



Roadmapping future eGovernment research

Government's role and responsibilities in the virtual world

Overview

- The eGovRTD2020 project
 - Project introduction
 - Research methodology
- Government's role in the virtual world
 - Results from envisioning the future
 - Results from the gap analysis
 - Roadmap: Government's role in the virtual world
- Results available

eGovRTD2020 project and objectives

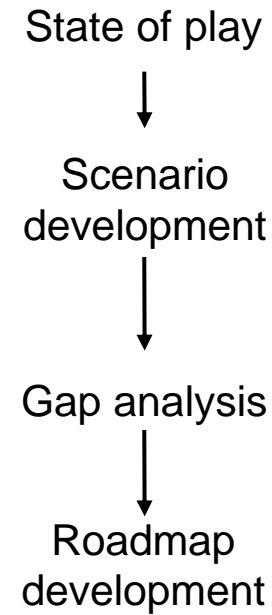
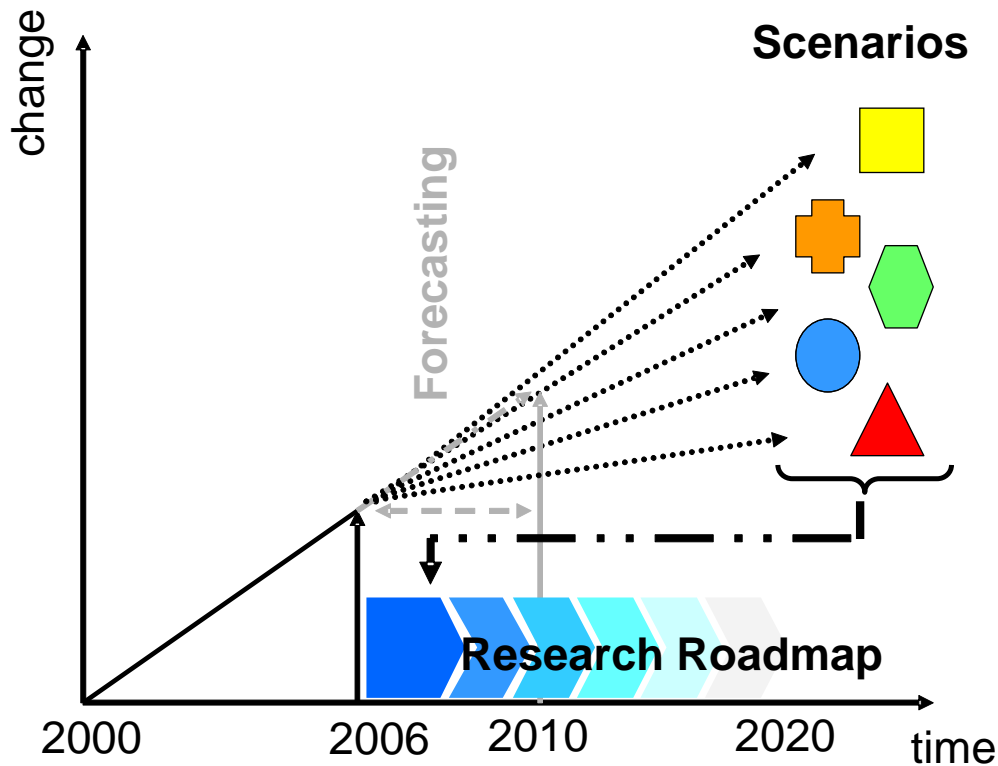


- A roadmapping project sponsored by the European Union 6th Framework Programme of IST
- A research partnership across Europe, the US, and Australia

Objectives:

- Identify and characterise key **research challenges**, and an implementation model for dynamic governments in 2020
 - Build up **visionary scenarios** of eGovernment for 2020
 - Develop a **detailed research roadmap** for the transformation process

Research methodology



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Government's role in the virtual world

Need for research



- **Starting situation:**

Global electronic markets, virtual organisations, virtual identities, virtual products and services, and Internet-related crime are growing in prominence and importance.

