phase of e-government is difficult enough for many jurisdictions. National e-government program development remains "desultory and unsynchronised."

The UN study contrasts those governments (and it cites the United Kingdom) for whom e-government is an "extensive, meticulously planned exercise" with others for whom going online is a "frenetic leap from the past into the future with little chance to absorb the present."

4.1 Three Key Themes

There is now enough evidence from around the world to identify the basic elements of a second phase agenda for the service delivery element of e-government. The agenda reflects, and reinforces, three consistent themes:

- Integration
- Collaboration[2]
- Trust

Integration

The next phase of e-government is already looking for ways to use the Internet and new technologies to deliver the kind of value to customers and citizens that can only be secured by new ways of integrating (and therefore changing) the underlying processes and functions of government. Increasingly, the task now is to answer questions and provide solutions for people that reflect the way they live and the complex, interconnected nature of the problems they are trying to solve. Invariably, those patterns do not reflect the relatively rigid and increasingly artificial structures and processes of "silo," mass-produced government.

Collaboration

The drive towards integration demands much higher levels of collaboration within and between government agencies and between government agencies and external, nongovernment organisations.

The fact that the e-government agenda is heading towards the collaboration challenge should come as no surprise. That is true, too, of the commercial sector in both large and small/midsize enterprises. Indeed, the significant investment Cisco has made in improving the way it collaborates with its business partners – by building a new "e-Hub" capacity to dramatically lift shared visibility among its supply chain partners into critical business process information and intelligence – is a great demonstration of the practical challenges and benefits of attacking the collaboration task.

E-Hub is emerging in a commercial supply chain environment. Its main task is to provide an intelligence-sharing capacity to allow a wide range of different organisations to "see" critical parts of the supply chain earlier and more clearly so that key business decisions can be made with greater confidence. The hub is being built around careful analysis of the information needs of the various players.

2 This challenge, for example, was recognised in a major report from KPMG, "Managing the Public Sector – Global Challenges," which noted that fragmentation of services and policies represented a significant "legacy" burden for the e-government agenda. While there was a will to collaborate, barriers included lack of political support, a mismatch between the collaboration approach and traditional budget allocation processes, and lack of appropriate accountability and performance management systems.

Its functions are fashioned around clear business rules and processes. It is a meticulous process, but one that has to be driven collaboratively to deliver its real benefits. The key players must move the same pace, otherwise it does not work. In other words, the build-out of e-Hub is itself a collaborative process.

The public sector has traditionally been wary of accepting that it has similar supply chain challenges to those that a commercial manufacturing and sales operation like Cisco clearly has. But managing supply chains is about managing information. More, it is about managing the capacity of a wide range of different people and interests to create, share, and use a common information base quickly and easily in order to achieve specific (and agreed upon) business outcomes. In that sense, e-Hub's focus on building the machinery of collaboration has considerable application in the public sector.

Here's one example. In the United States, an initiative was announced recently that may soon give patients the option of making key information from their medical records available electronically to all of the doctors, hospitals, and pharmacies involved in their care. This reflects a growing realisation that the health-care sector remains significantly behind the pace when it comes to introducing new Web-based tools. It is also a sector where significant cost savings and productivity improvements are waiting to be harvested.

Fragmentation and lack of communication among caregivers are widely cited by critics of the U.S. health-care system as a major source of medical errors, unnecessary spending, and inadequate care. A current project by the Patient Safety Institute (PSI), a new nonprofit organization, seeks to address those problems by creating an electronic network that allows participating doctors and health-care institutions to share information that is often needed to make medical decisions, such as the list of a patient's current medicines, recent laboratory tests, allergies, and immunization records. http://www.washingtonpost.com/wp-dyn/articles/A28495-2001Dec11.html. In New South Wales, for example, and in common with other health jurisdictions, the agenda for transformation includes the introduction of Universal Patient Identifiers (UPI) and integrated patient administration systems. Also identified is the need to use Web-based solutions to improve point-of-care clinical systems and community health services and support.

The promise of the Internet has always been about collaboration. The problem, though, is collaboration takes us into some of the toughest territory we've had to negotiate in the Internet revolution, shaped as it is by the clash of technology and culture.

It is that clash that is already shaping up as the biggest single challenge of the second, transformative phase of e-government.

Technology, increasingly, is making virtually everything possible and everything possible virtual. What will hold us back are deeply entrenched cultures forged in the fires of politics, turf, and the ancient art of information civil war. For those reasons, the second phase of e-government poses a severe test of management, governance, and, most of all, leadership.

Trust

Recognising that e-government is fundamentally about "repairing the relationship" reinforces the point that, in the end, the true test of whether we are making progress is to assess the extent to which it is helping to maintain, extend, or in some cases establish the trust from which the relationship between governments and citizens is fashioned.

That, in turn, should remind us that the trust issue in the e-government debate is about more than providing better and more reliable systems of security and privacy. Security and policy are significant issues, but the most compelling dimension of trust in the e-government debate is not about encryption and the sometimes-opaque complexities of Public Key Infrastructure (PKI) technology. What matters more is that the next phase of e-government demonstrably improves the underlying level of trust and confidence in the processes and institutions of government.

In Belgium, that challenge is about to be severely tested with the introduction of proposed identification cards, complete with electronic signatures. According to one report, officials believe the cards will advance e-government and create significant benefits for the country's citizens. The proposed cards apparently will feature the owner's photograph along with an embedded digital certificate that could be used for e-banking, online transactions, paying taxes and, eventually, online voting. PKI technology will support the digital certificates.

The proposal raises a number of concerns, particularly with those for whom privacy remains a key obstacle to greater e-government moves to more integration. The same report noted that many countries, such as Great Britain, are considering similar programs. The rollout of Belgium's program will clearly influence how other countries proceed.

In the Belgium example, managing digital certificates has been outsourced by making a security firm, Ubizen, responsible for issuing and managing digital certificates, a move itself likely to raise more concerns about private companies accessing public data.

4.2 The Reform Priorities

So, what to do? Assuming that we are indeed witnessing the transition to a new phase in the development of the e-government in Australia and New Zealand, how will that phase be progressed? Ten components of a second-phase agenda for the service delivery improvement of e-government are described below:

- Institutional design
- Education and skills
- Privacy and security
- Portal government
- Collaboration tools and practices
- Governance and leadership
- Creation of an e-government blueprint
- The challenge of human services
- A broadband network
- Integrating back-end systems

Institutional Design

However the second phase of e-government progresses, it will have to respond to and reflect some consistent values – the demand for high levels of privacy and security, the need to ensure equity and community, and the requirements of more effective governance, including the increasingly complex and cross-boundary nature of many of the most persistent and entrenched problems of public management and policy.

It is hard to see how e-government, especially in this second phase, can be successful without some fundamental changes to the design and practice of government.

What does that mean in practical terms? It is likely to involve at least these tasks:

- Creating *integrated processes and mechanisms* to develop, deliver, and monitor programs and services that may use resources from a range of different agencies or levels of government, but which are presented to citizens and customers as a single and successful user experience.
- A continuing program of *fundamental process reforms* that will see steady improvement in underlying business processes and systems within and between individual agencies and to external parties as well.
- Changing the *underlying structure of the incentives* that drive practical, day-to-day behaviour in the public sector so that performance management systems, and the range of accountability (auditors, public accounts committees, budget approval processes, etc.) is geared towards the new values and outcomes that e-government is trying to produce. This dimension of institutional design is usually overlooked in the e-government debate. There is a tension between the instincts and possibilities of the new e-government agenda, driven increasingly by what is technically possible, and the largely unreformed and unreconstructed system of accountability in the public sector. Failure to reconcile intention-based, networked government with the accountability and performance assessment habits and instincts of "mainframe," industrial government spells potential disaster. This process has to recognise that some aspects of government, especially those that have been designed to improve accountability and probity, have been designed with an inherent fragmentation and separation. The point, obviously, is not to jeopardise those protections but rather to make them work more effectively.

