

Role and positioning of e-government leadership: Trends and issues

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1. INTRODUCTION

Understanding the institutional dimension of e-government development provides a key to seeking effective measures and entry points in order to realise the potential of e-government for better service delivery and e-governance.¹ Setting up the right institutions presents a major challenge for many countries; including countries already experiencing some success in e-government. Most are still seeking the appropriate institutional solution.²

This is all the more important in the context of sustainable development, which is at the core of the post-2015 development agenda. The timeframe for implementation of the Millennium Development Goals (MDGs) will come to an end in 2015 and the UN and other stakeholders have been intensively discussing the scope and priorities of a post-2015 development agenda and seeking a shared vision over what future we want.

This Technical Paper assesses the importance and relevance of institutions for e-government strategies and development and presents pertinent country cases. It also explores the current institutional e-government landscape and outlines some underlying views, development trends, current and emerging issues on e-government, as well as associated challenges which are likely to cause or call for institutional changes. An offer of further observations and policy conclusions will ensue.

Institutional arrangements profoundly influence technology and its application in governments; that is, e-government,³ and the way governments provide services, interact with their citizens and deliver for stakeholder value. After all, e-government development typically takes place within countries' existing institutions and institutional arrangements; including particularly, the positioning of e-government leadership and responsibilities within public sector institutions.

More than just a technical project, e-government development is essentially a political and institutional project – as highlighted by some senior Government officials such as Singapore's Senior Minister Goh Chok Tong (2003). Mr. Goh stressed that more than technology and its application, a deliberate and sustained effort to improve on institutional context is critical to e-government success (e.g., breaking down of silos and working together as a single integrated government).

2. THE VARYING INSTITUTIONAL LANDSCAPE OF E-GOVERNMENT

Institutional contexts of e-government development and institutional positioning of e-government have developed differently across countries. The current, rather heterogeneous institutional landscape of e-government shows that Information and Communications Technologies (ICT) ministries and offices are often in charge of e-government, but are not necessarily the lead agencies in all countries.

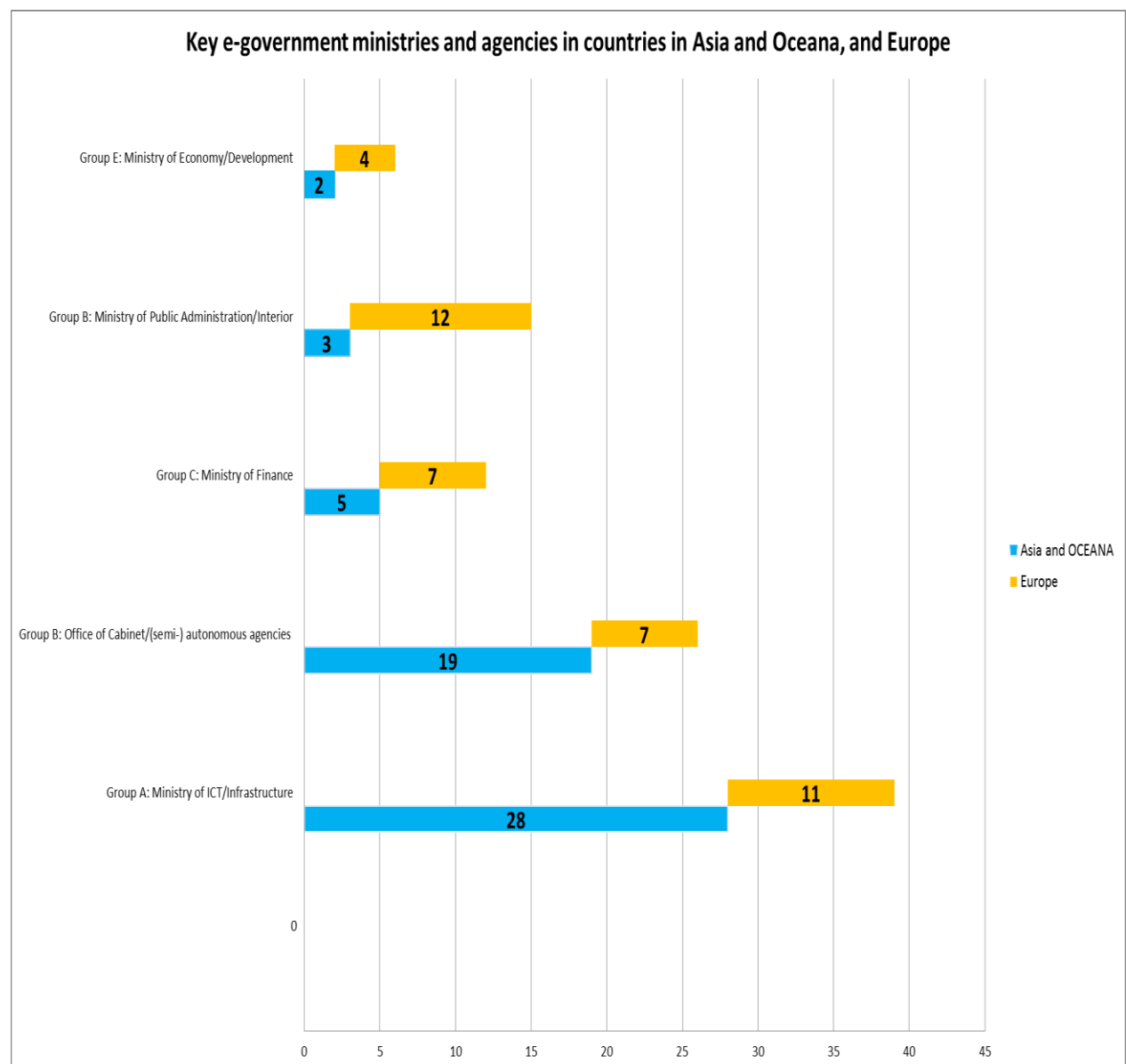
For example, a vast majority of African countries' e-government institutions have designated ICT ministries and agencies. But in the Latin American and Caribbean countries, e-government responsibilities are distributed across different ministries and offices.

A comparison between European and Asia-Pacific countries also shows a varying institutional landscape of e-government leadership.

In Asia and the Pacific, 27 countries have ICT ministries while 19 countries have cabinet and prime ministers' offices and semi-autonomous agencies serve as key e-government institutions. Other ministries serving as lead e-government institutions include the ministries of finance in 5 countries, and ministries of public administration (and the interior) in 4 countries, and ministries of economy/development in 2 countries.

