The Status of Information Technologies in ICA Governments – 2014

An Analysis of ICA Country Reports for the 48th Annual ICA Conference

Executive Summary - The Next Phase in Government Technology…Again

For 10 years ICA has produced a summary of ICT trends and initiatives based on the annual country report submissions to its annual conferences. These reports have served as snapshots of how ICT is transforming government administration and services.

In the report for the 2007 annual conference, we suggested that governments had entered a third phase in the use of technology. After initial initiatives to establish portals and create government-wide infrastructures and strategies, governments found that the full benefits of technology were not being realized. A third phase was to begin the long transformation of governments into more efficient, responsive and inclusive organizations. An economic crisis and explosion of mobile devices later, governments are still trying to figure out how to transform into digital governments. These phases are briefly described below:

Phase 1: Establishing a Government-wide presence Online
The first wave saw the launch of national portals and services such as taxes, permit applications, fee payments and government forms. Strategies expressed support for and defined E-Government, identified priorities and flagship initiatives and promoted citizen-centric models.

Phase 2: Managing ICT Government-wide
In the second wave, governments turned their focus inward, shifting governance models in order to centralize functions, encourage collaboration and standardize policies.

Phase 3: Transforming Government from the Inside
Governments had placed services online and adopted new structures for managing ICT, but transformation remained a work in progress. Many benefits were unrealized. Governments began to think of new ways to bring citizens back to the center of ICT by focusing on how technology can improve citizen outcomes.

Phase 4: Transformed from Outside
As was noted in the 2007 report "(Government) transformation is contingent on things that governments, much less ICT agencies within them, have little control over – technological change, shifting demographics, labor markets, etc.…Usually, transformation happens to governments more than it is brought about by governments." That definitely was the case in the following years, as economic and technological shifts transformed society in general. The economic crisis led governments to focus on cost management and shared services, in many ways mirroring Phase 2 shifts toward centralization in governments. At the same time, technologies from the consumer space like mobile phones, tablets and cloud services became mainstream and governments had to adapt.

Phase 5: The Next Phase…Again:
Work remains to be done for governments to become fully digital. This year's reports continue many of the same themes that have been highlighted over the past decade, but the environment in which these efforts take place is vastly different from what it was a decade ago. New digital

strategies are being developed. Governments are reorganizing and increasing central control in some areas. Governments are looking for innovative uses of technology. And finally, security remains a paramount issue. There continues to be an underlying tension between the ever-increasing demands to improve digital services and the need to control costs, security, and enforce government-wide approaches.

The following report is based on the observations, strategies and initiatives featured in 14 ICA Country Reports submitted for the 48th ICA Conference in Ottawa, Canada: Canada, Belgium, Finland, Australia, Singapore, United States, Taiwan, Estonia, Portugal, Mexico, Japan, the Netherlands, Cyprus and Israel. Selected initiatives and strategies from these reports will be highlighted throughout this document. Inclusion of a country initiative in the summary is not meant as a qualitative preference over country initiatives not included. Rather, initiatives are included as representative examples of the trend identified. The ICA thanks the authors of the reports for their valuable contributions.

New Strategies for Digital Government

Appropriate to the conference theme of "Smart Investment for Future Digital Government," a number of governments released strategic plans designed to make government fully digital. The past discussion of multi-channel services has given way somewhat to a "digital by default" approach to government. In addition to digital government strategies, this year's country reports saw some new positions and organizations. Several government strategies extended to the year 2020, which offered ample opportunities for 2020 Vision statements, showing that ICA members like a good pun.

Finland released its 2020 Vision for ICT, continuing its Action Programme on eServices and eDemocracy (SADe). The Vision focuses on governance, innovation, open data, centralizing services and improving ICT skills. Centralizing services appears to be moving along most quickly, while governance and ICT skills efforts are experiencing challenges, as they do for nearly every government. Finland also launched a National Architecture for Digital Services in June of this year to enable the exchange of information across government and increase service development.

Israel is releasing a new strategic plan at the end of this year, continuing its work under the Digital Israel plan. The goal of the Digital Israel program is to "promote innovation and efficient services." A recent resolution established a Steering Committee and Coordination Bureau out of the Prime Minister's office for the Digital Israel initiative. These bodies along with the recent establishment of a government CIO puts a governance structure in place.

2015 is an important date for the Netherlands' strategy for digital government, entitled simply "One." The goal of this effort is for services to be perceived as coming from One government rather than many agencies, making government easier to use and more efficient. They estimate savings of over 100 million EUR a year. Services are integrated across the municipal and national governments.