Education and Skills

There are several ways in which education and skills will be central to the second phase of e-government.

One is the need to quickly broaden the skill base throughout the community, to give people the confidence to use the technology that gives them access in the first place.

Another is the extent to which larger and more reliable networks can deliver the rich content necessary to cement and extend the role of the Internet as a major and perhaps dominant delivery mechanism for education and training.

A third dimension is one that Cisco itself, through its extensive and successful Networking Academy™ program, is already addressing. Clearly, we are going to need a lot more people skilled in the business of designing, building, maintaining, and improving the network infrastructure that delivers these benefits.

Privacy and Security

Although it is slowly changing, a major obstacle to the wider acceptance and use of the Internet for commerce as well as for government transactions is that many people still don't trust it. What that usually boils down to is a fear that (a) personal and private data will be open to abuse and unlawful access and (b) transactions across the Internet simply cannot be relied on.

Portal Government

The advent of what we might call "portal government" is really a way of searching for smarter ways to organise, discover, and connect people and the information they want or need to get something done quickly and easily.

It is a technology-focused way of describing where everyone seems to want to take the e-government debate – to the creation of single-entry, easy-to-access, simple-to-navigate sites that work on the premise that you start with the citizen's problem or the customer's requirements and quickly and easily assemble all the information, resources, and interactivity they need to get the job done to their satisfaction.

An Accenture study[3] of the emerging trend toward government portals noted that, in contrast to the evidence that online government changes the patterns of interaction with citizens, "most governments have responded to the e-Economy in an agency centred way, with the outcome being a proliferation of Web sites – the majority of which have little impact on the quality of service and offer limited functionality to the citizen." The same study summarised the key differences between a Web site approach to e-government and a portal approach.

Web Site vs. Portal – A Comparison

Web Site	Portal
Basic homepage	Homepage organised by citizen or customer interest/solution
List of agencies	List of key services
Mainly static information	Information and interaction
Some transactions	Transaction-rich
Organised by agency/function	Organised by user needs
Often standalone to IT	Fully integrated with IT systems
Weak or no customer support/interaction	Full customer support

Table 2:
Comparing web-sites and portals (Accenture)

It may be that, despite the patchy evidence – and most commentators seem to agree that largely, the silo model continues to dominate and even leading countries are less than halfway to reaching their online potential[4] – the data and process redesign that will drive the next phase of e-government will itself lead, eventually, to some quite different structures and agencies. But changing organisational structures and the names and appearance of the agencies themselves is neither the point nor the purpose of the next phase. This is all about managing information differently. Much of the rest will follow.

The latest manifestation of the push for portal government is a new-found, and inevitably tricky, interest in applying some of the lessons of CRM to the services and functions of government.

In its 2002 study of comparative progress in the implementation of e-government, Accenture recorded more evidence than they did a year ago of agencies doing something practical about something that was then the "next big thing." The study looks at CRM in government by asking a number of questions about the functionality of the new applications:

3 *Government Portals – The next generation of government online*, Vivienne Jupp, Managing Partner, Global e-Government Services, Accenture (May 2001)

4 *Rhetoric vs. Reality – Closing the Gap*, Accenture study of e-government maturity (2001)

- Do they help government agencies remember important things about their customers and the citizens they serve? In other words, do government agencies have the capacity to "persist" in their relationship with customers and citizens?
- Do the Web-based tools of e-government allow people to access multiple and related sites from one portal – in other words, once I'm in, can I do what I want without having to go in and out of different sites? This is what one leading Australian government IT executive refers to as the "there is no wrong door" approach – it shouldn't matter where a citizen starts, the rest of the system with which they need to connect to get the job done should be within easy reach.
- How customised and adaptable is the information presented – does it respond to the things I want to do?
- Can I get out from the government site to other "value-added nongovernment services" that are linked to the issues I am interested in or concerned about?

Things are changing. More and more, portal development starts from outside government – that is, from the customer or citizen's perspective – and works back from the question "what do they want to achieve?" IBM's perspective on this debate is instructive:

Portals are changing from their original roles – bringing order to the diverse information offered by their owners – to the more complex role of offering various applications to communities of interest, with the added characteristics of concealing complexity from the user, of integrating new and old applications, and of providing common solutions to universal services. (E-government futures, September 2001:15)

Collaboration Tools and Practices

Either within jurisdictions or between them, the collaboration challenge is rapidly becoming both central and increasingly compelling. Speeding up transactions when only one agency is involved is one challenge. Speeding up transactions that involve more than one agency and, in the process, creating real value in terms of service and responsiveness to customers and citizens – that is surely the glittering prize.

Like the rest of the e-government debate, the collaboration challenge is not primarily technical. That doesn't mean, of course, that technology isn't a key part of the equation. Nothing is going to change materially in terms of the quantity and quality of collaboration unless those new instincts are supported by a robust and scalable network infrastructure capable of handling the larger and more complex flows of data between and within agencies inside and outside government.

Leadership and Governance

Sustained and effective leadership in the development and implementation of an e-government blueprint is perhaps the single most critical factor in determining the likely success of the venture.

That, in turn, translates into the demand for a significant investment of political and bureaucratic capital. Capturing the promise of e-government's next phase will draw heavily on the ability of politicians and senior public managers to shape and execute a common strategy. An example is the United Kingdom's emerging "Knowledge Network" project. The Knowledge Network is a venture designed to achieve the apparently impossible – to create a single, integrated system to manage the flow of knowledge and information across the public sector at central and regional levels, 24 hours a day, and eventually become available to the public via the Internet.

The project is being implemented in phases, with Phase 2 of the exercise designed to establish the Network's basic infrastructure and to bring forward incremental improvements in the networks of individual departments and agencies. The approach is segmented, realistic, and pragmatic. But it can only succeed in its ambition to create a "mutually supportive, interactive, and coherent structure across government and between government and the regions" if it can rely on consistent, high-level support and direction. Resources have to be allocated, priorities have to be maintained (often in the face of considerable competition from new and emerging pressures), and results have to be checked off before each succeeding phase can begin.

The Knowledge Network venture is an illustration of the importance of governance as a determining factor in the search for success in this next phase of e-government.

In this context, governance refers to that set of arrangements by which individual agencies, and whole systems of public management, determine and execute their e-government priorities. Who makes the decisions to spend money and time? How do the priorities get set in the first place? Who is in the loop and who is not? How are projects managed, monitored, and measured?

In the case of the Knowledge Network, there is a complex and sophisticated governance structure, leading from ministers to senior managers responsible for implementation.

There is a Senior Responsible Owner, based in the Cabinet Office, and an overall Project Director. There are people assigned to responsibilities for individual parts of the project, including within key agencies and in the regions as well.

The specific details of this governance structure are less important than the lessons they illustrate. The complex and contentious demands that the next phase of e-government are already making of governments require very strong and practical ways to keep the show on the road. That requires significant investment in creating and refreshing the institutional machinery available to direct and control the overall strategy.

Perhaps the other important lessons we might take from the United Kingdom's ambitious attempt to fashion a true knowledge network is that piecemeal approaches that fail to drive both strategy and implementation from the centre won't work. The evidence we've looked at (Jupp 2000 and Westcott 2001) reinforces our own experience that, while collaboration is the undeniable ethic that makes things happen, it can only succeed with strong and convincing leadership from the centre. Unless those agencies are engaged and driving the overall game plan, the transformational dividend from the next phase of e-government will fracture into an incoherent collection of isolated and ultimately uninspiring individual projects.

