



The New World of Government Work

Transforming the Business of Government with the Power of Information Technology

March 2006

Authors:

Jerry Fishenden – National Technology Office - UK

Marie Johnson – Industry Manager Public Services and eGovernment - WW

Kim Nelson – Industry Manager Public Services and eGovernment - USA

Gilles Polin – Industry Manager Public Services and eGovernment - EMEA

Gabe Rijpma – Industry Manager Public Sector - APAC

Pascal Stolz – Government Industry Managing Director - WW

In recognition to the collaborative efforts of the Microsoft World Wide Public Services and eGovernment Team and their valuable contributions:

Melissa Adamson, Daniel Arroyo, Oliver Bell, Per Bendix Olsen, Erik Brown, Frederica Carpenter, Joel Cherkis, Jimi Duff, John Donaldson, Joice Fernandes, Carlos Gomes, Tom Haegle, Gordon McKenzie, Stijn Hendrikse, Eric Herzog, Naman Khan, Greg Lane, Stephane Loeb, Giuseppe Mascarella, Ruediger Meyer, Daniel Penney, Leo LaFlamme, Andy Pitman, Chris Roberts, Philip Stradling, Greg Stone, Richard Young, John Weigelt

Microsoft Public Services and eGovernment Strategy: Discussion Paper Series

Discussion Paper Number 1:

Achieving Seamless Service Delivery: Technology as a Policy Lever

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Purpose

The purpose of this paper is to stimulate discussion on some of the most profound challenges confronting government and society – that of a global connected world and an aging society. The extent of the fiscal impact and consequences for service delivery assurance in future years is beginning to emerge. The drive for efficiency breakthroughs, the competition for talent, and the protection and generation of tax revenues is driving efficiency and administrative reviews, and regulatory and service delivery reforms.

This paper offers the reader a vision for a new world of government work, introduces the Microsoft Public Services and eGovernment Strategy and proposes a discussion that will continue beyond the last pages of this paper. First in a series of strategic discussion papers, we offer that:

- Technology has become far more than the factor of production – it is in itself a policy lever;
- Technology alters the very concept of policy, and our very understanding of service delivery;
- Technology can preserve the underpinning policy purpose through connected systems.

The concepts developed or approached below will be further explored in subsequent papers, which will explore, in greater detail, elements of the Microsoft Public Services and eGovernment Strategy, the company's programs, solutions, and best practices.

Executive Summary

A powerful transformation is on the horizon for government and public services organizations. The technology investment decisions made by government organizations today and in the next few years will change the face of administrations and service delivery and alter the competitiveness of entire economies for decades.

Governments are sharply focused on the converging economic costs of aging populations, red tape, tax avoidance and benefits fraud. They are challenged to manage the future budget impact of these converging socio-economic forces. For the first time, populations will be more old than young. This factor will require a broader range of services over a longer period paid for by a smaller taxpayer base. In addition, escalating tax avoidance and benefits fraud add to the pressure to protect the revenue base. As a result, there is a common theme emerging around the world. What role can technology play in helping government achieve the necessary policy outcomes of improved service delivery, help drive increase tax revenues base, reduce the incidence and impact of the informal economy in emerging markets, while at the same time strengthening transparency.

As a leading provider of technology, Microsoft strongly believes that software and a connected infrastructure is a critical foundation to address these policy challenges and we proposes that the value and merits of a robust, predictable and interoperable platform will help governments worldwide achieve economy-wide efficiencies. This vision, demonstrated through the descriptive Connected Government Framework (CGF), is taking hold though the establishment of a global Public Services and eGovernment strategy focused on strategic solutions supporting the core functions of government. Technology has evolved beyond being a 'factor of production' to being one of the most powerful policy levers available to government.

Transforming the Business of Government with the Power of IT

In a global connected world, governments compete for talent, resources and revenue. Governments operate on a scale of global economies and are global even when the service is local – and this is no less the case for governments than it is for corporations such as Starbucks, Banco De Bilbao, or any other entity that interacts with an ever more mobile citizenry. In emerging markets, micro businesses move from the informal economy to the formal economy through technology innovation such as enabling micro purchases via mobile phones.

Technology alters the very concept of policy, and our very understanding of service delivery. If one starts to consider that through the use of technology, a tax administration, for example, can modernize its service delivery to realize processing efficiencies while regaining billions of dollars in unpaid tax. If a national government can publicly state that its tourism portal increased GDP by 1.5% GDP benefits, that a government employment agency can demonstrate that its online Web services job-brokerage operation reduces the frictional cost of unemployment, then one could contend that technology truly has become one of the most powerful policy tools for the twenty-first century. These types of benefits are not isolated, but continue year after year. Such significant benefits cannot be achieved through a marginal or superficial view of technology, but through a coherent and holistic approach that values the service delivery platform and interoperable strategic solutions across the policy-program delivery lifecycle.

Governments around the world are beginning to implement management and measurement systems used to evaluate the value of their technology investments. We recognize that when governments around the world implement these frameworks they do so not only to reduce the total cost of ownership, but also to provide assurance and control frameworks recognizing the fundamental role of technology in policy formulation and service delivery.