In Europe, e-government responsibilities are rather evenly distributed across various ministries and offices. Ministries of public administration (and the interior) are in charge of e-government in 12 countries and ICT ministries in 11 countries. The ministries of finance, and cabinet, prime ministers' offices and semi-autonomous agencies are lead institutions in 7 countries, while the ministries of economy/development are key e-government institutions only in 4 countries⁴ (see Figure 1).

Figure 1. Key e-government ministries and agencies in Asia and Oceania and Europe



Source: Created by author based on the United Nations Public Administration Country Studies (UNPACS)

What is behind these observed institutional differences and changes? The factors and driving forces vary. At a fundamental level, underlying and evolving e-government views and shifting policy emphasis strongly influence the institutionalization of e-government.

3.1 Underlying e-government view and shifting policy emphasis

E-government is often seen as a technology issue or a means of reducing costs and increasing efficiency by digitizing some of the existing processes rather than redesigning the processes by which government or public services are provided, as was experienced during the financial crisis in 2007-2008. For example, in response to the crisis, a number of member countries of the Organisation for Economic Co-operation and Development (OECD) aimed to improve efficiency and effectiveness by increasing productivity; while other countries opted to improve coherence and public service delivery as a policy priority.⁵

Notably, shifting e-government view leads to institutional change, as in the example of Ireland and in the earlier years, the Republic of Korea. Indeed, in the case of Ireland, the country's evolving and strengthening view of e-government as part of its reform agenda is clearly reflected in the institutional changes in its e-government set-up, particularly in the establishment of a new Government Chief Information Officer (CIO) Office within the Department of Public Expenditure and Reform in 2013 (see Box 1).

Box 1. Delivering transformation beyond efficiency



During and immediately after the financial crisis, the initial emphasis of the e-government policy of Ireland was on delivering more services in a more efficient manner and on achieving substantial progress in this respect (e.g., e-tax services).

Building on the progress and aligning the organizational structure to the reform mandate of the Department of Public Expenditure and Reform, in 2013, a new Government CIO Office was established in this Department for the first time in this country. The CIO Office replaced the Centre for Management and Organisation Development (CMOD) and was tasked to lead the cross-organizational CIO Council in instituting reforms and transforming the business of Government across departments by exploiting the opportunities that ICT provides.

The Department was mandated, not only to oversee the fiscal business of the government but also to initiate reform and therefore be at the forefront of transforming the business of government. In alignment with the Department's mandate, it is considered central to the Department's plan to reform and transform the business of government and improve the overall performance of the public service beyond cost reduction and computerization of existing business processes.

In fact, the very name of the ministry contains "reform", indicating a profile that is different from the other finance ministries leading the e-government initiatives in their respective countries, as listed in Table 1 below.

Table 1. Finance ministries (in charge of e-government) in Asia-Pacific and European countries

Asia-Pacific countries		European countries	
Australia	Ministry of Finance and deregulation	Denmark	Ministry of Finance
Cyprus	Ministry of Finance	Finland	Ministry of Finance
Fiji	Ministry of Finance	France	Ministry of Budget, Public Accounts and Civil Administration
Israel	Ministry of Finance	Ireland	Department of Public Expenditure and Reform
Singapore	Ministry of Finance	Slovakia	Ministry of Finance
		Spain	Ministry of Finance and Public Administration
		Switzerland	Federal Department of Finance

Source: UNPACS

In the case of the Republic of Korea, shifting e-government views changed the institutional positioning of e-government leadership in the earlier years. The Republic of Korea belongs to a small number of Group C countries whose public administration and interior ministries are in the forefront of e-government development (see Figure 1).

Currently, the country's e-government lead agency is the Ministry of Security and Public Administration (MOSPA). Previously, the Ministry of Information and Communication (MIC) led e-government initiatives. In 2003, with changing e-government views and visions, e-government leadership and responsibilities were transferred from MIC to the Ministry of Government Administration and Home Affairs (MOGAHA), later renamed to MOPAS, and then MOSPA. In the earlier years, e-government was mainly seen as a technical issue and handled by MIC, which had the advantage of having technical expertise. Later, the Government opted to shift this lead role to a public administration ministry so as to advance e-government as an integral part of government business.⁶

3.2 Opportunities, pressure and responses to integrate

Some of the most prominent factors causing and calling for institutional changes are increasing technological opportunities and the growing pressure to provide more integrated public service in response to citizen concerns and heightened expectations. These factors are driving institutional change to enable e-government to function in an integrated and synergistic manner.

3.2.1 Integration as a key success factor

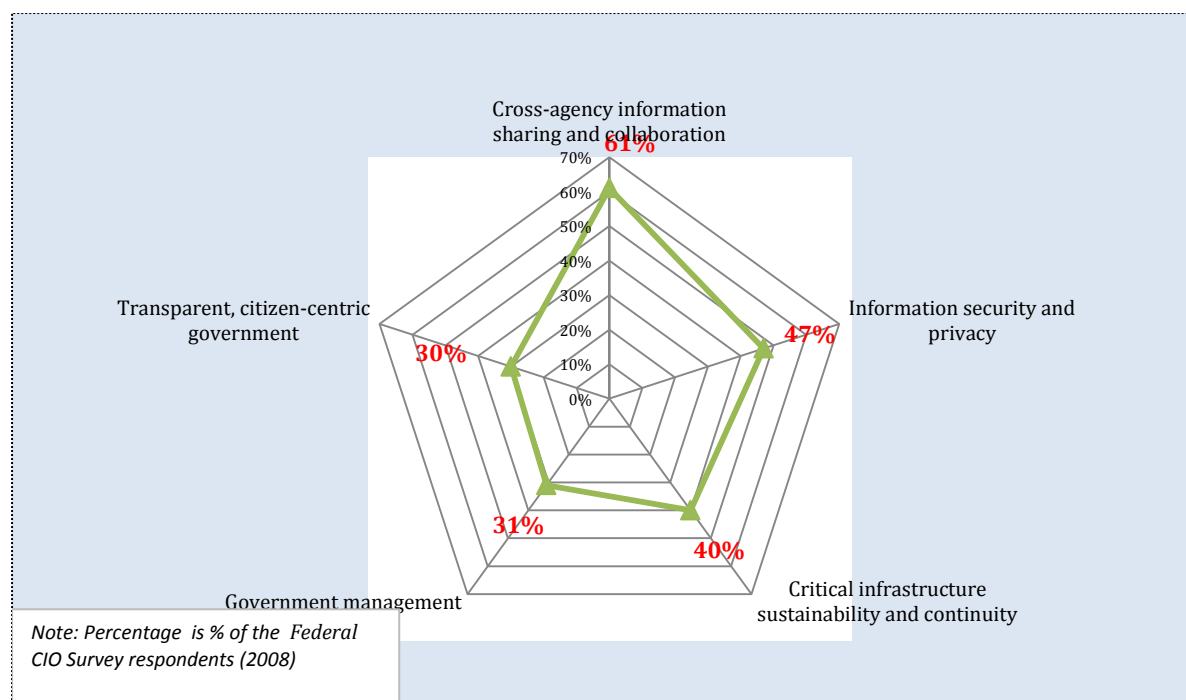
It was found that investments in such integration have the greatest impact on the performance of e-government. While a fast-growing array of new information technologies and tools and their introduction in government applications provide opportunities for such integration, taking advantage of advancing technologies can affect the structure of organizations and institutional properties because they introduce new procedures, rules and regulations which would then have to be implemented. These changes bring the various "silos" of government closer together, eventually integrating them into a single cohesive service function—causing