The last important point to reinforce about governance is the need to look much more closely at the underlying framework of accountability and control that tends to drive most public management systems. For hundreds of years, we have created often massive, strong, and highly centralised bureaucracies on "guild" or expert, professional lines.

Health looks after hospitals, education looks after schools, transport looks after road. The professionals in each field – doctors, teachers, engineers – set the agenda and spend much of their time looking for a solution to which they have often already created a technical solution in their own professional image. The entire system of reward and sanction, and the audit and accountability systems by which people in those agencies live and breathe, is designed to reinforce that vertical, or silo, approach.

Now, a conspiracy of technology and social change has created a huge demand for a different type of government. That demand, whose hallmarks are collaboration, integration, and the smooth and seamless delivery of responsive and tailored services, is now locked in a struggle with a public management machinery that is going to be hard to shift.

In Australia, the Federal Government's Management Advisory Committee has recently released proposals for a new governance structure to guide and improve the application of information and communication technologies in the public sector.

The proposal supports a move to a whole-of-government approach to ICT investment, which is consistent with Australia's move into integrated government service delivery, across agencies. The initiative is described as a move to a "federated" governance approach, in which agencies work together to achieve shared standards, increased collaboration on ICT procurement, and reuse of intellectual property across the federal government.

The new structure includes an Information Management Strategy Committee (the business and policy level) and a Chief Information Officer (CIO) Committee. The structure will be supported by the National Office for the Information Economy.

An initial agenda for future strategic work announced with the new proposals includes:

- Identification of significant issues related to investment in, and governance of, shared ICT infrastructure
- Development of a model for architecture, governance, and investment for the secure business systems of the Commonwealth
- Identifying the key lessons learned that would assist agencies entering into new and "second-generation" ICT sourcing agreements
- Authentication of clients

The report also recommends some simple governance principles, including:

- Agency management of ICT will be enhanced if there is improved information and knowledge sharing across government, including "better practice"
- Guidelines and shared processes should be developed through a cooperative governance model, promote interoperability and reuse of software or systems, and address public confidence and trust in the overall ICT framework
- System design should be underpinned by the premise that information content may at some time be transferred across agency boundaries
- ICT funding should have a strategic focus on business outcomes and efficiency gains

Finally, the new model responds to a set of business drivers whose relevance would be widely recognised by governments around the world – transformation of the delivery processes of government, creating and supporting multiple service delivery channels, improved value for money, and security and privacy.

Creation of an E-Government Blueprint

The first phase of this dimension of e-government has demonstrated unequivocally that securing the benefits governments and citizens want – lower costs, higher productivity, and better quality – is impossible without accepting some government-wide standards and rules. If the name of the game is to make the game simpler to play, especially for customers and citizens, then some core consistency has to be built into the e-government framework.

Effective integration of second-wave e-government is already making considerable demands on the collective capacity of governments to set and follow through on a framework that provides a clear, shared vision; a widely understood set of both "corporate" and agency-specific initiatives and priorities; a consistent set of standards and rules for data management and communication; and the basis for monitoring implementation and outcomes.

A certain amount of "top-down" thinking, planning, and mandating is unavoidable. This is not an agenda on which people can be left entirely to do their own thing. As the 2001 Accenture study put it:

Tomorrow's eGovernment leaders will match strong political will with co-ordinated action. Whole of Government guiding principles are required to ensure that through cross agency co-operation, a framework for customer focused, service provision emerges. These countries will organise their online services around citizens and businesses and will build new value-added relationships and alliances with the private sector.

The Challenge of Human Services

In general, the achievements of the first phase of e-government concentrated on those aspects of the relationship between people, communities, and governments that were both relatively simple and relatively easy to improve.

The second phase of e-government comes face to face with those areas of the relationship to government in which the sense of trust and confidence is forged. Think of areas like housing, education, community and welfare services, looking after people with disabilities, the provision of health-care services, and some aspects of urban services and planning.

How do governments create and deliver education and skills programs to people who are, for a whole range of reasons, difficult to get to and reluctant to access services offered in traditional ways?

How do governments design programs for, say, "at-risk" young people for whom the answer might require putting together a complex and shifting coalition of services and support in housing, drug rehabilitation, education, employment, and transport – and which still has to be properly managed and monitored and held accountable? And, more likely than not, requiring a range of services from different levels of government and the nongovernment sector as well.

Here, the second phase of e-government service delivery confronts two crucial insights. One is that simply speeding up and digitising existing services – pretty much what we've been doing for the first phase – won't cut the cake. The task now to is design new services or new types of service, in new and hitherto unheard-of combinations, designed to fit the contours of the needs of individuals and communities, rather than the other way around.

A Broadband Network

If the e-government revolution, and its promise of a richer, quicker, and more productive relationship between citizens and governments, has shown us anything, it is that none of it is possible without robust networks that can carry the data and make the connections.

The second phase of e-government is all about a level of connectivity and interactivity between governments and citizens, and the communities in which they live and work, that will not be possible on anything other than a broadband infrastructure. The concept of a "fast, always on" Internet, capable of handling increasingly large data flows that support text, graphics, and video, is crucial to some of the new e-government applications.

The Alberta 'supernet' proposal and recent decisions by the New South Wales Government in Australia to aggregate broadband demand (especially in health and education) as the basis for new carrier arrangements across the state are two examples of governments searching for ways to increase access to faster, more reliable networks.

Back-End Systems

Nothing works in e-government if the data doesn't work. The problem, of course, is that most organisational cultures thrive on and reinforce the reality of hoarded and siloed information. Against that unsustainable but deeply entrenched value system is the dawning realisation that, in a networked world, you gain by giving away. As both the pace and complexity of the world ramp up exponentially, no single player – government agency, business corporation, or nonprofit organisation – can succeed alone. The unsettling proposition, that you have to share to succeed, is slowly seeping into the equation.

It is one thing – relatively simple and unarguable – to say that governments need to clean up their data systems and make it easier to keep that data clean and more accessible. It is quite another to invest the time, resources, and dogged commitment to make it happen. The reason is simple – information usually has an owner, and the owner usually has a strong sense of "turf."

5: Improving Participation and Engagement with Citizens

In terms of the core challenge – to repair the relationship between governments and the communities to which they are accountable – this third dimension of the e-government challenge is likely to be the most significant, as well as the most difficult and contentious.[5]

There are quite a few "digital participation" sites and applications now, either as part of a government site (such as the Citizen Space portal that forms part of the UKOnline site) or through nongovernment Internet sites.

Examples are feedback forums and opportunities attached to television or radio broadcasts Also, nonprofit organisations dedicated to the challenge of lifting the quantity and quality of opportunities for citizen feedback and input to decision making.

The America Speaks Web site (http://www.americaspeaks.org/) is an example run by a nonprofit organisation that offers people a chance to contribute their thoughts on key policy issues, a recent one being welfare reform.

Some other examples we've come across include an electronic democracy site in New Zealand (www.naturespace.co.nz/ed/index.htm) and, in Scotland, the International Teledemocracy Centre (www.itc.org), which aims to develop and apply advanced information and communication technology to enhance and support the democratic decision-making process.

