What is transformation?

Abstract

The e-government goals of many countries are to 'transform government' through the use of ICTs, But such aspirational statements can be interpreted in a number of ways. This is partly because the concept of transformation has not been adequately defined, and because it is difficult for governments, as opposed to individual agencies, to envisage what 'transformation' will look like across the 'whole of government'. Progress of governments towards this transformed state is therefore hard to measure, and at best remains piecemeal, with sporadic successes in some agencies, and many setbacks. This chapter analyses the rhetoric used by countries about transformation in their e-government goals, and the steps that they understand are needed to transform government in an attempt to define the concept more precisely. It compares this with concepts of transformation emerging in the literature, based on the distinct disciplinary approaches taken in the fields of information systems, public administration and political science, and the distinction between e-government and e-governance, looking for a unified concept of transformation that will enable a true multidisciplinary approach to be taken.

Introduction

In the internationally competitive environment of global e-government, many countries use the word ‘transformation’ in their e-government goals or policy statements. However, the meaning of ‘transformation’ varies from country to country. For some it is confined to the level of business process, gains in efficiency, and cost savings. In others its use is more aspirational, and reflects a desire to transform more than the business processes of government, but to encourage both internal change in government agencies, and greater cooperation and collaboration between agencies, as well as a change in the relation between government and citizens, possibly transforming the nature of twenty-first century democracy. Across this spectrum, the concept of transformation is variously, and often inadequately defined, especially when it is used as an aspiration. This is in part due to the lack of agreement about what kind of transformation is sought, and partly because

it is difficult for governments, as opposed to individual agencies, to envisage what 'transformation' will look like when it has been achieved.

The purpose of this paper is therefore to investigate more closely what is implied by the term ‘transformation’ by examining the use of the term in the policies of a number of jurisdictions, to compare this with emerging literature on the topic, and to establish whether there is a common model of transformation that is useful in understanding the nature of the changes that ICTs are creating in the way that governments operate, and whether they are impacting on the nature of government itself. E-government is a new and multidisciplinary field that encompasses the mainstream computing science literature, the fields of Information Systems and Information Management, as well as Public Administration and Political Science. In many cases the different definitions of transformation are the result of the disciplinary focus of the author. In such a wide range of disciplines, there are bound to be differences in both theoretical and methodological approaches. As we learn about and embrace each others’ approaches, can we find common understandings and a model that will contribute to the formation of a central body of theory that will inform this new field, or will parallel theories and models continue to emerge, borrowing from each but never fully converging. The differences between theorists and practitioners (in both government and industry) and between the various disciplinary approaches are explored in this paper, with this over-riding question in mind.

Government agencies have many stakeholders and increasingly interact with them using a range of technologies. While the Internet is not the only channel of communication, much of the e-government literature focuses on the Internet, and especially the World Wide Web as the focus of this communication. State of the art information and communications technologies (ICTs) include digitally based telephone systems, with voice recognition capabilities, which are used by government agencies as well by commercial enterprises as a means of customer interaction. Thus, e-government strategies often include reference to user’s preferred ‘channels’ of communication. Since Internet based technologies are now adapted to operate in a wireless and mobile telephone

environment this must also be considered as one of the potential channels for communication with government. Behind these 'front-office' services dedicated secure networks are required to support interoperability, and extensive exchange of data both within some very large enterprises (such as the United Kingdom's National Health Service, reputedly one largest organisations in the developed world), and between agencies at all levels of government (national and federal, state and provincial, and local (the city and district level).) Thus, an examination of transformation must take into account the relationships of an agency, and of the central entity 'government', with all its chief stakeholders. Some of these relationships are frequently expressed in the terminology of e-commerce, the relationships being cast as: government to citizen (or customer) as G2C, government to business G2B, government to government G2G, government to employee G2E. Uses of ICTs within the organisation to increase internal efficiency are often characterized Internal Effectiveness and Efficiency, or IEE.

Those who advocate transformation in the broader more aspirational sense, tend to use the term 'e-governance' to describe the change they envisage. For example the Rutgers E-governance Institute defines e-governance as follows:

> E-governance involves new channels for accessing government, new styles of leadership, new methods of transacting business, and new systems for organizing and delivering information and services. Its potential for enhancing the governing process is immeasurable." (Rutgers, 2007)

In his recent analysis of the difference between government and governance, Donald Kettl defines governance as "a way of describing the links between government and its broader environment—political, social, administrative." (Kettl, 2001) Based on Kettl's analysis, and his observation that governance is the outcome of the interaction of government, the public service, and citizens throughout the political process, policy development, program design, and service delivery, international e-government consultant Thomas Riley further defines the distinction between e-government and e-governance as in Fig 1.

GOVERNMENT	GOVERNANCE
superstructure	functionality
decisions	processes
rules	goals
roles	performance
implementation	coordination
outputs	outcomes
E-GOVERNMENT	**E-GOVERNANCE**
electronic service delivery	electronic consultation
electronic workflow	electronic controllership
electronic voting	electronic engagement
electronic productivity	networked societal guidance

Figure 1. The distinction between e-government and e-governance. Copied from Riley, 2003.

Thus, in Kettl's model, governance focuses on functionality, not structure, processes, not immediate decisions, goals not rules (in the Weberian sense), performance, coordination of effort, and outcomes not outputs. (Riley 2003, 14). E-government, building on, and to some extent breaking free of the Weberian model of bureaucracy has new dimensions: service delivery (described by Riley, as primarily a "webification solution" associated in its early days with cost-savings for both citizens and government), workflow or automation of back office activities, and productivity. The application of technology, leading to greater productivity, as Riley notes, is seen as "the best way for governments to achieve the trade-offs between increasing expectations and diminishing resources." (Riley, 22) E-voting, while included by Riley, may not be essential to this model; it has not been widely adopted in most OECD countries and has many unresolved issues that inhibit its widespread adoption. This model of e-government is directed at the G2C, G2B, G2G, and IEE activities of government. E-governance, by contrast, allows citizens to engage in the policy processes of government through a range of technologies from email, to social networking applications, and online conferencing. Electronic consultation, more formal systems of e-engagement, include initiatives such as the US e-Rulemaking process, and e-participation initiatives outlined later in this paper. Electronic controllership consists of the standardization of technologies, and applications necessary to support the activities of and maintain citizen trust in e-government, and the development of international technology standards (including Internet governance). The

dimension of ‘networked societal guidance’ allows citizens not only to engage with and be consulted by government but to scrutinize processes and decisions, within government—a potentially radical new form of participatory governance. Both e-government, e-governance, and e-democracy, Riley concludes, are separate but valuable concepts, that reflect not a profound change in the nature of government, which could only come about through a revolution or deep debate within society about the nature of government, but which are allied to each other in an evolutionary way. It is a case of “meeting the new challenges of the digital world, while being rooted in the strengths of its past.”