profound and evolutionary change in the institutional set-up of the government.

Integrated service delivery requires government agencies to collaborate across their organizational boundaries, so as to achieve coordination of processes across multiple organizations. The role of CIOs is thus redefined and includes responsibilities such as “cross boundary broker” and policy leader— with the potential for government transformation highly dependent on the working relationships between the CIOs and other ministries and agencies.⁷

Effective institutional integration is therefore a critical factor for the success of e-government development and presents an important challenge that needs to be addressed by e-government leaders. In a survey conducted by the US Federal Government, it was found that integration-related initiatives is the very area, where IT investments have the greatest impact on the performance of government, making it the most important factor to consider in planning for e-government development strategies. Figure 2 illustrates cross-agency information sharing and collaboration as having the greatest impact in the performance of e-government.

Figure 2. Where IT investments have the greatest impact on the performance of government



As countries progress, integrated service delivery becomes all the more important; from information dissemination and interactive phases, to more advanced e-government development stage (e.g., transactional stage).

In the transactional stage, there is an increase in organisational and technological complexities, and other associated challenges to institutional properties—from less complex, relatively standardized technologies with minimal effects, to more complex impact of customized technology. As more government agencies, offices and even non-governmental organizations become stakeholders, an alignment of the technologies used by the interlinking institutions

and a re-engineering of the institutions' business processes are called for to enable better citizen access to e-government services. In this phase, the whole-of-government (WoG) application becomes important for service delivery customized and built around the needs and expectations of the citizens.

The opportunities and associated challenges resulting from integrated service delivery through e-government are many. While many governments have progressed and utilized technology to take public service delivery to a whole new level, most government initiatives have not been able to pass the point of plain information dissemination and basic interaction with its citizens.

According to data from the 2014 E-Government Survey, 23 countries do not provide any features enabling citizens to complete transactions with government at all. Out of all transactional features measured by the Survey, 67 countries provide for up to 15% transactional features; 83 countries up to 10%; and 105 countries up to 15%, as measured by the Survey (See table 2).

Table 2. Countries providing transactional features (in percentage)

0%	23 countries
0% - 5%	67 countries
0% - 10%	83 countries
0% - 15%	105 countries

3.2.2 Setting up new Government CIO offices and institutions

Having a functioning WoG approach to e-government is becoming a key priority issue for many countries. An important part of every government's efforts in going towards more integrated service delivery is the setting up of new government CIO offices or its equivalent authority bodies.

A growing number of countries across different development stages and conditions have opted for a centralized institutional structure to facilitate integration; including through the establishment of CIO offices and other similar authority bodies. The expectation is that the presence of a national coordinating authority can help overcome internal barriers and focus efforts on integrated responses to citizen concerns.

According to the 2014 United Nations E-Government Survey data, the overall development trend shows a rising number of countries with a government-wide CIO institution or equivalent authority body for coordinating national e-government development—starting from 29 countries in 2008; 32 countries in 2010; 60 countries in 2012 and up to 82 countries in 2014. However, the CIO offices are at different institutional levels and have varying functions and responsibilities.

Some of the newly created CIO roles, offices and/or key e-government authority bodies between 2013 and 2014 include those in Bhutan (2014), Ireland (2013), Jamaica (2014), Japan (2012) and Kenya (2013) (see Box 2).

Box 2. Delivering integration, setting up new CIO offices and lead agencies (country examples)

Kenya – ICT Authority: Rationalizing all ICT government institutions in Kenya (2013): The newly established ICT Authority is tasked to rationalize management of all Kenyan ICT government institutions, enhance efficiency and eliminate duplication of e-government activities. The ICT Authority is a State corporation under the Ministry of Information Communication and Technology.

Jamaica – E-governance push and establishment of a new e-government agency (2014): As part of Jamaica’s focus in promoting e-governance, particularly the streamlining of ICT activities across government ministries and agencies, E-government (e-gov) Agency was created under the helm of a newly recruited CIO. The new CIO is responsible for providing overarching leadership in the development and implementation of the Government’s ICT strategies by the Ministry of Science, Technology, Energy, and Mining

Bhutan – Setting up Program Management Office (2014): Bhutan is moving closer to institutionalizing e-governance structure with an e-Gov master plan to ensure effective implementation. The master plan includes the setting up of the eGovernment Program Management Office within the Ministry of Information and Communications as the lead agency to drive effective governance and to oversee the implementation of various e-government programmes.⁸

(Source: Various newspaper articles and press releases)

3.2.3 But going in the opposite direction?

While the pressure to integrate has led to the creation of new CIO offices and authorities, the opposite also happens; Australia and the United Kingdom are cases in point (see Boxes 3 and 4 below).

Box 3. Going in the opposite direction? Dissolving “WoG CIO” role (Australia, 2014)

Amid concern over its ability to deliver with a WOG strategy, the role of the Australian CIO, initially under the Australian Government Information Management Office (AGIMO) of the Department of Finance and Deregulation was dissolved (2014). The responsibilities of the CIO have been reassigned to the First Assistant Secretary of the newly created Efficiency, Assurance and Digital Government Cluster under the same Department.

