



eGovRTD2020 Regional Workshop in Lithuania
10 November 2006, Vilnius

Roadmapping eGovernment 2020 (Project Work Package 4)



MYKOLAS ROMERIS UNIVERSITY

Prof. Dr. Rimantas Petrauskas
Eglė Malinauskienė

eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up



Overall objectives

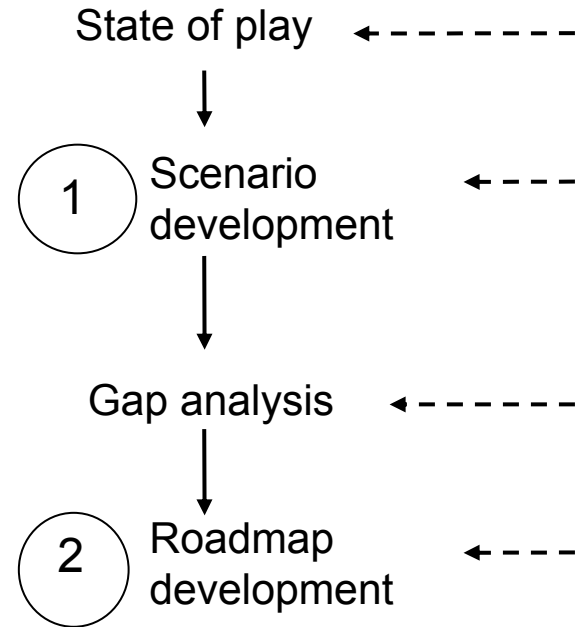
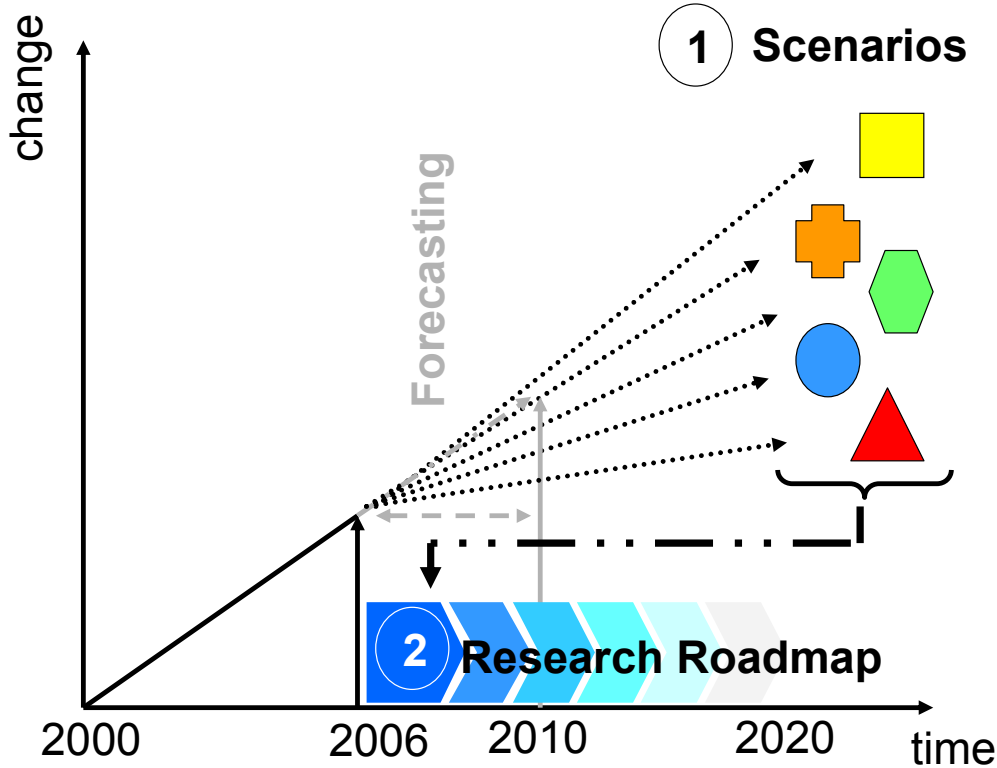


Contract no: IST-4-27139

- 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**



Overall methodology



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

Purpose of Roadmapping Workshops



Contract no: IST-4-27139

- Assessment of scenarios for eGovernment in 2020
- Validation of identified research gaps
- Defining key research challenges
 - In order to facilitate wanted scenario-trends
 - In order to avoid unwanted scenario developments
- Formulating a research action plan
- Prioritisation of research themes and research activities within the catalogue of measures
- Consolidating the group results towards a strategic research programme for eGovernment