> Governments are the stable point in society . . . The public administration continues and does not go away because a new party takes office. This does not mean that accountability, trust and openness with government are not important. What is the most important is that government is perceived and continues to be perceived, as the bedrock of society. This is another reason why the transition to e-government, e-governance, and e-democracy is a smooth one, but does not send the message that somehow government as we have known it is now gone, and a new order has emerged. (Riley 2003,28)

Using this distinction between e-government and e-governance, it is clear that for those who define ‘transformation’ in terms of the dimensions of e-government, there are a series of logical steps to be taken to achieve it. Electronic service delivery, especially service delivery integrated across a number of agencies, and the ‘back office’ changes necessary to achieve this (electronic workflow), are dependent on increasing interoperability between government agencies, both at the federal level and between federal, regional and local governments. The concept of interoperability requires more than just the ability to transfer data or interrogate data in information systems and data bases across a range of agencies—this is a relatively straightforward exercise, in which international standards such as the European Interoperability Framework, developed by the IDABC (2004) , or the UK ‘s E-Government Interoperability Framework (United Kingdom, 2005a) based on international stabdards developed by the WC3, and covering interconnectivity, data integration, e-services access and content management provide examples of electronic controllership.

Part of electronic controllership, but equally necessary to support electronic services and workflow, are the complex issues that government agencies are now dealing with, such as 'semantic' interoperability, a harmonization of the language and terminologies used by individual agencies that is necessary to allow exchange of text data between systems (such as the Australian metadata standard for government web sites, AGLS). Also necessary to the achievement of electronic service, and electronic workflow (and productivity), essential e-government activities that verge on e-governance are the increasing use being made of federated enterprise architecture systems across government, the inclusion of access to legacy systems within such an architecture, and in some cases digitization of paper-based legacy systems.

More transformational, falling outside of e-government but not quite e-governance as Riley defines it, is the need for cultural and organizational change to support inter-agency collaboration and the development of 'citizen-centric', sometimes 'customer-centric' service. This is contrasted in many e-government policy statements with what are currently characterized as silo-based bureaucracies which lack sufficient focus on the needs and convenience of their clients. The transformation sought within the e-government model is dependent on critical political changes and changes in organizational culture that must take place alongside the introduction of technology. It is widely acknowledged that these changes are more difficult to achieve, especially given the stability and long-established practice and culture of the administrative arm of government in many mature Western democracies. Is this an e-governance issue, or some other form of transformation that is needed?

Evaluating e-government and transformation

A customer or citizen-centric service must be able to demonstrate its value-added proposition for citizens, based on knowledge of what citizens are seeking. E-government policies, and the transformation of e-government service should therefore be based on robust research into the needs and expectations of citizens, and the extent to which they have been met. There is little evidence that this is so.

There have been a number of measures used to date to gauge the success of e-government initiatives, and the extent of change brought about by the use of ICTs in government. They do not provide much information about how well governments are achieving their goals of 'transformation', whether this is conceived of as enhanced service delivery, or a new form of e-governance. Success in e-government (whether it is termed evaluation, achievement, performance measurement), is currently assessed by a range of unrelated metrics. These include a number of e-government rankings, such as the Economist Intelligence Unit's e-government readiness rankings based on 100 quantitative and qualitative criteria, organized into six distinct categories measuring the various components of a country's social, political, economic and technological development (including infrastructure), and the *UNPAN Global E-Government Readiness Report* (focused on the quality, relevance, usefulness and the willingness of government websites for providing online information and participatory tools and services to the people.)

Darrell West's annual *Global E-government Report* attempts to rank countries on e-government achievement rather than readiness, assessing a range of national government websites in each country, including executive offices (such as a president, prime minister, or ruler), legislative, judicial and other major agencies serving crucial functions of government, such as health, human services, taxation, education, economic development, internal and foreign affairs etc. Features assessed include online publications, online databases, audio and video clips, non-native languages or foreign language translation, user payments, disability access, privacy policy, security features, presence of online services, digital signatures, credit card payments, email address, and comment form, automatic email updates, and website personalization (West, 2007). Only one of the ranking systems (the UNPAN report) includes e-governance as well as e-government transformation measures.

Other approaches to evaluation include citizen surveys of uptake and satisfaction, as in the ongoing AGIMO surveys (Australia, 2006), or the surveys included in the US measures of achievement noted below. They may also based on a comparison with

progress against goals, as in the NZ government report *Achieving E-government 2004: A report on progress toward the E-government Strategy* (State Services Commission, 2004) which includes survey data, focus group interview data, a web site evaluation, and case studies of successful initiatives. The US government's Office of Management and Budget currently sets performance measures for e-government based on five measures, three of which are focused on citizen-centered government, (adoption/participation, usage, and customer satisfaction), and cost (cost savings and avoidance, and efficiency). Selected agencies now report their flagship program's online services against these targets, reporting statistics on uptake, numbers participating, estimating cost savings, and including customer survey data in some instances. (OMB 2007) In all these examples, it is not clear how agencies are to develop targets, or how these measures should be applied. These measures therefore only minimally contribute to our understanding of how far governments have achieved transformation, whether it is in e-government, or in e-government. Along with more clearly defined, and empirically derived metrics on service delivery, workflow, and productivity, measures of engagement and participation, that can assess engagement across society, and wider capture of views are sorely needed.

An alternative and influential approach is taken by Richard Heeks, whose long-standing examination of the value of e-government to the developing world has informed his pragmatic benchmarking methodology. His evaluation paradigm advocates benchmarking e-government activity and achievement at all tiers of government (national, regional and local) and across all spheres of activity, from e-readiness measures, through G2C, and G2B, through G2G, and IEE, in addition to the use of multi-channels, and intermediated access (through a third party). Heeks emphasises the need to use a full range of measures, from inputs and precursors, (or e-government readiness), through the central core activities of e-government, to outputs and outcomes which he acknowledges are often referred to as a transformation stage, although the befits he is advocating are often transformational at a much more down-to-earth level. However, Heeks sees interest in e-government waning and little real interest on the part of governments in transformation. The evidence for this analysis, he suggest is scanty but relies on:

- The US National Academy of Public Administration's ending of its e-government

programme and the absence of e-government from its 2006 "big ideas" list.

• 2003 being the peak year for number of e-government benchmarking studies reported by eGEP (2006a).

• The virtual "without a trace" disappearance of the once much-publicised e-government targets in the UK.

• Accenture's 2005 refocusing and rebranding of its annual e-government survey to centre on customer service. (Heeks, 2006, p5)

Heek's pragmatic and through approach to evaluation would be a challenge for any government let alone the governments of developing countries with which he is most engaged. A range of all the measures he outlines might be necessary within his very pragmatic vision of developmental e-government transformation.

Across all these approaches there some emerging models but few specific targets with which to measure transformation, whether transformation is conceived as enhanced services delivery and greater interoperability, or as a set of processes with the potential to encourage participation. It is possible that to gauge the extent to which transformation is achieved, we need new measures that are based on a coherent model of transformation. More complex concepts which are suggested as integral to the aspirational view of transformation, such as e-democracy, e-participation, and e-governance would need to be included in this model. Perhaps Riley's distinction between e-government and e-governance could form the basis for that model, and help to reconcile the diverse approaches identified so far.