Work by Steven Clift in the United States is well known as a key contribution to the e-democracy debate. In the E-Democracy Book (www.e-deomcracy.org/do), Clift notes that "the Internet will save democracy. Or so Internet technohype led many to believe." Clift is adamant, though, in his view that while there have been "thousands of exciting and important democracy online accomplishments [and] the pace of change is accelerating…transforming democracy through the use of Internet has just scratched the surface." Like other e-democracy advocates, Clift is not interested in adapting democracy to the way the Internet is now. He contends "over the next few decades we can change democracy for the better and develop 'wired' ways that allow people to improve their lives and the world around them. In our local communities and regions, our nations, and globally we are at the beginning of an era we can define."

The point, though, is that this ambition is only realised as a function of deliberate policy and even ideological choices, not as a function of the core technology itself.

Experiments in digital democracy are well entrenched in Minnesota (http://www.e-democracy.org/). Minnesota E-Democracy is a nonprofit, nonpartisan citizen-based project, whose mission is to improve participation in democracy in Minnesota through the use of information networks. Minnesota E-Democracy hosts quality online public spaces for citizen interaction on public issues.

In Canada, there are similar experiments with using the Internet for a range of participation and citizen engagement functions (www.cio-dpi.gc.ca/cio-dpi/index_e.asp).

5 A recent Victorian Parliamentary inquiry in Australia has been looking at electronic democracy, focusing on the potential impacts, positive and negative, on citizens, groups, Parliament, and government itself.

There have also been experiments in online voting and in online "polling," such as the vote.com site (www.vote.com) established by former Clinton advisor Dick Morris. Different versions of that approach are being developed by individual politicians, whose Web sites are beginning to offer constituents a way not only to communicate to their representatives, but also to express their opinions and concerns. One example is the Web site that Australian Federal Labor MP Mark Latham has established as party of his "third way" Web site (http://203.42.16.132/latham/vote.htm).

These developments in digital democracy tend to inspire and dismay in equal measure. For some, these are bold and long-overdue initiatives that use the transformative potential of the Internet to affect change in the business of politics and governance. For others, the faith in technology is both naïve and dangerous. For all its promise, technology works in a context shaped by dramatic inequalities of power and influence, a still-significant "digital divide," (which describes the gap in access to computers, information technology and networks between different groups and countries) and may exacerbate some of the worst excesses of populism.

It might also, at least until Internet access reaches levels of accessibility similar to telephone or television, create new divisions because people with access to the Internet appear to have an advantage over those who don't.

But while the Internet undeniably offers unprecedented opportunities for more and better public participation in some aspects of government and policymaking, it doesn't resolve the underlying issues.

The central questions that have always been asked of any form of consultation or participation remain valid – who gets to contribute, on what terms, what impact do the contributions have, who determines what gets consulted on and what does not?

It will be interesting to watch the contest between the Internet's inherent capacity for efficiency and accountability (because it renders the interactions between people and systems more immediate, more direct, and more transparent) and the capacity for the decision-making process to remain opaque, distant, and secretive. The shift of the e-government debate into the deeper and more turbulent waters of "digital democracy" will be difficult because, in the end, it will confront a contest about power and control. There is little evidence that governments, at either the political or bureaucratic level, have much interest in a voluntary redistribution of either.

In a summary of the recent German elections, one commentator made this assessment:[6]

The much expected première of the first true online-campaign in the political history of Germany however did not take place. Although all major parties and most of the candidates used the new media in a professional, up-to-date and sometimes creative way, it became clear, that the Internet is not yet a mass media in Germany. Especially people that are already active political partakers or even party members can be reached online. The largest online-community is found among people that vote for the Green Party: 62 percent of these sympathizers can be reached through the net. For the Social Democrats (SPD) 42 percent are connected, the CDU supporters are estimated to have a online penetration of 38 percent.

Information and news still play the leading role on the Web and leave only a rather minor part for interactivity and service elements.

Overall, the evidence from the practical application of digital democracy is mixed, with some interesting initiatives and still a considerable gap between rhetoric and reality. patchy The primary messages seem to be:

- The Internet is having an impact, but it is marginal and sporadic.
- Much like the first steps into the e-government space, much of the focus is on one-way "conversations" and relatively simple communication and interaction. Attempts to create genuine interactivity and to therefore shift, if only marginally, the balance of power between politicians and citizens, seem few and far between, and half-hearted when they occur.

6 The assessment was posted on Steven Clift's DoWire mailing list (Democracy On Line) by Carolin Welzel, 30 October 2002

- Part of the problem is that we're only just starting in terms of the penetration of the technology and the pervasive access to the skills and equipment necessary to make it effective in the political arena.[7] Taking a longer-term view, and assuming that many of the access issues will be solved fairly quickly, the assessment finally seems to be that, despite a fairly unprepossessing debut at least in the United Kingdom, the Internet as a tool of transformational strategies in governance and democracy is "waving, not drowning" – that is, all the activity now happening in this arena is a healthy sign of experimentation, not evidence of its demise.

Other studies of the growing phenomenon of digital democracy reinforce the central theme of this white paper. For example, a recent Hansard Society study of online public engagement in policy deliberation notes that "new relationships between citizens and institutions of governance must emerge if a crisis of democratic legitimacy and accountability is to be averted."[8]

Similarly, others have pointed out the clash between the nonlinear and nonhierarchical potential of the new technologies – with their tendency to be open, transparent, and connected – and the persistently "closed" and hierarchical structures of government.

To shift that requires changes in information rights and the distribution of power, a truly engaged democracy, and an informed and engaged citizenry.[9]

7 Internet population increased by nearly 20 percent last year, and more than 700 million users are projected by 2004. Despite the events of September 11th and the global economic downturn, the number of Internet users worldwide will rise from 445.9 million in 2001 to 709.1 million in 2004, according to a new eMarketer report, *eGlobal: Demographics and Usage*. "The recession hasn't staunched the desire to stay in touch. If anything, the events of 9/11 highlighted the value of e-mail and instant messaging applications," says Dr. Nevin Cohen, eMarketer Analyst. "More people, from more places around the world, are communicating with one another and accessing information quickly, easily, and economically. Why? Because now – with the Internet – they can." http://www.emarketer.com/ereports/eglobal/welcome.html

8 *Bowling Together: Online Public Engagement in Policy Deliberation*, Stephen Coleman and John Gotze, Hansard Society, 2002

9 E-Democracy in the Future: Will we see significant change? (The Riley Report, August 2002)

6: What's Next - Networked Virtual Government

In March 1999, the U.K. government boldly proclaimed that "there is no good reason why, by 2008, it should not be as simple and easy to do many of the main dealings with government as it is today to make a phone call or choose between TV programmes." [U.K. White Paper "Modernising Government" March 1999 Cm 4310] In the same vein, the expectation was that "dealing with the Internal Revenue Service…would be as easy as buying a book on Amazon.com." (Can Uncle Sam Save Tech? Larry Dignan, ZDNN December 2001).

The picture is clearer now. E-government has been through its own version of the "hype curve," in which the promise of streamlined, efficient, cheap, and paperless dealings with the public sector has been made difficult by reality. We know that the changes required to make e-government work well can be difficult, contentious, and messy. We know that technology and culture do not always mix, and that changing people and behaviour is harder than laying new cables and putting clever boxes on people's desks.

But we also know that the pressure to change and improve, using the Internet sensibly but with some sense of innovation and commitment, is relentless and unlikely to diminish.

Governments around the world do not have a choice. The Internet has already proved to be much more than the "techno-utopian infatuation" that some critics still fear. Citizens have seen what, at its best, the Internet can deliver in terms of lower costs, higher quality, and greater convenience in other parts of their lives. The early stages of e-government have given them a taste of what they can and should expect from public services and systems.

6.1 Networked Virtual Organisations

Central to securing those potential benefits is a steady shift toward an operating model that Cisco has defined as the networked virtual organisation (NVO).