As part of Mexico's National Development Plan (2013-2018), they released a National Digital Strategy last year. The strategy includes objectives to make government services more open, citizen-centered and simple to use. Goals also focused on technology's role in economic development, education, healthcare and public safety. In implementation, they have also identified five enablers that need to be in place for the strategy to work - connectivity, digital inclusion and skills, interoperability, legal frameworks, and open data. Mexico also released its

ICT Policy focused on internal government processes in May of this year, which identifies security, cloud and shared services approaches.

In April of this year, Cyprus released its new eGovernment Strategy of the Republic of Cyprus for 2014-2020. The goals of the strategy are to increase capacity, reduce costs, expand and improve services and facilitate international cooperation within the EU.

Portugal has adopted "digital by default" as the guiding principle of its National Administrative Modernization Strategy. Two strategic goals of the strategy are the use of Citizen Spots as service delivery points, and the simplification of internal processes and user interfaces.

Taiwan has reorganized the management of ICT by establishing the Ministry of Science and Technology in March. Two other ICT organizations, the Executive Yuan "Research, Development and Evaluation Commission" and "Council for Economic Planning and Development" were merged into a "National Development Council" that will develop policies for government use of ICT and economic development using technology.

Estonia released its Digital Agenda for Estonia at the end of last year (https://www.mkm.ee/sites/default/files/digital_agenda_2020_estonia_engf.pdf). Priority efforts as part of this plan include completing a national broadband network and several innovative internationally focused efforts. The strategy creates a Nordic Digital Infrastructure Institute, which will jointly expand upon Estonia's X-Road and identity management infrastructure, a "virtual residence" status to allow non-residents to use services, and a global think tank amongst other initiatives.

Japan established an e-Government Minister Meeting this year to promote and implement the government's strategy to automate and reengineer processes. The group includes relevant Ministers and the Government CIO and is situated in the org chart between the IT Strategy Headquarters at the highest level and the CIO Council of ministry CIO's.

Controls - Budgets, Centralization and Security

As part of its aforementioned Digital Agenda, Estonia anticipates an increase in ICT spend in the coming years, in contrast to most other countries. Most reports indicated flat or slightly declining budgets and staffing, coming after large adjustments as the result of the economic crisis. Though it's unclear how comparable the numbers are, ICT budgets were in the 1-3% range of the national government budgets. Recent histories of large projects with mixed results, cost overruns and increasing security risks reinforce the need for robust controls over ICT. Many governments are increasing central control of ICT management and consolidated services government-wide.

Consolidation and Strengthening Central Leadership

Generally, governments have centralized ICT management and increased oversight and control. Shared services are centralized in most governments to achieve economies of scale. In some cases, central bodies are being reorganized and politicized. Despite rhetoric among governments about the drag that compliance, budgets, procurement and security places on innovation, oversight in these areas and centralization continues to increase.

Finland has created a new agency to serve as a shared service center for the Finish government. Services that are "sector independent," meaning they can be commoditized with little customization by sector, are being transferred to Valtori. By the end of 2015 sector independent functions from 80 agencies will transfer to Valtori and its anticipated 1200 staff.

Portugal developed a strategic plan focused specifically on managing ICT costs with the goal of creating better public services at lower cost. Goals for the plan include the implementation of common ICT solutions across agencies and an explicit focus on cost reduction.

The US has focused heavily on oversight of spending and projects in the past few years with its PortfolioStat and TechStat reviews and transparency efforts around spending. In 2014, they made Shared Services a Cross Agency Priority Goal for efficient management of IT systems. The goal is to develop common standards and benchmarks for shared service provision and implement them into shared service offerings, with the assumption that savings and efficiencies will necessitate their use by the broader government community.

Canada has made it a priority to practice "leadership in the strategic use of IT to enable more efficient and effective" government. A number of initiatives support this priority. Their Application Rationalization effort is working to standardize and consolidate back office applications through enterprise solutions and strategic sourcing. A Government-wide Integrated IT Plan builds upon shared services efforts to transform the management of data centers, telecommunications and end user devices. Finally, consolidating Canada's government web presence to a single entry point is the goal of their Web Renewal effort.

As part of their Shared Service Platform and IT Strategy, Japan developed a "Roadmap for Information System Reform" at the end of last year that addresses government-wide integration into Japan's Government Cloud. By 2018, Japan plans to reduce the number of government systems by nearly 60% through integration and consolidation efforts.

