

0110
0111
0111
0111
0111



International Open Government Data Conference

Governance 2.0— Enabling Participation for Development

Dr. Tomasz Janowski, *UN University*





UNITED NATIONS
UNIVERSITY

UNU-IIST

International Institute for
Software Technology

Governance 2.0

Enabling Participation for Development

Tomasz Janowski

United Nations University

tj@iist.unu.edu



IDENTITY	Dual - University and UN
ESTABLISHED	1972
MISSION	To contribute – through collaborative research, teaching, capacity development and advisory services – to efforts aimed at resolving the pressing global problems of sustainable human security, development and welfare that are the concern of the United Nations, its Peoples and Member States.
AIMS	<ol style="list-style-type: none">1. Advancement of knowledge relevant to the role and work of the United Nations2. Application of that knowledge in formulating sound principles, policies, strategies and programmes for action
LOCATION	Worldwide, with headquarters in Tokyo



UNITED NATIONS UNIVERSITY NETWORK



UNITED NATIONS
UNIVERSITY
UNU-IIST
International Institute for
Software Technology



INSTITUTES

UNU-CRIS	Regional Integration	Belgium
UNU-EHS	Environment and Human Security	Germany
UNU-IAS	Sustainable Development	Japan
UNU-IIGH	Global Health	Malaysia
UNU-IIST	ICT for Sustainable Development	Macao SAR, China
UNU-INRA	Natural Resources Management	Ghana
UNU-INWEH	Water, Environment and Health	Canada
UNU-ISP	Sustainability and peace	Japan
UNU-MERIT	Socio-Eco. Impacts of Technologies	Netherlands
UNU-WIDER	Development Economics	Finland

PROGRAMS

UNU-BIOLAC	Biotechnology and Society	Venezuela
UNU-FNP	Food and Nutrition Capacity	USA
UNU-FTP	Fisheries Training	Iceland
UNU-GTP	Geothermal Training	Iceland
UNU-LRT	Land Restoration	Iceland
UNW-DPC	Water Capacity Development	Germany



CENTER FOR ELECTRONIC GOVERNANCE



UNITED NATIONS
UNIVERSITY
UNU-IIST
International Institute for
Software Technology



IDENTITY

Center of Excellence on
Electronic Governance research
and practice, part of UNU-IIST.

MISSION

Supporting governments, universities
and the UN in strategic use of ICT to
enable good governance and
sustainable development.

ACTIVITIES

Conduct research, provide policy support to governments and the UN system, develop educational programmes, and build capacity of universities and governments to best utilize ICT and Electronic Governance in the pursuit of the Sustainable Development objectives.

AIM AND OVERVIEW

AIM

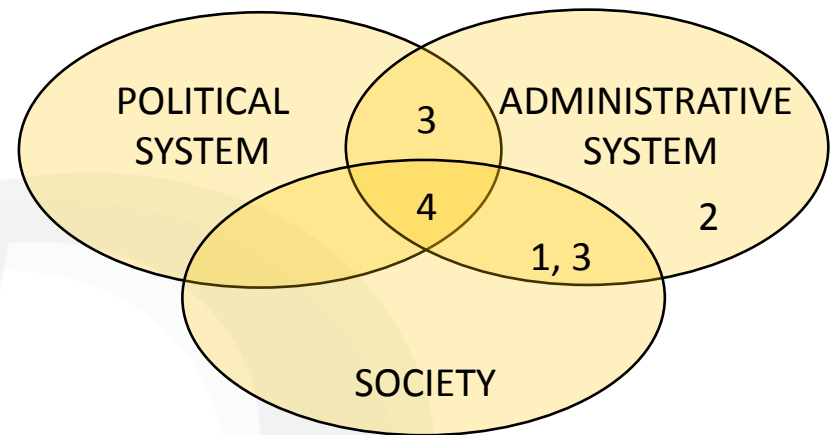
- Explain the meaning of EGOV in the development context – EGOV4SD
- Present how EGOV evolves to utilize Web 2.0 technologies and enable greater participation – GOV 2.0
- Share some lessons learnt and connections discovered between EGOV4SD and GOV 2.0
- Discuss the problem of semantic interoperability for GOV 2.0 and outline an architectural solution

OVERVIEW

1.	CONTEXT	UNU → EGOV
2.	EGOV FOR DEVELOPMENT	EGOV → EGOV4D → EGOV4SD
3.	EGOV FOR PARTICIPATION	EGOV → GOV 2.0
4.	ENABLING PARTICIPATION FOR DEVELOPMENT	GOV 2.0 ↔ EGOV4SD
5.	TECHNICAL FOCUS	SEMANTIC INTEROPERABILITY FOR GOV 2.0 [8]



DEFINITIONS [10]	DISCIPLINES					
	INFORMATICS	POLITICAL SCIENCE	PSYCHOLOGY	ECONOMICS	MANAGEMENT	SOCIOLOGY
1. Internet service delivery and government online.	X		X	X		
2. Front- and back-office use of ICT by government.	X			X	X	
3. ICT-enabled transformation in working of government	X	X			X	
4. ICT-enabled transformation in the working of and interaction with government	X	X			X	X



Supporting new governance paradigms: [3][4]

- Distribution of power to citizens
- Government-wide coordination
- Stronger regulation due to participation on non-state actors
- Relying on social networks for citizens to express collective voice



D Development – Three basic schools of thought: modernization, dependency and human-centered. The human-centered school focuses on enabling the realization of individual potentials, largely based on the Sen’s capability framework.

GOV4D Management of the development process through a framework of rules and institutions to regulate the conduct of all actors involved, public or non-public [1].

