DIGITAL GOVERNMENT PRINCIPLES, PRACTICE AND RESEARCH

MODULE 7: DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT

TOMASZ JANOWSKI
GDAŃSK UNIVERSITY OF TECHNOLOGY, POLAND
DANUBE UNIVERSITY KREMS, AUSTRIA

ELSA ESTEVEZ AND PABLO FILLOTRANI
UNIVERSIDAD NACIONAL DEL SUR, ARGENTINA

AIM

1	To present the concept of DG for Development (EGOV4D)
2	To present the concept of DG for Sustainable Development (EGOV4SD)
3	To provide cases in EGOV4SD
4	To explore DG can contribute to Sustainable Development Goals

OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

DEVELOPMENT

DEVELOPMENT	
Economic, social and political development in the countries of Africa, Asia, Latin America, the Caribbean and the South Pacific (the South).	
MULTIPLE DIMENSIONS	
Economic	Creation of wealth and improved conditions of material life
Social	Well-being in health, education, housing and employment
Political	Human rights, political freedom, enfranchisement
Cultural	Values, beliefs and self-identity
Environmental	Commitment to ecologically sound, sustainable development

GOALS (MDGS)

1. Eradicate extreme hunger and poverty
2. Achieve universal primary education
3. Promote gender equality
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

RESULTS

Mixed for most countries except a small number of countries mainly in East Asia. Key reasons:

- inappropriate policy choices
- poorly performing public sector
- changing trends in development administration

GOVERNANCE FOR DEVELOPMENT

ROLE OF GOVERNMENTS

Formulate and implement, jointly with the private sector and civil society institutions, development policies to generate economic growth, provide education, maintain security, expand jobs, etc.

GOVERNANCE FAILURES

1. Excessive use of regulations and formal rules
2. Poor communication between agencies
3. Centralization of decision making
4. Distance of public servants to citizens
5. Orientation on maintenance, not outcomes
6. Inefficiency and unresponsiveness
7. Administrative corruption

ADMINISTRATIVE REFORM

Reform agenda to address poor performance of state institutions causing development failures:

1. Eliminating red-tape
2. Decentralizing/devolving the authority
3. Improving responsiveness to citizens
4. Engaging the public in decision-making
5. Developing human capacity in government
6. Introducing performance and accountability
7. Delivering public services by private firms
8. Utilizing ICT in all aspects of the reform

[Mark Turner, David Hulme, Governance, Administration and Development, 1997]

ICT FOR DEVELOPMENT

Application of ICTs to socio-economic development:

- Direct – to benefit populations
- Indirect – to assist governments, NGOs, etc. in improving socio-economic conditions.

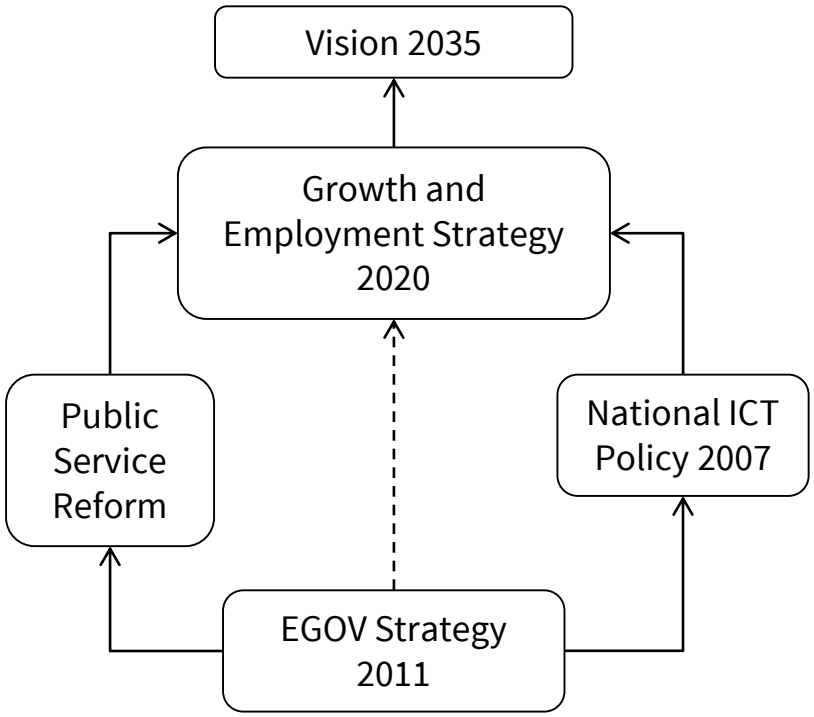
POVERTY (MDG1)	Increasing market access and competitiveness of the poor Improving social inclusion of isolated communities
EDUCATION (MDG2)	Increasing access to education through distance learning Enhancing the efficiency of educational policies
GENDER (MDG3)	Increasing economic and job opportunities for women ICT for women's education and for women as educators
HEALTH (MDG4-6)	Providing remote health care services Connecting rural health providers with formal health system
ENVIRONMENT (MDG7)	Environmental monitoring and risk mitigation Environmental progress in the ICT and other sectors
PARTNERSHIP (MDG8)	Effective data management for international development Good governance…

[Wikipedia]

[World Bank, ICT and MDGs – A World Bank Perspective, 2003]

EXAMPLE – EGOV4D IN CAMEROON

Policy context



Lessons learnt

Lower levels of governments are low priority

National agencies prefer to invest at the central level for visibility, creating increasing divide within the countries.

Fragmented Stewardship

EGOV rests with IT agencies but implementation suffers from shared stewardship with related powerful ministries.

Academia-Government Collaboration is Necessary

Engaging local academia in research, education and training significantly improves program sustainability.

Bureaucracy is Pervasive

With authorizations required for every action, project managers cannot decide on basic activities and progress is only assured with direct engagement of agency heads.

INTERACTION

WHAT KIND OF DEVELOPMENT-FOCUSED ICT AND EGOV EFFORTS ARE BEING CARRIED OUT BY YOUR ORGANIZATION?