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up





Results of scenario building workshops

Alternative Visions for
Governments
in 2020

Seven regional workshops for scenario building

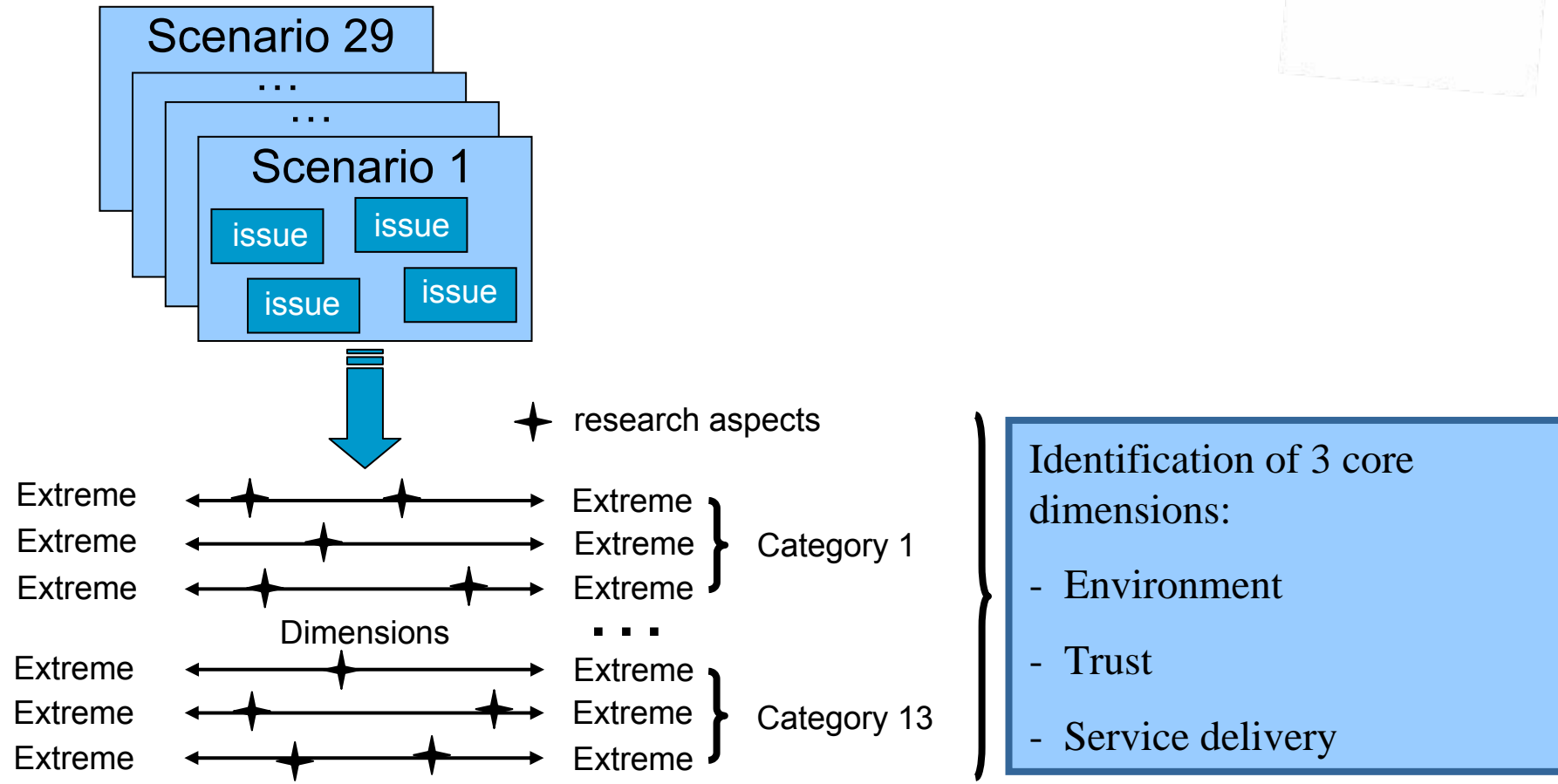


Contract no: IST-4-27139

Region	Participants	# Scen.
Western Europe NL: Delft	4 Government, 7 Research, 8 Business	4
Northern & Baltic States LI: Vilnius	5 Government , 8 Research, 5 Business	3
Central Europe DE: Koblenz	2 Government, 13 Research, 4 Business	5
Central Europe AT: Linz	11 Government, 9 Research, 5 Business	4
Eastern European CZ: Prague	1 Government, 13 Research, 1 Business	4
Southern / Eastern Europe SI: Bled	2 Government, 12 Research, 5 Business	5
USA: San Diego	2 Government, 23 Research, 1 Business	4