Belgium's FEDICT continues to experience growth as agencies adopt their services. Their reports show that consolidation to shared services continued with new customers joining in the past year. Their services focus primarily on back office functions, with ministries responsible for front office applications. One challenge noted was a stalled procurement of cloud services due to ambiguity in the definition of the service.

Cyber-Security – Cyber-attacks are becoming daily news stories in the private sector and public sector. Threats have intensified to the point that governments are treating them as existential threats to critical infrastructure and systems. Security initiatives continue to increase in profile and urgency among ICA member governments. Arguably, more resources and attention are devoted to cybersecurity than any other issue.

Finland adopted a national Cyber Security Strategy in 2013 with the goals of securing vital infrastructure against attack and becoming a global leader in cybersecurity preparedness by 2016. An implementation program for the strategy was approved in March of this year that includes 74 measures. The Ministry of Finance is responsible for steering security efforts within government, with all agencies responsible for security in their management and operations.

Mexico's ICT Policy released in May 2014 focuses on Information Security to protect critical infrastructure and personal data. The policy established a Specialized Information Security Committee (CESI) and tasked it with creating a National Strategy for Information Security. The strategy will emphasize collaboration across sectors including law enforcement and academia.

Cyprus has created a Government Secure Gateway "ARIADNI." The tool will serve as a means for government agencies to share information and a secure single-sign on channel for citizens to receive services from across Cyprus's government. The pilot went live in March of this year.

Additionally, an electronic Identification, Authentication and Signature (eIAS) effort is underway. eIAS services will be the basis of secure interactions to interact digitally with government.

Australia's report highlighted a number of initiatives focused on security and privacy. The Privacy Act of 2012 and Privacy Regulations of 2013 went into effect in March of the year. The laws established a set of standards and requirements for handling personal information. A series of frameworks governing authentication, public key infrastructure, identity management and third-party providers of identity services are also in place. One initiative to highlight is the myGov inbox effort, which was released in March of this year. The Department of Human Services supports the service which integrates service and communication from a variety of online services into one account. A Validated Customer Model is designed to expand myInbox so that accounts are linked to a citizen's case records to improve personalized services.

This year Portugal is implementing mobile authentication with its Key Mobile service to complement its Citizen Card. The service will allow users to access government services securely and easily using mobile devices. Also, earlier this year the Bank of Portugal supported the government identity management efforts by stating that the Citizen Card and interoperability framework were important to financial stability.

Innovation: Open and Smart Government

While oversight, security and cost management were emphasized across country reports, many initiatives to encourage innovation were also highlighted to make governments more open and smart. Open government efforts continued, with members highlighting many open data initiatives, collaborations with outside developers, the public and even unprecedented examples of code reuse across national boundaries. Countries also highlighted important initiatives to make government smarter; using data analytics for decision making and managing services, improving digital service delivery by adopting agile practices, and bringing in new development expertise and a customer focus into government.

Open Government

Governments are continuing their efforts to make data more open and leverage private sector expertise. Governments share data and applications across agencies and even internationally, with many countries mentioning European coordination and international code sharing. In many ways, government is a unique environment in that a robust market of the shelf applications doesn't exist to meet complex government needs. This has led governments to look for sharing, reuse and co-creation opportunities to fill in the gap.

Estonia has been a leader in creating a Digital Infrastructure and is increasingly collaborating and opening up its infrastructure for use by other governments and even non-citizens. In place for nearly a decade, Estonia's X-Road data exchange infrastructure is being adopted by Finland and potentially other countries. This will in turn enable cross border data exchange for countries that adopt the model. Another innovative program is the offer of e-residency, which opens up Estonia's identity management card to non-citizens for authentication purposes to conduct business digitally. Estonia can also digitally sign with Latvia, Finland and Lithuania. In December 2013, the world's first digitally signed intergovernmental agreement was signed by Estonian and Finnish Prime Ministers. (Note: Estonia has received a great deal of international press as a model for government use of ICT. See the following link for one example http://www.theatlantic.com/international/archive/2014/01/lessons-from-the-worlds-most-tech-savvy-government/283341/)

Finland's National Architecture for Digital Services is being built in large part using shared code from Estonia's X-Road data exchange platform. It will be interesting to see how the adoption of this core platform goes in a different and slightly larger environment. Finland is using X-Road to integrate data registers with broader data repositories, identity management services, local and agency specify applications, and Digital Service Views designed to create single windows to government for citizens and businesses.

Australia released GovShare, an online tool for government collaboration and reuse of code, documentation, standards and guidelines surrounding government ICT. The site was launched across Australian government in May of this year. In addition to sharing a variety of tools, the service includes databases of online services, online discussion forums and a skills matching tool to find people with technical expertise across government.