The often generic definitions used in many eGovernment surveys and report cards are typically only limited to the features and functionality of government Web sites rather than the fundamental transformational nature of the expected change. As a result, these methodologies fail to account for the multifaceted functions of government, including

- The roles of policy formulation and service delivery
- The concept of whole-of-government responsiveness,
- The many ways in which citizens and businesses interact with government
- How government outcomes are measured and evaluated

The very essence of the definition of eGovernment may have to be re-thought. eGovernment may need to be looked as using technology to transform the business of government and realize superior performance in service delivery against the core challenges facing Government. Thus, in defining eGovernment we might consider including the full range of government functions transformed by technology to achieve the following:

- Agile and responsive policy advice and service delivery
- Strengthened transparency and accountability
- Enhanced ability to function effectively in a global context
- Efficient administration

Different factors, related to risk and return on investment (ROI), affect each of the dimensions listed above. eGovernment initiatives have typically failed when these notions have not been understood and accounted for. Together, the lack of clarity, establishment of appropriate measurement framework and or a common terminology has significantly undermined eGovernment projects. ***Fundamentally, eGovernment has always been about service delivery and the business of government.***

Microsoft believes that meeting the needs of the new world of government work is very possible indeed. Nevertheless, success will come only from the discipline of considering technology as a policy lever and through robust governance and vigorous project management of this transformation from both a technology and a business perspective.

The Microsoft Public Services and eGovernment Strategy

From either the perspective of developed or developing economies, the Microsoft worldwide Public Services and eGovernment Strategy proposes a direction of core enabling solutions and capabilities as the foundation platform to help transform government administration. This transformation will greatly benefit service delivery, optimize regulatory compliance and meet the needs of an aging society. By supporting an actionable government focus on service delivery, the strategy provides governments with the means to transform operations and deliver service seamlessly to agencies, businesses and customers.

The Connected Government Framework, the backbone of the strategy, is an innovative descriptive blueprint, whitepapers and global case studies that establishes a predictable, robust, and agile platform to support government service delivery. Building on top of the CGF, the strategy identifies *four capabilities fundamental to government operation*:

- Document Management
- CRM / Case Management
- Forms Management
- Identity Management

Governments themselves have identified these as priority investments. These enabling solutions, delivered through our world wide partner ecosystem, establishes the seamless service platform fully extending and bringing to life the deep innovation of Office 2007.

When a Government enables these core capabilities to interlock digitally it will reap the benefits of seamless data exchange from the elimination of inefficient manual processing. Government will further benefit from achieving a single view of the customer allowing them to deliver better services, more efficiently, for any constituents of government. The capabilities will help strengthen policy and decision making processes, offering fast and appropriate access to information. The result, Seamless Service Delivery, offers the true citizen-centric perspective governments aspire to, while realizing productivity efficiencies that could return billions to their bottom lines. This opportunity is unprecedented in the history of modern government, and it offers the promise of being the greatest single paradigm shift for government work and service delivery for the dawning century.

Challenges without Modern Precedent

Over the next decade, governments around the world will face a wave of economic and demographic issues. The following sections briefly discuss these challenges, which are without precedent in modern government history.

Social changes

In both developed and emerging markets, societal changes are altering market expectations, driving new business opportunities, and challenging the efficacy of the traditional model of government service delivery. For example, cocooning, a social trend in Western economies, is characterized by making the home the focus for both social and work activities.¹ The Internet increasingly serves as a medium that makes it possible to stay at home. Telecommuting, home theaters, home schooling, home shopping and delivery, gated communities, and home-based businesses are possible and desirable due to the Internet.² Gartner attributes this change to the growing number of consumers in the increasingly affluent West who would rather have more time than money.³ Gartner also cites the belief held by many that with a high-speed Internet connection they could do more work and complete more personal errands than through other tools.⁴

Similarly, the global penetration of micro businesses and mobile phones, in developing economies, represents a societal change that will affect the business of government. The value of imports, purchased by emerging economies, expanded from \$1 trillion in 1990 to \$4 trillion in 2003. Worldwide share of all goods and services imported by the emerging economies grew from 29% in 1990 to 40% in 2003. Scores of social, government, economic and cultural issues must be altered to encourage further economic expansion in emerging economies. Yet, it is clear that the pace of importing by so many emerging nations is rising. C.K. Prahalad, in his 2004 work, *The Fortune at the Bottom of the Pyramid*, predicts large numbers of low-income individuals will soon become consumers in emerging economies. Ecosystems of small businesses serving these consumers will be accessible, via the mass adoption of the Web and mobile telephony in nations such as India. The key to unlocking this huge market potential is cost-effectively reaching and serving poor consumers in remote locations.

These examples signal the future opportunity and challenges for government services in developed and emerging markets. Yet they show that while technology is a key enabler for different models of business and government services – and can enable the mass distribution of services – context is key.

