New challenges of eGovernment towards eDemocracy and eParticipation

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Agenda

• History of eGovernment
• Waves of public service implementations
• Current investments in research and implementation
  – eGovernment, eDemocracy and eParticipation
• Challenges and future trends
  – Convergence of eGovernment and eParticipation
History of eGovernment

- Projects of electronic data processing in the public sector since *five decades*
- *Academic* interest emerged *three decades* ago starting with the term Data Processing in Public Administration
- *International* institutionalisation by IFIP (International Federation of Computer Societies) with founding 1990 IFIP Working Group “Information Systems in Public Administration”.
- *One decade* ago the concepts *electronic Government* (Europe) and *digital Government* (US) were created
History of eGovernment

• Further concepts have emerged
  – some replacing “e” with “m” for mobile or “k” for knowledge or “t” for transforming
  – others with more radical view claim: “drop the e”

• eGovernment as full domain of Information Systems Research
  – Dedicated to ICT usage in the various branches of the public sector

• Recent focus on Public Governance broadened the scope of eGovernment to include
  – Public management and public sector reform
  – Reduction of administrative burden
  – Broader interdisciplinary approaches
  – Addressing good governance principles

• Likewise, eParticipation and eDemocracy have become popular terms
Definition of eGovernment

• The European Commission defines:
  „eGovernment is the use of information and communication technologies in public administrations - combined with organisational change and new skills - to improve public services and democratic processes and to strengthen support to public policies.”

eGovernment as research discipline

Key questions

• How can we conceptualise modern and improved public sector activities through the use of advanced ICT?

• How can we ensure public sector governance and how can we therewith optimise the available resources with the help of modern ICT?
Holistic view on eGovernment

Public Value Expectations / Good Governance / Economics and efficiency

Society / Democracy / Market / Environment & Culture

ICT innovations, new technologies

Government responsibilities / and activities / political decision making / Policy implementation
Multitude of competencies ...
Definition of eDemocracy

• Clift defines eDemocracy

... as the use of ICT and ICT strategies by democratic actors (e.g. governments, elected representatives, media, political parties, interest groups, citizen organisations, voters / citizens) in political processes at different levels of State. Therewith, a higher degree of citizen participation is enabled.
Application fields of eDemocracy

Consultation
Consultation
Information
Web casting
Voting / Elections

eDemocracy

eParticipation
Scope of eParticipation

Four-dimensional framework

Participation areas
- Information Provision
- Community building / Collaborative Environments
- Consultation
- Campaigning
- Electioneering
- Deliberation
- Discourse
- Mediation
- Spatial planning
- Polling
- Voting

Stages in policy making
- Agenda setting
- Policy formulation
- Decision making
- Policy implementation
- Policy evaluation

Level of Engagement
- eInforming
- eConsulting
- eInvolving
- eCollaborating
- eEmpowering

Stakeholders involved
- Citizens groups
- Politicians
- Political parties
- Industry
- Elected representatives
- Government / Executive
- NGO's
OECD eDemocracy challenges (1/2)

• Challenge of scale
  – how can technology enable an individual to get heard in public mass debates; how can technology support governments to listen and respond to citizens' comments?

• Building capacity and active citizenship
  – designing technology to encourage deliberative debates on public issues among citizens.

• Ensuring coherence - allowing a holistic view of policy-making
  – there is a need to ensure that knowledge that is input at each stage is made available appropriately at other stages of the process so as to enable more informed decision making by governments and citizens.

[Promise and problems of e-democracy. OECD study, 2003]
OECD eDemocracy challenges (2/2)

• Evaluating eEngagement
  – there is a need to understand how to assess the benefits and impacts of eDemocracy tools on political decision-making.

• Ensuring commitment
  – governments need to adapt structures and decision-making processes to ensure that the results gathered with eDemocracy tools are analysed, disseminated and used.

[Promise and problems of e-democracy. OECD study, 2003]
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Public Services -
Wave 1

• Access and Connectivity
  – New technology introduced new capability
  – Having a web-appearance was high on the agenda
  – Governments were involved in infrastructure building and setting a regulatory framework
  – Benefits were evaluated intuitively
Public Services - Wave 2

• Online Services
  – eGovernment as an additional communication channel
  – Measuring take-up became important
  – Some effort in improving front-office and interfaces
  – Yet, disproportion with back-office improvement, which could not keep pace
  – Heavy deficits in standards and integration curbed progress
• Transform the Institution
  – Driven by efficiency
    • measuring impact in terms of benefit high on agenda
  – High emphasis on back office automation and integration
  – Two sub-phases of the wave
    • Automating the processes
    • Reengineering the processes
      – Greater benefits to be expected
Next Generation Government

- eGovernment is Government ceasing to be “e”
- eGovernment no more a separated entity
- Digital support fully ingrained
- Reorganisation performed radically
  - Spanning across diverse public entities as well as across private partners
- Decreasing the administrative burden for citizens and companies
- Government innovates
- Measurement criteria: public value, burden reduction, inclusiveness and effective results
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Pillars of eGovernment activities since 2005