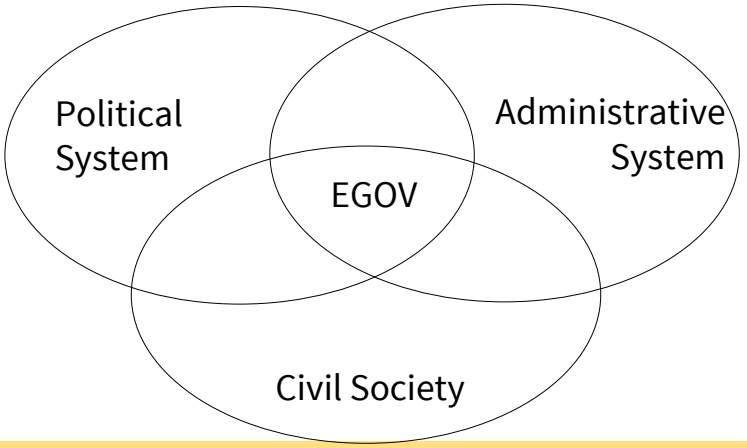
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

ELECTRONIC GOVERNANCE

DEFINITION

Transforming the working of government and its interactions with citizens, businesses, civil society and other arms of government through technology



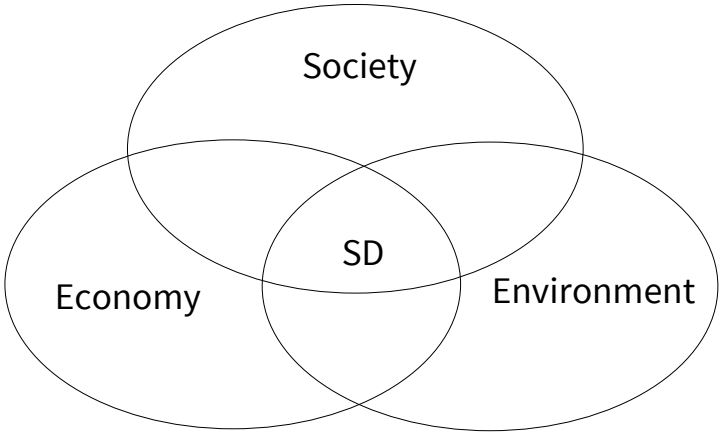
DIMENSIONS

GOVERNMENT	TECHNOLOGY	INTERACTION	CUSTOMERS	SOCIETY
Mission	Equipment	Channels	Information needs	Demography
Role	Infrastructure	Channel Strategy	Service needs	Digital inclusion
Values	Data	Interoperability	Producer roles	Institutional change
Operations	Social Media	Partnerships	Consumer roles	Social tension
Services	Services	Goals	Accessibility	Globalization
Institutions	Applications	Governance	Trust	Migration

SUSTAINABLE DEVELOPMENT

DEFINITION

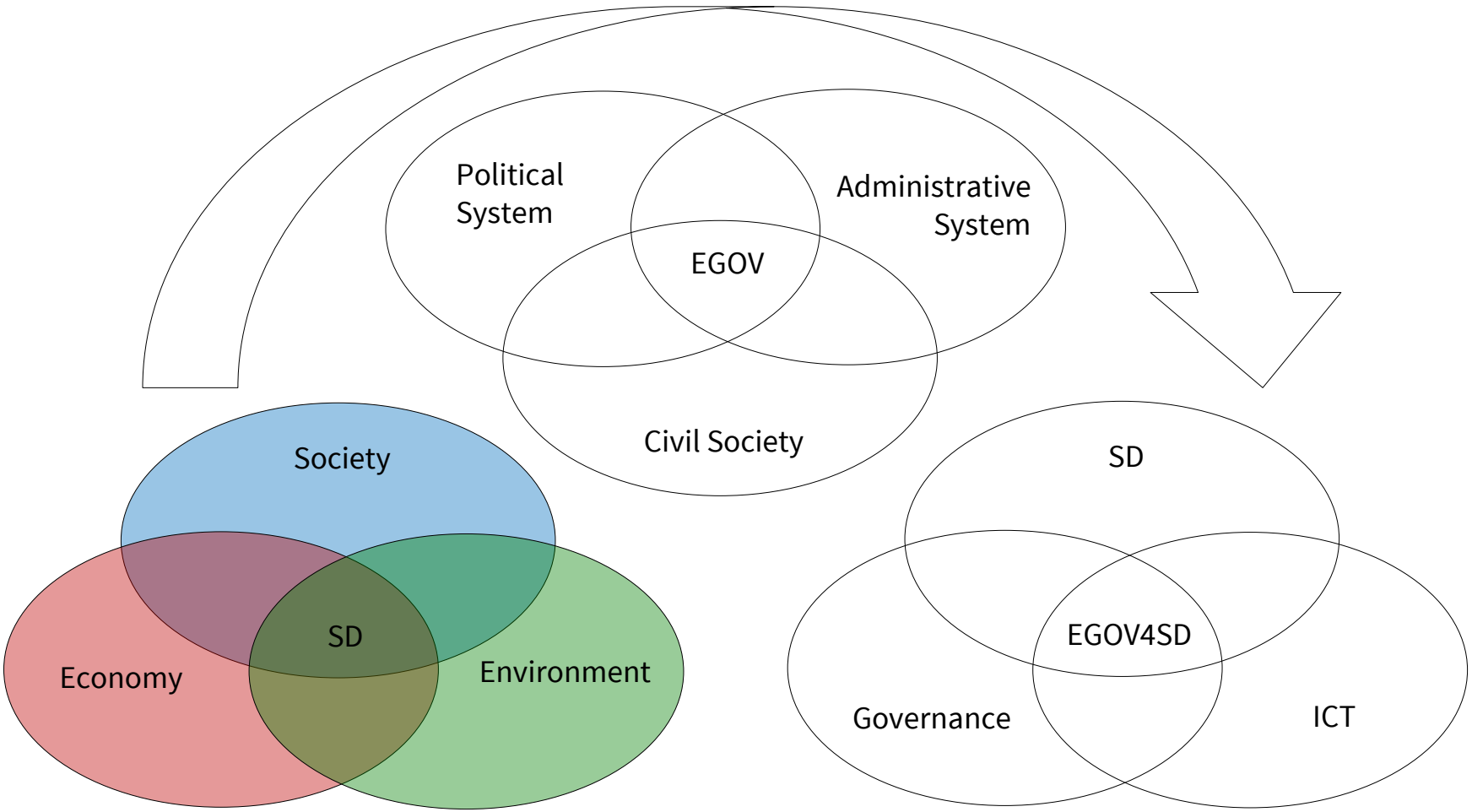
Development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs.



DIMENSIONS

ENVIRONMENTAL	ECONOMIC	SOCIAL	TRANSITIONAL
Climate change	Transportation	Poverty and inequality	Green accounting
Water Scarcity	Logistics	Hunger and malnutrition	Renewable energy
Land degradation	Energy Consumption	Gender imbalance	Voice and empowerment
Fish stock depletion	Economic Growth	Illiteracy	Environmental practice
Biodiversity loss		Maternal/infant mortality	Policy integration
Deforestation		Access to communication	

EGOV + SD = EGOV4SD



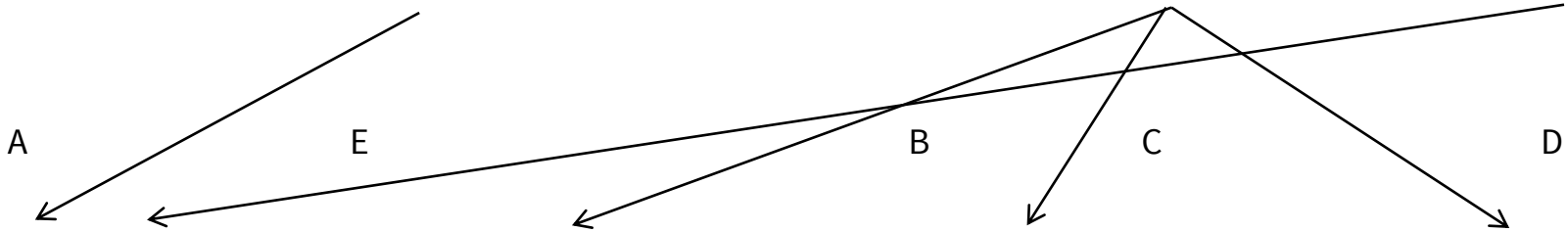
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

SOCIAL SUSTAINABILITY – MAPPING

How can EGOV initiatives explicitly address the Social Sustainability goals?