Intergenerational factors within the general population

Over the next 10 years, the retiring baby-boomer population is expected to place pressure on government budgets approximately 5% to 10% GDP (figures vary by study and economy). For the first time in history, populations will be older than young. This will present governments with an unprecedented challenge. They will need to provide a new range of services, in varying service contexts, to a large population of retirees from a much smaller taxpayer base. Consider the implications:

Across the globe – and especially in the United States, Japan and Western Europe, the triad where most of the world's wealth is created and held – falling birth rates and lengthening life spans are causing populations to age rapidly... Aging and its implications are emerging as major social, political and economic issues...the long term solvency of pension plans – both public and private – is a growing concern across the triad countries. Policy makers are wrestling with the fiscal consequences of aging and seeking solutions. Business leaders and investors are seeking to understand how aging will affect global markets for goods, capital and labor.⁵

¹ Nelson, Scott. Gartner. 2005. "The Implications of Societal Changes on Enterprise Technology". September 23

² Nelson, Scott. 2005. "Societal Changes: Their Implications and How to Use Them to Advantage". *Gartner Symposium. 2005*, October 16-21.

³ Nelson, Scott. 2005. "Societal Changes: Their Implications and How to Use Them to Advantage". *Gartner Symposium. 2005*, October 16-21.

⁴ Nelson, Scott. Gartner. 2005. "The Implications of Societal Changes on Enterprise Technology". September 23

⁵ McKinsey & Company. 2005. "The Coming Demographic Deficit".

The quoted study indicates that over the next two decades, in the absence of dramatic changes in population trends, savings behavior, or returns on financial assets:

- Growth in household financial wealth will slow by more than two thirds; and
- This slowing, driven by aging, will cause a global wealth shortfall of \$32 trillion by 2024.

This shortfall, left unchecked, could significantly reduce future economic well-being. It may also exacerbate the challenge of funding the retirement and healthcare needs of an aging population. This coincides with the financial reality of infrastructure replacement, revenue leakage, increasing fraudulent benefits claims, workforce skills shortages, and the significant regulatory compliance burden. What will be the ripple effect of the challenges confronting countries where “*most of the world’s wealth is created*” on other countries, especially emerging markets that face different intergenerational pressures? In Iraq, for example, 50% of the population is under the age of 20, which will require a unique range of services delivered in unique and innovative ways. The impact of HIV/AIDS on population in many countries presents not only governments but also entire economies with health services challenges. How will small businesses survive, as great percentages of the skilled trade workers are lost? Who will take over? How will knowledge transfer occur? What type of services will these businesses need from government to survive?

Massive demographic shifts within government workforces

As part of these broader intergenerational shifts, 23% to 50% of the government workforce in developed economies is expected to retire over the next 10 years. According to the Government Accounting Office (GAO), more than 50% of all United States’ federal employees are eligible to retire within 5 years and 70% of all senior managers will be eligible to retire by 2009. (The United States’ federal workforce is much older than the workforce as a whole). This accentuates the reality of liabilities related to unfunded superannuation and pensions. It also underscores the challenges of knowledge management, transparency and accountability, timely decision-making and effective service delivery. Governments in developed countries are wrestling with the challenge of their own shifting workforce demographics along with the policy challenge of supporting new and expanded services to an aging population.

Like their North American counterparts, European businesses and government agencies are beginning to grapple with retiring workforces. Declining birth rates and low immigration levels are combining with early retirements to create acute skilled labor shortages in fields requiring extensive technical training and experience. Retirements are also taking a toll within outsourcing companies. Outsourcers are experiencing shortages of talent, which leads to gaps and delays in their ability to respond to the needs of government customers. Most enterprises do not realize the magnitude of this problem or the force with which it will hit businesses during the next five years. The workplace and even work itself will need to change.

What strategies will agencies adopt to ensure they are able to sustain operations and service delivery during this period of mass workforce disruption? Regardless of what they are, they will need to meet the expectations of a new generation of workers, the so-called “Millennials,” people born between 1980 and 2000 who, according to Forrester, have an innate ability to use technology, are comfortable multi-tasking while using a diverse range of digital media, and literally demand interactivity as they construct knowledge.⁶ This new generation thrives by using many technologies – often simultaneously – to get the job done quickly and have a personal life as well. According to Forrester, today’s information worker tools do not get the job done for the Millennials. While the Millennials may not have the skills and experience of the many retirees they are replacing, they will look to technology to help fill this gap. However, in the technology management domain, many countries are expressing concern that new technology graduates are not being prepared by universities and technical training schools.

The coming crisis in national workforce skills

In both developed and emerging markets, there are significant workforce skills shortages that will present escalating challenges in the context of the issues presented by intergenerational factors and government workforce demographics. Governments have historically supplemented their own workforce skills and numbers by sourcing these from the wider national market. These strategies will be constrained in the future by the demographic changes affecting whole economies.

⁶ Forrester. 2005. “Get Ready: the Millenials are Coming. The new workforce has its own styles and skills.” September 30.

Beginning in 2005, the number of retirees in Europe is expected to increase by up to 30% each year, and this retirement rate is already affecting the national pool of skilled IT people.⁷ Agencies thus face the challenge of reducing the complexity in the IT environment, not only to reduce total cost of ownership (TCO), but also to ensure the future supply of skills that will be needed to manage and transform the environment and to support agile government policy and service delivery.