EGOV4D EGOV focusing on development-related governance issues [2]:

- Enhancing the capacity of government agencies for public service delivery through the process of ICT-enabled reform and decentralization
- Using ICT to support the delivery of accessible and affordable services that are most needed by the poor and small businesses
- Enabling through ICT the increased participation of the disadvantaged groups in the society in government decision making
- Using ICT to enhance access to government and other information aimed at the well-being of the poor



SD Sustainable Development - development that meets the needs of present generation without compromising the ability of the future generations to meet their own needs [5][6].

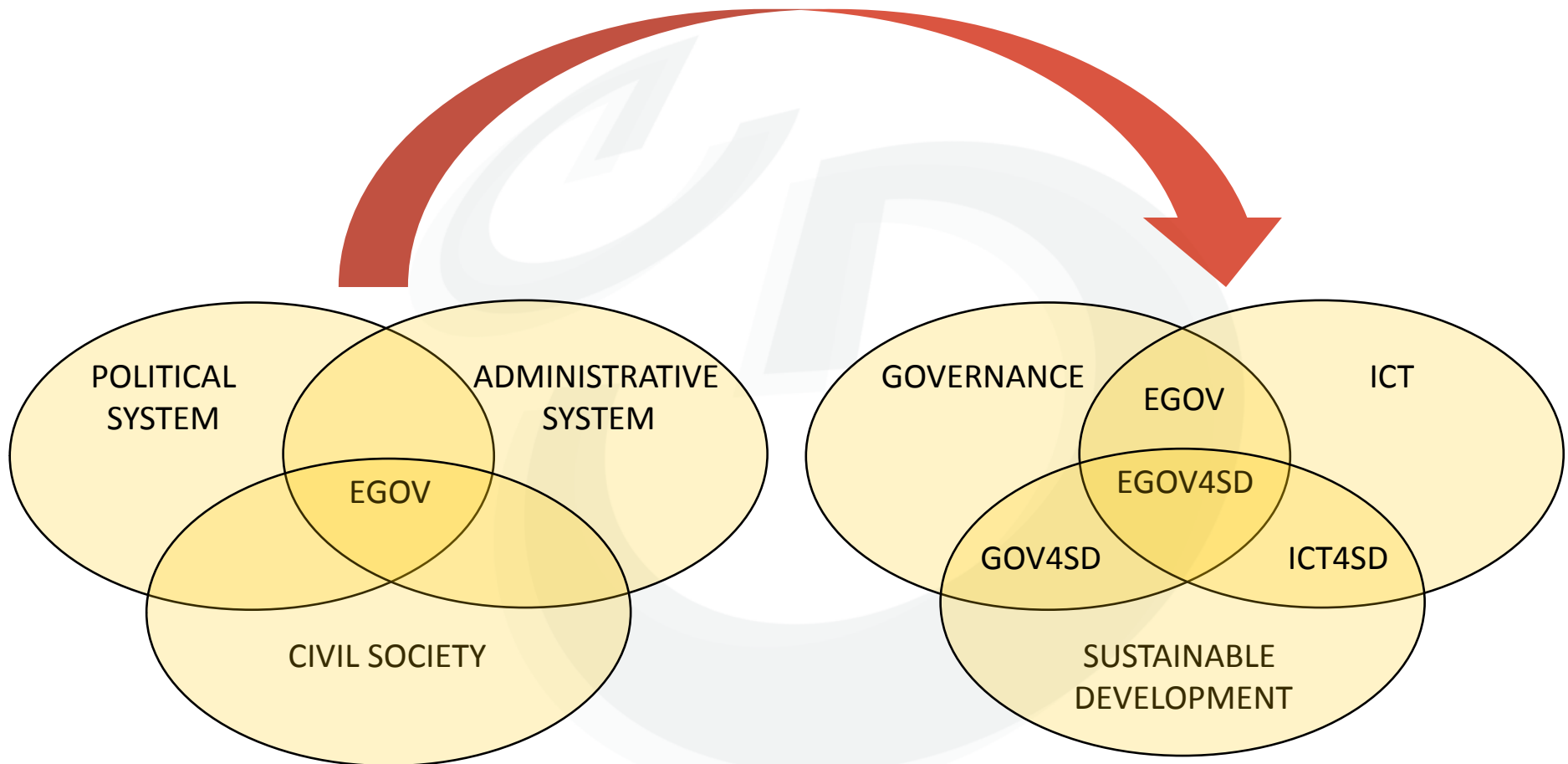
GOV4SD SD faces peculiar governance issues [7]:

- engaging citizens and other actors in the SD process
- long-term policy perspective to address inter-generational concerns
- vertical and horizontal policy integration for coherency of government decisions

EGOV4SD Strategic use of ICT to enable the governance of the SD process [2]:

- Enhancing the efficiency of internal government operations with SD-oriented ICT strategies, processes, architectures and infrastructure
- Applying ICT to support the provision of accessible services needed by the poor and small businesses, delivered at the minimum environmental cost
- Using ICT to increase participation of the poor in government policies/decisions