Transformation in the e-government policies of the US, UK, Canada, Australia and New Zealand.

The concept of transformation, and the way it is expressed in mission statement and/or policy documents is examined in five jurisdictions. Each has a declared ambition to be a world leader in e-government, and all share some common elements in their systems of governance and government; three (the US, Canada and Australia) have federal systems of government with bi-cameral chambers, and two (the United Kingdom and New

Zealand are single state systems (although devolution in the UK has given some independent decision-making powers to the Scottish, Welsh and recently the Northern Ireland governments). New Zealand is unicameral. The five systems are close enough in 'governance' culture to share expertise on a range of administrative areas through informal networking and seminars, and are can be considered to be 'high achievers' in the global e-government rankings listed above, and routinely make it into the top 15 or 20 in these rankings, although the order of placement may change form year to year and between the two systems. The UK, Canada and the US consistently makes it into the top 10.)

The use of the term transformation is not confined to these five countries. In an address entitled *Emerging Challenges for EU eGovernment Policy*, the Head of the eGovernment Unit in the European Commission, Paul Timmers, refers to the need to move from e-government readiness to "impact and transformation." This transformation, it emerges in several accompanying statements, will see "modern and innovative administrations,"and increased interoperability between government agencies within national borders and across Europe, dependent on common authentication systems, European-wide ID systems, harmonization of regulations and common standards—all focused on ensuring that Europe has an outstanding public service system that will make it an attractive place to work and invest. (Timmers, 2005) This statement, hinting at some radical advances for some of the 25 countries of the European Union, is modest in its goals compared with the vision promoted in many individual jurisdictions.

The United States, *E-Government Strategy 2002*, (United States, 2002) pushes the concept further with its reference to the " transformation of government into citizen-centered e-government" (United States, p4) focused on three principles, "citizen-centered, results-orientated and market-based," a strategy concentrated on multi-agency projects that "improve citizen services, and yield performance gains" (United States 2002, 6). Policies outlined target services to citizens (G2C), business compliance and data sharing (G2B), sharing and integration of data between federal, state and local agencies (G2G), and improved supply chain procurements, HR and financial

management (IEE). The US strategy attempts to articulate the link between these processes and transformation.

> The payoff will not result from automating current processes, but rather through the transformation of how government interacts with its citizens and customers. Only through changing how we do business internally—that is, streamlining work processes to take advantage of modern IT systems—will citizens experience the transformation envisioned. (United States 2002, 16)

The document cites Rosabeth Moss Kanter's assertion that successful transformation requires "systemic change, a shift in the organizational way of life," and the recommendation of the President's Management Council that a new governance structure is necessary to achieve this transformation. However, the projects outlined in the Appendix as the first demonstration projects (the same as are evaluated in the 2006 performance measures noted above), are focused on transferring traffic from mail, walk-in or call centres, dealing, for example, with tax filing, information on benefit availability (but not applications for benefits), and educational loans, to web sites. It is unclear how governance changed to secure these service enhancements.

In the United Kingdom, the strategy document *Transformational Government: enabled by technology* was published in November 2005. The strategy was commissioned

> to seize the opportunity provided by technology to transform the business of government. Technology has a major part to play in the solutions to each of three major challenges which globalization is setting modern governments - economic productivity, social justice and public service reform. Only a strategic view will enable the United Kingdom to use technology decisively and effectively across government to meet its national objectives. (United Kingdom, 2005)

The strategy is aimed at providing effective technology solutions to transform public services for the benefit of citizens, businesses, and front-line staff, and at creating more efficient corporate services and infrastructure, freeing resources for front-line services. Overall, this "technology-enabled transformation" was intended to achieve a number of goals, including: to provide citizens and businesses with choice and personalization in

their interactions with government; to deliver efficiency gains, reduced paper work and lower costs to government; to provide public servants with better tools in order to provide better service; to enable policy makers to achieve intended outcomes; and to assist managers to free resources from back office to frontline services. It was also intended to enable citizens to be more engaged with the processes of democratic government. This vision ends with the statement

> However, the vision is not just about transforming government through technology, it is also about making government *transformational* through the use of technology – creating and retaining the capacity and capability to innovate and use technology effectively as technology itself develops. This is the only way public services can keep up with a continually changing, globalised society." (United Kingdom 2005, 4)

The strategy is intended to deliver services designed around the citizen or business, within a shared services culture, and a culture of professionalism, overseen by a Service Transformation Board. However, despite this focus on customer-centered service, much of the strategy is overtly designed to steer citizens towards the online channel, to eliminate legacy channels, and rationalize the number of online access points. It is also intended to promote more extensive data sharing between agencies, and to allow citizens to access their own data (a move which although increasing openness and accountability which would surely require complex online identity authentication and authorization procedures, not yet in place.) The strategy's advocacy of a continuing innovation and change process within government is focused on the development of a sharing culture between agencies, and the alignment of the strategy with several other key government IT strategies such as the problematic *Connecting for Health* program, reform of the criminal justice system, and the *Connecting Britain* digital strategy. This is an ambitious plan, which may have been overoptimistic given the inertia of the 300 year old bureaucracy it was hoping to transform.

The first *Transformational Government Annual Report* (2007) reports on the progress made against each of the published work strands, highlighting examples of customer-centric services, shared services, and personnel development (professionalism.) Various

agencies provide examples of new data sharing systems, service delivery, and IT enhancement across the health, education, and welfare sectors. Statistics are reported (e.g. the number of tax returns online) but not against targets set, or with any indication of the proportion of transactions carried out online or by other channels. There are also numerous examples of very successful call centers sitting alongside online information services. The report notes good progress with e-government initiatives, greater use being made of online interactions and transactions in addition to information provision, but none of this adds up to significant transformation. The report notes that there are still major challenges in many areas including the hugely expensive flagship project *Connecting for Health* in the NHS.

The independently commissioned Varney report is much franker, and finds e-services in the government sector are not keeping up with the private sector, and are failing to deliver on efficiency and cost savings. The report acknowledges the *Transformational Government* strategy has set the scene for "transformation of contact with citizens and businesses, including increasing the focus on the user of public services and making the most of technological advances," but notes that little progress has been made on the radical improvement in the level of collaborative delivery across the public service that is needed to effect this. For this to happen, it is necessary "to establish service transformation as a top priority outcome for government, underpinned by a detailed delivery plan and quantitative performance indicators." (Varney 2007) The Varney report has been very influential in e-government thinking in the UK, and reinforces the concept of transformation as the integration of service delivery across agencies, and internal efficiencies.