The NVO is more than just collaboration It goes well beyond sharing information with a few key partners or creating a smoother articulation between different links in the value chain. An example that lives on the boundary of collaboration and something more complex are plans in Victoria, Australia to create a "Knowledge Management and Collaboration Portal," which will link all 78 regional and metropolitan councils. The goal of this project is for all councils to securely collaborate online, share documentation and best practices, and eliminate current hardcopy communication between the dozens of interrelated organisations.

10 Steven J. Kafka et al, *The Collaboration Imperative*, Forrester Research, May 2001

Cisco has growing interest in the NVO idea, both as part of its own evolving business model and as a logical next phase in the application of Internet business solutions. This reflects a wider interest in creating single, shared business processes and systems from contributing expertise and resources taken from different organisations. That interest is itself being driven by increasingly compelling insights into the network structure of complexity. Whether you are trying to cure complex diseases, understand the growth of the Internet, or be successful in business, it seems the key to success is the same – successfully creating and using networks or integrated systems (Barabasi 2002).

The management challenge now is not only to achieve outstanding organisational performance and competence (a minimum requirement to play in the NVO game). It is to work out how to create NVOs that bring together different organisations that can work as if they were one entity, delivering value to customers and citizens that cannot be achieved alone.

Some Starting Propositions

An NVO is based on four concepts:

- Moving things and information from "raw" to "customer" quickly and effectively
- Shrinking the time and distance involved in making and executing key decisions (basically, it is about stripping out the "latency" in the process, minimising delays in responding to changed circumstances or opportunities)
- Lifting the quality and value of real-time collaboration between increasingly complex communities of interests, resources, and skills whose contribution to the network is defined in terms of what is "core" (what they do best and adds most value) and what is "context" (what others can do best)
- A central and obsessive focus on creating value for end users

In a networked virtual organisation, you are likely to see many noncore activities outsourced to those for whom that function or expertise is core (core, in this case, is defined as something that directly adds value to the worth of the organisation). The network will be manifest in numerous alliances and agreements that stipulate how the different parts of the "organisation" will work, what they will do, what risks they will share, and what benefits will accrue to the network and to its individual members. Increasingly, and supporting those shared processes, the network partners would be working from, and contributing to, a common, global database.

And perhaps by definition, an NVO will demonstrate some very strong common or shared purposes around the activities that have been networked. This is about different organisations building common, networked business processes to add value to a group of customers – or citizens – the advance of whose interests they are all committed to.

NVO Principles

Some simple but significant principles form a firm foundation for creating an NVO, usually driven by an "orchestrator" on whose visibility, credibility, and competence the networking process draws. These principles include:

- Define processes increasingly broadly; NVO core processes, on which collaboration is required, have to be defined to include the participating organisations (the idea being to create, in effect, one process for the network participants). One analysis describes this as "sharing business activities across a network of allies."[10]
- Standardize process execution for scale; agreeing and sticking to some common standards in key networked processes means the "organisation" can scale up or down on those processes very quickly and with minimum disruption to service.
- Innovate on customer experience; if the NVO is fully "alive," it can rapidly turn customer ideas and insights into new products or services more quickly than the competition.
- Integrate supplier innovation; similarly, an NVO can rapidly take advantage of innovation anywhere within the "organisation" to add value to the shared or networked process.
- Own the process with or without the execution.
- Evolve strategies in parallel.

A collection of organizations…

- Pursuing the same business goal
- With tightly integrated business processes
- Focusing on clear functional specialization
- Not necessarily with an ownership relationship
- Using networking to increase communications and reduce costs…

…and achieving better business performance than a single large enterprise,

or multiple organisations with typical vendor/supplier relations.

Table 3:
NVO summarized

Other NVO Insights

There is an increasing interest in defining and refining the NVO concept, sometimes using different language but always focusing on the same shift. Cisco sees it as a gradual transformation from basic automation to complex integration.

Initially, the task for organisations was to automate their basic functions and find standalone applications that could deliver efficiency and productivity. Then, different applications in the same functions were networked to add another layer of value. The next step was to find applications that could integrate across different functions, classically reflected in the growth of large-scale, ERP-type solutions.

The NVO model takes a logical next step in pursuit of additional value for customers or citizens and integrates applications that flow not just across different functions within an organisation, but also across shared functions that embrace different organisations. Now, the task is integration across the value chain.

The new organisational competencies will include an ability to form "ecosystems" that can react as one and in real time (a driving factor for the NVO model is the ability to respond more effectively to changing market and citizen demands or circumstances). Some call this a "value web," reinforcing the point that in this model, value resides in the network, not in the individual participants.[11] Others talk about the need to shift from a "static and optimised tree into a dynamic and evolving web, offering a more malleable, flexible command structure." (Barabasi 2002:202)

Being able to take advantage of, and contribute to, an NVO or value web will require individual organisations to run efficient operations. In more traditional supply chain contexts, the NVO model is reflected in more effective end-to-end visibility into information about orders, supplier performance, and customer satisfaction.

It is clear that IT and the network infrastructure that connects the virtual organisation are very significant assets. To reflect the new demands of this model, the infrastructure must meet new standards for "quality of service" and reliability, for security and availability, and for much greater mobility and agility to keep highly distributed people and activities in touch and on course.

NVO in the Public Sector

There are several dimensions to the application of NVO in the public sector.

One is a continuation of a search for improved ways to integrate diverse services and functions into citizen-centric solutions, which is already the hallmark of leading-edge, second-wave e-government applications.

Another takes that same instinct, but goes beyond the boundaries of a single sphere of government, and beyond government and into the community. This involves searching for viable ways to combine databases, business processes, and competencies across sectoral boundaries to create value webs for delivering service and support to citizens and whole communities.

Two examples from recent Cisco engagements with Australian public sector clients illustrate the scope and complexity of the challenge.

One comes from WorkCover New South Wales, the state government agency charged with running the worker's compensation and occupational health and safety regime. The regime is delivered, in large part, not by WorkCover but by a wide range of large, small, and midsize private insurance companies, some of which are associated with the larger employers who effectively run their own insurance schemes.

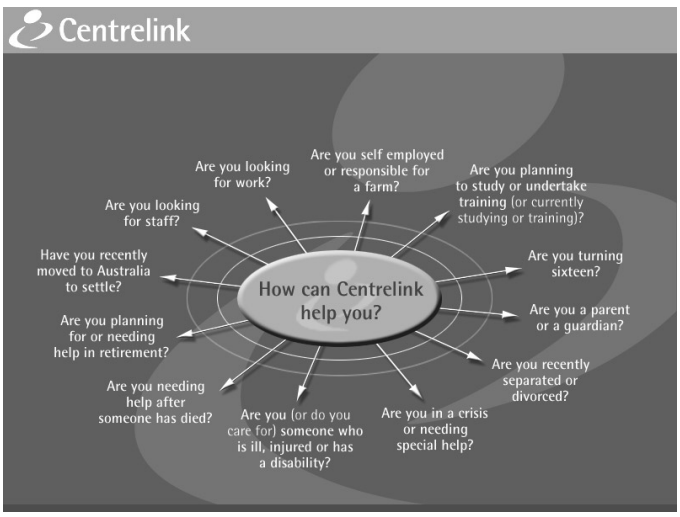
The key to success for WorkCover – defined in terms of lowering costs, increasing productivity, improving workplace safety, and helping injured workers more effectively – is better management of the flow of information and knowledge from and with their insurance partners. Aspects of the solution, parts of which are now being implemented, include standards-based information exchange through a dedicated, secure portal. This will allow increasingly easier and quicker access to, and visibility of, business information by WorkCover and the insurance companies and a gradual adoption of agreed standards and processes for lodging key operating data.