AGIMO was responsible for formulating and implementing a WoG policy and despite some success in its efforts to implement WoG coordinated procurement; it appeared to have struggled in defining its role and function. This was possibly owing to the fact that responsibility for ICT in the Australian public service has historically been decentralized with high levels of autonomy across agencies and with decentralized authority over the final resources.

In the case of the United Kingdom (UK), the role of a central, inter-departmental CIO was dissolved as part of a big shake up of the country’s ICT and e-governance structure in 2013, just a year into the tenure of a new CIO who was appointed in 2012.

In lieu of an inter-departmental government CIO, the Technology Leaders Network was created consisting of the departmental technology leaders from the main Government departments (e.g., Ministry of Justice, Department for Work and Pensions, and others). The Network functions under the Government Digital Service which was established in 2013. Its objective is to provide a forum where common technology services can be developed which can deliver on the digital transformation requirements laid out in the Civil Service Reform Plan and

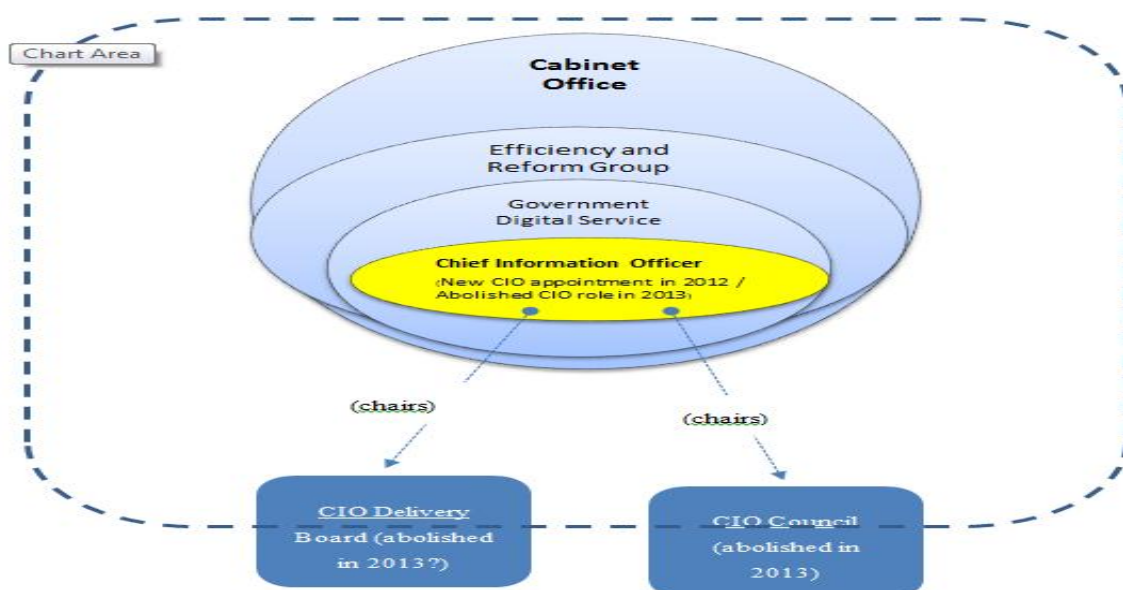
the Government Digital Strategy. According to the Cabinet Office, a central government CIO role has become superfluous and is no longer central to delivery."⁹

The thinking is that each department's CIO profile is different and the task to monitor across the various ministries/departments is too complicated for one person.¹⁰ Moreover, according to the Cabinet Office, the CIO role has shifted to a quasi-procurement and contract manager role. The role of a central Chief Technology Officer who reports to the Executive Director of the Government Digital Service was retained. The e-government leadership roles shifted to the chief technology officers of each Department and others appointed in various Departments in 2013. They meet regularly to discuss how to best deliver e-government services.

The Technology Leaders Network collaborates closely with other governance boards such as the Digital Leaders Network. The Technology Leaders Network replaces the CIO Council and CIO Delivery Board, which were abolished in a wider reorganisation of the Whitehall IT governance structures in March 2014.¹¹

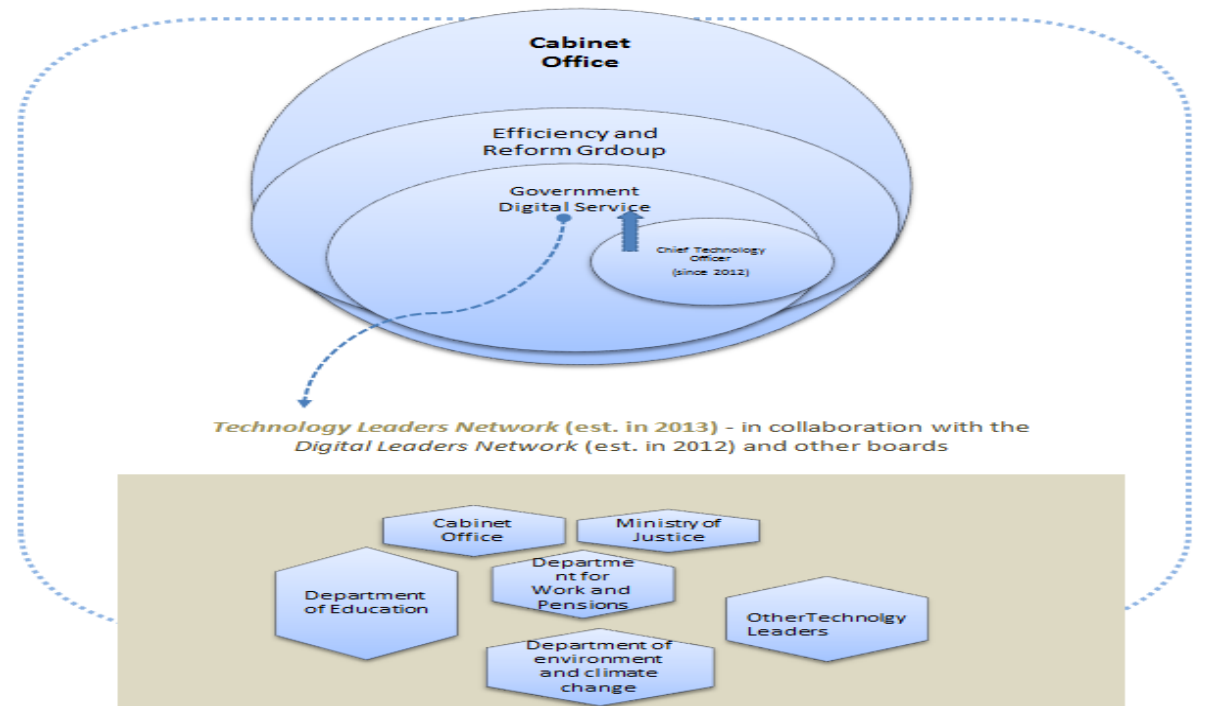
The following Figure 3 and Figure 4 show the institutional changes of the central CIO Office and other relevant authority bodies, which took place between 2012 and 2013.