- **Need for future eGovernment research:**

In a world that is increasingly non-physical and borderless, what are government's roles, responsibilities and limitations?

Scenarios:

Aspects towards government's role in the virtual world



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■ Prague WS: *Sustainable and pervasive governments*

„government has realised a secure public intranet separated from other networks and **fully controlled by the government**. Using this network, universal access is accomplished and citizens might log in using their identity which is implanted in each person. As such, fraud has become almost impossible in the public internet.“

■ Vilnius WS: *The new world order*

„**control of the Internet** is a key concern. The Internet administration is being elected using a democratic process and contains representatives from all countries over the whole world“ „The Internet has evolved and includes peer-to-peer networks, many blogs. Information brokers made a business of aggregating the information in the blogs and by making them searchable“

Related topics of interest extracted from the scenarios

- Cyber wars and crimes
- Information ownership
- Digital rights
- Geographic borders disappear / globalisation
- Identification and authentication
- Privacy
- Data access and regulations
- eParticipation / eDemocracy
- Communities of Internet politics

Topic of interest:

cyber wars and crimes



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- Crimes as phishing, credit card frauds, bank robbery, illegal downloading, industrial espionage, child pornography, kidnapping children via chat rooms, scams, cyberterrorism, creation and/or distribution of viruses, spam and so on.

Orchestrating Government: „... *crime* is limited and often has a virtual nature, such as manipulating data and eMoney“

The new world order: „The internet is unreliable and there exist various *hackers alliances*. Governments are continually battling these hackers alliances“

Topic of interest:

geographic borders disappear / globalisation



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The new world order: „Virtual territories make up borders and new voting rights ... Traditional borders have changed into *virtual borders*. Borders are decided by (horizontal and virtual) communities. Persons living in one European country can participate in a community affecting the policies of other countries“

Vilnius WS: „Changing physical and virtual borders (*borderless* between countries, EU and outside EU, interoperability borders, ethical/religion borders). Seamless trading with countries outside EU, relaxing borders“

Local wins: The Me, I, My World of mass selfsegregation: „Not just a geographic boundary, people will *associate virtually* with those who are like them“

Topic of interest:

identification and authentication



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- Legal and technical measure for not only the prohibition of identity theft, data protection against misuse but also dealing with partly identities in the www, e.g. second life

The new world order: „Most people have *multiple identities* on the Internet and use various identities to participate in democratic processes“

Local wins: The Me, I, My World of mass selfsegregation: „intelligent technology assesses input from people and weights it in ways for the others to process. Identification and authentication is mastered so that no outsiders can *sneak into virtual rooms* where people work and play with others that are like them“

Mature (e)Government in the united federal states of Europe: „Europeanization leads to an EU-wide recognition of *identification and authentication methods*“

Demographics Rule: „Technologies related to identity will have come the farthest, allowing for people to *transact* all kinds of business, vote remotely, and conduct their affairs with authentication and security“

Strong nomadic individuals: „Individual identities are fully authenticated, but *no privacy protections* exist – each person must protect his or her own data“

Topic of interest:

privacy



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- Data collection and gathering / data storage and processing / profiling / data misuse
- Often mentioned trend: privacy might be scarified to ensure security

Orchestrating Government: „less privacy as the government knows all ... privacy has improved as people who violate their privacy are immediately identified and arrested“

Local wins: The Me, I, My World of mass selfsegregation:
„*Personal data on citizens is collected* by numerous entities but technology has advanced so that you can detect when information is being collected and you are able to halt or scramble it. Technology is so pervasive that some people prefer to live in an *internet free zone.*“

Topic of interest:

eParticipation / eDemocracy



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- Freedom of exchange of information globally / direct voting and participation / changes in traditional democracy