- EU’s main policy initiative: eGovernment Action Plan with efforts on five priorities

Diagram:
- Inclusive eGovernment
- Efficiency
- High Impact Services
- Key Enablers
- eParticipation

- Flexible and multi-channel Public
- Measurement
- eProcurement
- eID (elIdentity)
- Preparatory Action

- Services

Good practice sharing/exchange
Pillars of eGovernment activities since 2005

• Several supporting programmes for the eGovernment Action Plan
Research funded in 2005-2009

6th Framework Programme (FP6) with focus on

– modernising public agencies at all levels,
– innovating to create new and/or improved services for citizens and businesses which can save them time and money in their dealings with government
– eGovernment services designed to facilitate movement of people, as well as the goods and services companies make and supply, in the internal market to bring added value at EU level

• Themes given financial support in FP6
  – increasing participation of citizens in policy development and democratic decision-making
  – developing intelligent, personalised government services to help citizens and businesses
  – building new support services to make the business of government at all levels more efficient
  – improving security in data transfer and data handling, to protect the private information of citizens and businesses throughout the internal market
Three large-scale pilot projects funded

Competitiveness and Innovation Framework Programme (CIP): Funding (among others) four large-scale pilot implementation projects in the “Information Communication Technologies Policy Support Programme“ ICT PSP with 10 – 20 Mio € financial support from the EC

PEPPOL: Pan-European Public Procurement OnLine (www.peppol.eu)

STORK: Secure identity across borders linked (http://www.eid-stork.eu/)

SPOCS: Simple Procedures Online for Crossborder Services

S.O.S.: Smart Open Services - Open eHealth Initiative for a European Large Scale Pilot of Patient Summary and Electronic Prescription
eParticipation pilots funded in 2006-2010

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<tr>
<th>Year</th>
<th>Projects</th>
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<tr>
<td>2006</td>
<td>DALOS, Legese, LEX-IS, TID</td>
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<tr>
<td>2007</td>
<td>CitizenScape, demos, ideal-eu, eCommittee, FEED, VEP, voiceE</td>
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<tr>
<td>2008</td>
<td>EMPOWER, EuroPetition, HUWY, MARE Nostrum, CEP, WAVE</td>
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Monitored by the coordination activity:

MOMENTUM

www.ep-momentum.eu
Interoperability framework by IDABC

European Interoperability Framework (EIF)

– Technical interoperability covers the technical issues of computer systems. It includes also issues on platforms and architecture.

– Semantic interoperability ensures that the precise meaning of exchanged information is understandable by other applications.

– Organizational interoperability is concerned with business processes and cooperation of agencies. Here the requirements of decentralized agencies have to meet the central needs on coordination.

– Political, legal and structural conditions
Good Practice Exchange

www.epractice.eu is an online portal created and promoted by the European Commission to network in and among communities in the field, and thereby use social software

- Different stakeholders: politicians, administrators, companies, researchers
- Main elements are databases of project cases and documents, groups, events and members
- The motto is: meet – share – learn
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  – Roadmapping future eGovernment research
  – Convergence of eGovernment and eParticipation
Overall objectives of eGovRTD2020

• Identify and characterize key research challenges and an implementation model for dynamic governments in 2020
  – Develop visionary scenarios of eGovernment for 2020
  – Develop a detailed research roadmap for the transformation process

• Vision
  – transform the EC Government landscape into a coherent community
  – contribute to the development of the EC as a leading knowledge society
Methodology

Forecasting

time
change

2000 2006 2010 2020

1 Scenarios

State of play

1 Scenario development

Gap analysis

2 Roadmap development

Research Roadmap

2000 2006 2010

Impact, dissemination, awareness raising, dialogue among stakeholders, impacting policies and strategies, and community building

Gap analysis

State of play

Scenario development

Roadmap development

Forecasting

change

time

2000 2006 2010 2020
Method for scenario development

1. Scenario building based on a holistic approach

2. Extraction of issues from scenarios and classification in respect to their uncertainty and impact on future eGovernment

3. Validation of the workshop results and consolidation of aspects, extraction of three key dimensions

4. Synthesis of results into final eight alternative scenario pictures
Analysing the scenario issues

Identification of three core dimensions:
- Environment
- Attitude towards Government
- Government scope

Dimensions

Scenario 1

Category 1

Category 13
Gap Analysis Method

State of Play:
- Topics of Interest
- Dimensions

Input for the **Gap Analysis**

Scenarios:
- Topics of Interest
- Dimensions

<table>
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<tr>
<th>Step 1: Identify commonalities and gaps in commonalities</th>
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<td>Diverging understanding</td>
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<th>Step 2: Identify gaps between the scenarios and the state of play</th>
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<td>Identify topics of interest emerging in the scenarios but not in the state of play</td>
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<th>Step 3: Assess gaps according to their relevance and impact to the governance model</th>
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<td>policy formulation</td>
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<th>Step 4: Develop gap storylines to convey the need of targeted research in specific eGovernment themes</th>
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<tr>
<td>- for gaps ranked as high / very high</td>
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<tr>
<td>- to argue the need of future research emerging from the scenarios, and risks and weaknesses in current research</td>
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13 roadmap themes from eGovRTD2020