Figure 3. Previous government structure and e-government positioning in the UK (2012–2013)



Source: created by the author as part of PACS research. Note that this is based on desk research and not validated in terms of its accuracy and validity as of August 2014

Figure 4. New government structure and e-government positioning in the UK (2013-14)



Source: Created by the author as part of PACS research. Note that this is based on desk research and not validated in terms of its accuracy and validity as of August 2014

3.2.4 Centralization efforts in pursuit of integration

Instead of setting up a new CIO office or institution, some countries centralize e-government activities in pursuit of greater integration (e.g., by empowering a single agency). The level of interaction between government departments and agencies involved in IT projects is a determining factor of the degree of centralization required, which in turn is a key element in successful e-government integration.¹²

In Bulgaria, the President demanded that a single institution be in charge of e-government development right after he took office in 2012. He said, "Bulgaria has at least three institutions that are doing something in that respect. We need a change". The Ministry of Transport, Information Technology and Communications is the single e-government institution tasked to bring into line all other institutions to provide e-government options for over 1100 administrative services. It coordinates all the activities for the implementation of the policy in the IT field.

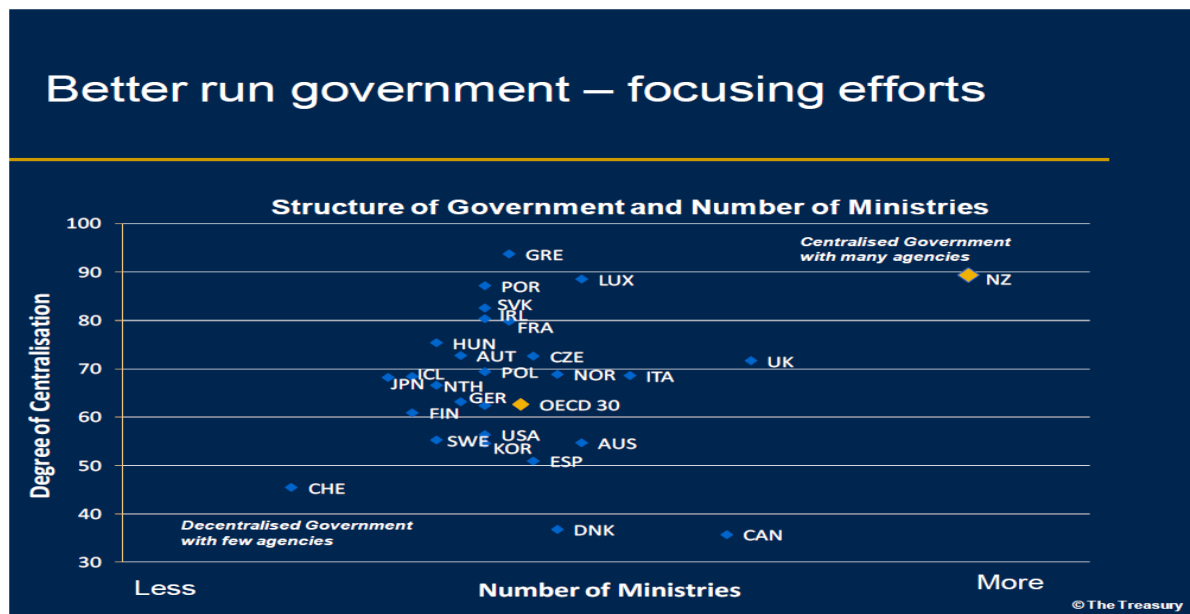
The ultimate location of the e-government responsibilities and the degree of centralization determines to a large degree, the outcome of the process. An example of this is the US Office of Management and Budget which pushed for increased centralization of IT-related responsibilities in the US federal government in the early 21st century. However, to what extent centralization determines the actual integration outcome is not clear.

There is a recognized need to achieve better focus through fewer government agencies over time, with stronger governance across agencies; alongside the opportunity for agencies frequently based around common services and processes to integrate and synergize. This is the case with countries like New Zealand, which has a highly centralized government with a

number of ministries beyond the OECD average of 30 ministries/departments.

Figure 3 shows how the government sector of New Zealand is divided into “clutters of agencies”, and how complex it is for this country to take a WOG approach to policy development. As part of a strategy to build stronger governance across agencies and for said agencies to be clustered based on common services and processes, the Government of New Zealand is now streamlining the government system, reducing the number of government departments.¹³

Figure 5. OECD countries’ government structure and number of ministries



3.2.5 Alternative coordination arrangements and leadership

What if neither a single “Uber” CIO with a highly centralized budget and planning authority nor a powerful lead agency exists?

Some countries rely on multiple committees to steer and coordinate e-government activities. Bahrain, for example, experienced problems with insufficient buy-in from stakeholders (ministries) in cooperating towards the development of a one-stop-shop platform for e-government. To ensure continuing cooperation and support from the various ministries, several actions were undertaken including forming a high-level steering committee led by the Deputy Prime Minister to oversee the progress of developing and implementing the e-government one-stop-shop platform.¹⁴

The State of California (USA), with its decentralized form of e-governance, warrants particular attention, as it has successfully used an IT Council to implement e-government strategies by acknowledging the different agency goals and circumstances (see Box 4).

Box 4. IT Council with focus on overseeing government-wide collaboration (California, USA)

The IT Council of California, composed of high-ranking public agency officials and CIOs from different areas in the public sector, allows its member agencies to develop a common language for conveying expectations and goals in online service provision and intra-agency communication. It is the mission of the IT Council to provide guidance to the State CIO and make IT recommendations for implementation by executive agency departments. Each agency has its own CIO, who is a member of the IT Council. The Council concentrates on government-wide collaboration for technology budgets and planning, standardization and integration, and policy goal-setting.

