Challenges & Issues for Electronic Government

By Salim Al Kindi
Presentation Outline

- The Power of “e”
- E-Government Definition
- E-Government Categories.
- E-Governance & E-Commerce.
- E-Government’s World Experiences.
- E-Government Pillars.
- E-Government Building Blocks.
- E-Government - Advantages.
- E-Government - Challenges
- Q & A
The Power of “e”

- What does letter “e” means in today’s Practice?
- Examples of the power of “e”
  - E-Governance.
  - E-Commerce.
  - E-Learning.
  - E-Service
  - E-Vote.
  - E-Health.
E-Government Definition

- Common Definitions:
  - The use of IT to support government operations, engage citizens, and provide government services (Center for Technology in Government. CTG).
  - The use of internet as a tool to achieve better government (Organization for Economic Co-operation and Development - OECD).
E-Government Definition (cont.)

- Official Governments’ Understanding
  - Germany: The use of Information & Communication Technologies (ICTs) to make public administrations more efficient and effective.
  
  - Belgium: The way to enhance the quality of public services offered to citizens and businesses by utilizing the opportunities of modern technologies
  
  - Japan: Japan thinks of e-government as part an overall society development and that e-Government is about electronic administration and offering eServices
E-Government Categories

- Government to Citizens (G2C) (Majority of Government Services - USA.gov).
- Government to Business (G2B) (Downloading Tenders’ Info, Quotations).
- Government to Government (G2G).
  - Northeast Gang Information System (NGIS) in United States.
  - Police states departments, public service departments and law enforcement can access the information
- Government to Employees (G2E).
  - Improve employees’ satisfaction and reduce employees’ transaction delays
  - Payroll Processing, Leave Requisition, EoS Calculation
E-Governance and E-Commerce

- Government is Only a Subset of E-Governance
  - Promote Greater Participation of Citizens in the Governance of Political Institutions

- E-Commerce
  - Electronic transaction between sellers and buyers
# E-Government Experiences

<table>
<thead>
<tr>
<th>Ultimate Goal</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership in e-Government</td>
<td>Austria, Singapore, Canada, Korea, New Zealand, Japan, Australia, UK, Finland</td>
</tr>
<tr>
<td>Government Transformation</td>
<td>UK, New Zealand, Malaysia, Jordan</td>
</tr>
<tr>
<td>Better services, better government</td>
<td>Australia, Belgium</td>
</tr>
<tr>
<td>Promotion of Citizenship/Democracy</td>
<td>Brazil, Korea</td>
</tr>
<tr>
<td>Move government online</td>
<td>Canada, UK</td>
</tr>
<tr>
<td>Modern and efficient administration</td>
<td>Austria, USA</td>
</tr>
<tr>
<td>Better connection with citizens</td>
<td>Canada, Singapore</td>
</tr>
<tr>
<td>Public administration</td>
<td>France</td>
</tr>
<tr>
<td>Delight/Satisfy citizens</td>
<td>Singapore</td>
</tr>
<tr>
<td>E-Business/E-Commerce - based</td>
<td>UK</td>
</tr>
<tr>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>Iceland</td>
<td>91</td>
</tr>
<tr>
<td>Australia</td>
<td>71.67</td>
</tr>
<tr>
<td>USA</td>
<td>74</td>
</tr>
<tr>
<td>UK</td>
<td>78.39</td>
</tr>
<tr>
<td>Oman</td>
<td>20</td>
</tr>
<tr>
<td>Singapore</td>
<td>69</td>
</tr>
<tr>
<td>Sweden</td>
<td>90</td>
</tr>
<tr>
<td>Malaysia</td>
<td>55.80</td>
</tr>
<tr>
<td>Japan</td>
<td>75.40</td>
</tr>
<tr>
<td>China</td>
<td>22.60</td>
</tr>
<tr>
<td>Spain</td>
<td>59.60</td>
</tr>
<tr>
<td>France</td>
<td>70.68</td>
</tr>
</tbody>
</table>

Table 4 - Percentage of Individuals using the Internet (Source ITU)
E-Government Pillars
# E-Government Pillars