Research is also highlighting issues upstream in the education system. European countries already have difficulty generating a sufficient level of enthusiasm for computer sciences among prospective students. UK, Dutch, and German technical universities showed a fall in student numbers of between 5% and 20% between 2001 and 2005, with some drops as steep as 40%. European governments are thus likely to struggle simply to meet the bare minimum of IT workers that will be needed by the industrial and commercial sectors.

This shortage of talent and skills is a global phenomenon that affects both developed economies and emerging markets. The McKinsey Global Institute notes:

Despite China's enormous pool of university graduates (3.1 million in 2005 alone), MGI research suggests that fewer than 10 percent of Chinese job candidates, on average, would be suitable for work in a foreign company, and the fast-growing domestic economy absorbs most of those who could. Indeed, far from presaging a thriving offshore services sector, MGI points to a looming shortage of homegrown talent, with serious implications for the multinationals now in China and for the growing number of Chinese companies with global ambitions. To avoid this talent crunch and to sustain the economic ascent of the past 20 years, China must produce not just more graduates but more suitable ones as well. Reforms in the educational system including greater emphasis on practical and language skills—will help the country fill its skilled-labor gap.⁸

McKinsey's research also highlights a similar pattern in India, where the vast supply of graduates is smaller than it seems once their suitability for employment by multinational companies is considered. Moreover, in the country's most popular offshoring locations, such as Bangalore, rising wages and high turnover are evidence that local constraints on talent supply have already appeared.⁹ Nothing short of radical service delivery and administrative transformation will overcome the combined impact of shortages in workforce numbers, skills, a constricted taxpayer base, and the demands of an aging population.

Societal Expectations

Optimizing regulatory performance through technology

Technology has a powerful role to play in both developed economies and emerging markets, in optimizing the performance and strengthening the transparency of regulatory frameworks. Various, regulatory compliance requirements involve citizens and businesses providing information, keeping records, and making and receiving payments in relation to license, grants, benefits and business registration. Not surprisingly, the burden disproportionately affects small business. Whilst these processes are increasingly becoming electronic, the great proportion remain manual as evidenced by the many thousands of static PDF forms on government web sites world wide.

Depending on the source, the burden of regulatory compliance (sometimes referred to as "the red tape burden") is estimated to be approximately 4% to 10% of Gross Domestic Product (GDP). For any transactional cost to be measured in terms of GDP means that the economies in question are burdened, productivity is constrained, and quality of life for citizens is diminished.

In emerging markets, the complex and highly manual regulatory regimes present a major disincentive to Foreign Direct Investment (FDI). In India Pakistan, Indonesia, and the Philippines, as much as 70% of the non-agricultural workforce is employed in informal businesses.¹⁰ In part, the enormous cost and barrier to doing business legally results in the growth of the informal sector. For example, it reportedly takes 89 days to register a business in India, compared with eight days in

⁷ Forrester. 2005. "Europe's Looming IT Skills Deficit." July 6.

⁸ McKinsey Global Institute. 2005. "Addressing China's Looming Talent Shortage."

⁹ McKinsey & Company. 2005. "Ensuring India's Offshoring Future" *McKinsey Quarterly* 2005.

¹⁰ Farrell, Diana. McKinsey & Company. 2005. "Boost Growth by Reducing the Informal Economy." October 18.

Singapore. It takes 33 days to register property in the Philippines, compared with 12 in the U.S. It takes five and a half years to close an insolvent business in Vietnam. Moreover, businesses in emerging markets face administrative costs that are three times as high as those borne by their counterparts in developed economies.

One of the most powerful policy options for reducing the extent of the informal economy is the application of technology, to digitally streamline regulatory procedures.¹¹ There is, in fact, good evidence of a direct correlation between the burden of regulation and the extent of the informal economy. The issues involved are both economic and social.¹²

Technology provides governments with the real opportunity to reduce the informal sector and in doing so realize significant economic gains. In the Philippines, for example, the estimated tax yields were falling and so the Bureau of Internal Revenue (BIR) implemented a data warehouse to improve taxpayer compliance. In one year alone BIR uncovered 70 billion pesos (US\$1.25 billion) in under-declared tax, and managed to collect 6 billion pesos (US\$107 million). This represents a ROI of more than 375%.

Clearly, technology itself is a major driving force in regulatory enforcement as well as regulatory simplification. According to the OECD, the use of innovation in information technology has been a major driving force in administrative reform programs in most OECD countries.

“Government formalities are important tools to support public policies in many areas such as taxation, safety and environmental protection. Administrative regulations can also create benefits for enterprises by setting level playing fields where commercial transactions can take place in a pro-competitive and low cost environment. As regulations have become more complex and information dependent, regulatory burdens have shifted to citizens and businesses in the forms of asking for permits, filling out forms, and reporting and notifying the government... (the) skilful use of IT in many areas is leading to new and more effective approaches to administrative regulation¹³.”

Technology is a powerful force for the preservation and realization of underpinning policy purposes. The ROI on technology is therefore not a simple ‘transactional’ calculation, but an ROI based on policy outcomes.