FROM EGOV TO EGOV4SD

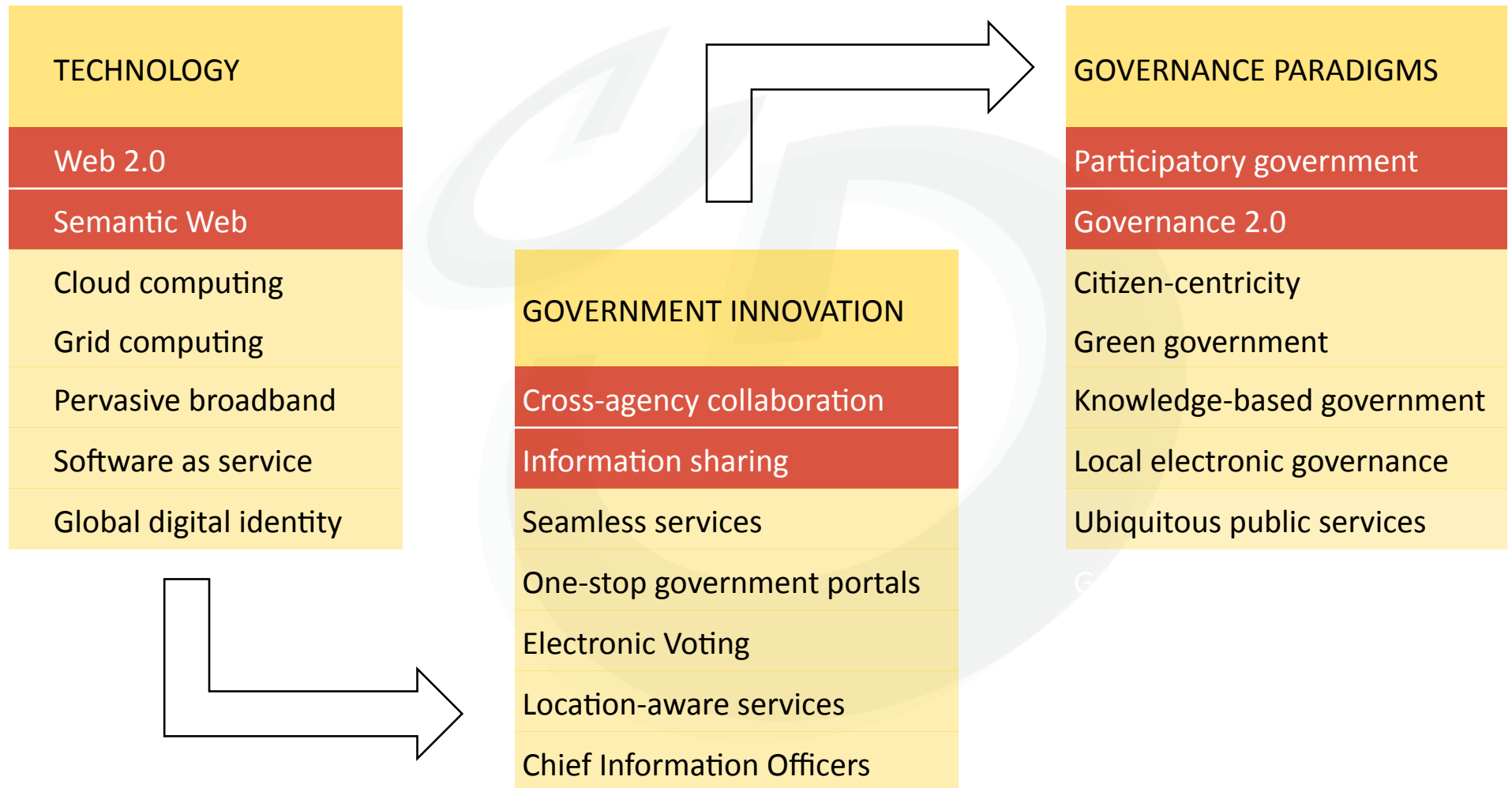


OVERVIEW



1.	CONTEXT	UNU → EGOV
2.	EGOV FOR DEVELOPMENT	EGOV → EGOV4D → EGOV4SD
3.	EGOV FOR PARTICIPATION	EGOV → GOV 2.0
4.	ENABLING PARTICIPATION FOR DEVELOPMENT	GOV 2.0 ↔ EGOV4SD
5.	TECHNICAL FOCUS	SEMANTIC INTEROPERABILITY FOR GOV 2.0 [8]

TECHNOLOGY, INNOVATION AND GOVERNANCE



TECHNOLOGY



WEB 2.0	Blogs - journal writing, Wikis - collaborative editing, Mashups - combining contents, Social Networking - interaction, Virtual Worlds - simulations
SEMANTIC WEB	Tagging or adding semantic information to resources on the web to facilitate finding, sharing and combining content
CLOUD COMPUTING	dynamically scalable resources as services over the web, with data and software stored on servers and business functions accessed from a browser
GRID COMPUTING	applying computer resources from many domains to computing tasks
SOFTWARE AS A SERVICE	deploying software as service on demand
GLOBAL IDENTITY	validating identity of users globally in any context (.Net passport)
UBIQUITOUS COMPUTING	delivering computing networks and services everywhere
AMBIENT SERVICES	providing environment-embedded services
PERVASIVE BROADBAND	broadband access everywhere

GOVERNMENT INNOVATION



SINGAPORE IN2015	E-KOREA VISION 2006	EU I2010 STRATEGY
Sharing data, processes and systems for synergy	Strengthening links between EGOV and public reform	EGOV should benefit everyone including disadvantaged
Attracting participation in online public consultation	Increasing participation of citizens in policy making	Continuing to reduce administrative burden
Extending the reach and accessibility of e-services	Constructing mobile government infrastructure	Delivering high impact electronic services
Developing insights to enhance customer services	Information services for clean and healthy environment	Increasing participation in decision making
UNDESA 2008	WASEDA 2009	WEF GIT Report 2008 – 2009
Connected Governance – strong central coordination and information sharing	Integration of EGOV and public administration reform	The importance of mobility in workforce and networked world
More integration between EGOV and public reform policies and strategies	Move from agency-centric to citizen-centric programs	From mobility to ubiquitous connectivity
	Move from e-Government to e-Governance	
	Government CIOs	

GOVERNANCE PARADIGMS



CONNECTED GOVERNMENT	cooperating government enterprises, whole-of-government
PARTICIPATORY GOVERNMENT	sharing more power with citizens in decisions and policies
REGULATORY GOVERNMENT	government taking increasing regulatory role in the economy
GOVERNMENT CIO	Chief Information Officer delivering technology leadership
LOCAL E-GOVERNMENT	from national- to local-level EGOV to deliver benefits to the people
AGILE GOVERNMENT	government capable of sound strategy execution and response
MOBILE GOVERNMENT	providing public services anywhere, including on the move
GREEN GOVERNMENT	developing environmentally friendly and sustainable initiatives
KNOWLEDGE-BASED GOVERNMENT	knowledge management for smarter government operations
GLOBALIZING GOVERNMENT	services to enable participation in the regional and global economy
GOVERNANCE 2.0	...