- All Pillars used to generate Critical Success Factors

<table>
<thead>
<tr>
<th>Success Factors</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reform (structure, processes, laws...etc.)</td>
<td>Finland, Australia, Denmark, Austria, Malaysia, USA, India, The Netherlands</td>
</tr>
<tr>
<td>Efficient and robust use of technology</td>
<td>Finland, The Netherlands, Australia, Austria, Canada, Malaysia</td>
</tr>
<tr>
<td>Collaboration</td>
<td>France, The Netherlands, EU, Denmark, Austria, Canada</td>
</tr>
<tr>
<td>Political leadership/ownership</td>
<td>The Netherlands, Denmark, Malaysia, India</td>
</tr>
<tr>
<td>Availability of skilled staff and capacity building</td>
<td>Germany, Austria, Finland, Malaysia</td>
</tr>
<tr>
<td>Rules and responsibilities (organizational)</td>
<td>Germany, The Netherlands</td>
</tr>
<tr>
<td>Public-Private Partnership (PPP)</td>
<td>Denmark, India</td>
</tr>
<tr>
<td>Monetary resources</td>
<td>Palestine, Malaysia</td>
</tr>
<tr>
<td>Citizen-centricity</td>
<td>Austria, Canada</td>
</tr>
<tr>
<td>Integrated infrastructure</td>
<td>Denmark, USA</td>
</tr>
</tbody>
</table>
E-Government Building Blocks

- Technical
  - Service (Portals, DB, Intra-Governmental Secure Network)
  - e-procurements
- Organizational
  - Organizational framework
  - Legal framework
- Policies and Standards Guidelines
  - Electronic Signature
Advantages of E-Government

- Improves Efficiency of Services
- Helps achieve Specific Policy Outcomes
- Protects Environment.
  - Go Green
  - Reduce Air and Noise Pollutions
Advantages of E-Government (cont.)

- Enables Information Sharing
- Facilitates accessing governmental information
- Contributes to economic policy
  - Reduces corruption and increases the trust of government in managing online services
  - Promotes information society and electronic commerce objectives
  - Foreign Investors (businesses) can be increased
  - Enhances the transparency between government and business
Challenges of E-Government

- Design and Development
- Users
- Internet Price
- Infrastructure
- Data Quality (DQ)
- Technology Change
- Readiness
Challenges of E-Government (cont.)

- Design and Development
  - Planning and control
  - Good planning and effective controls can help public organizations design and develop online applications.
  - Maintain and enhance web applications is more important than creating them.
Challenges of E-Government (cont.)

- Users
  - Users’ needs and users’ knowledge.
  - Strong relationship between developers and targeted users.
  - Upgrade the IT experience to citizens.
    - provide intensive free IT training for the citizens
Challenges of E-Government (cont.)

- **Internet Price**
  - Open the door for competitors to provide the internet and communication services.
  - Modify and enhance the rules and policies that minimize investment risks.
  - Allow different network operators and internet service provider to share the same resources.
Challenges of E-Government (cont.)

- Infrastructure
- Software: OS, Application Software (ERP, CRM)
- Hardware: Computers, Servers, Switches, Routers, Hubs.
- Network: security and firewalls assets, internet connectivity and network connectivity.

- Can Be solved by Outsourcing to:
  - Reduce Infrastructure Cost.
  - Utilize advantage of expertise,
Challenges of E-Government (cont.)

- Data Quality (DQ)
- Mainlining clean data that the organization can depend on.
- Sources of bad data or errors in data:
  - Data entry errors.
  - Measurements errors (System design errors)
  - Distillation (Preprocessing data before uploading to database)
  - Data integration errors (Data migration from different sources)
- Solutions:
  - Construct well Interfaces.
  - Using exploratory data analysis and cleaning
Challenges of E-Government (cont.)

- Technology Change
- Some Organizations prefer Legacy System.
  - Old Programming Language (outdated or obsolete).
  - Reasons for using legacy systems;
    - Poor documentation → Hard to define the system requirement.
    - Redesigning the new application in most of the time is extremely expensive
Challenges of E-Government (cont.)

- Technology Change

- Solutions: IT Specialist need to inform top management:
  - Old software application are in the risk of corruption at any time because of the many years of maintenance.
  - Extremely difficult to find trained staff who is capable of maintain and enhancing legacy systems.
  - Huge amount of disk space which at the end will result to the low execution speed
Challenges of E-Government (cont.)

- Readiness.
  - willingness of countries to utilize the digital technologies in providing public services electronically

- Solutions
  - Conduct continued training and workshops for citizens.
  - Re-engineer the different organizational business processes.
  - Provide different service channels for the users (personal computers, mobile phones, tablets, kiosks, and call centers)
  - Evaluate the electronic services periodically to fix the issues and problems and enhance the existing features and applications.
Thank You