The new world order: „More **direct participation** of citizens in the various democratic processes takes place. Special interest groups (e.g. on environment, safety, pollution, water, etc.) use the Internet to mobilise people to participate directly in the policy-making process ... large corporations use the **Internet for open lobbying** ... Political parties appear on the Internet and represent the interest of certain groups; as a result the system of political parties is now organised around certain topics and much more fragmented.“

A brave new world: „Pseudo-democracy can be abided by adapting the law and ICT (**eVoting**). Citizens' participation is restricted to a minimum“

Carousel: „Direct participation is realized and the impact of decisions is calculated and made **transparent** before any voting takes place. If discussions are not transparent or decisions are not rational, the media will be aware of this and a whole discussion is started. The media is very **critical towards government**“

Gap analysis: grounding the research



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- No national borders and therewith no national rights exist in the Internet
 - Not only national regulation disappears, but also national protection
- Self-regulation within the Internet is the most popular kind of regulation
 - Self-regulatory codes of conduct across National, EU and International boundaries
 - E.g. see Selfregulation.info (EU No. 27180-IAPCODE)
- Lack of effective laws, methods, measurements and technologies to prosecute crime in the virtual world
- Lack of possibilities for jurisdiction and enforcement in the Internet



Gap analysis examples: Comparing the state of play and scenarios

eGov RTD

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Worldwide Identification and Authentication

Scenarios		Related Topics of Interest from the State of Play
Dim	Topics of Interest	
Worldwide Identification/ authentication	Systems integration	Integration of legacy systems
	Identity management using biometric data	Integration of difference registers
	Identity management using implanted chips	Electronic identification means (chip cards)
	Universal identification system	Identity management using biometric data
	RFID and build in devices	

GAP:
Worldwide identification / authentication is not present. No single system for government controlled identity management is established. Research is needed to identify under which circumstances what degree of identification and authentication is needed in the Internet. The phenomenon of partly identities, as well as multiple identities in the Internet and its consequences to government related issues, e.g. eCrime, eDemocracy, eAdministration, etc. requires future research, in particular governments role in identity management in the Internet needs further research.

Gap Assessment: Very High Relevance
Identification/authentication is very high relevant to eGovernment in general. There is a need to integrate different information systems, registers and implement identity management to achieve more efficient and secure authentication/identification processes at worldwide level.

Cyber wars and crimes

Scenarios		Related Topics of Interest from the State of Play
Dim	Topics of Interest	
Cyber wars and crimes	Fight against hackers' alliances	eCrime
	Control of internet	
	Cyber crimes accrued	

GAP
How to fight against hackers' alliances and provide control over Internet? Over the last years, eCrime increases. Government duties have increased to provide proper protection mechanisms. Effective research is needed to develop concepts, methods and tools to detect and counteract corruption, crime and terrorism activities taking place also via the Internet or being prepared via the Internet. Secure core infrastructures and Internet security protocols, as well as monitoring concepts for managing emerging risks and increased complexity shall be developed by corresponding research. Research should focus on related domains like psychological, societal, institutional, legal or economic aspects which can prevent eCrime.