Canada

When Canada began to develop a transformational vision in 2003, it placed emphasis on 'service transformation' and 'business transformation,' within a 'whole of government' approach. To achieve this, the Canadian government developed a set of high level "visions" for service transformation to determine what a client-centered seamless "service continuum" should look like and what government-wide enablers or capabilities needed

to be in place to support it. These were identified as: service delivery, common secure infrastructure and architecture, policy, organizational readiness and human resources, and communication, and were advanced on two fronts, described as:

- client-centricity, or moving to citizen-centered programs and services to improve the service experience; and,
- a whole-of-government approach, or transforming how we do what we do across government to deliver operational efficiencies and better results for Canadians. (Canada, 2003)

The Canadian approach was more radical than either the British or American approaches, in that it clearly acknowledged that issues of governance would need to be addressed.

> How best to address implementation and sustainability issues is also being determined, such as what incentives would encourage clients to move on-line for transactions best suited to the Internet; what tools are needed to enable coherent, disciplined and standards-based business transformation across departments and agencies; what additional changes are required to governance and decision-making processes to support implementation, and what are the best approaches to financing government-wide transformation. (Canada, 2003)

Under the heading *An evolving governance approach*, the report continues:

> The themes of client-centricity and whole-of-government innovation have been central to the government of Canada's efforts to foster a service culture across the public service, and deliver operational efficiency gains. To date, the Government of Canada has not made radical changes to its governance structure. Instead we have pursued an approach that promotes interoperability and integration that we call "radical incrementalism." Until we know better how to operate as a fully e-enabled e-government and design the supporting structures to achieve fundamental transformation, our experience suggests significant change can be undertaken to meet citizen's steadily more demanding expectations for service delivery *within* existing organizational structures.

(Canada, 2003)

It is as though transformation has been postponed for the moment, while the government takes stock. It is not off the agenda though. The *Government Online Report 2006* declared "Mission accomplished" and that the Canadian GOL site would close. Achievements noted include "a robust common secure infrastructure, 130 of the most commonly used services available through the Canada Site and its gateways, a citizen-focused engagement, and stronger interdepartmental and inter-jurisdictional partnership." However, the report notes

> the work on transforming government service delivery has just begun . . . a deeper level of interoperability is needed to support multi-channel service transformation. While well-orchestrated on-line interfaces are critical, true transformation must include the "back-end" of government - shared and common internal-to-government services such as desktop computing, human resources management and financial administration.(Canada, 2006)

Thus, despite earlier talk of the need for changes in governance, the next stages of transformation look to be focused on G2G and IEE transformation.

Australia also focused on business transformation

Australia's most recent e-government strategy makes specific reference to business transformation, building on earlier strategies. The broad agenda was set in 2002 in the initial e-government strategy, *Better Services Better Government*, which mapped out the move toward more comprehensive and integrated use of new technologies for government information, service delivery and administration, led by the National Office for the Information Economy. In 2004, *Australia's Strategic Framework for the Information Economy 2004 – 2006* was released. This outlines a 'whole of government' approach to maintaining Australia's position as a leading information economy including a key strategic priority to "raise Australian public sector productivity, collaboration and accessibility through the effective use of information, knowledge and ICT". (Australia, 2004)

The current vision has shifted somewhat, the National Office for the Information Economy has become AGIMO (the Australian Government Information Management Ofice) and the focus has shifted to "a connected and responsive government by 2010." Like the UK, the Australian e-government strategy envisages its e-government achievement as integrated across online, electronic and voice-based capabilities, and seeks to measure achievement across all these channels. Activities will be in four main areas: meeting users' needs, establishing connected service delivery, achieving value for money, enhancing public sector capability. These strategies are led by AGIMO, and by the Secretaries' Committee on ICT (SCICT) established in June 2006 as a strategic decision-making committee for whole-of-government ICT use by the Australian Government. The SCICT's agenda is informed and supported by both the Business Process Transformation Committee (BPTC) and the Chief Information Officer Committee (CIOC). AGIMO's stated role is to maximise government benefits from ICT investments, and to act as a catalyst for change in government to improve the delivery of public services and achieve long-term efficiencies.

Australia's 2006 e-government strategy *Responsive Government: a new service agenda* includes a reference to transformation under the heading *Reform and transformation*, but there is little focus on true transformation:

> The government will reform poorly designed and redundant business processes, and reduce duplication by combining similar processes across agencies. While technology will be an enabler for these reforms, the main effort will be in implementing new ways to undertake government business. (Australia, 2006)

Systems and processes across government agencies that will facilitate this include: identity management, registration, application, reporting and accountability, information and content management, and payments. There is a clearly stated expectation that, "connected government means that agencies can no longer operate as isolated silos." A paper by Lionel Pearse on the AGIMO web site reflects the Australian philosophy:

> E-government is not simply a public good that provides another channel of communication between governments and their constituents, it is an opportunity to employ new technologies in order to enable transformation of government to a model more appropriate to the 21st century. To obtain this transformation a management

method should be employed that reduces the risks and assists realisation of the benefits.**”** (Pearse, 2004)

New Zealand

New Zealand’s current e-government goals take a different approach to transformation, stating:

> By 2007, information and communication technologies will be integral to the delivery of government information, services and processes.
>
> By 2010, the operation of government will be transformed as government agencies and their partners use technology to provide user-centered information and services and achieve joint outcomes.
>
> By 2020, people's engagement with the government will have been transformed, as increasing and innovative use is made of the opportunities offered by network technologies. (State Services Commission, 2007a)

The formal Strategy document entitled *Enabling transformation: e-government strategy for 2006*, which defines what is meant by the use of ‘transformed’ in the 2010 goal above, links the e-government strategy to two other government strategies—the Digital Strategy, (which aims to make New Zealand a world leader in using information and technology in order to realize its economic, social, environmental and cultural goals), and the Developments Goals for the State Services, which include goals such as networked state services, accessible state services, trusted state services and excellent state servants (focused on raising the ‘professionalism’ of state servants).

The 2006 e-government strategy is an ‘all-of-government’ approach to transforming how agencies use technology to deliver services, provide information and interact with people (State Services Commission 2006). But it goes further than this – envisaging a model of e-goverment that will offer user-centered services in a ‘joined-up’ government environment, based on a federated enterprise architecture of total transparency. For example, in an exemplary demonstration of Riley’s ‘networked societal guidance,’ the public disclosure of data on which policies are based will “allow users and interest groups to draw their own conclusions on policy-matters, thereby increasing the

transparency of agency decision-making. This in turn will lead to increased trust in government" (State Services Commission 2006, 34). Evaluation criteria proposed (though not actual measures) are focused on the citizen (can they achieve what they want without searching across a number of agencies, get consistent service across channels, find the services intended for them, and provide personal information to government to a single agency, for re-use); and the agency (do they put citizens first, inform themselves about users' experience of their services, work together, sharing knowledge and learning, and do systems and infrastructure support this).

This long-term vision depends on a changed culture throughout government, a 'seamless' approach to government service, and the use of new social networking software (collaborative web sites, wikis , blogs, etc.) The difficulties inherent in achieving this vision are recognized . . .