Canada has demonstrated a commitment to open data and open government. They are releasing the Directive on Open Government and Action Plan for Open Government 2.0 this fall. The documents are the results of extensive conversations with stakeholders inside and outside of government. The goal of the policies is to place data and information online in usable formats through Canada's Open Data Portal. The potential of government data was demonstrated in this year's CODE—Canadian Open Data Experience, Canada's largest ever hackathon. A review panel selected finalists, which then pitched to an audience of industry experts. The top 3 applications received cash prizes.

Smart Government

Smart governments deliver services that are simple to use and built efficiently with customer value in mind. Also, Smart Governments use data to the fullest extent to make decisions, manage resources, track indicators and deliver responsive services. This year's reports included a number of examples of national efforts to become Smart Governments.

Singapore, which has been a leader in the innovative use of technology in society, has set the goal of being the world's first smart nation with its Smart Nation Platform. Combining elements of big data analytics, sensors (Internet of Things) and cloud computing, the program is designed to collect data on a variety of indicators using their Above Ground Boxes sensor network and what they call a Heterogeneous network to collect info across mobile and fixed location devices. A Smart Nation Operating system is designed to synthesize and analyze the data for insights to create an anticipatory government that provides integrated and responsive services. Other interesting initiatives include the eCitizen Ideas portal and Apps4SG challenge launched earlier this year. The portals are for crowdsourcing ideas and applications from the public, further demonstrating Singapore's commitment to co-creation

A key component of Portugal's Government and Administrative Modernization Strategy is the availability of Citizen Spots. The Citizen Spots build on the one-stop shop model used in the Citizen Shops, which combine more than 30 different public services in one location. ICA members toured a location at the 2013 conference in Lisbon. Citizen Spots will be staffed to support citizens accessing digital services online from a single location.

Taiwan has long been a leader in online and mobile government services. Highlighted in past reports, their Home eServices is an extension of mobile services, bringing electronic services directly to underserved populations. Rather than viewed as a separate channel, it is viewed as an issue of access and economic equality, which is a byproduct of the digital by default mindset.

Cyprus is creating a government data warehouse to consolidate and aggregate data across all government agencies, track key indicators and enable use of data analytics to improve government services. The goal is to create a "tuned up government." The project is scheduled for completion by the end of 2015.

Japan developed its policy for "Improvement of the Convenience of Online Procedures" in April of this year. The policy requires agencies to establish improvement plans to increase user feedback, responsiveness to requests, utilization rates, and API access to services.

The U.S. has created a Smarter IT Delivery Agenda to bring a startup mentality to government services, focused on improving the citizen experience and quick delivery rather than compliance. This is done through a handful of new organizations combined with an influx of talented developers and small firms from outside government. Part of this goal is also to establish a future ready workforce that can develop and maintain services of the future. The Presidential Management Fellows programs has been institutionalized into a program office called 18F hosted at GSA. 18F is tasked with developing citizen centric applications in an agile fashion with agencies. Some of the applications being worked on will streamline the contracts and grants process for citizens and businesses. Also in 2014, the U.S established the US Digital Service in the national CIO office with the goal to "improve and simplify the digital experience that people and businesses have with their government." The new organization will adopt standards to match the best private sector sites and collaborate with agencies in the deployment of citizen centric services.

Conclusion

Governments are of two minds when it comes to use of technology. On one hand it is a necessary evil that can be costly, risky from a security standpoint and in need of central control. On the other hand, it is a source of innovation that has the potential to add value to the public and customers through better services and more responsive government. This discord is evident in many country reports. The same report may highlight instances of increased oversight and security requirements alongside an overview of a new innovative organization operating independently of the same oversight. The same office may have responsibilities for both. In some cases, there's even oversight to make sure you're innovating. Countries consistently highlight the lack of IT skills as a challenge to creating quality digital services within government, yet they devote an ever increasing portion of their staff to oversight and compliance activities.

There is a tone of impatience evident among IT leadership, political leadership and the public that we're not adapting quickly enough. This impatience is reflected in the changes in organization structure, new initiatives and offices. While it's true that we shouldn't keep doing what isn't working; a sustained, consistent operating model for government use of technology is necessary for success. Governments should be wary of too much change in the operating environment.

Despite the impatience and risks, this year's reports included a number of successful and forward looking efforts designed to create secure, simple and cost effective digital services. Finding the right balance between control and innovation is key.