GOVERNANCE 2.0 – WHAT AND WHY



WHAT The use of social media (Web 2.0 technologies) by governments for improving citizen access to information, participation in policy processes, delivery of customer-focused services and harnessing collective intelligence of citizens [8].

WHY	USER-ORIENTATION	Solutions like PatientOpinion.org.uk help understand user needs, public feedback or rating systems promote user-orientation
	TRANSPARENCY	Applications like TheyWorkForYou.com and PlanningAlerts.com enable citizen awareness and government monitoring
	PARTICIPATION	E-Participation solutions such as e-Petitions stimulate debate and participation in public decision-making.
	JOINED-UP GOVERNMENT	Applications like Intellipedia enable better collaboration across and organizations, reducing "silo effect" and duplications [9]

GOVERNANCE 2.0 – WHERE AND HOW



WHERE [9]	Front Office	Back Office	Participatory Governance
	<ul style="list-style-type: none"> ○ Service provision ○ Political participation ○ Transparency 	<ul style="list-style-type: none"> ○ Regulation ○ Cross-agency collaboration ○ Knowledge management 	<ul style="list-style-type: none"> ○ preference determination ○ policy formulation ○ policy implementation ○ monitoring and accountability

HOW	<ol style="list-style-type: none"> 1. Considering Governance 2.0 as a Technology concern. 2. Focusing on core governance issues that will benefit most from Governance 2.0. 3. Aligning technology (Governance 2.0) and organizational (Participatory Governance) aspects. 	Organization	Technology	
		Participatory Governance Strategy	Governance 2.0 Strategy	Strategy
Participatory Governance Structure	Governance 2.0 Structure	Structure		

OVERVIEW

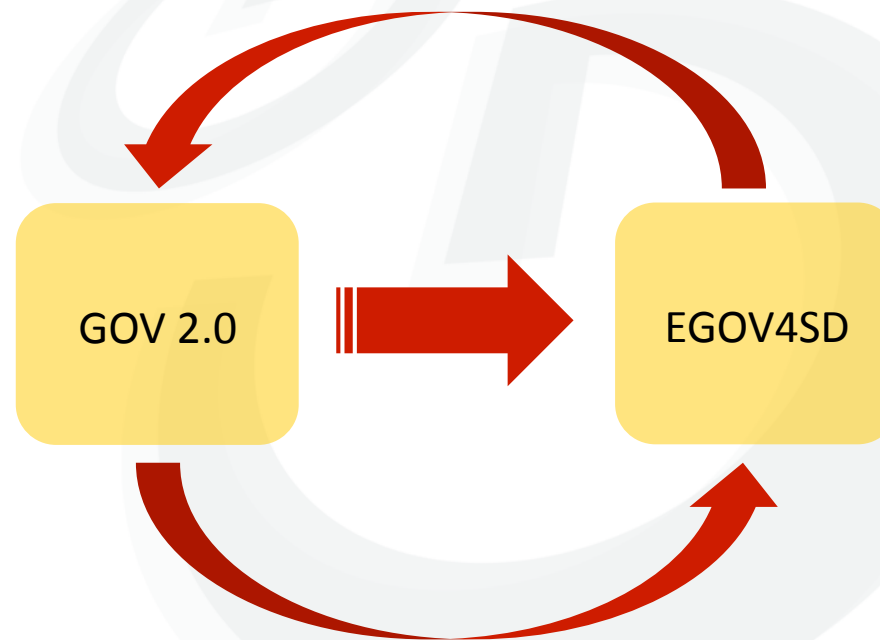


1.	CONTEXT	UNU → EGOV
2.	EGOV FOR DEVELOPMENT	EGOV → EGOV4D → EGOV4SD
3.	EGOV FOR PARTICIPATION	EGOV → GOV 2.0
4.	ENABLING PARTICIPATION FOR DEVELOPMENT	GOV 2.0 ↔ EGOV4SD
5.	TECHNICAL FOCUS	SEMANTIC INTEROPERABILITY FOR GOV 2.0 [8]

CONCEPTUAL MAPPING – GOV 2.0 ↔ EGOV4SD

Triggers and evolves the current participation model to explicitly consider participation at all levels of society, e.g. involving citizens in the rural areas.

Increases participation of citizens and other non-state actors, but what segment is implicitly targeted? Which group does really participate?



Aims to reach the bottom of the pyramid in terms of services and engagement, but how to achieve this given the current gap between central and lower levels of government?

Increase participation of external actors in decision processes and services delivery.