EGOV DIMENSIONS				
GOVERNMENT Internal capacity and values for EGOV	TECHNOLOGY Technology infrastructure	INTERACTION Collaboration within government and with partners	CUSTOMERS Technology-enabled information/services	SOCIETY Making sure that all society segments participate in EGOV



Access for all	Reducing poverty and inequality	Reducing gender inequality	Reducing infant and maternal mortality
SOCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	ECONOMIC SUSTAINABILITY	SUSTAINABILITY TRANSITION
SD GOALS			

SOCIAL SUSTAINABILITY – MEASURES

A	EGOV technology initiatives should consider accessibility (cost, ability to use, etc.) of all segments of society in their technology choices, e.g. support for mobile channels for service delivery.
B	EGOV services should enable citizens and particularly the disadvantaged to meet their critical livelihood needs like access to jobs, primary health services, educational services, sanitation, etc.
C	EGOV services in rural areas and at lower levels of government should be specifically targeted at women as critical actors in the social and economic development of families.
D	EGOV services should support government public health efforts in reducing infant and maternal mortality by providing necessary information to mothers, particularly in the less developed areas.
E	EGOV initiatives should involve participation of different members of the society and should not exacerbate existing digital divide.

SOCIAL SUSTAINABILITY – STRATEGIES

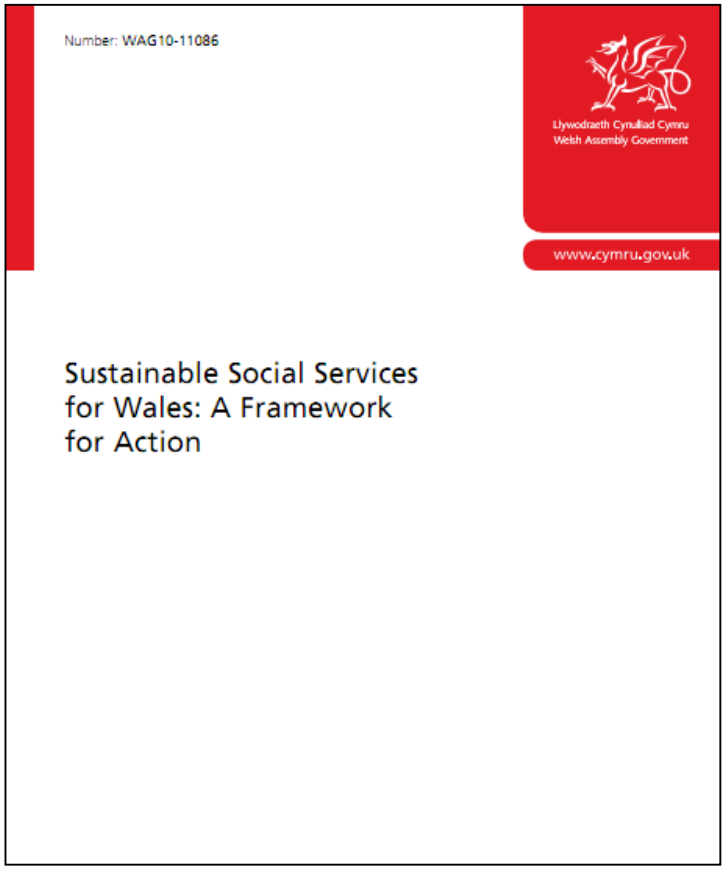
SINGAPORE 2015	KOREA 2012	ESTONIA 2013
Next generation infocomm infrastructure	Public-private collaborative governance	One service space - public, private and third sectors
Innovation centers and entrepreneurship	Seamless and converged informatization	Paperless document management
Infocomm competency framework	Active response to adverse effects of informatization	Traceability of the use of one's own data
Electronic health records	Utilization-focused services	Internet in rural areas
EUROPEAN UNION 2015	**UNITED NATIONS 2010**	**WASEDA 2011**
Improve (seamless) services to cater for different needs	Government data sharing based on open standards	Increase of social media applications for participation
Invite third parties in EGOV development	From readiness to development	Cloud computing and data center virtualization
Involve stakeholders in public policy processes	Agility to respond to more demands as revenues drop	Disaster management and business continuity
Reduce carbon footprint	Citizen-centric practice	Smart grid and green technology

SOCIAL SUSTAINABILITY – EXAMPLE

Sustainable Social Services for Wales, UK

Priority actions:

1. A strong national purpose and expectation and clear accountability for delivery
2. A national outcomes framework
3. Citizen centered services
4. Integrated services
5. Reducing complexity
6. A confident and competent workforce
7. Safeguarding and promoting the wellbeing of citizens
8. A new improvement framework for Wales



[http://wales.gov.uk/docs/dhss/publications/110216frameworken.pdf]

INTERACTION

HOW IS YOUR ORGANIZATION CONTRIBUTING TO THE SOCIAL SUSTAINABILITY GOALS? HOW IS ICT INVOLVED?

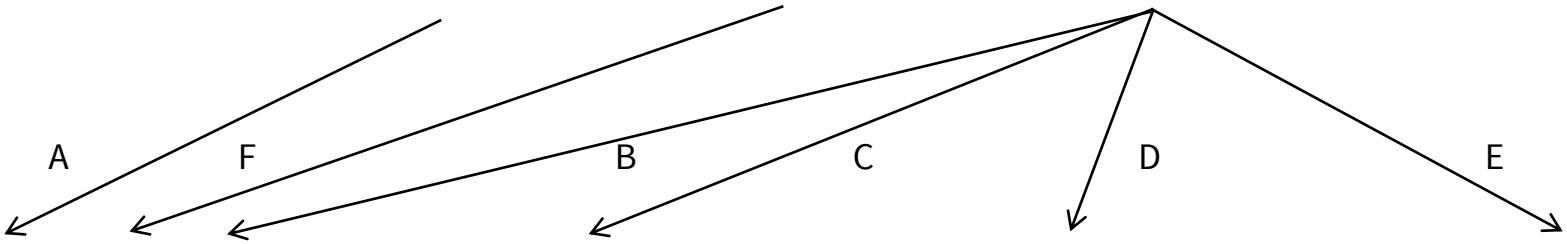
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

ENVIRONMENTAL SUSTAINABILITY – MAPPING

How can EGOV initiatives explicitly address the Environmental Sustainability goals?