The infrastructure and functional assets of government

To meet the future challenges discussed, governments are confronting the heritage of past decades. In developed economies, governments face the challenge of the replacement of infrastructure assets and systems, including the core functional assets of government. In developing or re-building economies, governments face the challenge of building or establishing these systems for the first time.

Legacy systems and technology over 30 years old are examples of how infrastructure and functional assets constrain policy and service delivery options. Governments are investing billions to modernize their systems in order to protect the tax base, enable policy agility, and implement a broader range of service delivery options yet the weight and burden of these legacy systems prohibits the delivery and system improvements required. These modernization programs are generational in nature, and are being made to enable or support basic policy and service delivery, yet must meet the expectations of the next two decades.

Registries – such as, land registries, business registries, registries of births, deaths, and marriages – provide core functionality managed across many different levels of government. As the authoritative sources, registries provide services to citizens, businesses and other government agencies. Governments are investing in the modernization and transformation of registries for very similar reasons that are driving investments in the modernization of tax administrations. The legacy environment of registries is constraining effective service delivery. Along with the demographic and workforce changes that are occurring, the current environments, costs, and service models are not sustainable.

¹¹ Ibid.

¹² Worldbank. 2005. “Doing Business in 2005: Removing Obstacles to Growth” <http://rru.worldbank.org/Documents/DoingBusiness/DB-2005-Overview.pdf>.

¹³ Organisation for Economic Co-operation and Development. 2003. “From Red Tape to Smart Tape, Administrative Simplification in OECD Countries.” p.8.

In some cases, registries are being used for purposes for which they were not designed. An example is the use of driver's licenses for identity purposes. Some agencies are investing in systems modernization to ensure operational robustness, process transparency, privacy, security, and data integrity. Finally, registries have an important economic and assurance function. The modernization of registries and the ability of registries to allow direct citizen access play a pivotal role in strengthening transparency of government and eliminating corruption. The transformation and modernization of registries is a key component of the transformation of government service delivery.

How IT Will Transform the Business of Government

The sum of these dynamics – the regulatory compliance burden, social and generational changes, aging technology assets, and emerging functionalities – are setting the backdrop for the new world of government work. As governments today build administrations, infrastructures, and service delivery mechanisms to grow and support future economies, there are significant opportunities to address these challenges with existing and emerging information technologies able to provide the core fundamental underpinning for resolution.

Over the past decade, technology has profoundly transformed the way we live, work and communicate. In the decade ahead, technology holds even greater promise to truly transform the business of government. The intersection of the social and economic factors outlined in the previous section with the robust, ongoing innovation that is happening across the worldwide IT industry, is establishing a new reality and rendering obsolete twentieth century models and assumptions. Not only will twentieth century government process workers have retired before many more years have passed, but soon the past century's modes of work likewise will be preserved only as the quaint memories of a bygone era.

For both developed and emerging economies, technology offers solutions that are not only possible but necessary in order to meet the requirements of the new world of government work. In the following section we will outline a number of the important ways in which Microsoft believes technology will transform the business of government in the coming years. This vision, the Microsoft Public Services and eGovernment Strategy, encompasses the following fundamental beliefs:

- Fewer forms and electronic regulatory processes will optimize policy and service delivery outcomes
- New information management capabilities will enable efficiency
- Real-time reporting will drive real-time policy
- Advanced mechanisms will alleviate identity-based concerns
- Interoperability will help mitigate the burdens of bureaucracy and legacy migration
- Collaboration will enable timely and robust policy and decision making

Fewer forms and less red tape will streamline service delivery

From the year 2000, eGovernment strategies around the world resulted in tens of thousands of forms being “made available” on government web sites – in fact, the United Nations estimates that there are 170 national government Web sites with downloadable forms.¹⁴ There are an estimated 20,000 government forms for business in Australia, 30,000 in the UK, and tens of thousands at the federal level alone in the United States. Most of these forms, however, are only available in PDF, Microsoft Word, or simple graphics file formats. *Fewer than 5% allow people to complete a genuine electronic transaction.* In the new world of government work, this untenable situation is in for a monumental change.

According to the OECD, the time and effort involved in filling in government forms is one of the major components of the burden of regulatory compliance as well as cost. In the new world of government work, technology innovation presents the potential for fewer forms, connected to business processes through XML interfaces and web services enabling the dynamic exchange of data. In a mobile, multi-channel, machine-to-machine context, the very concept of what a form is and the role it fulfills will fundamentally transform government services. Data exchange will be the mechanism by which regulation is enforced, benefits provided, decisions made. The productivity pay-off can only be significant.

¹⁴ United Nations. 2004. *Global eGovernment Readiness Report*, p.59.

There is a political and economic imperative for agencies to apply technology to enable government forms, to become interactive. Technology exists today that provides agencies with the means to cost effectively integrate forms information capture through government business processes. Agencies that put those technologies to use will thereby stimulate greater productivity and help achieve significant service delivery improvements. These promising information technologies offer a significant value proposition and strategic opportunity for agencies. They can help streamline not only the delivery of services to citizens but cross-agency interactions as well.