- Trust in eGovernment
- Semantic and cultural interoperability of public services
- Assessing the value of government ICT investments
- E-participation, citizen engagement and democratic processes
- Mission-oriented goals and performance management
- Cyber infrastructures for eGovernment
- Information quality
- Ontology and intelligent information and knowledge management
- Governance of public-private-civic sector relationships
- Government’s role in the virtual world
- Crossing borders and the need for governance capabilities
- eGovernment in the context of socio-demographic change
- Data privacy and personal identity

[see www.egovrtd2020.org]
Results of eGovRTD2020

- Book online available for free under www.egovrtd2020.org
Challenges Ahead

• Pan-European public services demanding cross border interoperability and identity management

• New modes of work: collaboration, social media, multimedia and knowledge enhancement

• Public governance and citizen participation
  – Citizens as co-producer or “prosumer”
  – Citizens actively involved and engaged
Research focus in the 2009 call of ICT

a) Governance and Participation Toolbox

b) Policy Modelling, Simulation and Visualisation

c) Road mapping and Networking for 'participation, governance and policy modelling'
a) Governance and Participation Toolbox

– Advanced tools embodying structural, organisational and new governance models to empower and engage all types of societal groups and communities, enable them to exploit mass cooperation platforms and allow governments to incorporate their input.

– ICT toolboxes must include security, identity and access controls to ensure privacy and, where appropriate, the delineation of constituency domains according to the specific needs of government applications.
Research focus in the 2009 call of ICT

b) Policy Modelling, Simulation and Visualisation

- Real-time opinion visualisation and simulation solutions based on modelling, simulation, visualisation and mixed reality technologies, data and opinion mining, filtering and aggregation
- Novel instruments which allow consideration of options based on the simulated behaviour and wishes of individuals, groups or society as a whole to understand the possible outcomes of government proposals, decisions and legislation
- Use of advanced tools and technologies to perform large-scale societal simulations integrating all possible variables, parameters, interferences, scenarios necessary to forecast potential outcomes and impacts of proposed policy measures
Collaborative projects to be funded:

- 6-7 projects with a budget of approx. 3.5 – 4 Mio € each, approx. 2 Mio € funding from EC and running for 2.5 – 3 years
- 6 – 12 partners involved
- Addressing themes a) and/or b)
- Example: OCOPOMO

Support action to be funded

- Crossroad with a budget of approx 0.5 Mio €, one year runtime
- 5 partners involved
- Applying the eGovRTD2020 method
OCOPOMO

Open COllaboration for POlicy MOdelling
Two levels of scientific and technological advancements

- **Socio-political**
  - formulate, model, evaluate and monitor social and economic policies of governments

- **Scientific and technological innovations**
  - drawing together lessons and practical techniques from complexity science, agent based social simulation, foresight scenario analysis and advanced ICT for e-participation
**Approach**

1. **Interest groups**
   - Policy operators
   - Policy analysts

2. **Common macroeconomic model**

3. **Narrative scenarios of alternative futures for each pilot study**

4. **Individual agent-based policy models for each pilot study**

5a. **Visualisation and simulation**

5b. **Expert groups**

- **Policy operators**
- **Policy analysts**
- **Interest groups**
OCOPOMO developments

• Integrated IT platform for efficient policy development
  – integrating formal policy modelling, scenario generation, and open collaboration
  – supporting engagement of wide stakeholder groups in social and economic policy areas of two pilots

• Using methods and tools of policy modelling and scenario-based foresight

• Integrating the methods into a platform of open collaboration among key stakeholders
  – policy analysts, policy operators, wider interest groups of specific policy domains, etc.
  – using e-participation tools
eParticipation platform: mass collaboration platform with advanced Web 2.0 features

- Discussion forum
- Wiki
- Online chat
- Argument visualisation
- Rating feature
- Simulation
- Social community
- Semantic search
- Further advanced features

- Scenario development and policy modelling tools
  - Scenario development tool
  - Policy modelling tool
  - Complexity management support

- Content base and knowledge management
  - Information base
    - Pilot 1
    - Pilot 2
  - User management

- Stakeholders:
  - Interest groups
  - Policy operators
  - Policy analysts
  - Expert groups
Expected outcomes

• IT solutions (e-governance toolbox) supporting the engagement and open collaboration of participating stakeholders in collaborative scenario-development and in reflexive discussions about resulting formal policy models

• A general model of macroeconomic relations deduced as much as possible from data available at national and European level, and enriched with the commonalities deduced in the two pilot policy areas
Expected outcomes

• Two policy analyses related to the strategic economic and social development policies in regions in Italy and Slovakia
  – Based on both formal simulation models and narrative scenarios
  – Generated with the precision and clarity of formal models and rich contextual narrative scenarios resulting from the combination of scenario-based foresight and formal policy modelling. The e-governance ICT toolbox facilitates the policy creation, analysis, modelling and evaluation in a comprehensive and participative way.
Many thanks for your attention!

Your considerations ...

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Our research & development projects ...