EGOV DIMENSIONS				
GOVERNMENT Internal capacity and values for EGOV	TECHNOLOGY Technology infrastructure	INTERACTION Collaboration within government and with partners	CUSTOMERS Technology-enabled information/services	SOCIETY Making sure that all society segments participate in EGOV



Climate change	Improved water management	Reduced land degradation	Restoration of biodiversity
SOCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	ECONOMIC SUSTAINABILITY	SUSTAINABILITY TRANSITION
SD GOALS			

ENVIRONMENTAL SUSTAINABILITY – MEASURES

A	Use of low or zero carbon-emission ICT equipment for government operations (front and back office).
B	Providing information and services to citizens on how they can contribute to addressing the climate change (e.g. carbon footprint calculators) to support decisions about the choice of delivery channels.
C	Providing information and services for citizens and businesses on better domestic water management practices and smart metering systems.
D	Providing information to citizens on better land use practices and information systems at government offices for better management of land use, with relevant services for citizens.
E	Providing information to citizens on the practices that can improve or restore biodiversity and develop relevant information systems to monitor ecological areas of interests.
F	Develop partnerships with relevant environmental agencies to deliver A – E, including improved water management, reduction of land degradation and restoration of biodiversity.

ENVIRONMENTAL SUSTAINABILITY – STRATEGIES

SINGAPORE 2015	KOREA 2012	ESTONIA 2013
Next generation infocomm infrastructure	Public-private collaborative governance	One service space - public, private and third sectors
Innovation centers and entrepreneurship	Seamless and converged informatization	Paperless document management
Infocomm competency framework	Active response to adverse effects of informatization	Traceability of the use of one's own data
Electronic health records	Utilization-focused services	Internet in rural areas
EUROPEAN UNION 2015	**UNITED NATIONS 2010**	**WASEDA 2011**
Improve (seamless) services to cater for different needs	Government data sharing based on open standards	Increase of social media applications for participation
Invite third parties in EGOV development	From readiness to development	Cloud computing and data center virtualization
Involve stakeholders in public policy processes	Agility to respond to more demands as revenues drop	Disaster management and business continuity
Reduce carbon footprint	Citizen-centric practice	Smart grid and green technology

ENVIRONMENTAL SUSTAINABILITY – EXAMPLE

Crowd-sourcing renewable energy strategy on the Internet, Maldives:

AIM	Experts around the world are invited to provide technical advice on low-carbon energy generation, storage and financing.
GOALS	Making the country carbon-neutral by 2020 Addressing lack of local technical expertise
SCOPE	8 themes and 65 theme-related questions, e.g.

1. How should Maldives pursue carbon neutrality vis-à-vis short-term economic wellbeing?
2. How should Maldives account for tourist air travel in its quest for carbon neutrality?
3. Should air travelers contribute financially to de-carbonization of the Maldives economy?
4. What level of oil price should the Maldives use for planning its energy future?

[http://maldives.co2.org]

INTERACTION

HOW IS YOUR ORGANIZATION CONTRIBUTING TO THE ENVIRONMENTAL SUSTAINABILITY GOALS? HOW IS ICT INVOLVED?

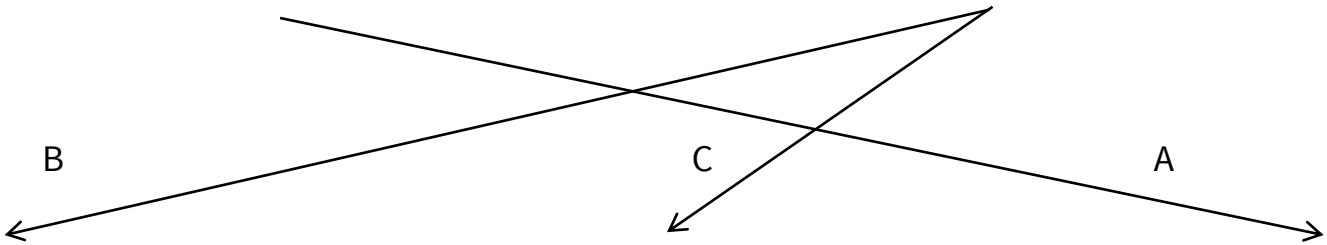
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

ECONOMIC SUSTAINABILITY – MAPPING

How can EGOV initiatives explicitly address the Economic Sustainability goals?

EGOV DIMENSIONS				
GOVERNMENT Internal capacity and values for EGOV	TECHNOLOGY Technology infrastructure	INTERACTION Collaboration within government and with partners	CUSTOMERS Technology-enabled information/services	SOCIETY Making sure that all society segments participate in EGOV



Transportation and logistic	Economic growth	Improved energy consumption

SOCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	ECONOMIC SUSTAINABILITY	SUSTAINABILITY TRANSITION

SD GOALS

ECONOMIC SUSTAINABILITY – MEASURES

A	Use of energy efficient technology equipment in government operations and incorporation of such equipment in the government procurement practice.
B	Providing information and services to citizens to help reduce transport congestion e.g. real time service to check traffic situations in different parts of cities.
C	Providing information and services to enterprises and businesses to support their operations, interaction with governments, and growth.

ECONOMIC SUSTAINABILITY – STRATEGIES

SINGAPORE 2015	KOREA 2012	ESTONIA 2013
Next generation infocomm infrastructure	Public-private collaborative governance	One service space - public, private and third sectors
Innovation centers and entrepreneurship	Seamless and converged informatization	Paperless document management
Infocomm competency framework	Active response to adverse effects of informatization	Traceability of the use of one's own data
Electronic health records	Utilization-focused services	Internet in rural areas
EUROPEAN UNION 2015	UNITED NATIONS 2010	WASEDA 2011
Improve (seamless) services to cater for different needs	Government data sharing based on open standards	Increase of social media applications for participation
Invite third parties in EGOV development	From readiness to development	Cloud computing and data center virtualization
Involve stakeholders in public policy processes	Agility to respond to more demands as revenues drop	Disaster management and business continuity
Reduce carbon footprint	Citizen-centric practice	Smart grid and green technology

ECONOMIC SUSTAINABILITY – EXAMPLE

Green occupational guidelines for 23 occupations by California Government

Informational services:

1. Work to be carried out as a …
2. Required skills
3. Possible tasks and required skills
4. Working conditions
5. Job expectations
6. Wages and benefits
7. Job outlook
8. Qualifications
9. Training opportunities
10. Job opportunities

[http://www.labormarketinfo.edd.ca.gov/OccGuides/GreenIndexOfGuides.aspx?Geography=060100000]

INTERACTION

HOW IS YOUR ORGANIZATION CONTRIBUTING TO THE ECONOMIC SUSTAINABILITY GOALS? HOW IS ICT INVOLVED?