11 Gale Daikoku, *Ecosystems and Value Webs: No company is an island,* Gartner G2, August 2001

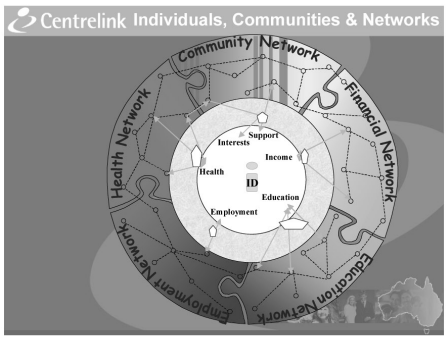
The other example is Centrelink, one of Australia's largest government agencies. It was established five years ago as a statutory authority (Commonwealth Services Delivery Agency) to deliver welfare, social security, benefit payment, and community services and programs on behalf of 20 client agencies. 24,000 staff service over 1,000 delivery points across the country, paying over $AUS50 billion a year to more than six million Australians.

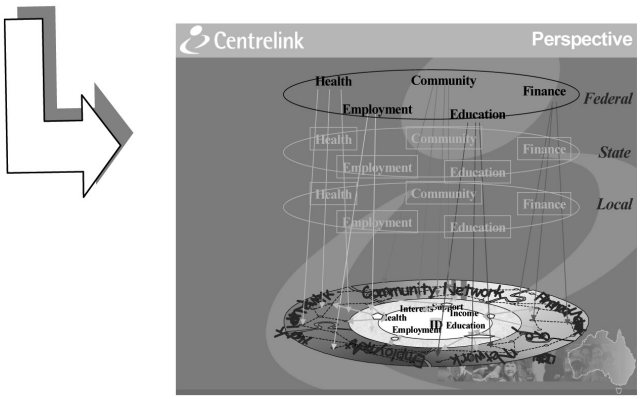
Centrelink has some important relationships with not-for-profit community organisations that deliver some of the key welfare services to end-user families and communities. The emerging vision for Centrelink is to connect with that highly dispersed web of large and small community organisations so that, in terms of the way families and individuals in need experience the system, it offers them a single and simple integrated experience that profiles their requirements, entitlements, eligibility, and the support that is provided.

The starting point for Centrelink is to characterize its role as part of a web of potential services and support, each of which is designed to respond to specific life-event or life-stage issues.[12] The focus might be work ("are you looking for employment?"), family issues ("are you a parent or a guardian?"; "are you recently divorced or separated?"), or immigration ("have you recently moved to Australia to settle?").



Around those events, the constantly developing value web of services and support can grow by connecting together other "webs" or networks of organisations, expertise, and resources. These will emerge from a number of sectors – in this presentation, the illustration of the emerging NVO includes networks in employment, health, community services, financial services, and education. To reinforce how complex this model can become, those networks need to connect different resources and organisations not just at the national level, but at the state and local (or municipal) level as well.





NVO in the Public Sector – Some Issues for the Future

Both Centrelink and Cisco are, in their own fields, examples of organisations exploring the new possibilities of a networked virtual organisation model. In both cases, they are acting as orchestrators of increasingly complex webs of connection in which, as the model evolves, successful outcomes will be a function of shared systems, common and accepted standards and business processes that flow across organisational boundaries.

12 This brief summary of the Centrelink vision is taken from a recent presentation by Jane Treadwell, Deputy CEO, Digital Business. This description and analysis has been developed by IBSG and does not necessarily reflect the views and opinions of the Australian government, Centrelink, or any of its employees.

That role is also being explored by a number of organisations in the not-for-profit or 'social' sector. An example in Australia is the evolution of a research and practice network around the issue of early childhood health and education, which is being developed and co-ordinated by The Smith Family. The Smith Family is one of Australia's leading social enterprises and is part of one of Australia's leading community-business partnerships with Cisco (Australia and New Zealand). Reflecting a major shift in strategic direction three years ago, the Smith Family's mission is to use education especially as a tool to unlock opportunities for disadvantaged families to participate more fully in society.

The Smith Family's approach to what is a task of daunting proportions and complexity is to create wide and inclusive connections with other social sector, government, university and commercial organisations whose skills, experience and resources can be harnessed to the wider outcome of better education and health outcomes.

An example is the emerging network of more than 100 separate organisations in a research coalition that aims to integrate more effectively research and policy-making affecting health and education for early childhood and young Australians. What this initiative shows (and it is only one of the many network models that The Smith Family is evolving or participating in) is that organisations in the public and nonprofit sectors are turning, almost instinctively, to an NVO model to create new networks of connection and practice. The kinds of complex social outcomes that are at stake can only be achieved when the process of developing new solutions, and the practical business of actually doing something about them, flow more and more easily across and between different interests and organisations.

However, recognising that moving to an NVO model is both inevitable and necessary doesn't deny the enormous complexities of making it happen in a context where in many instances delivering of the promise of the first phase e-government remains a significant challenge.

At least some of the evidence emerging from the few systematic evaluations of e-government progress suggests that performance on some of the first phase e-government projects has been patchy. A recent U.K. Parliamentary Public Accounts Committee report – *Improving Public Services Through E-Government* – noted the lack of evidence about the real costs and benefits of going online and criticised the lack of services that citizens could routinely access online. Similarly, a recent survey of U.S. federal government Web sites by San Francisco State University concluded that most sites remain hard to navigate and offer little more than the most basic elements of e-government. The point is not the validity of these criticisms, but that they reinforce the complexity of executing e-government well.

The Centrelink vision is itself a reminder of the profound shifts involved in this approach. There are intensely practical issues involved in resolving the organisational, institutional, and technical challenges. And there are difficult security and privacy issues with a level of sensitivity and complexity not usually encountered in the private sector.

Perhaps most importantly, the NVO or value web model has the potential to drive profound changes in the way we define the purpose of government and therefore how we determine its performance. While the individual elements of an NVO model, of the sort that is implied in the Centrelink vision, all need to be capable of high levels of operational competence, the focus now shifts to the performance of the network as a whole. How well do the elements of the networked virtual organisation work together to deliver new levels of value and service to citizens? How well does Centrelink itself (in this example), or any other element within the network, perform as an orchestrator, capable of sustaining the network itself?

In the commercial world, there is a growing realisation that the performance of any individual part of the value chain is not in the end as important as the performance of the value chain itself.

As the NVO model is explored more widely in government, key issues of security and privacy will emerge. Resolving those challenges demands a new balance be struck between the technology-driven capacity for greater integration and the institutional protections on which we rely to prevent the abuse of power.

The system of government that has evolved in the western, liberal tradition is based on a certain amount of deliberate fragmentation. Institutions and agencies were structured to be separate and to some extent competing – a system of "checks and balances" to prevent undue power in any single part of the system. Against that institutional and cultural instinct, the intrinsic power of the Internet, and indeed of any network structure, is to integrate and connect. This creates something of a clash and certainly generates considerable tension as the public sector confronts two pressures.

As customers of government services, we like the so called "network effect" because it promises that seamless, citizen-centric service that seems now to be the dominant driver of so much public sector management and organisational reform. All of the "good practice" in e-government is headed in that direction. However, we become fearful of too much integration if it starts to allow parts of government to become too seamless. What if this new-found facility to create more integrated systems leads to greater surveillance, greater coercion, and a loss of privacy?

The task – never more acutely defined than today – is to find the point at which we secure as many of the benefits of an NVO model (take advantage of the network effect) without cutting too deeply into the institutional protections on which an open, free, and enterprising society depends.