> Transformed government will call for a different way of working – one where networks, not hierarchy, are the focus. This raises fundamental questions about the future. Does the 'new system' threaten the integrity of the existing one? More specifically, what are the implications for personal privacy or parliamentary accountability? Are there other ways of meeting these accountabilities? If so, what are they and how do they work? What is the balance of cost and benefit? (State Services Commission 2006, 20)

These questions arise from e-government, the strategy notes, "but their answers require discourse and a work program that go beyond e-government."

Pursuing the goal of e-Participation, the government has established an online participation project, in order to ensure policy and services tap into and "fit better with peoples' experiences and needs," and "focus the public's good will and knowledge on significant complex problems that need local solutions" (State Services Commission, 2007b). In order to assist public institutions to take advantage of new technologies to capture this public participation, the E-Government policy team have established a *Guide to Online Participation,* originating with the OECD guidelines, informed by comment from an online wiki-based community, and compiled case studies of successful online

participation projects, on a dedicated web site. (State Services Commission, 2007c). [1]

Summary, common themes, differences etc.

In the e-government strategies of these five countries there are common themes, and some significant differences. Many of these differences result from the fact that e-government strategies are tied closely to wider government policies. Thus while the US e-government strategy shares with the others reported here the concept of citizen-centered service, it also has a strong results-orientated and market-based focus which is one of the primary drivers in the current US administration. G2G and IEE dimensions are therefore competing with G2C. Canada's 'whole-of-government' approach, by contrast, underlies its very strong focus on client-centricity with an understanding that governance issues must be addressed. Its concern about finance is as much focused on how to finance the necessary change process, as what savings can be made. Canada is strongly focused on G2C, and G2B relationships within e-government, with some interest in e-governance issues.

Australia and the United Kingdom share a common approach to transformation that places emphasis on business process as the core domain of change, and cost savings, efficiency and productivity (in the IEE domain) as the major outcomes desired. In the UK, organisational change, or 'public sector reform' is seen as driven more by globalization, with ICT as an enabler rather than a primary driver. The goal of customer-centered service is constrained by goals to close legacy channels, rationalize points of access, and share data, in the name of service: "overzealous data sharing rules may be an obstacle to improving public services, " states a report from the Prime Minister's Office, over-riding concerns expressed by citizens and the Information Commissioners Office. (Espiner, 2007) Australia's initial emphasis on the use of ICT to develop an information economy determined its focus on raising public sector productivity and business process transformation as its key transformational goal, through the mechanisms of a multi-agency and whole-of-government strategy. Australia and the US thus share a definition of

[1] The first example of a participation wiki used to gather public responses, and solicit suggested wordings, on proposed new legislation (the New Zealand Police Act) can be found at: http://wiki.policeact.govt.nz/

transformation closely related to the achievement of G2G and IEE goals. The New Zealand government's concept of transformation in e-government is closer to the Canadian strategy, but perhaps goes further in including e-participation as a core plank in its strategy as it moves toward the transformation of the relationship between government and citizens. However, its identification of a change in governance as a necessary step towards transformation is less clearly articulated than in Canada.

Concepts of transformation in the literature

In contrast with the more limited conception of e-government in most of the government strategies above, the view of e-government transformation emerging in the literature is much broader, but not any more unified. Fountain's concept of the Internet as an 'enacting technology' refers to " the tendency of some organizational actors to implement new IT in ways that reproduce, indeed strengthen, institutionalised sociostructural mechanisms," to "preserve ongoing social or network relationships," and to enact new technologies in ways that will sustain or strengthen "*deep institutions*, history and culture encoded in the existing norms and values of an institution," (Fountain, 2001, p90). However, Fountain's careful observation, leading to a relatively conservative view is in contrast to the vision of those who see the emergence of e-government as an opportunity for a transformation of western democracy, and new forms of 'e-governance.' An agreed conceptualisation of what e-government is, where it is heading, what benefits it can bring, is still lacking. The academic community is no more in agreement than the world of politicians, policy makers and IT consultants.

Stages of E-government

The earliest attempts to describe the changes that ICTs were bringing to the public sector, are based on a stages model, an approach already well developed in the fields of Information Systems and E-Commerce. Although Layne and Lee's model of the four stages of e-government was not the earliest, it is one of the most widely cited. Their model includes: the catalogue stage (where directories of publications, staff contacts or services available appear on goverment web sites); the transaction stage (services available online through single agencies); vertical integration, where access to

information and services are aligned at all levels of the individual instituion; and the final stage, horizontal integration, where services that require input from more than agency are accessible from one site, and through one interaction. (Layne and Lee, 2001) [2] The four stages can be characterised as progress through information provision, to interactive services, and the necessary collaborative fully integrated service for mature e-commerce delivery in government, dependent on technological and semantic interoperability, within a shared organizational culture. It is basically an information systems model, useful as a measure of technology adoption in agencies and to investigate the effectiveness of the drivers from central government towards fully integrated service.

Kunstelj and Vintar argue that the development of e-government is "still primarily aimed at developing electronic services that customers can access via the Internet" (Kunstelj and Vintar 2004, 131) and that this has led to a slow-down in e-government development. Using a model drawn from the Australian National Office for the Information Economy (2003), focused on Web presence, Interaction, Transaction, Transformation, they develop a model of e-government based on : e-readiness, back office, front office (subdivided into supply, and demand), and effects and impacts. Kunstelj and Vintar observe that most governments and agencies have up to this point adopted a "quick-fix, quick-wins" approach to e-government development, along with front-end portals that are used to pull the endeavours of various agencies together into a 'one-stop shop' to these services. They note that evaluation of e-government in the literature, which is where most models have been presented, has to date been narrowly focused and has taken a piecemeal approach, lacking in understanding of the relationship between e-government processes that would create the fully integrated services necessary for transformation. Thus the literature is seen to fall short of addressing the strategies needed for governments to achieve their e-government objectives.

[2] Examples of this include the ICT facilitated cooperation between emergency services in both the UK and US, and facilitation of exports by NZ Customs, through the use of e-certificates issued by the NZ Food Safety Authority.

Kunstelj and Vintar analyse the dominant e-government evaluation models, noting the absence of research which relates e-government readiness to back office systems (such as interoperability between agency databases), or which relates back office systems to integrated front office services, or which relates web-based interfaces and services (identified as front office (supply-side) to user demand, or to front office (demand-side). They also note that the current emphasis on customer orientation inherent in the concepts 'citizen-centric' and 'transformation', as used in government strategies, requires integration of services, and suggest that methods for monitoring, evaluating and benchmarking e-government will need to follow same principles. They then propose an integrated model (see Figure 2) which highlights the dependence of back office systems on environment