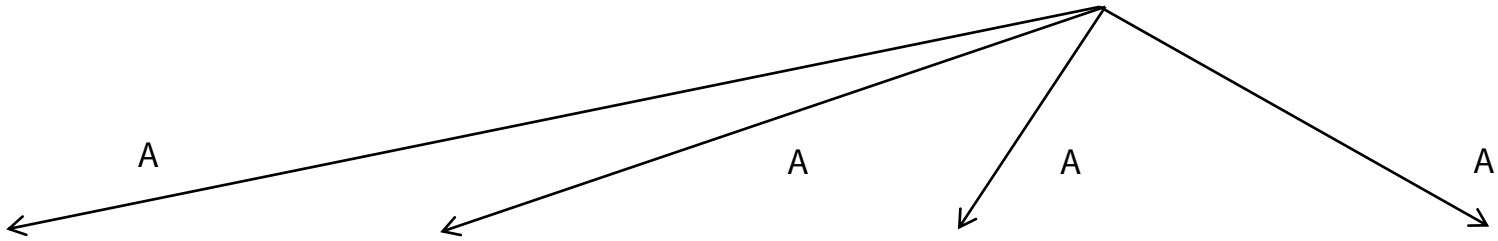
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

SUSTAINABILITY TRANSITION – MAPPING

How can EGOV initiatives explicitly address the Sustainability Transition goals?

EGOV DIMENSIONS				
GOVERNMENT Internal capacity and values for EGOV	TECHNOLOGY Technology infrastructure	INTERACTION Collaboration within government and with partners	CUSTOMERS Technology-enabled information/services	SOCIETY Making sure that all society segments participate in EGOV



Adoption of Green Accounting	Access of under-privileged groups	Adoption of environmentally friendly practices	Energy from renewable sources
SOCIAL SUSTAINABILITY	ENVIRONMENTAL SUSTAINABILITY	ECONOMIC SUSTAINABILITY	SUSTAINABILITY TRANSITION
SD GOALS			

SUSTAINABILITY TRANSITION – MEASURES

A Provide information and electronic services that show key SD indicators and their interpretation for citizens and agency management:

SOCIAL INDICATORS	ECONOMIC INDICATORS
1 Population, density, growth rate	1 Air travel
2 Life expectancy, infant mortality	2 Energy consumption
3 Urban/rural population distribution	3 Growth of economic activity
4 Percentage of voting population	4 Agricultural production density
ENVIRONMENTAL INDICATORS	**TRANSITIONAL INDICATORS**
1 Plant biodiversity	1 Changes in food and nutrition style
2 Animal population	2 Environmental and general education
3 Depletion of fossil fuels	3 Percent of energy from renewable sources
4 Topsoil and farmland loss	4 Access of the poor to public decision-making

[Helen Briassoulis, Sustainable development and its indicators, 2001]

SUSTAINABILILITY TRANSITION – STRATEGIES

SINGAPORE 2015	KOREA 2012	ESTONIA 2013
Next generation infocomm infrastructure	Public-private collaborative governance	One service space - public, private and third sectors
Innovation centers and entrepreneurship	Seamless and converged informatization	Paperless document management
Infocomm competency framework	Active response to adverse effects of informatization	Traceability of the use of one's own data
Electronic health records	Utilization-focused services	Internet in rural areas
EUROPEAN UNION 2015	**UNITED NATIONS 2010**	**WASEDA 2011**
Improve (seamless) services to cater for different needs	Government data sharing based on open standards	Increase of social media applications for participation
Invite third parties in EGOV development	From readiness to development	Cloud computing and data center virtualization
Involve stakeholders in public policy processes	Agility to respond to more demands as revenues drop	Disaster management and business continuity
Reduce carbon footprint	Citizen-centric practice	Smart grid and green technology

SUSTAINABILITY TRANSITION – EXAMPLE

Directgov, UK

Offering informational services on environment and greener living:

1. Recycling and reducing waste
2. Climate change and environment protection
3. Energy saving and generation
4. Greener home and garden
5. Greener travel and leisure
6. Keeping farm animals and bees
7. Greener community and work
8. Greener life events and celebrations

[http://www.direct.gov.uk/en/Environmentandgreenerliving/index.htm]

INTERACTION

HOW IS YOUR ORGANIZATION CONTRIBUTING TO THE SUSTAINABILITY TRANSITION? HOW IS ICT INVOLVED?

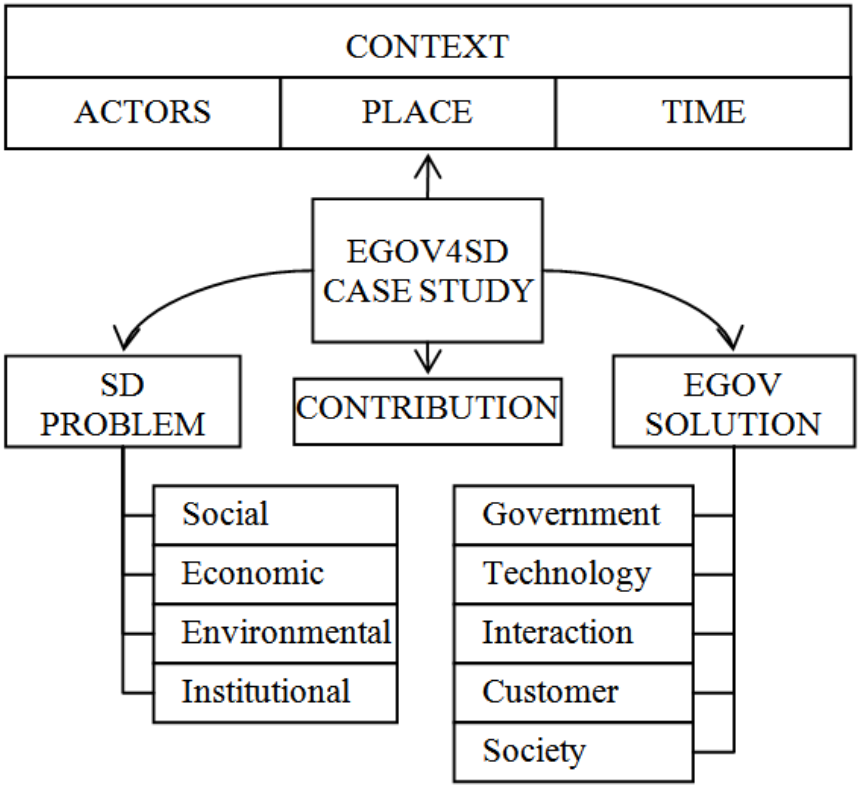
OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