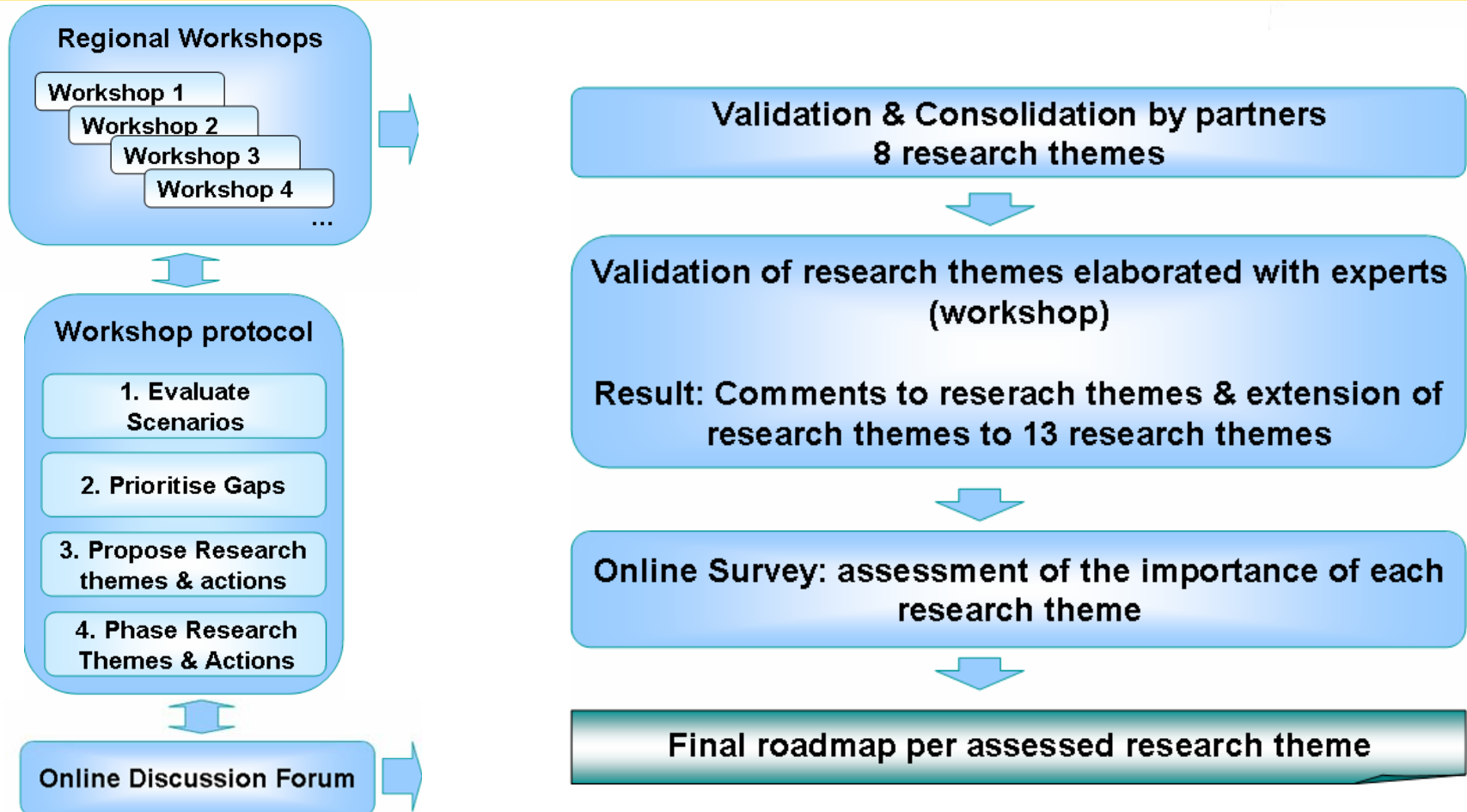
Gap Assessment: Very High Relevance
It is expected that fight against hackers' alliances and cyber crimes would have very high relevance to eGovernment. Internet related crime steadily increases, not only in number but also in its variety. More research is needed to be focused to this field in next years.

Gap analysis results:

Basic research questions for roadmapping

- Is it possible to regulate the Internet?
- How to regulate the Internet?
 - Government regulation or self-regulation?
 - International cooperation or single national regulation?
- How to translate national law into the Internet?
 - Generate virtual national borders or to set up global international legal framework?
 - Jurisdiction and enforcement: Who will execute the laws?
- What kind of virtual citizenship will appear in the Internet?
 - Society developments