Other risks that the NVO model has to negotiate include the fact that, despite the emerging visions for greater integration of information and service, many agencies are still struggling with the relatively simple demands of greater automation and basic network services. The e-government agenda has exposed complex and sometimes intractable dilemmas of cultural and social resistance to a more integrated, open, and transparent system. Sharing information and knowledge across the silo boundaries of traditional modern government is hard enough. Creating the kinds of knowledge webs on which an NVO model relies will clearly be that much harder.

Issues of power and accountability are also inherent in the shift to a more highly networked business model in government. Who is "in charge" and who is expected to carry the accountability can become much more complicated when the drive is to create service, support, and delivery models whose connections between different elements involved in designing, devlopijng and delivering the end result become less visible.

As one analysis puts it:

> The accountability issue is another one that has given many thoughtful people pause, when considering the goals of e-government. There seems little doubt that the networking model of government that it implies stands in tension with the hierarchical, chain-of-command kind of accountability that liberal-democratic governments have relied on for the last two centuries.
>
> (Lenihan, April 2002:18)

Another risk is introducing an NVO model without working out how to replicate the integration we want to see at the service-and-delivery level at the policy level. How can government create "networked virtual policy" capable of confronting the inevitable conflicts, clashes, and pragmatic trade-offs and of providing a wider context in which an NVO model can emerge and thrive? The same analysis (Lenihan 2002) notes that integrated policy is the "natural soulmate" of seamless service.

An NVO model is already emerging as a response to two interdependent drivers, as salient in government as it is in the business or community sectors. One is the surging rate of change. Markets, technology, and the needs and expectations of customers (and citizens) conspire to create successive and always more demanding waves of what is possible, driving the search for better ways to create value and quality.

Succeeding in that environment is no longer possible without the capacity to take advantage of the resources and skills of a network of many different players, all of whom in some fundamental respects must be able to operate as if they were a single entity.

There are plenty of examples of contemporary public policy and social change challenges for which an NVO model is increasingly likely to provide the right framework. Some examples could include:

- The current and obviously urgent search in most countries for more effective '*homeland security*' structures capable of linking together information, operational processes and decision-making across large numbers of government agencies and non-government bodies as well (the US Dept of Homeland Security is linking elements of 22 separate agencies and will create an agency of some 170,000 staff).
- Responding more effectively to persistent social problems like *child abuse* or *domestic violence*, in which typically the chances of being able to move beyond the "detect and respond" stage and actually work to prevent these kinds of problems happening in the first place demands the input of lots of different agencies. In an NVO response, the resources, information and expertise from, for example, the police, community services, health and local government in the public sector, and a range of nonprofit organisations as well, need to be tied together in a structure that offers some common information and business processes and some standard operating procedures that allows these different agencies to act as if they were one.
- The challenges of *land use management and sustainability and environmental policy* are also severely testing the skills and 'reach' of any single agency. The urgency of achieving new and more demanding environmental standards is rendering the traditional notions of co-operation and collaboration (typically manifested in government in the tried and tested 'interdepartmental committee' structure) too slow and too weak.
- Another arena in which an NVO framework seems to be making more and more sense for public policy is *urban planning and urban management*. Large, complex cities need to be managed by complex, interconnected networks of agencies in government and in the wider community, all of whom have a part to play but none of whom can reach for the kinds of accessibility and sustainability results that people want to achieve.

These are just a few of the networked problems that demand networked solutions in government and public policy. The principles and, increasingly, the practice of the NVO model seem an apt and timely evolution of the Internet business model in which the technology's intrinsic attributes (connectivity, transparency, ubiquity) are set to make a major contribution to a new phase of public policy problem-solving.

Networked Virtual Society

Combining shared information or knowledge through more complex networks that are driven by common and shared business practices and processes is emerging as a compelling combination both in business and government. As the NVO business model evolves, it is becoming clearer that its primary value is the promise of securing attributes that determine how successful these new networks can be. These attributes include speed, agility, managing knowledge, learning continuously, understanding and leveraging the interdependence of partners and, above all else, the ability to orchestrate the new mix of skills, resources and expertise to deliver value to citizens and customers.

The intriguing possibility starts to emerge that this operating model, shaped by the combination of circumstances, technology and opportunity, could become an operating model at a whole-of-society or national governance level. It is possible, in other words, to detect the emergence of what could be defined as the 'networked virtual society' or NVS in which knowledge and innovation are the hallmarks of success and leadership, governance, technology and competencies remain the four key attributes of successful implementation.

What is at stake is relatively simple to define – the capacity to solve complex, citizen-centred problems in areas like health, education, employment, community safety and economic competitiveness. What the NVS framework starts to determine is a way of making these things happen. Converging networks in government, business and the community sectors, supported by a technical, regulatory and cultural infrastructure or 'ecosystem' will create new solutions and opportunities. Just as the NVO model is about creating new levels of productivity and the ability to execute more complex solutions to give customer greater value, so the NVS model offers the promise of new levels of 'citizen productivity'. Societies can become more efficient in solving the problems, and creating the opportunities, that drive a rising quality of life.

The barriers and risks are many and various, of course. Political inertia and intransigence, a concern to protect current territory and influence, a fear of the loss of control and authority, the lack of a sufficient skills base to execute the reforms and the lack of a sufficiently quick and obvious 'return on investment' that fails to transcend a short political cycle are all potential obstacles. Questions of equity and distribution of costs and benefits are also significant, as are the perennial concerns about transparency, accountability and power. These are not insignificant concerns. But they should be handled within the framework of a new sense of what is possible in the network model.

6.2 Creating an 'Enterprise' Architecture for E-Government

The first phase of e-government was about cost (less) and convenience (more). The second phase of e-government is about moving from transaction to transformation – about repairing the relationship between government and citizens.

The task is to present seamless, citizen-centric, and intention-based tools and solutions for people to use in their dealings with government. Government has to work as if it were a single enterprise. Therefore, governments have to adopt common and shared platforms for the core technologies, applications, and networks on which digital government will run. That requires some practical strategies to mediate the clash between technology (what is possible and what is necessary – some degree of centralisation) and culture (the structure and habits of traditional public sector management – devolved and fragmented).

The key is to create a common strategy and a single architecture to guide the evolution of digital government solutions.

Cisco strongly reinforces the view from a recent Gartner symposium on e-government that "as e-government initiatives move beyond mere presence and interaction phases, the ability to conduct transactions and ultimately transform government operations will be predicated on reliable shared infrastructure." (Gartner 2002a:14) Further, the value of that infrastructure increases in proportion to the developing complexity.[13]

The architectural principles that flow from that analysis can be summarised as follows:

Citizen-Centric

Data integration across departmental back-end systems.

Personalized

Dynamic content driven by user profiles and persistence across sessions (a system that stores the context of previous interactions). Metadata classifications and fine-grained content to ensure relevance.

Consistent

Homogeneous look and feel and functionality through maximum reuse of architecture components.

Proactive

Citizen profiles and life-cycle management to drive alerts and workflow.

Accountable

Clear ownership of tasks through workflow and the ability to escalate at any stage.

Accessible

Seamless blending of various channels: phone, e-mail, call-center, and agency.

Agile

Data integration on back-end systems and supply-chain integration to vendors and partners.

Transparent

Marketplace, service-level agreement (SLA) monitoring, and reporting

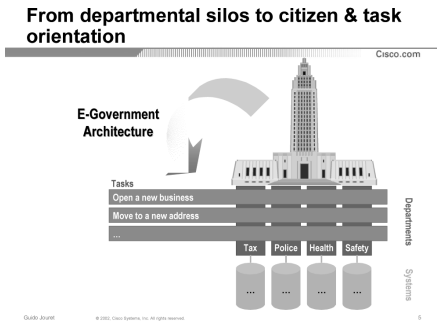


Figure 1:
An e-government architecture

What begins to emerge is an architecture that supports the shift from silo to citizen-centric, where what people want to achieve creates an organising framework within which to combine – in ways that reflect user needs and not the provider's structure – the resources, information, and support they need to be successful.