However, such coordination modality is not always successful. In the case of Brunei in the early 2000s, poor identification of a champion in e-government resulted in the compartmentalization of government agencies which inevitably resulted in duplication of projects. There was an absence of a “lead agency” as the authority of the E-Government Program Executive Council (EGPEC) was limited to that of an approving committee without enough clout to break down the silos among ministries.

The bottom line is that having a coordinating committee is very different from having a lead agency in implementing a WoG strategy in the public sector.¹⁵ In Brunei where there was no e-government champion or strong leadership, there was a clear need for someone to break the silo culture and to take on the essential role of coordinating, match-making and negotiating to bring the ministries together and integrate the multiple e-government processes.

Indeed, having a strong leadership makes a big difference in e-government implementation. In the case of the social welfare services in the Republic of Korea which required integration and a WoG approach due to the involvement of 17 different government agencies, a successful WoG implementation was a result of new legislation and top-level leadership. The WoG approach was facilitated among the ministries, including in the case of the newly organized Social Security Information System.

3.3 Towards effective relief of natural disaster emergencies

Aside from the increasing pressure to integrate the delivery of regular public services, there is a growing pressure to improve and facilitate the delivery of e-government services for natural disaster relief. Similar to the pressure to integrate regular public services, natural disaster emergencies present challenges that do not fit neatly and entirely into the competencies of any one ministry. In response to emergencies caused by natural disasters, some countries like Japan and Bangladesh introduced institutional change (see Box 5 and 6).

Box 5. Establishment of a new CIO office in a highly developed country—delivering natural disaster relief and open data promotion (Japan, 2013)

In response to a recent natural disaster, the major earthquake and tsunami that hit East Japan in 2011, the Government of Japan reinforced its e-government efforts by promoting the use of open data analysis for disaster management (including those co-produced with citizens through open government data) and promoting effective mobile services in its disaster relief operations.¹⁶ Open data promotion constitutes one of the most important policies of the current Japanese administration.¹⁷

The first-ever Government CIO took office in the Japanese Cabinet Secretariat in October 2013; with a view to making Japan “the world’s safest and most disaster-resilient society” and also in order to provide an integrated public service delivery including through the “Number One” system (also known as “My Number”), which is also used for taxation and social security.

This relatively new office is currently exerting efforts to establish itself firmly in the forefront of the current Japanese e-government landscape where powerful ministries are in charge of e-government projects, despite its lack of resources and legal basis.

In developing countries, especially in a least developed country like Bangladesh, natural disasters present an immense challenge to sustainable development and thus require and cause changes in disaster management-related institutions (see Box 6).

Box 6. Delivering disaster relief for sustainable development in a least developed country (Bangladesh)

Bangladesh is very vulnerable to natural disasters. But it is also known as a leading country in disaster management, with a well-functioning disaster risk reduction system (DDR). This long-term comprehensive disaster management programme is designed to institutionalize DRR, not only in the Ministry of Food and Disaster management, but more broadly across various sector ministries.

In Bangladesh, ICT plays an increasingly important role in all phases of disaster risk reduction. It is the objective of its disaster management information network to put in place a more effective and better coordinated system in order to improve coordination among agencies at all levels with access to timely and integrated information.¹⁸

The DDR focusses primarily on strengthening institutional capacities in reducing disaster risk. In order to better deliver natural disaster relief, particularly through effective ICT application, Bangladesh has recently changed its institutional arrangements. In 2009, the Government’s bureau of disaster management and relief was for the first time upgraded into a division, the Disaster Management and Relief Division.

Following enactment of Disaster Management Act in 2012, a full-fledged ministry, the Ministry of Disaster Management and Relief was established; in order to reduce overall vulnerability and to better coordinate various government and non-government organizations’ relief efforts.¹⁹ The new Ministry is mandated to manage disaster—to reduce risk, protect the people and alleviate its effects, especially among the poor and the disadvantaged.²⁰

3.4 Emerging public challenges such as information security

With the advancement of technology, new public challenges, such as information security require cross-boundary cooperation and changes in institutional arrangements. Information security is an emerging priority issue for many countries around the world. In particular, cyber security is currently a top priority for highly developed countries like Canada and United States.

Without information security, the success of any country in implementing e-government initiatives is highly compromised. In fact, information security is a major success factor. For example, the Netherlands achieved its high e-government ranking (2nd in 2012 and 5th in 2014) in the UN E-government Survey owing to the secure manner with which its citizens are able to communicate digitally with its governmental bodies.²¹

According to the Director of the Michigan Department of Technology, Management and Budget and State CIO, this issue weighs most heavily in the priorities of the CIOs of the US government. In recent years, information security issue had caused the cognitive shifting of the CIO's role—from one limited to technical concerns to one which includes the handling of non-technical tasks like budget management and information security.²²

This evolving role and associated understanding is aptly summarized in the following:

“Security is becoming an important aspect of the current CIO duties. In the past decade, the position of CIO has evolved from chief IT coordinator, chief standards enforcer and chief IT budget officer to chief IT strategist, chief IT policy advisor and most recently, chief security officer.”

The 2014 United Nations E-government Survey found that 79 countries have addressed data privacy and security through specific legislation, including through Data Protection Acts. However, 90 countries still have no legislation on this issue. Only 15 countries have data privacy and security provisions in their constitutions; six have relevant draft legislation; while three countries cover data privacy in their access to information laws.

Beyond legislation, some countries like New Zealand institutionalize privacy and information security protection through the creation of a new position of authority, i.e., Chief Privacy Officer.

**Box 7. Newly created Chief Privacy Officer position—delivering on information security
(New Zealand, Department of Internal Affairs, 2014)**

The Government of New Zealand created the position of Chief Privacy Officer (CPO), to signal its intention to bring stronger focus on privacy and security throughout the government systems. Its Ministers are expected to ensure that their respective agencies are accountable for the security and privacy of their data.

The role the GCPO was to strengthen an all-of-government approach, to provide leadership and advice on privacy issues, to oversee information security and to provide a single point of reporting for vulnerabilities within the government systems. The Officer provides additional support to the Government CIO in setting standard, supports other agencies in meeting their privacy responsibilities and coordinates with the Privacy Commissioner.

The positioning of the GCPO role in the Department of Internal Affairs is an example of the realignment of this Department to strengthen privacy and security of public services.