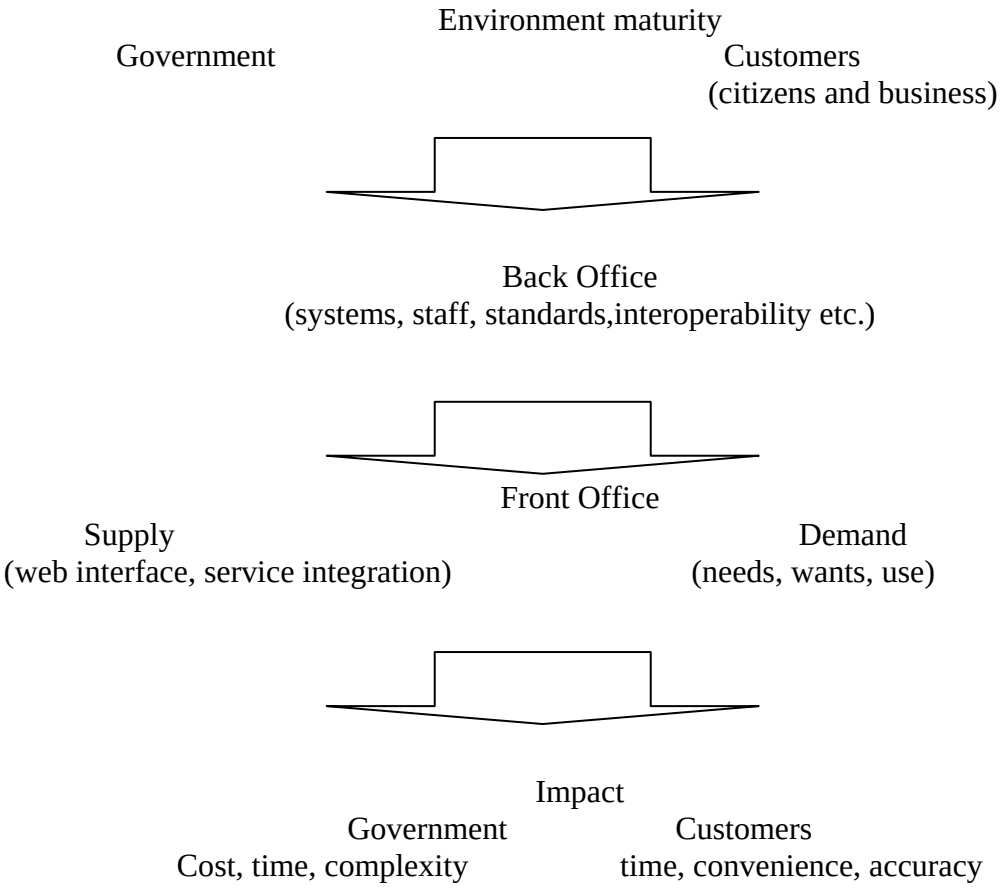

Figure 2. Kunstelj and Vintar's model of integrated e-government evaluation

maturity (or e-government readiness); the dependence of front office services (supply and demand side) on back end systems; and which relates front office services to impacts. This is a useful approach, and helps us see where the literature is failing to address the challenges which governments are setting themselves. However, transformation in this conceptualisation remains focused on transformed service delivery, fully integrated and customer-centric but still delivering primarily cost savings to government, and time savings and convenience to citizens. Their model is primarily an e-government transformation modle, fairly typical of the information systems concept of transfomation.

Incrementalism vs transformationalism

If transformation means more than this, an alternative 'stages' model is needed, one that goes beyond service delivery, that can both articulate the nature of transformation envisaged, and support the development of measures of success. In a paper on "E-government and the transformation of service delivery and citizen attitudes," Darrel West, Director of the Taubman Center for Public Policy at Brown University, and developer of the InSidePolitics.org web site which features the Global E-Government rankings referred to earlier (West, 2007), summarizes research which examines "the content of e-government" (rather than the processes of e-government to determine whether it is taking advantage of the ability of the Web to "to improve service delivery, democratic responsiveness, and public outreach."

West 's stages model is more grounded in a Public Administration approach and incorporates: billboards (equivalent to Layne and Lee's catalogue stage); partial service delivery; portal stage (integrated service delivery); interactive democracy, envisaged as public outreach, participatory two-way communication and accountability, resulting in "systemwide political transformation." This model should really be regarded as a model of four dimensions, rather than a sequence of stages. Although it links e-government and e-governance, implying that one precedes the other, this is not necessarily so. Governments as we have seen above may choose to focus on one or the other, or both at the same time.

West also argues that

> In some respects, the e-government revolution has fallen short of its potential to transform service delivery and public trust in government. It does, however, have the possibility of enhancing democratic responsiveness, and boosting beliefs that government is effective. (West 2004, 15)

West suggests that the difference between some of the more optimistic, and what we have called 'aspirational' visions of e-government transformation, and the findings of empirical research, including his own, can be ascribed to a fundamental difference between 'transformationalists,' and 'incrementalists,' who focus on "the constraining influence of social, economic, and institutional forces on the ability of technology to alter behavior." West observes that change occurs generally on a continuum based on comparisons over time and space, that assessment of change is thus complex, and that discussion in the literature of the impact of technological change is too often focused on the "endpoints of change comparisons," without looking at "the direction and degree of change, or identifying which particular dimension of change is being evaluated." (West, 15) In an attempt to deconstruct these dimensions of change, and reach a more informed assessment of the nature of change in e-government, he suggests that researchers should consider change on three axes: long term vs short term change, big vs little change, and technocratic vs political and institutional change. West's conclusions are based on the data analyzed in the paper, and on evidence such as an increasing degree of interaction and responsiveness to citizens on some web sites examined. He identifies an apparent link between a positive perception of the public's views of government and an e-government framework, and suggests that the is that digital government "has the potential to transform delivery and citizens attitudes." However, at this point in time, government in the US is undergoing incremental rather than transformational change due to the use of technology. More profound change (fully integrated and interactive services *and* e-democracy), West suggests, would be needed to harness the transformational power of the Internet, and even this would not necessarily increase citizens' trust or

confidence in government. He is right, trust and confidence in government is a much more complex and fragile phenomenon than most e-government policy rhetoric suggests.

Scholl brings some different dimensions to the debate. To determine whether the field of e-government is also introducing a new research paradigm, one that differs from the more traditional frameworks of Public Management Information Systems research, Scholl reviews recent literature on transformation in the emergent e-government literature, and the earlier PMIS literature. He investigates the dimensions of organizational change analysed in the literature, and concludes that e-government "has the capacity to transform the business of government in mode rather than in nature"(Scholl 2005, 1). Using Watzlawick, Weakland, and Fisch's (1974) definitions of and second-order organizational change, (first-order change being "incremental , and planned . . . minor improvements and adjustments" (cited Scholl, 3) , and second-order change extending to a "multi-dimension, multilevel, qualitative, discontinuous and radical organisational change involving a paradigmatic shift" (Levy and Merry, 1986, cited Scholl, 5) Scholl suggests that there is little second-order change or "true-to-label business reengineering" in the public sector, and that organisational transformation in the public sector is of comparatively slow pace and is mostly first-order change oriented (Scholl 2005, 3-4). Contrary to the view of Traunmueller and Wimmer (2003) and others that e-government, with its capacity for reengineering, would bring about second-order change, Scholl finds that there is little evidence of true second order change through e-government initiatives. If this was to occur, he suggests, it is likely that it would be in the domains of G2G, G2E, and IEE. Whether the lack of evidence is because such changes are not occurring, or because research has been focused on the first-order change domains of G2C and G2B, as Scholl hypothesizes, is not yet clear, research evidence of second-order change is required to address this questions. Second-order change of the kind that Scholl outlines would indeed be clearly transformational— but not necessarily purely in terms of the radical organizational change he describes. This level of organizational change, whether transformational or not, remains internal to the organization, and does not include the e-governance activities identified by Riley. This suggests that two approaches to e-governance may be needed one reflecting internal structural change and one related to

external relationships. An alternative view is that structural organizational change is still with the realm of e-government, and should not be considered to change the nature of government.