Anecdotal evidence indicates that the numbers of internal forms are a magnitude greater than the number of forms used for external service delivery. The future world of government work will offer ways that are more effective to deal with interactive, internal and external forms via Web browser. Forms technologies available today provide government agencies with a roadmap to transform processes in readiness for the massive changes in workforce demographics and service delivery challenges over the coming years.

New information management capabilities will enable greater efficiency

Customer relationship management (CRM), case management, document management, and records management are the key pillars for the future of government work. These capabilities help realize the efficiency dividend and ensure accountability and transparency. For example, new management capabilities will help tax agencies gain a single view of taxpayers. They can also help local government building authorities to gain a single view of builders and their application workloads. Records management will enable the tracking and sharing of information across departments. Integrated systems will ensure that data, even if stored in the repositories of individual agencies, can be shared across organizations. Citizens will not have to enter details multiple times and case managers will always have a complete picture.

Service delivery will be rapid, customized, and seamless. The integration of various management functionalities will significantly enhance the capability to focus the delivery of services to the end user. An integrated approach will streamline the connection between front and back end IT systems both horizontally across agencies at the same level of government and vertically among the various levels of government. This will help fully realize the economic and efficiency benefits of seamless, customer-focused service delivery. Beyond eGovernment, only a fully IT-enabled government will be able to ensure fully customized, synchronized, and rapid delivery of services.

Advanced mechanisms will alleviate identity-based concerns

Identity underpins the functions of government and is the key to enabling the transformation of service delivery with trust, confidence, and security. The growing power of software combined with very inexpensive hardware will redefine public sector processes in ways that will make a dramatic difference. Government IT capacity has been growing for a number of years, fueled by a combination of technology advances and falling price points. Very large databases are now both very simple and very affordable. Not long ago, a database that would keep track of information about every citizen in a country with a population of 10 million would have cost millions to build and might have taken years to develop. Today, such a system can be purchased for less than U.S. \$50,000. Future software development tools will allow complex applications to be developed and deployed in a fraction of that time.

Unfortunately, this growth in institutional capacity will parallel a rise in data vulnerability. Therefore, it is imperative to lock down and protect government systems and operating environments, and to ensure appropriate access to information and services.

Demographic change will drive a new range of government services to an increasing percentage of the population in the coming years. The current challenges of escalating fraudulent claims and managing appropriate access to confidential data cannot be sustained. Government workers will interact with multiple systems. Caseworkers and contract workers will have portfolios to manage. Benefit recipients will have varying needs as they work part time or seasonally. Robust identity management systems and frameworks will be essential to seamless service delivery and to driving down the costs of fraudulent claims and the economic cost of identity theft.

Interoperability will propel service and process transformation

In the new world of government work, agencies will focus on the citizen and their context before the service and mode of delivery. Service “components” will come together across interoperable systems. Multi-channel and machine-to-machine

service delivery will eliminate many of the processes and procedural inefficiencies that exist in the manual world. Describing government information through standards, metadata, and electronic tags, will further enable seamless discovery and seamless service delivery.

In addition, seamless service delivery will occur across many channels. These will be delivered from government systems to business accounting software and web sites of third-party organizations and intermediaries. Business accounting software will receive direct updates, via web services, of government services and other information. The software will be able to securely upload and download a taxpayer's tax information, and thus eliminate costly and time-consuming mail-outs, re-keying, and manual processing. Taxpayers who qualify for grants, benefits, or other concessions will automatically be alerted of their change of status. Updates will be provided to the business accounting software, financial institutions, and at the point of sale.

At the local government level, builders lodging Building and Development Applications deal with many local government authorities, each asking for the same base level of information with some differences – information has been provided numerous times in previous applications. Re-work, re-entry and data entry errors cost time, money and opportunity. The information requested from the builder is itself sourced (by the builder) from government and other public registries – authoritative sources such as Business Registers and Licensed Builders Association. The future worker, in local government, works collaboratively with the builder, programmatically receiving information from the Business Registers, the Licensed Builders Association, and GIS management systems, not only to streamline approvals but also to provide pre-approvals for applications in the pipeline.

This new paradigm will not only deliver efficiency dividends, but will bring within reach the closure of the “tax gap.” In all economies, budget deficits and the associated difficulty of enacting tax increases make efficiency gains and closing the tax gap top political and policy priorities. In developing economies, for example, smart micro-tax applications, delivered by mobile phones, are already enabling citizens and businesses to register, submit returns, and pay taxes. Thus, many hard-working citizens are moving en masse from the informal economy to the formal economy. Technology in an interoperable world becomes the means of policy.

Real-time reporting will drive real-time policy

In the near future, quarterly reports will become an antiquated relic of the last century. They will be replaced by instantaneous reporting capabilities, made possible through the combination of interoperable systems, interoperable processes, and a whole-of-government taxonomy of tags, events, and actors. End of year reporting will be accomplished within days instead of weeks or months, and will bear little resemblance to the reporting formats, processes, and models that have driven government over the past 30 years. The investments being made today enable this efficiency to be realized sooner than many may believe.