3. ASSESSING THE RELEVANCE OF INSTITUTIONS FOR E-GOVERNMENT DEVELOPMENT

There is no doubt that institutions matter and that they are factors for success. The question is, how, and to what extent they influence e-government performance. There is no direct relationship between e-government performance and the way countries arrange their e-government lead agencies. For example, institutional positioning of e-government leadership vary among the top 10 most successful e-government countries ranked in the 2014 United Nations E-government Survey within their governments.

While in the Republic of Korea, the Netherlands and New Zealand, Public Administration and the Interior ministries are the lead agencies; in Australia, Finland and Singapore, Finance ministries take the lead in e-government. The UK no longer has a CIO; while the CIO of Japan is based in the Cabinet Office and the CIO of the United States is in the White House.

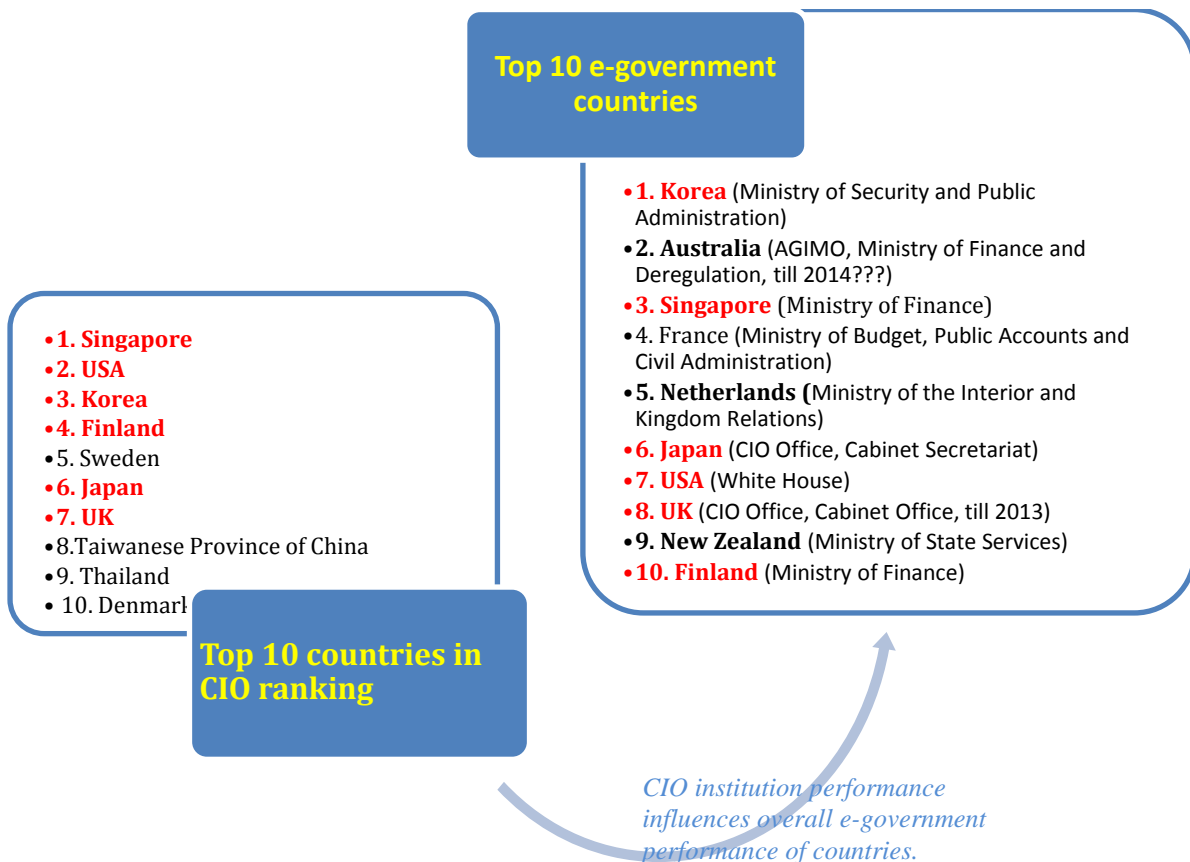
4.1. CIO arrangements matter a lot

While there are few systematic analyses exploring the effects of institutions on e-government strategy and development, the effects of the existence and functions of a government CIO on e-government development can be explored.

This can be done by comparing the country rankings in the 2014 United Nations E-government Survey with the *Waseda - IAC International E-Government* Ranking 2014. The latter uses the CIO-indicator among its 7 indicators. The CIO indicator is based on CIO presence, mandate, organizations and development programmes. In the ranking of the 2014 United Nations E-government Survey, 6 out of 10 top ten countries, i.e. Finland, Japan, Korea, Singapore, the United Kingdom and the United States, are the same countries with the highest scores in the CIO indicator.

It is therefore likely that there exists some correlation between having a CIO position/institution and e-government performance, supporting the argument that CIOs actually matter for e-government performance and development. (See Box 9 below).²³

Figure 6. Comparison of 2014 UN E-Government Survey ranking with Waseda-IAC CIO indicator-based ranking of top 10 e-government countries



Source: Created by the author

4.2 Institutional dimension of e-government policy: Country cases

4.2.1 Institutional positioning and e-government strategy in Denmark

The case of Denmark shows how institutional positioning and arrangement can actually affect e-government strategies and development. In Denmark, the lead agency for e-government is the Ministry of Finance.

Finance ministries are often expected to function in a conservative manner. The model of finance ministry holding the authority over e-government development seems to have worked relatively well in countries where a powerful central agency has cross cutting mandates. The model enforces policies and priorities through the budget process, while allowing for effective decentralization (Hana, 2009).

Finance ministries often focus on internal government issues such as increased efficiency within the public sector. And the Danish Ministry of Finance is focussed on digitization as a tool to increase efficiency; digitization is a cornerstone of the necessary modernization of the public sector towards 2020. In the case of Denmark, the Committee for Digital Administration currently known as the Digital Taskforce within the Ministry of Finance has been a major player in e-government policy.²⁴

4.2.2 Power of institutions in the Republic of Korea and the United States – a comparison

According to a comparative study of the e-government initiatives of the Republic of Korea and the United States in the early to mid-2000s, initiatives with similar policy objectives can produce different outcomes in different countries. This difference is most likely to be attributable to different institutional arrangements for e-government promotion.

The e-government policy structure of the United States includes the Office of e-Government, which has a concentration of authority, powerful managerial tools for control, coordination and leadership over federal agencies. This set-up contributed towards the creation of a function-oriented “Business Reference Model” (BRM) which allowed the Government to implement its e-Government projects successfully.