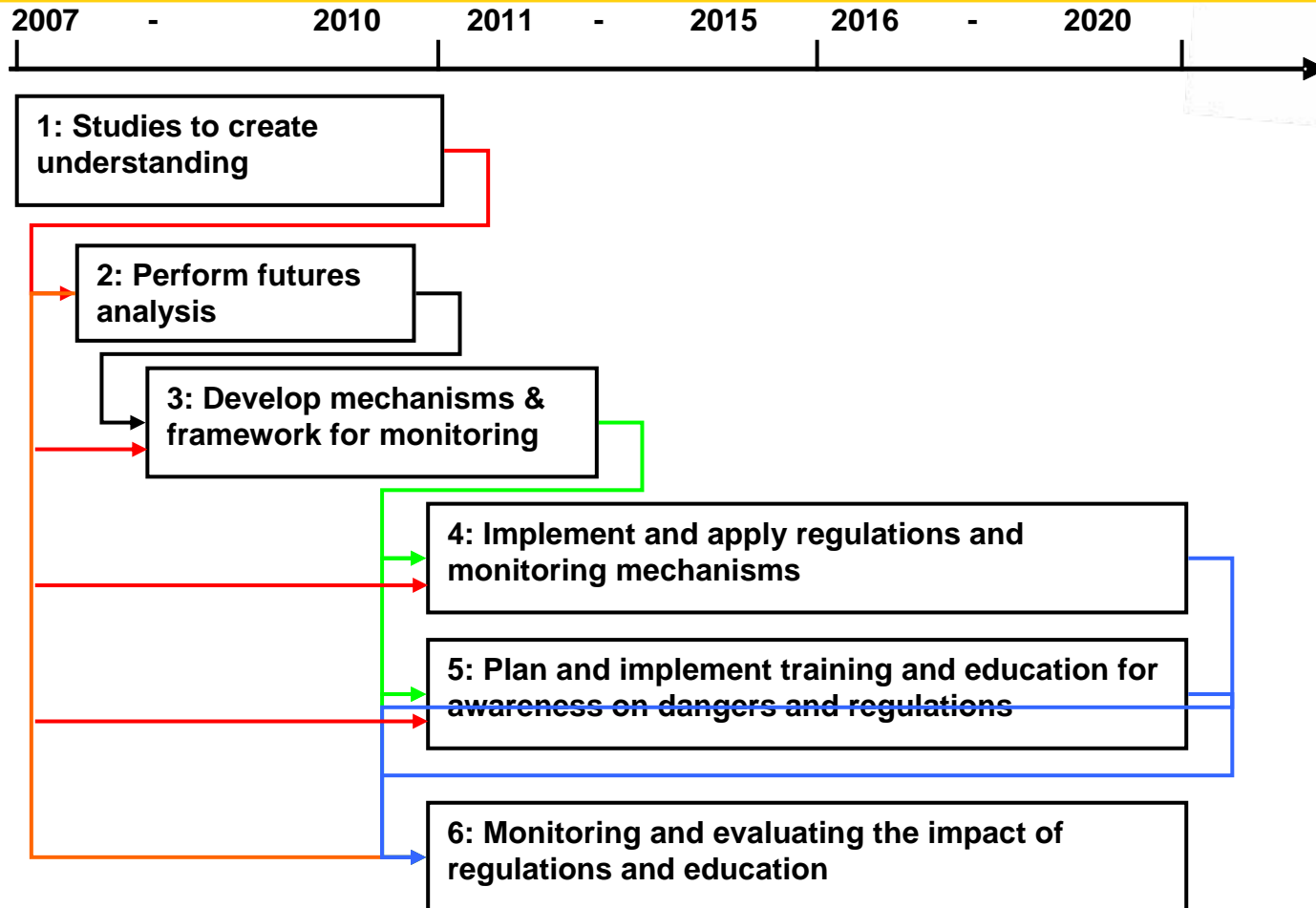
Roadmapping methodology



Research Roadmap for „Government’s role in the virtual world“



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Results of the eGovRTD2020 project



- Detailed results:
 - State of play report
 - Scenario report (including regional workshops report)
 - Gap analysis report
 - Roadmap report

- Summary in a final book
 - „Roadmapping eGovernment Research. Visions and Measures towards Innovative Governments in 2020“
 - and can be downloaded for free at

- Available at: <http://www.egovrtd2020.org/>



Thank you for your attention !

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