The upfront manual effort of extracting information and the effort needed to prepare it for use – all massive drains on efficiency – will similarly be outdated. Seamless, streamlined, instantaneous reporting will instead deliver significant efficiency savings. The context and dynamics of policy development and advice will change in the process. Moreover, reports themselves will become increasingly dynamic, and will draw on data assets not usually associated with policy to add context that will inform – and transform – decision making.

Seamless, streamline, instantaneous reporting would not only deliver significant efficiency savings, but would change the context and dynamics of policy development and advice. Drawing on GIS data, cross-agency or cross-functional reporting on grants to small business for example, will show geographically the locations of small businesses receiving grants and the type of grant. This will help to determine whether a particular industry or area is over or under serviced. Reporting tools will also make it easy for these people to overlay data layers to reveal any structural impediments. Examples would be the lack of broadband infrastructure, which might limit the potential of small businesses' grant recipients to thrive. These and similar reporting capabilities will make it possible proactively to boost the potential return on investments. In the new world of government work, information becomes insight through the power of information technology, not only informing policy, but also shaping the very nature of policy options.

Collaboration will enable timely and robust policy and decision making

The drive for timely decision-making and collaboration is so acute – the most fundamental of government functions – that in many organizations, government workers are entrusting the most fragile of systems, email. Estimates indicate that by 2010 the average knowledge worker will receive no less than 50 times as many e-mails as in 1997. At present, people spend about 30% of their working time looking up, arranging, managing, and distributing information. Email undermines collaborative efforts, presents a record and document management nightmare, and inhibits transparency and accountability. This same need for speed in a mobile setting is driving policy dialogues to mobile text messaging. The current model is not sustainable. Citizens have every right to expect that policy discussions and decisions that drive the investments of taxpayer funds will be supported by robust agile systems.

In the new world of government work, software and services will deliver pervasive capabilities to enable people to work together more effectively. Four areas are critical to effective collaboration: integrated communications, collaborative workspaces, access to information and people, and people-driven processes. These allow agencies to maximize their unique value by enabling their employees to focus on expressing their unique talents rather than chasing down information and people.

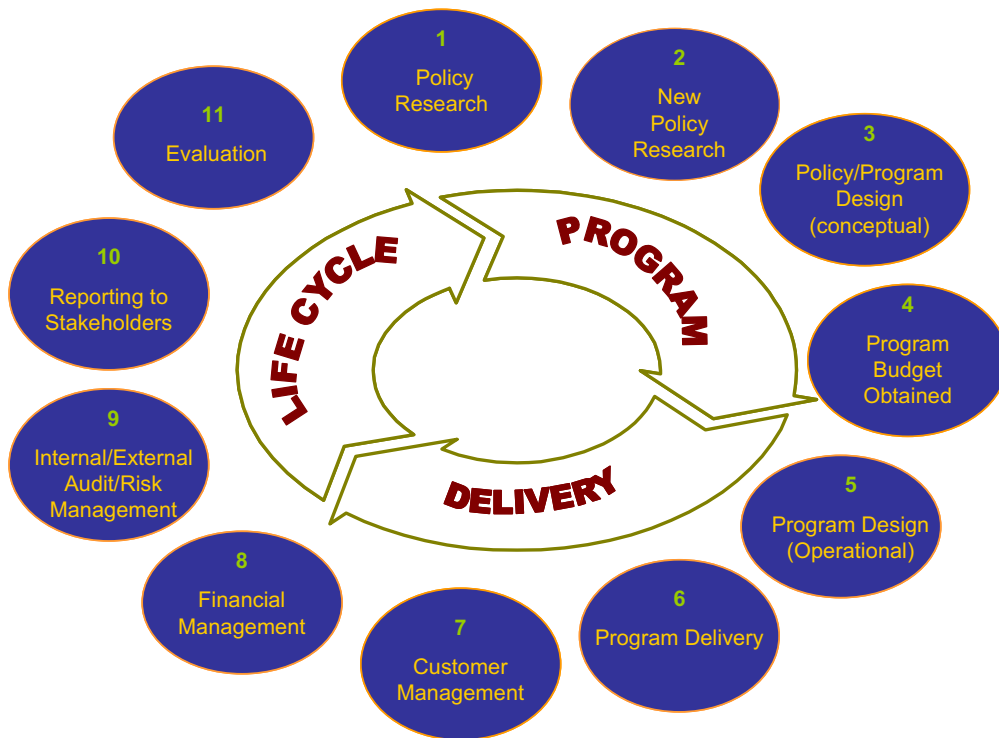
Collaborative technologies enable agencies to share information securely across functional boundaries within and across agency boundaries. A whole-of-government response becomes meaningful and effective. A threat environment, for example, will activate more than a defense and security response. Government task forces will come together to provide policy and services support for affected industries as well as to assist stranded citizens in need of relocation and repatriation.

Finally, task forces are becoming increasingly the administrative construct for channeling administrative efforts. Collaborative technologies enable task forces to operate across functional boundaries, across time zones, across geographies, online and offline, and while mobile. Every dimension, actor, data source, device, and time slice will thus become fully productive.