In contrast, the Korean experience suffered from fragmented authority, ineffective managerial tools and confrontation over the course of BRM project implementation. It is argued in an analysis of e-government policy arrangements that the power of the institution and its influence over the various line agencies spell a difference in the outcome of the implementation process of BRM initiatives.²⁵

4. FURTHER OBSERVATIONS AND CONCLUSIONS

Setting up the right institutions presents a major challenge for many countries around the world, including highly developed countries. The institutional positioning and arrangements of each country’s e-government leadership and responsibilities often differ across countries and regions. Moreover, these arrangements are evolving and sometimes, very quickly, as seen in the British case.

1. ***Institutional effects and challenges:*** Institutional arrangements profoundly influence technology, its application in governments and the way governments provide services, interact with their citizens and deliver value to stakeholders. After all, e-government development typically takes place within countries’ existing institutions and institutional arrangements (including particularly, the institutional positioning of e-government responsibilities). And without strong institutional capacities, countries may have to resort to ad hoc measures, which are not sustainable and detrimental to e-government development in the long run.
2. ***Behind the current institutional landscape and changes:*** The reasons behind the current institutional arrangements and recent changes are not just the need for WoG-wide integration. Other factors such as shifting views, the need to deliver natural disaster relief and information security, also come into play. It is important to note that there are no common set of reasons behind the creation of CIO roles. That said, integrated service delivery remains the key objective of e-government promotion in many countries which led to the creation of new CIO roles and authority bodies in various countries around the world. It should also be noted that there are countries, such as Australia, which are seemingly going in the opposite direction.
3. ***Alternative institutional arrangement and leadership factor:*** Countries, especially those which do not have an “Uber CIO”, have been trying to streamline their existing institutional arrangement with stronger legal framework, mandate and control of common resources or effective utilization of committees, IT council and other alternative institutional arrangements, as well as coordination through strong and high-level leadership. Leadership is essential to settling any issue or conflict, as e-government involves project coordination across various

ministries. Some argue that it is a pre-requisite for the successful implementation of any type of e-government project that the e-government leadership should reside at the highest possible level.

4. **CIO arrangements and e-government performance:** There is no direct, automatic relationship between e-government performance (as measured by the United Nations E-government Survey) and institutional arrangements. But having a CIO factors; that is, the presence of a CIO as well as institutional positioning of said e-government leadership greatly influence e-government development. In this connection, it is also worth noting that the skills and competences of the CIO need to extend well beyond the business of IT to the business of government. Being a CIO is not a technical job, but a position of leadership for transformation, integration and security, etc.
5. **The importance of institutionally supportive legal framework:** The legal framework of all e-government processes is important as seen in the case of Brunei in the early 2000 and the recent experience of social welfare services in the Republic of Korea. Ambiguous legal framework pertaining to e-government can lead to weak institutional coordination and integration, while an effective framework can support institutional reforms and adaptation processes essential to e-government progress.
6. **Catalyse 'WoG transformation' beyond central governments' institutions – through collaboration across different levels of governments:** It is important to catalyse 'WoG transformation' beyond central government's institutional arrangements. In many countries, a large proportion of the responsibility for service delivery resides at the local level, even though central coordination and standard-setting are crucial for an effective implementation of e-government.²⁶

Thus, many countries are refocusing attention on how to collaborate more effectively across the different levels of government. As the central government's concern for local delivery of services increases, getting the institutional arrangement that would mutually strengthen central to local connections becomes all the more important.

Particularly successful cases include the United States, a leader in e-government, with its effective local governments and its Government-to-Government initiative aimed towards collaboration across different levels of government to empower state and local governments in serving the citizenry. The effective implementation of the iNUP programme in the Netherlands, with its control vested in the Administrative Steering Group Services and e-Government (BRG), a coordination process of central-local e-government policies, is another e-government success story.

7. **Consider institutional implications of moving towards e-governance:** The policy implication resulting from moving towards e-governance is that governments are evolving into platform-like roles on which citizens can effectively participate in service provision. That is, Governments may need to re-arrange existing institutions and carry out institutional reform, so as to fulfill their role in successfully providing a 'platform'. E-government can deliver far greater stakeholder value if it is developed within the broad context of public service delivery and institutional reform agenda.²⁷
8. **Policy strategies and further observations:** The following factors need to be taken into consideration for the development of e-government policy strategies. These include e-governance, and capacity building issues, which go beyond the focus of this study, that is,

e-government and central government institutional arrangements. While the institutional arrangements and structure of e-government agencies is important, the internal capacities of e-government institutions are also important, thus warranting policy focus on investments in human resources.

9. *A good policy strategy based on careful assessment of the “fit”*: Such policy should pay attention to the fit between institutions and development conditions such as size of the country. This is one area where size matters—especially in the context of whether or not to centralize. Small countries such as Singapore can take advantage of its geographical size to ensure tighter collaboration and have rightly chosen a centralized approach. Even though it cannot be generalized, there are some relevant cases like Russia, a big country, where the main factors restricting e-government development are said to be the lack of information technology infrastructure and a lack of standardized educational system due to its large population and significant regional differences.²⁸

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- ³ Institutions mentioned here are defined as formal government organizations, such government ministries and agencies responsible for e-government (policy design and implementation. An institutional perspective one-government focuses attention on the internal workings—the structure and capacity—of the state. (Heeks, 1999; Fountain, 2001 (http://works.bepress.com/jane_fountain/91/) Jane E. Fountain (2009). "Bureaucratic reform and e-government in the United States: An Institutional Perspective" Routledge Handbook of Internet Politics. Ed. Andrew Chadwick and Philip N. Howard. New York, NY: Routledge, 2009. Available at: http://works.bepress.com/jane_fountain/91.
- ⁴ The data presented in this graph are based on desk research with validation by some European and Asia-Pacific countries and their government officials. The data were obtained throughout 2013 and may no longer accurately represent current organizational set-up of these Governments. Both Asian and Oceania, and European countries herein are identified based on the classification of the UN Statistical Division. Lead agencies are mostly identified through desk research, with some validation by communications with governments and their officials).
- ⁵ Australia, Belgium, Czech Republic, Denmark, Hungary, Iceland, Germany, Ireland, Japan, Korea, Mexico, Netherlands, New Zealand, Slovenia, Switzerland, United Kingdom, United States
- ⁶ <http://www.slideshare.net/cathcup/korea-e-government-unesco> (??).
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