EXPERIMENTAL ENVIRONMENT - EGOV.* FRAMEWORK



NAME	EGOV4D Development Framework (EGOV.*)	
CONTEXT	Public Administration (PA); can be national, provincial or municipal level	
AIM	Systematically construct a high-quality Electronic Government program through readiness assessment, research, strategy and program development, and building human and organizational capacity of the local institutions to execute this program.	
TARGET	A generic framework, well-suited to addressing typical needs of developing countries.	
NEEDS	Policy-Strategy Gap	Human Resource Development
	Strategy-Implementation Gap	Leadership and Coordination
	Enabling Inter-Agency Cooperation	Scaling up from national to local government
	Weak Implementation and Delivery	EGOV in Resource-Constrained Environment
	Financial constraints	Lack of research to precede implementation

EXPERIMENTAL ENVIRONMENT - EGOV.* PROCESS

PROCESS

1. Establish the state of readiness for EGOV4D in the PA
2. Develop a government-wide strategy towards EGOV4D in the PA
3. Construct a program for PA and its partners to implement the strategy
4. Build capacity of the PA and partners to be able to execute/benefit from the program
5. Establish a research/innovation environment to help develop and execute the program



NEEDS

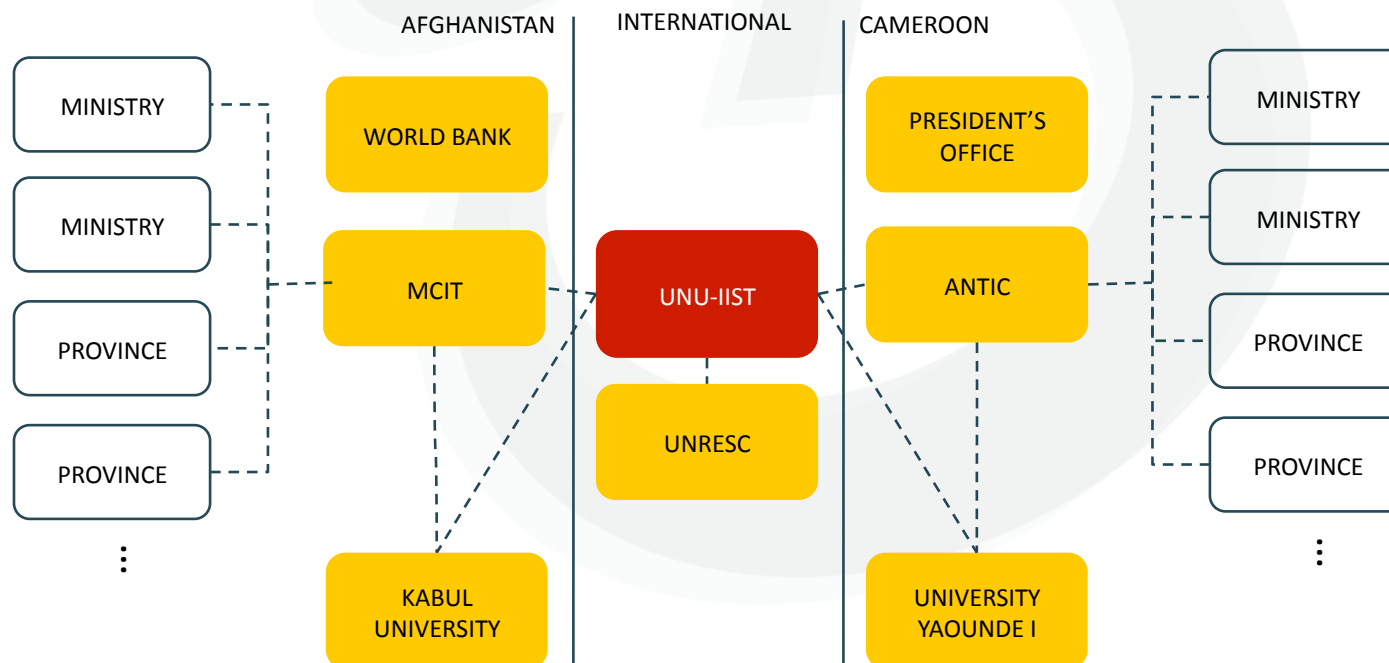
Policy-Strategy Gap	Human Resource Development
Strategy-Implementation Gap	Leadership and Coordination
Enabling Inter-Agency Cooperation	Scaling up from national to local government
Weak Implementation and Delivery	EGOV in Resource-Constrained Environment
Financial constraints	Lack of research to precede implementation

EXPERIMENTAL ENVIRONMENT - EGOV.* INSTANCES

Two national-level instances are active:

- EGOV.AF in Afghanistan with the Ministry of ICT and Kabul University, funded by the World Bank;
- EGOV.CM in Cameroon with ANTIC and Yaounde I, funded by the President's Office.

Regional adoption is being discussed with UN Regional Economic/Social Commissions.



LESSONS LEARNT FROM EGOV.* PROJECTS

1. Lower Levels of Governments are Always Low Priority - *Playing to the gallery really pays!*

National agencies prefer to invest at the central level for visibility, creating increasing divide within the countries. Local government structures are weak and, since international benchmarking primarily considers the EGOV maturity at the national level, incentives for EGOV4D are weak.

2. Fragmented Stewardship - *He who pays the piper should dictate the tune!*

While EGOV strategy may rest with IT agencies, implementations fall apart due to shared stewardship with related ministries with substantially more resources. International organizations work with different agencies on the similar programs.

3. Academia-Government Collaboration is Necessary - *Bringing the gown to town also pays!*

Local academia is uniquely positioned to support governments in developing strategies, programs and the required pool of skilled workforce to operate EGOV programs. Involving academia from the outset significantly improves program sustainability.

4. Bureaucracy is Pervasive - *Commander is supreme!*

With bureaucratic and inflexible civil service culture and authorizations required for almost every action, project managers are unable to decide on basic activities and progress is only assured with direct engagement of agency heads. EGOV management must accommodate these constraints.