13 E-Government Futures: Government and technology into the new century, IBM e-government futures, September 2001

6.3 The Seven Habits of Effective E-Government

It is likely that the next phase of Internet business solutions in government will drive new reforms in public sector management. Reforming government and driving new e-government solutions will increasingly be one and the same thing.

During the next five to ten years, the e-government debate, in all three dimensions (improving organisational effectiveness, improving service delivery, and improving democracy) is likely to be grappling with several themes. E-government leaders increasingly will be those tackling these themes with vigour and credibility, and posting some tangible results. The themes include:

Vision and Leadership

The plans for the next phase of e-government, across all three dimensions, will increasingly be the subject of articulated strategies that define what governments – and the communities they work with – are trying to achieve. This will work so long as the approach combines inspiration with a practical focus on metrics of success, and open, regular assessment of performance.

The Network Effect

Governments will move beyond the traditional obsession with the singular, exclusive virtues of a centralist or a "distributed" model. They will take advantage of the network effect that combines consistent, system-wide standards and rules for key data management, communication, applications, and local flexibility.

From Strategy to Execution (Think Big, Start Small, Scale Fast)

Governments that take the lead in charting the new e-government territory will have adopted a "think big, start small, and scale fast" model – an effective platform on which to construct the plans and budgets that will give the vision life. Successful governments will be driving from strategy to execution, and will be looking to get things done relatively quickly – to review and refine their successes, kill off the risks that didn't turn out well, and move on to the next phase.

An inevitable part of that push will be investing more effort in learning what worked and what did not, and accumulating the empirical evidence to reinforce the claims about productivity improvements and deeper, more effective citizenship engagement.

Single Enterprise Platforms

Successful e-government will be driven within an environment in which enterprise standards and operating rules will be collaboratively defined, widely agreed upon, and consistently applied.

E-government is not going to work if everyone follows their own model, whether across government or within agencies (especially the larger ones). People in those systems will learn to play a more sophisticated (although at times no less contentious, and always complex) game that combines common standards and rules with room for local flexibility and responsiveness.

Assess, Review, Revise

Web sites, new transactional applications, and Web-based tools and applications of every kind will reflect the perspective of those using the applications, not those that built them.

Complaining about customers or citizens who don't "get it" or who aren't smart enough to work their way through your online labyrinth won't work. Initiatives will be designed from the customer or citizen up, and relentlessly assessed and revised depending both on what customers do and what they say when it comes to the new applications and services they encounter online.

More Radical Experiments with E-Democracy

The third element of e-government – improving the quality and impact of citizen participation in, and engagement with, the process of policy and public governance – is likely to feature as a more explicit strand of e-government strategies.

As these strategies (or experiments) are rolled out, they will likely test and redefine the way citizens can become involved in "their" government, especially testing the extent to which the Internet's inherent capabilities can have an impact on the entrenched habits of the governing process. The real question is whether e-democracy is the same democracy as we have now, but online or, in the process of going online, evolving into something more satisfying for all involved.

Resolve the Technology-Culture Clash

Finally, countries with leading e-government strategies will be deliberately confronting the clash between what technology can do and what the prevailing culture in government will allow. There are risks in that process as governments start to realise that embracing the Internet is a potent change program in its own right. Changes to structures and process will start to become irresistible, new demands in terms of the skills and

resources of people working inside government will become more urgent, and the gradual removal of unnecessary obstacles to a more open, transparent, and responsive government will become inescapable.

Successfully negotiating those risks is likely to be a hallmark of countries in which e-government has started to affect the central challenge – repairing the relationship and refreshing the democratic project itself.

6.4 Some Key Indicators – What Should We Expect to See?

If the next phase of e-government is going to be judged as a success, what are some of the indicators by which we can fairly expect to make that assessment?

As they already have in the commercial sector, and in their initial application in the public sector, the Internet and Web-based solutions have already delivered **significant cost reduction and productivity improvements**. The clear expectation is that, as we drive forward to extend and improve these solutions, we should see new productivity improvements and be able to reliably demonstrate their effectiveness.

Increased citizen use of and satisfaction with the new applications and solutions should characterise the e-government experience. Error rates for users will come down. Doing business with government will become quicker, cheaper, and easier.

Asking citizens what works, what doesn't, and how these technologies can best be used to make their interactions with government smoother and more effective will increasingly be the starting point for new ideas and initiatives.

The cost and quality of more extensive and sophisticated collaboration – the emergence of the **practical application of the NVO model** – will both improve (in other words, it will be less expensive to collaborate more effectively). Information and knowledge will flow more freely across organisational boundaries and, with the appropriate levels of security and privacy, between government and organisations in the business and community sectors.

We can expect to see more extensive experiments in the use of the Internet and Web-based solutions to **improve the quality of engagement in the public policy and governance process** by individuals, organisations, and communities.

E-democracy should be not so much about the "e" but the about "democracy." These technologies should gradually make it more likely that people will become engaged in debates and decisions that affect their lives. The idea of a "digital commons" that creates new (and easier) ways for people to get involved will start to bear fruit in terms of decisions that are seen as legitimate and grounded. Trust rises, and the relationship starts to repair.

From the pragmatic to the profound, these are a few of the leading indicators on which we should expect the next phase of e-government reform to have a positive impact.

A Summary - Putting the Pieces Together

The next phase of e-government is poised somewhat awkwardly between promise and performance. Some are losing interest in e-government as ambition outstrips results. This next phase will be a journey in which the prizes are as large and demanding as the potential setbacks. Navigating around the latter to lay their hands on the former is a challenge that governments around the world have already started to take up.

Governments, too, are becoming more virtual, able to deliver information and services regardless of time and space. But the ability to successfully serve the public online requires more than just the emergence of new technologies. It also calls for a fundamental change in the relationship between the state and its constituents because the ultimate benefit of digital democracy is that it not only promotes more responsive government, it also arouses a more involved electorate.

21st Century Literacy Summit White Paper, AOL Time Warner Foundation/Bertelsmann Foundation, March 2002

In the end, the view we have sketched of the essential features of that journey comes down to these fundamental elements:

- The purpose of e-government reform is to contribute to the larger program of transforming the purpose, practice, and performance of government – to repair and strengthen the relationship between governments, individuals, and communities.
- Three key outcomes define the extent to which the application of Web-based solutions to the tasks and functions of government is producing results – reducing costs and increasing productivity, lifting quality, and improving access.
- Supporting the new applications and solutions is a renewed focus on the strategic significance of secure and reliable networks capable of connecting people at broadband speeds and creating a sense of trust and confidence by those who use them.

Finally, we believe that e-government will experiment with variations on the NVO theme as part of the search for ways to deliver greater value to citizens and customers in a more demanding, rapidly changing world.

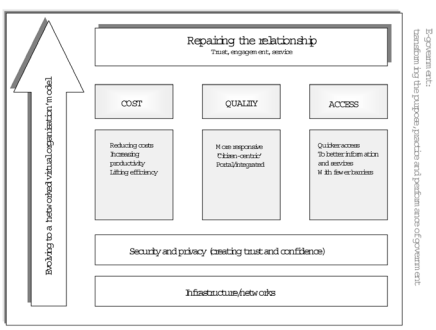


Figure 2:
A e-government summary view

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