CONCEPTUAL FRAMEWORK

			EGOV				
			Government	Technology	Interaction	Customer	Society
			Solution Space				
SD	Social	Problem Space	Contribution Space				
	Environmental						
	Economic						
	Institutional						

ASSESSMENT FRAMEWORK



CASE 1 - SINGAPORE

Context	e-Government Strategy 2011-2015 (eGov-2015) prepared by ○ Singapore Ministry of Finance, ○ Ministry of Information, Communications and the Art, and ○ Infocomm Development Authority in 2011.
Problem	To achieve the vision of a Collaborative Government Collaborative Government - private sector and the people work together seamlessly, through the enabling power of infocomm technologies

CASE 1 - SINGAPORE

Solution	Three strategic pillars: 1) Co-creating for greater value - empowering citizens to co-create new services with the government. The government plays the roles of: ○ service provider – exploiting the advantages of high mobile penetration in Singapore to provide feature-rich, innovative mobile services; and ○ platform provider – enabling citizens to access government information on the data.gov.sg in order to support research and to develop innovative solutions. 2) Connecting for active participation - The second pillar refers to citizen participation – keeping citizens informed and engaging them in formulating public policies. 3) Catalyzing whole-of-government transformation - next generation whole-of-government ICT infrastructure to enhance cross-agency collaboration by leveraging cloud computing, energy-efficient technologies and broadband networks.

CASE 1 - SINGAPORE

SD Problems Addressed	○ Social – empowering customers – leveraging social networking and social media platforms – improving neighborhood amenities – enhancing community relations ○ Economic – government cost savings – facilitating new partnership models – achieving greater resource optimization and operational efficiency ○ Environmental – leveraging energy-efficient technologies ○ Institutional – sustainability planning, adopting sustainable ICT practices

CASE 1 - SINGAPORE

EGOV Solution Proposed

- Government
  - facilitating government collaboration
  - whole-of-government transformation
  - defining e-government strategy
- Technology
  - designing mobile services
  - transforming public ICT infrastructure
  - leveraging cloud platform
  - providing cloud services and secure ICT environment
- Customer
  - empowering customers for co-creation of services
  - enabling non-state actors to co-create services
- Society
  - promoting innovation through service co-creation
  - delivering value
  - promoting e-consultation

CASE 2 - INDIA

Context	TARAhaat (village bazaar) initiative: ○ Aim - providing services to rural population in northern India. – Organizations – Development Alternatives Group – Companies: Microsoft, Philips and Shell – International organizations: UNDP, IDRC, CIDA ○ Target audience - districts of Punjab, Uttar Pradesh, Madhya Pradesh, and Bihar ○ Duration: 2001 until today
Problem	Empower rural communities through the use of ICT to enable sustainable livelihoods: – providing informational services and vocational training to rural communities – promoting community development – strengthening EGOV

CASE 2 - INDIA

Solution	1) Portal – providing relevant information - market prices, weather and education for the target audience, the look and feel designed to facilitate interactions with the rural population: farmers, traders, housewives, senior citizens and children. 2) Community centers - established in the villages of Madhya Pradesh and Punjab states, acting as community knowledge and business centers offering services customized to local needs, and established according to two business modes: – a center owned or operated by a private company or – a center owned by a village entrepreneur and operated as a franchise unit 3) Training courses promoted through the portal and centers - training to develop job, life and basic ICT skills. A program to develop IT skills among 5800 women in India was established with Microsoft.

CASE 2 - INDIA

SD Problems Addressed	○ Social – developing sustainable livelihoods – empowering citizens in rural areas – facilitating rural community development – digital inclusion for rural population – developing human capacity in rural communities ○ Economic – promoting entrepreneurship – promoting informed business decisions through awareness about market prices

CASE 2 - INDIA

EGOV Solution Proposed

- Government
  - delivering services to rural population
  - delivering services through partnerships
- Technology
  - publishing information on portals
- Interactions
  - providing friendly interfaces
  - using community rural centers as channels
- Customers
  - addressing citizen needs
  - providing vocational training
- Society
  - promoting social inclusion through customer-focused electronic services

CASE 3 - AUSTRALIA

Context	Green Heart - local government initiative, launched by the City Council of Brisbane, Australia in 2011.
Problem	Environmental engagement program aimed at transforming Brisbane to “environmentally friendly city in all aspects of community and business”. The driving goals are: ○ to reduce energy and waste ○ to contribute to improved transportation ○ to protect green areas

CASE 3 - AUSTRALIA

Solution	Providing incentives, services and rebates to citizens, businesses and institutions to live and work in a more sustainable way. The target sectors - homes, schools and businesses. Example services under the “homes” category include: ○ workshops teaching the basics of composting and worm farming ○ information about compost and soil types ○ information about cycling, walking trails, use of public transport and ○ recommendations on active school travel for children ○ action points for reducing bills and emissions ○ information on events and workshops to help more sustainable living ○ fact sheets on different subjects to help citizens reduce their carbon footprint ○ design checklists for homes, units and apartments The program utilizes online three-dimensional interactive house project with information about household sustainability to induce behavioral changes by demonstrating the need to invest in sustainable designs.

CASE 3 - AUSTRALIA

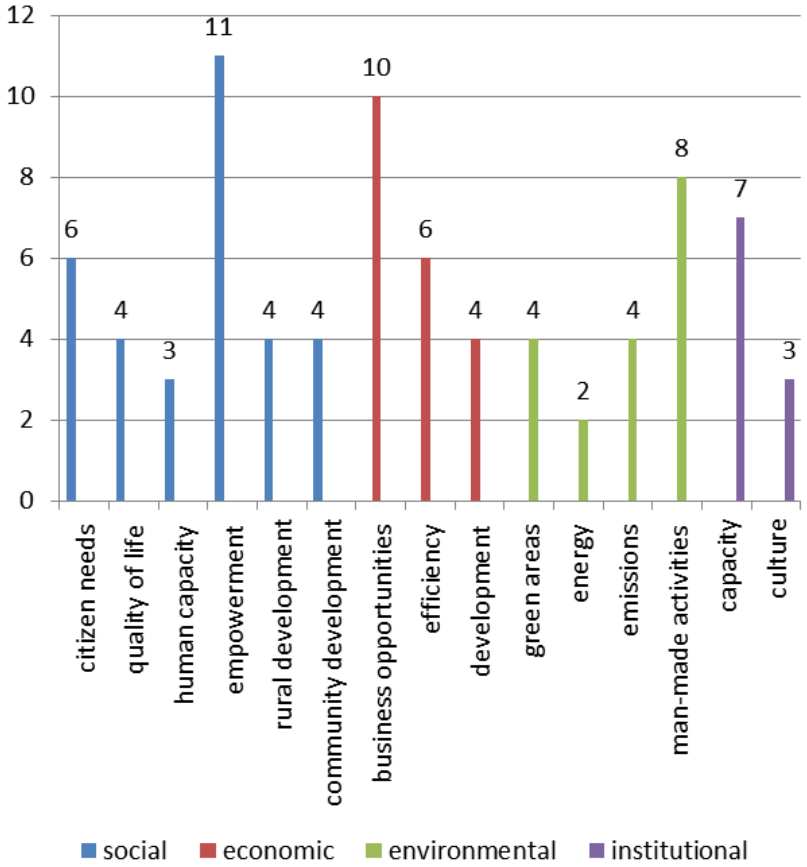
SD Problems Addressed	○ Social – improving life conditions – enabling community participation – informing, inspiring and empowering citizens – providing high-quality transport ○ Economic – reducing consumption – promoting local food production ○ Environmental – promoting environment-friendly activities – developing and protecting green areas – restoring natural habitats – reducing waste – promoting efficient energy use