OVERVIEW



1.	CONTEXT	UNU → EGOV
2.	EGOV FOR DEVELOPMENT	EGOV → EGOV4D → EGOV4SD
3.	EGOV FOR PARTICIPATION	EGOV → GOV 2.0
4.	ENABLING PARTICIPATION FOR DEVELOPMENT	GOV 2.0 ↔ EGOV4SD
5.	TECHNICAL FOCUS	SEMANTIC INTEROPERABILITY FOR GOV 2.0 [8]

SEMANTIC INTEROPERABILITY AND GOVERNANCE 2.0



SEMANTIC INTEROPERABILITY

The ability of participants in a network to use exchanged information in a manner consistent with its intended meaning, particularly in the cases where the information is used outside its original context.

SEMANTIC INTEROPERABILITY AND GOVERNANCE 2.0

A fundamental concern in Governance 2.0 where most data is used outside its originating context.

RESEARCH QUESTIONS

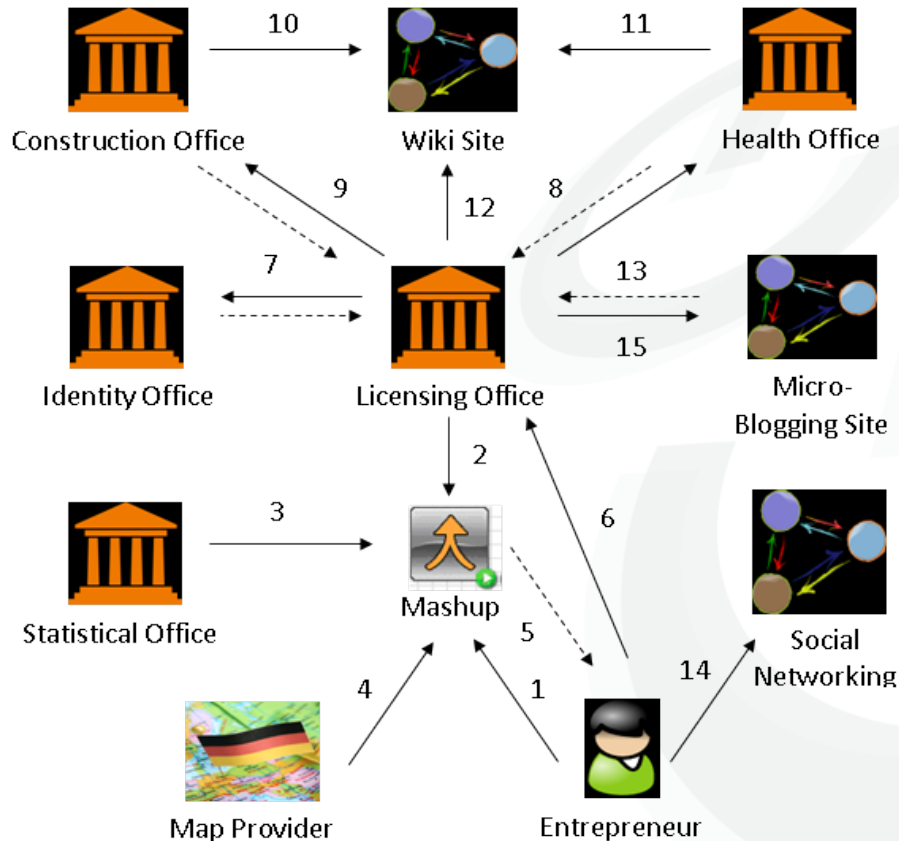
1. What types of requirements do semantic interoperability pose for Governance 2.0 networks?
2. What capabilities do governments need to address such requirements?

CASE STUDY



NO	STEP
1.	Entrepreneur X wants to start up a restaurant business in a district in his or her state
2.	To determine the best location, X relies on the mashup service combining GOV 2.0 initiatives: <ul style="list-style-type: none">○ the latest policy on restaurant services in the state, by the Licensing Office○ demographic data for the state, by the Statistics Office○ geospatial data from a private Map Provider
3.	X determines the best location for the restaurant, and applies for the license to the Licensing Office.
4.	Licensing Office relies on its portal, social networking and micro-blogging sites to: <ul style="list-style-type: none">○ publish government policy on restaurant services affecting districts○ disseminate information on procedures, regulations, and public notices○ harvest service experiences as a basis for improvement and feedback on policy issues
5.	In order to process the application from X, the Licensing Office relies on expert opinions from the Identity, Construction and Health Offices.

CASE STUDY – INTERACTIONS AND SCENARIOS



- ## SCENARIOS
- Building mashups from heterogeneous data sources
 - Broadcasting or publishing information to social media sites
 - Harvesting and aggregating social media contributions from different sites
 - Contents contribution and access to social media sites by human agents
 - Integration of information from different agencies at the back office

CASE STUDY – SEMANTIC ISSUES



- 1 Semantic data mediation service is required on demand and on the fly
- 2 Data services should be discoverable based on semantic descriptions
- 3 The mashup development environment is required to support semantic information processing
- 4 Social media services should be discoverable and requested in a semantically valid manner
- 5 Content models for social media sites should be understandable by government systems
- 6 Government systems should understand the tags associated with social media contributions
- 7 The contents contributed by agencies on social media must be understandable to their audiences
- 8 Government systems should be able to aggregate contents in a semantically correct manner
- 9 Government systems must be able to map content models for social media sites
- 10 Government systems must be able to map tags from different social media sites
- 11 Government must make sure that published contents is understandable to citizens
- 12 Government systems must be able to mediate semantic differences in information exchange