Technology as a Policy Lever

Technology is increasingly being applied as a policy lever – beyond the factor of production that it is traditionally considered. When the modernization of a tax administration has the potential to claw back billions of dollars through efficiency gains and in unpaid tax; and when a national government publicly states that its tourism portal increased GDP by 1.5% GDP benefits; and when a government employment agency publicly states that its online web services job brokerage operation reduces the frictional cost of unemployment – then technology has truly become one of the most powerful policy tools for the 21st century.

The policy process itself transforms when collaborative technologies and interoperable systems are designed into the process. The following diagram represents the common stages of the policy development process – whether the policy is developed under crisis or more planned timeframes.



The policy-program delivery lifecycle drives government action and there is no stage in this cycle, which is not dependent on technology. The quality and creativity of the policy and the efficacy of the program are optimized when interoperable systems operate across the lifecycle – connecting policy development to program delivery.

This evolution of the role of technology raises the stakes in relation to risk, governance, project management and performance management. Unfortunately, there are many instances world wide of project failures and delays, ineffective governance – and such failures have a disproportionate impact when they occur in developing economies.

When technology becomes a *policy* lever, what are the measures of success; what are the appropriate governance frameworks; what are the risks; what new skills are required to ensure success; and can we and how do we differentiate between technology as a factor of production and technology as a policy lever?

These are profound questions surrounding government technology investments, involving relative assessments of cost, necessity and that of outcomes and economic benefit. Such significant benefits cannot be achieved through a marginal or superficial view of technology. A coherent, holistic approach that values the platform and interoperable strategic solutions across the policy-program delivery lifecycle is needed.

Strategic Management and Measurement Frameworks

Against this background, the Microsoft Public Services and eGovernment Strategy aligns with and supports the efforts of governments around the world who are implementing strategic management and measurement frameworks to guide and inform decision making regarding technology investment priorities. These frameworks are driving transformation efforts and governments globally are learning from one another's efforts. In the U.S., the Federal Enterprise Architecture (FEA) is a framework that enables agencies to ask the question, "*What functions are core to my mission?*" The FEA helps the Office of Management and Budget and agencies assess the capability of enterprise architecture programs. Similarly, the European Commission (EC) developed eGovernment Economics Project (eGEP), as a measurement framework to evaluate the effects of eGovernment in Europe. The project includes three main areas of activity. The first is an analysis of eGovernment expenditure and funding throughout Europe. Secondly, it includes the development of the measurement framework. Finally, it includes the creation of an economic model to appraise the macroeconomic effects of eGovernment. The Australian

Government's Demand and Value Assessment Methodology is a framework for any department, agency, or entire government that wants to adopt a manageable approach in establishing the public value of its eGovernment initiatives.

It is clear that the strategic purpose of these frameworks, given the investments being made and the emerging role of technology as a policy lever, are not only intended to reduce TCO but as assurance mechanisms recognizing the fundamental role of technology in service delivery and the achievement of government outcomes.

The Road Ahead: Realizing the full potential of policy and seamless service delivery

From the perspective of both developed and emerging markets, the Microsoft Public Services and eGovernment Strategy proposes a direction, core technologies and a series of enabling solutions to address government challenges. The strategy is underpinned by the Connected Government Framework (CGF), a predictable and robust platform vision for government facilitating the full policy-program delivery lifecycle. The strategy identifies partners and solutions to enable seamless services delivery, fully extending and bringing to life the deep investments and innovation of the suite of Microsoft applications, servers and services. Together, the end-to-end picture from infrastructure to service delivery presents powerful business benefits to government knowledge workers, decision makers, and caseworkers; easing governments change management process and transform administration and service delivery models.

The strategy presents a cogent vision that strategically confronts the historic challenges discussed in this paper. The strategy is unique in that it encompasses an executable roadmap, based on deep and direct government experience and presents an approach to the functional infrastructure and processes of government. Microsoft technology touches all stages of the policy-program delivery lifecycle and all stages of service delivery from the government infrastructure to the government customer. This distinctive perspective presents unique insight to the challenges discussed. This future is now within reach.

Find out more

This paper is the first in a series of discussion papers that will explore in much greater depths each of topics addressed herein. The foundation of the strategy is anchored in the descriptive Connected Government Framework, leverages best practice and case studies and is epitomized in Microsoft government engagement plans globally. We encourage you to learn more by checking out the following resources below.

- Connected Government Framework Local and Regional Government (CGF and LRG) Kit:
<http://www.microsoft.com.au/localgovernment>
- East of England Agency (EEDA) – Government Agency Boosts User Efficiency and Increases Customer Confidence Thanks to Integrated CRM Solution:
<http://members.microsoft.com/CustomerEvidence/Search/EvidenceDetails.aspx?EvidenceID=3460&LanguageID=1>
- Less Red Tape Equals More Growth – Commission tables package for better regulation:
<http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/311&format=HTML&aged=1&language=EN&guiLanguage=en>
- Jersey Post Aims to Cut Document Management and Communication Cost:
<http://www.microsoft.com/uk/casestudies/CaseStudy.asp?CaseStudyID=1052>
- State of Washington Deploys First-of-a-Kind Digital Archive:
http://download.microsoft.com/documents/customerevidence/21718_Washington_Digital_Archives_case_study.doc

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