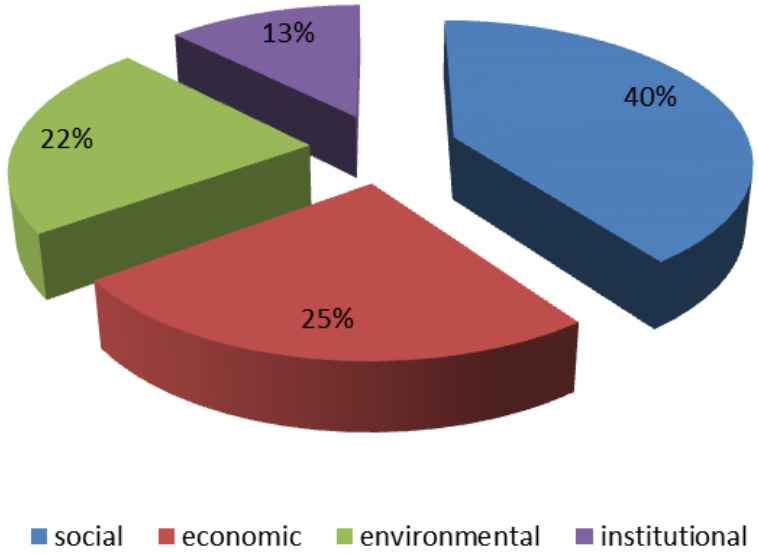
CASE 3 - AUSTRALIA

EGOV Solution Proposed

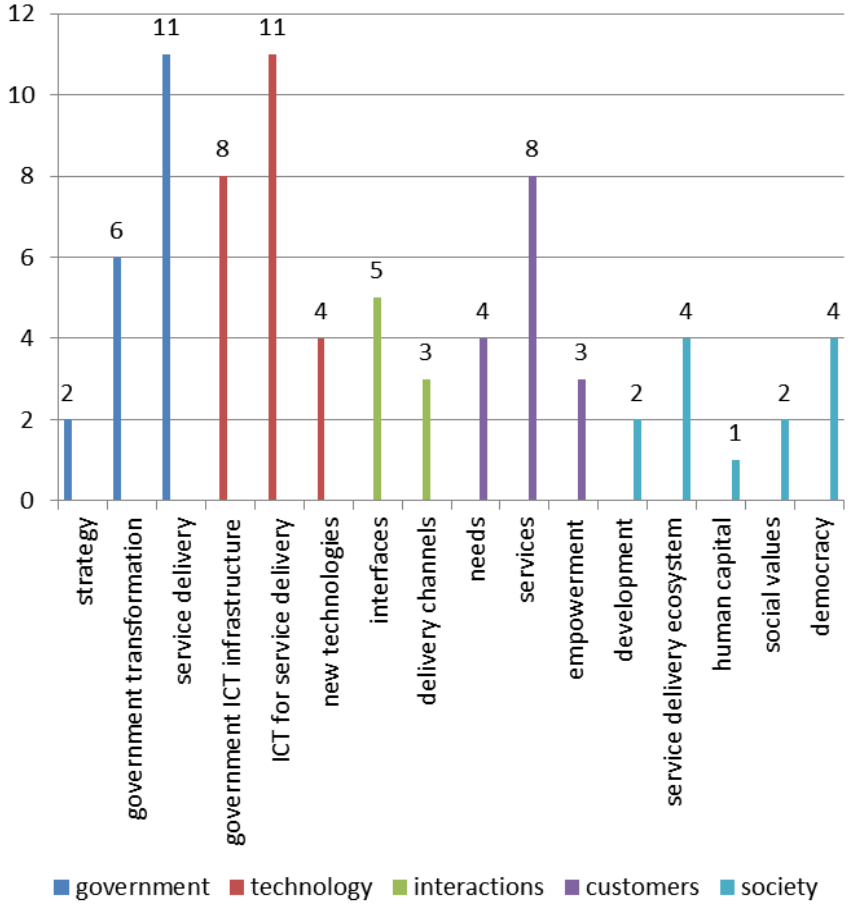
- Government
  - delivering informational services
- Technology
  - applying 3D simulations for service delivery
- Interactions
  - using 3D visualizations
- Customers
  - empowering citizens through informational services
  - facilitating online participation
- Society
  - promoting sustainable practices

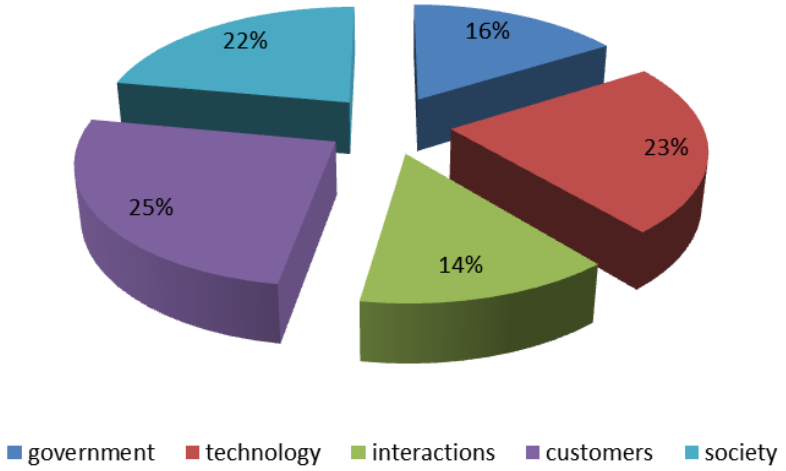
SD PROBLEM CATEGORIES





EGOV SOLUTION CATEGORIES





OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

RELEVANCE OF GOVERNANCE TO SDG

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

Governance

MDG experience

SDG

RELEVANCE OF GOVERNANCE TO SDG: MDG EXPERIENCE

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

CASE STUDY 3: MDGS AND CAUSES OF DEVELOPMENT FAILURE

NO	CAUSES	
1	Governance failures	1. Not upholding the rule of law 2. Pursuing unsound economic polices 3. Making inappropriate public investments 4. Mismanaging public administration 5. Not protecting basic human rights 6. Excluding civil-society in national decision-making
2	Poverty trap	Lacking fiscal resources to invest in infrastructure, social services, public administration, environmental management, etc. needed to improve governance
3	Pockets of poverty	Regions within countries lagging in economic development, facing geographical disadvantage and political disempowerment of minority groups.
4	Policy neglect	Policymakers unaware or neglectful of core policy issues, e.g. environmental policy, gender biases, access to obstetrical care, teaching life skills, etc.