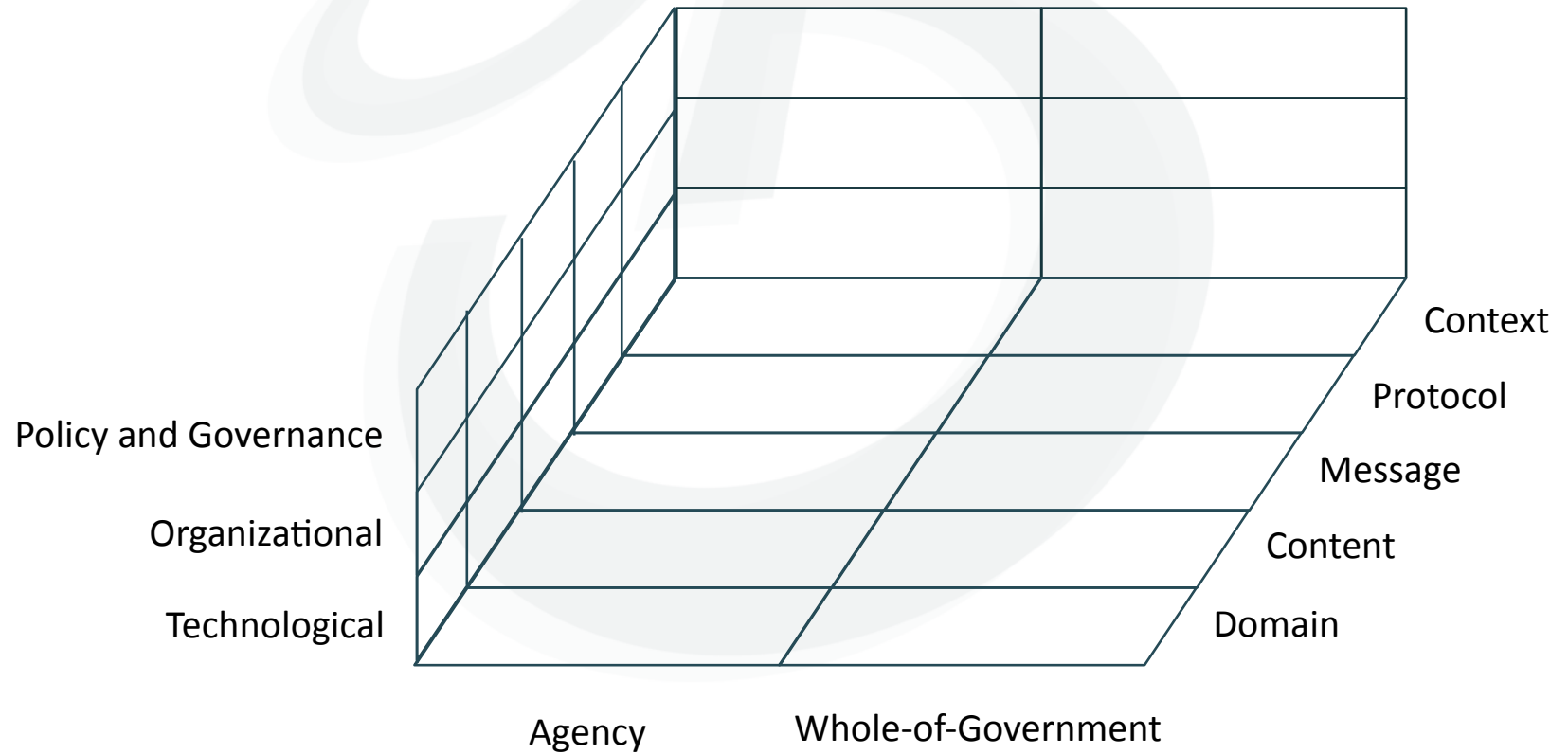
RESEARCH QUESTION 1

QUESTION

What requirements do semantic interoperability pose for Governance 2.0 networks?

ANSWER

Addressing GOV 2.0 semantic issues is a multi-dimensional capability:



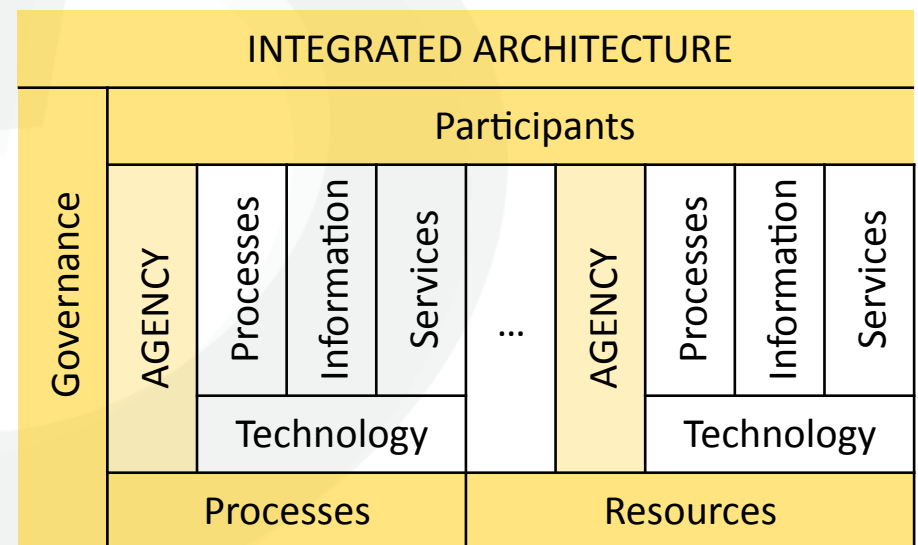
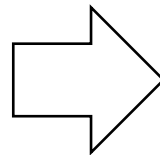
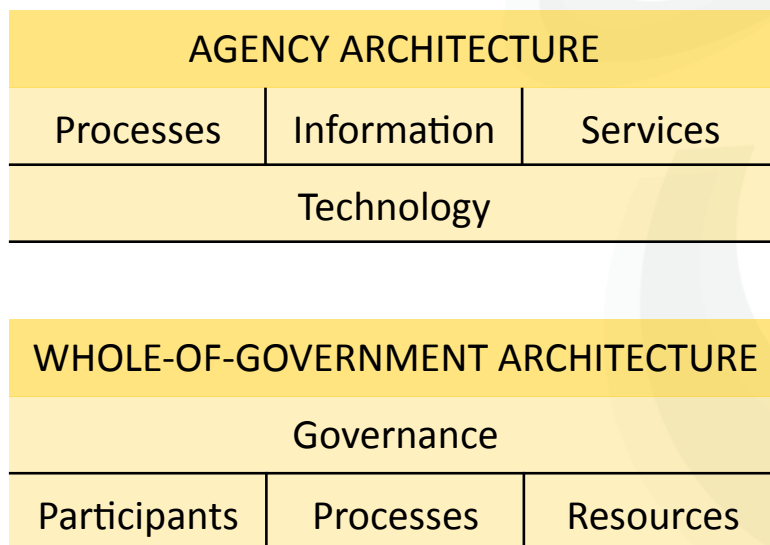
RESEARCH QUESTION 2