Chadwick and May argued as long ago as 2003 that an opportunity for a 'renewal of democracy' through e-government had been lost, largely because "the ways in which the debates about the interaction between government and citizen have been framed have had a major impact on governments' new electronic forms" (Chadwick and May, 2005, 273). The authors attribute this to two causes—the nature of "key values, and discourses" in the early phases of e-government development, and the dependence of the public sector on ICT solutions developed in the private sector, which must then be put to effective use, preempting any rethinking of the overall relationship and information exchange between government and citizens. In their now very familiar model of e-government-citizen interaction, Chadwick and May contrast the Managerial, the Participatory and the Consultative models. The Managerial model covers the majority of contemporary e-government activity, enhanced delivery of services, more accurately targeted communication of citizen requests and faster responses, better communication flows between government and citizens and between agencies. The Managerial model is described as incremental, and can be identified as a model of e-government transformation.

The Consultative model, focused on information gathering for policy creation, portrays an electronic paradigm that mirrors the processes already used by government for public consultation, with some existing barriers to participation, such as the dominance of 'special interest groups,' removed (but possibly others, such as the lack of access, competence or interest in technology introduced). Neither the Managerial nor the Consultative model require transformative change, according to Chadwick, although the consultative model looks very like Riley's e-governance model.

The Participatory model is a much more radical proposition:

> While the first two models of interaction stress the vertical flows of state-citizen communication, the participatory model assumes a much more complex, *horizontal* and *multidirectional* interactivity. It is assumed that while states may facilitate political discussion and interaction, they are but one association among many with a presence in civil society. (Chadwick and May, 2003, p280)

As the authors go on to note,

> the participatory model contains the recognition that knowledge is discursive, contingent, changeable—that it emerges through interaction. It has obvious Utopian leanings, but at the same time, advocacy of an active civil society need not rest upon a desire to sweep away representative structures. (p281)

This paradigm foreshadows the growth since that time (and certainly since some of the prophetic sources upon which Chadwick and May base their arguments), of social networking software, the development of wikis and blogs as knowledge creation tools, and their use by government agencies in their experimentation with participatory democracy, as noted above. Despite the potential of these new communities of interest, the authors point out the risk of " the characteristic trends of post-industrial democracies—fragmentation and single issue politics" being intensified by social networking software.

An alternative way of looking at the transformative potential of e-government- e-governance

In contrast to the knowledge creation model of Chadwick and May, Geoffrey Roy addresses the potential of e-government to change the nature of governance itself. Roy defines e-government, using what he describes as a definition adopted by many governments of late, as "the continuous innovation in the delivery of services, citizen participation, and governance, through the transformation of external and internal relationships by the use of information technology, especially the Internet."
In contrast to the perception of transformation focused on the organisational level, vertical and horizontal integration between agencies and between central and local government with a new citizen-centric focus, for Roy, transformational e-government

implies a changing relationship between government and citizens , an evolution of the current model of parliamentary democracy applied in most Western countries to a new model, greater citizen involvement in governmment through e-democracy, and e-participation, and a "re-conceptualisation of how power is organized and deployed" in the modern state. The desired path of 'transformative collaboration' (as opposed to 'transitional change,' which he suggests is what has largely occurred to date) is "a collaborative ethos that must ideally render e-government a more participatory model of co-governing between public servants, government officials, and the citizenry" (Roy 2005, 292).

Roy's emphasis on governance, rather than government, is critical. The distinction between e-government as the application of information and communications technologies across integrated IT infrastructures, integrated service delivery models, dependant on the networking of information and managerial systems across government, is contrasted with the fluidity of e-governance, the changing structures and relationships within the public sector, and in its external relationships, necessary to create "more radical organizational, socio-economic, and political adaptations to new governance realities, more digitally networked, participative, and empowering." (Roy 2006, x) But this is not the same as Riley's model of e-governance, a more conservative and politically acceptable view. Roy, it is worth noting does not use the term e-governance. The transformation he is seeking is a of a larger order than e-collaboration, e-engagement or even what Riley calls networked societal guidance, although it encompasses all three—it is closer to Chadwick and May's avowedly utopian vision of Participatory management, with its emphasis on new paradigms of knowledge creation.

Roy acknowledges that there is a substantial divide between "those seeking more participative democracy and those preferring a refurbished representational model," a divide typified by "the distinction between customer relations management and citizen engagement" which he describes as follows:

> Whereas the former encompasses tools such as focus groups, feedback surveys, and polls, (some of them online) deployed by public managers in their role of serving

> public service customers, the latter is more dependant on collaborative engagements involving efforts to share power and foster leaning. (Roy 2006, 74)

While Roy agrees with Chadwick and May that the way in which information is exchanged and deployed is key to this distinction, he concludes

> It is the very nature of power and governance that is shifting as information becomes less scarce and more readily available. The challenge for organizations is to become less insularly concerned with containing and shaping information and more able to share it with all relevant stakeholders—and to be less defensive and more pro-active in doing so. The challenge is also to become more participative and collaborative—both internally and externally—and less reliant on vertical authority. Finally the challenge is also one of embracing new forms of complexity rather than relying solely on clarity. (Roy 2006, 75)

Transformation a wider social phenomenon?

This vision of the future of parliamentary democracy, changing governance structures within the bureaucracy, the sharing of knowledge and power through e-enabled consultative processes and knowledge creation, calls into question the very nature of representative democracy, and raises many other issues. What is the role of the parliament itself, its committees and decision-making process, and the need for the executive government of the day to take responsibility for decisions, to be held accountable? Will increasing use of consultative processes (both on and off-line) to enhance citizens' participation in the decision-making processes raise expectations of government by plebiscite? Will powerful lobby groups simply adopt these new channels to influence decisions, and how will contributions from such groups be weighed against those of ordinary citizens? How do the new consultative processes sit alongside the well-honed procedures for public consultation which already exist within western legislative systems, such as Select Committee hearings in the Westminster system and Senate and Congressional Select Committees in the US? These are important issues, all canvassed in passing by commentators on transformation and e-government, but to which there are few answers.