Source: http://www.unmillenniumproject.org/reports/why8.htm

RELEVANCE OF ICT TO SDG

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

ICT

WSIS-SDG interdependence

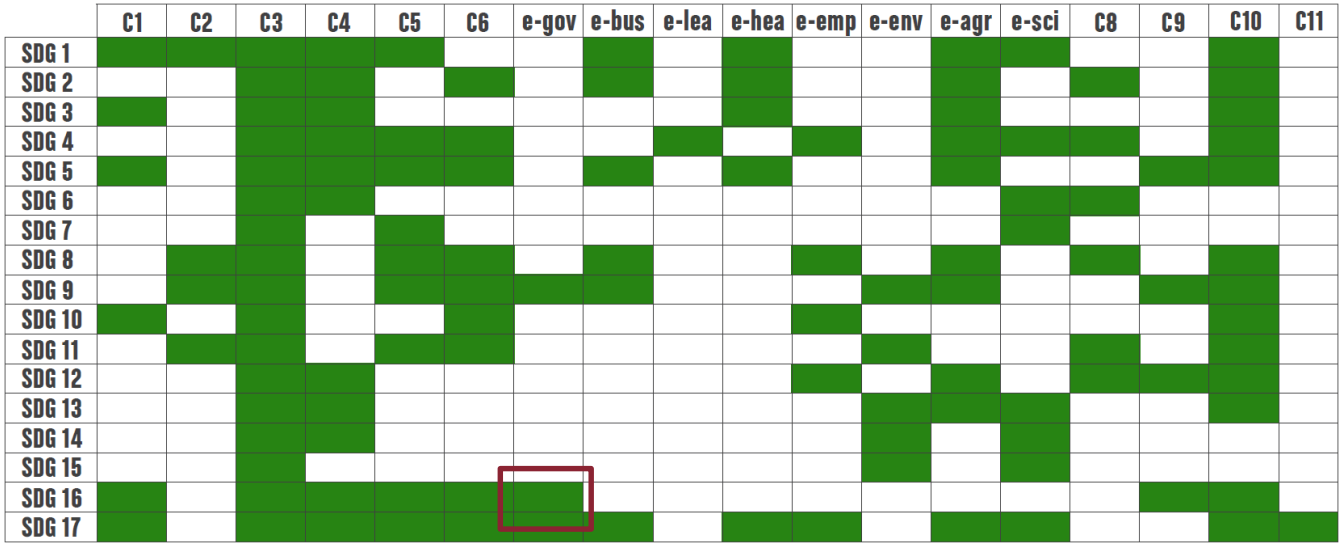
SDG

RELEVANCE OF ICT TO SDG: WSIS VERSUS SDG

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

CASE STUDY 4: WSIS AND SDG

Interdependancies between WSIS Action Lines and SDG



C7 (EGOV): Various forms of ICT-enabled information sharing and consultation provide opportunities to expand participation in decision-making, provided digital divides have been addressed.

SDG 16.7: Ensure responsive, inclusive, participatory and representative decision-making

Source: https://www.itu.int/net4/wsis/sdg/

RELEVANCE OF DIGITAL GOVERNMENT TO SDG

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

Governance

MDG experience

SDG

Digital Government

ICT

WSIS-SDG interdependence

SDG AND DG EVOLUTION

Governance

ICT

Digital Government

Digital Government Evolution model

SDG

SDG AS PRESSURE, DG AS RESPONSE

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

TECHNOLOGIES

- Office software
- World Wide Web
- Cloud computing
- Big data and analytics
- Social networks
- Mashups
- Mobile platforms
- Etc.

PRESSURES

INSTITUTIONALIZATION

?

INNOVATIONS

? ?

DIFFERENT STAGES FOR DIFFERENT GOALS

UNITED NATIONS UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven Electronic Governance

NO	STAGE	CHARACTERIZATIONS AND IMPACT		
		Internal government transformation?	Transformation affects relationships with others?	Transformation is context (territory/sector) specific?
1	Digitization	no	no	no
2	Transformation	yes	no	no
3	Engagement	yes	yes	no
4	Contextualization	yes	yes	yes
		GOVERNMENT	GOVERNANCE	DEVELOPMENT

OVERVIEW

1	DIGITAL GOVERNMENT FOR DEVELOPMENT (EGOV4D)	
2	DIGITAL GOVERNMENT FOR SUSTAINABLE DEVELOPMENT (EGOV4SD)	
	2.1	GOAL – SOCIAL SUSTAINABILITY
	2.2	GOAL – ENVIRONMENTAL SUSTAINABILITY
	2.3	GOAL – ECONOMIC SUSTAINABILITY
	2.4	GOAL – SUSTAINABILITY TRANSITION
3	CASES IN EGOV4SD	
4	DIGITAL GOVERNMENT AND SUSTAINABLE DEVELOPMENT GOALS	
5	SUMMARY	

SUMMARY

1	EGOV4D	Development, dimensions, goals, results, government and governance for development, administrative reform, ICT4D.
2	EGOV4SD	EGOV – government, technology, interaction, customer, society; SD – social, environmental, economic, transitional; EGOV4SD.
3	GOAL 1 – SOCIAL	Access for all, reducing poverty and inequality, reducing gender inequality, reducing infant and maternal mortality.
4	GOAL 2 – ENVIRONMENTAL	Climate change, improved water management, reduced land degradation, restoration of biodiversity.
5	GOAL 3 – ECONOMIC	Transportation and logistics, improved energy consumption, economic growth.
6	GOAL 4 – TRANSITIONAL	Adoption of green accounting, access of underprivileged groups, adoption of environment-friendly practices, renewable energy.
7	EGOV AND SDG	EGOV is relevant to Sustainable Development Goals but mainly at the Contextualization stage of the Digital Government evolution

THANK YOU FOR YOUR ATTENTION.

QUESTIONS?

Tomasz Janowski

Elsa Estevez

Pablo Fillottrani

SOURCES

1 Elsa Estevez and Tomasz Janowski. Electronic Governance for Sustainable Development – Conceptual Framework and State of Research. Government Information Quarterly, volume 30, supplement 1, Elsevier, 2013, http://dx.doi.org/10.1016/j.giq.2012.11.001

2 Tomasz Janowski. Implementing Sustainable Development Goals with Digital Government – Aspiration-capacity gap. Government Information Quarterly, volume 33, issue 4, pages 603-613, Elsevier, 2016, http://dx.doi.org/10.1016/j.giq.2016.12.001