QUESTION

What capabilities do governments need to address such requirements?

ANSWER

Three reference architectures are proposed for organizing the capabilities - agency architecture, whole-of-government architecture and integrated architecture:



RECOMMENDATIONS [8]



UNITED NATIONS
UNIVERSITY
UNU-IIST
International Institute for
Software Technology

1. SIOP should be conceived as a government “capability” to ensure a holistic approach covering policy, organization and management issues to obtain concrete SIOP benefits.
2. As SIOP depend on the social, cultural and human factors within each agency, implementations should be approached modestly with strong orientation on learning, risk minimization and benefits.
3. As the development of semantic assets - ontologies, mapping tables, tags, ontology-folksonomy maps, etc. is difficult, a mix of formal and social approaches is advised.
4. It is important that governments contribute to the emerging Web 2.0 standards in the area of social networks, data interoperability and open identity management, to support their GOV 2.0 innovations.

CONCLUSIONS



SUMMARY

- Explained the meaning of EGOV in the development context – EGOV4SD
- Presented how EGOV evolves to utilize Web 2.0 and enable greater participation – GOV 2.0
- Shared some lessons learnt and connections discovered between EGOV4SD and GOV 2.0
- Discussed the problem of semantic interoperability for GOV 2.0 and outlined an architectural solution

FINDINGS

- Developed Countries – GOV 2.0 engages citizens in decision- and policy-making and through better representation and policy modeling contributes to achieving more effective policy outcomes.
- Developing Countries – GOV 2.0 should be strongly promoted for transparency and participation, but improvements in governance must translate into concrete development outcomes (EGOV4SD).
- Like GOV 2.0, EGOV4SD is relevant to both developing and developed worlds. The difference rests in the nature and priority of the sustainability challenges.

LOOKING AHEAD [2]...



Participation Challenge

What new technologies, policies and strategies can be adopted to reduce all forms of digital divide - geographic, gender, age, socio-economic, etc. to enable participation of citizens in government decisions that directly affect their lives, including environmental concerns?

Policy Integration Challenge

How can ICT policies be effectively integrated with economic, social and environmental policies across all government levels? What ICT tools can be used to support the integration of national policies with global policies on climate change, health pandemics, human security or terrorism?

EGOV4SD Development Challenge

How can the new generation of EGOV4SD frameworks - policies, strategies, architectures and infrastructure, be developed and diffused to support the global sustainability transition?

REFERENCES

- [1] ADB. Governance and Sustainable Development - The. Asian Development Bank, Manila, 2008.
- [2] Tomasz Janowski, Adegboyega Ojo and Elsa Estevez, Electronic Governance for Sustainable Development Programme - Strategic Plan 2011 – 2014, 2010
- [3] Coleman, Stephen. Foundations of Digital Government. In Chen, Hsinchun et al., eds., Digital Government: E-Government Research, Case and Implementation. Springer, 2008.
- [4] Finger, Matthias. Conceptualising e-Governance. European Review of Political technologies, 1 (March 2005), 1-7.
- [5] Elliot, Jennifer A. An Introduction to Sustainable Development. Routledge - Taylor & Francis Group, London and New York, 2006.
- [6] Atkinson, Giles, Dietz, Simon, and Neumayer, Eric. Handbook of Sustainable Development. Edward Elgar Publishing Limited, UK, 2007.
- [7] Kemp, Rene and Gibson, Robert. Governance for Sustainable development: moving from theory to practice. International Journal of Sustainable Development, 8, 1/2 (2005), 12-30.
- [8] Adegboyega Ojo, Elsa Estevez and Tomasz Janowski. Semantic Interoperability Architecture for Governance 2.0. Information Polity, Volume 15, No 1/2, 105-123, IOS Press, 2010.
- [9] D. Osimo, "Web 2.0 in Government: Why and How?," Institute for Prospective Technological Studies, European Commission, JRC Scientific and Technical Report 2008.
- [10] Åke Grönlund and Thomas A. Horan. Introducing e-Gov: History, Definitions, and Issues. Communications of the Association for Information Systems, Volume 15, Number 1, 2005



UNITED NATIONS
UNIVERSITY

UNU-IIST

International Institute for
Software Technology

How can we work
together to address them?

Tomasz Janowski

tj@iist.unu.edu