Another key question is whether the transformation envisaged is simply a part of broad social revolution driven by technology, and the rising expectations of citizens in relation to those technologies, or whether some of the changes (greater accountability, citizen-centric services, a higher level of consultation), none of which are dependant on technology, are part of other factors in contemporary society, and changing attitudes toward authority. In which case calls for changing governance structures and e-democracy may be driven as much by societal change as by technology. The changing role of the media are part of this new 'complexity'. The impact that new technologies have had on the creation and dissemination of news stories, and the 'populist' debates and polls conducted in today's media are influencing the social capital and knowledge creation taking place in society at large. At the same time, the tendency of the media to sensationalize, some would say trivialize, public issues, to 'name, shame and blame' government agencies for perceived failures mitigates against the trend towards greater openness and accountability, and will foster, rather than diminish the tendency to 'defensiveness' noted by Riley. (2003, 75)

Many of the same drivers and tensions, arising in part from the digital revolution, are impacting on the media itself, as was graphically illustrated by British Prime Minister Tony Blair, in his speech on the media during his last days in office (Blair 2007).

> the relationship between politics, public life and the media is changing as a result of the changing context of communication in which we all operate; no-one is at fault - it is a fact; but it is my view that the effect of this change is seriously adverse to the way public life is conducted; and that we need, at the least, a proper and considered debate about how we manage the future, in which it is in all our interests that the public is properly and accurately informed. . . .

Blair continues .

> The audience needs to be arrested, held and their emotions engaged. Something that is interesting is less powerful than something that makes you angry or shocked. The consequences of this are acute. First, scandal or controversy beats ordinary reporting hands down. . . News is rarely news unless it generates heat as much as or more than

light. Second, attacking motive is far more potent than attacking judgment. It is not enough for someone to make an error. It has to be venal. Conspiratorial.

As a result of intense competition in the media, digital channels, and multimedia formats competing with the traditional news sources, a universal tendency to intermingle fact and comment in order to gain immediacy and a competitive edge, and constant, unfair and unbalanced has led to what Blair describes as the "demoralization" of the public service. Can new forms of e-governance, e-engagement, e-participation, networked society guidance, and new forms of knowledge creation based on social network software overcome these trends in the media in the 21st century, allowing government to communicate more immediately with citizens, avoiding the media entirely? This would surely be transformation.

Conclusion

This paper has investigated various approaches to the theoretical foundations and practical implications of the concept of e-government transformation using examples from three perspectives: the policies and strategies adopted by governments, the information systems/information management literature, and the public administration/political science literature. Each discipline brings its own theoretical and methodological framework to bear on the situation, and these in turn determine the questions which are posed, and the ways in which they are investigated. They are also focused on different aspects of government –whether this be structure, services, internal efficiency, or consultation and participation. The examples chosen are necessarily selective, but represent a range of the approaches taken both by governments and academic and industry commentators, in order to explore the landscape of e-government research. Some of the authors referred to in detail are major thinkers in the field, others bring a unique but useful perspective to the issues under debate.

If we assume that in the applied social sciences, a broad category that encompasses all the disciplines engaged in e-government research, the purpose of such research is to analyze observed phenomena, to develop theories, and criteria for the evaluation of both theory and practice in order to contribute to understanding of the nature of government, with

improvement of government the long term goal, we need models which will enhance this endeavor. The question then arises, do these various disciplinary approaches represent different aspects of the same phenomenon, that can be aligned in one unifying paradigm, or are they incompatible, continuing to talk past each other, as they seem to have done in the past? This paper has made some distinctions between these various approaches based on a number of premises, for example, the terminology G2C, G2B, G2G, and IEE has been used to distinguish between the domains of government activity that are being changed in some way by the use of ICTs. It has also contrasted the highly pragmatic approaches of analysts such Richard Heeks with those of advocates of a more aspirational vision of e-government- although Heeks is no less passionate than the so-called transformationalists in his advocacy of the value of e-government, especially in the developing world. It has considered the view that this debate is one between 'incrementalists vs transformationalists,' between those who see limited change occurring, and those whose vision leads them to articulate the potential for change in e-government, as opposed to what they see occurring. What is needed is a unifying model of e-government transformation, which allows this broad range of analysts to find a place where their research can contribute to a holistic understanding of e-government and where the past habit of talking past each other become more focused on talking to each other.

A model based on Riley's definitions of the dimensions of e-government and e-governance, based on Kettl's distinction between government and governance (Fig 1) forms a useful basis for this. But it needs to be more comprehensive. It is important to recognize that the six elements of governance outlined by Kettl along with the six elements of governance remain crucial to any model. These dimensions of government/governance do not disappear simply through the introduction of ICTs to government, and a model of transformation which does not accommodate them will fall far short of reflecting the actual world. Indeed they would form a valuable focus for e-government research. Changes are occurring within government, as a result of the introduction of ICTs, which cannot be confined to electronic service, productivity and workflow. On the other side of the model, electronic consultation, engagement and

networked societal guidance may also not able to contain and adequately describe some of the initiatives being trialed by innovative governments and agencies keen to employ ICTs to enhance the reach of their communication with citizens, and to look seriously at social knowledge creation. It is these activities that may achieve both the participatory democracy envisaged by Chadwick and May, West's final stage (or dimension), and the transformation envisaged by Roy. It would be useful, therefore, to define 'networked societal guidance' more broadly than Riley defines it, to include socially derived knowledge, and to bring his definition of e-governance closer into line with the vision of so-called 'aspirationalists.' This level of activity would allow governments to side-step the media, to manage their communication with citizens more pro-actively, even to compete with the media for the attention of citizens. While some may see this cynically as allowing for government to put its own 'spin' on these communication channels, it can also ensure that citizens can challenge the spin directly, in an open forum without relying on the media to do so. This is a powerful incentive to governments to engage in social networking.

Thus, an integrative model of e-government, and e-governance, as defined by Riley but with a broader definition of networked societal guidance, and grounded in the Weberian principles of government and governance as defined by Kettl (2001) can provide a coherent framework for a multidisciplinary approach to research into the use of ICTs in the public sector, whether incremental or transformational. While some of the dimensions of e-government, and in particular e-services or G2C/G2B dimensions have a good track record of research, and methodologies are developing well, less well explored to date, is the impact that e-government is having on government itself, in terms of superstructure, decisions, rules, roles and outputs. Similarly, as Scholl has noted, there is little research to date focused on the dimensions of e-governance – as these activities begin to take shape and move beyond experimentation to formal policy across government, the research community must increasingly turn to this part of the model with empirical investigations as well as theoretical speculation. While we can predict that this new and under-researched area, which can be categorized as G2C2G, and G2B2G, will see initially some incremental changes, it has the potential, should governments decide to

fully exploit it, to enhance democratic process in a highly transformative way. But as in the relationship between 'government' and 'e-government', research in these new e-governance areas, must recognize their relationship to the core dimensions of governance as defined by Kettl. E-governance, e-participation, and knowledge creation, if they are to be both effective and transformative will only develop through clear politically driven and purposeful goals of government and agencies. The research community, bringing to bear the methodologies and insights of a rage of disciplines, has some significant tasks ahead to help governments understand how they can better serve their goals, and make better use of ICTs in government to achieve better government.

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