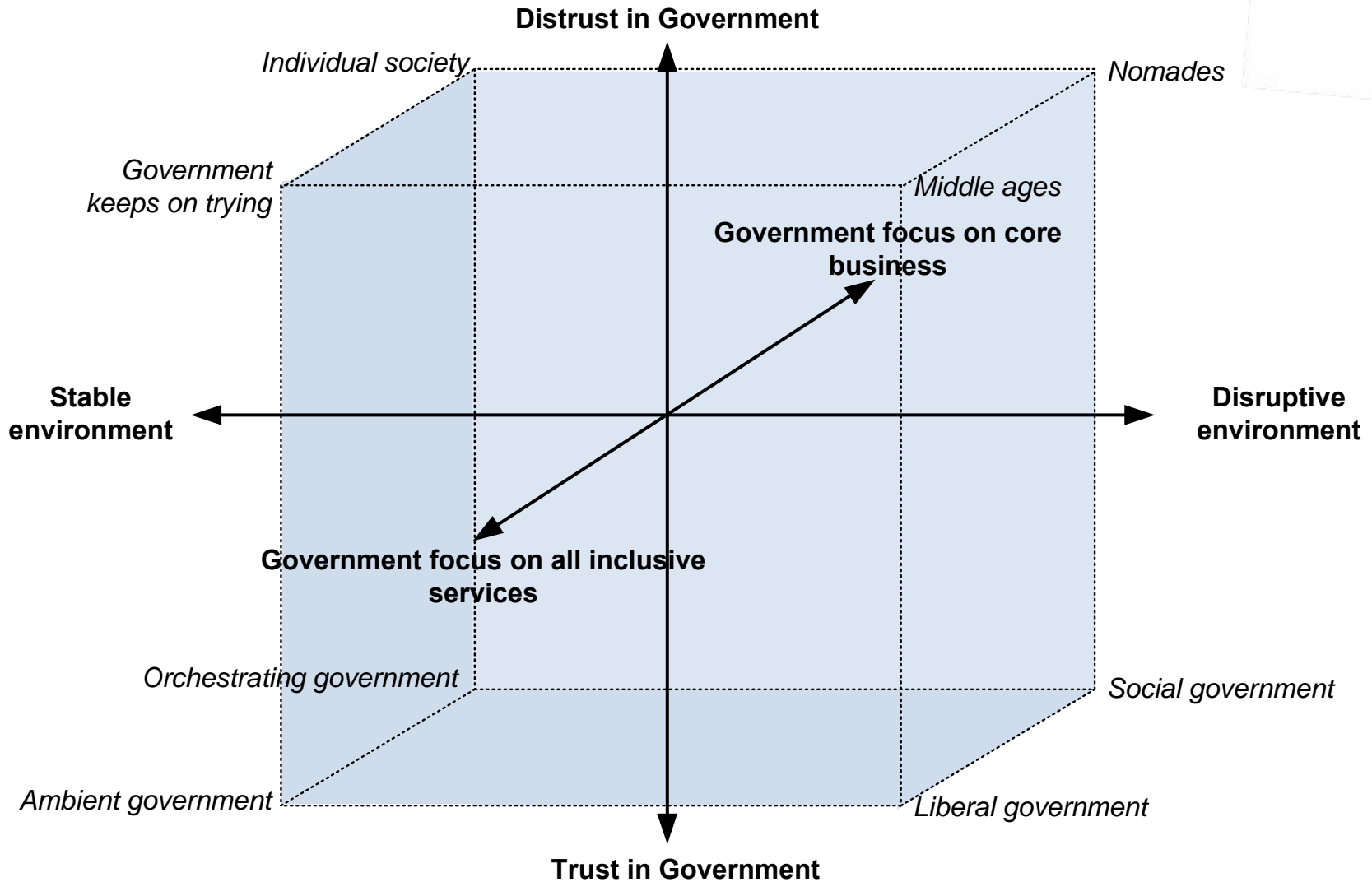
Scenario analysis - Extraction of research aspects and dimensions



Consolidated scenario results



Contract no: IST-4-27139



Orchestrating government

[Stable environment, trust in government, government focus on core business]



Contract no: IST-4-27139

Disruptive developments that were predicted at the start of the 21st century did not occur, or these had only a modest effect on Europe's societies. The government adopts a facilitating, but limited role in society, which attitude is broadly supported.

Society and context

Inclusive society

Stable environment

Integration of ageing society

Europeanization

Trust in government

Government

Government focus on core business

Outsourcing of non-core business
(Public-Private-Partnerships) for

Cost efficiency

Service quality

No personalised services

Transparency (Legislation)

Legal and social norms are not
automated

ICT

Mobility

eCrimes and eTerrorism

Technical standards

Unique identity



Individual society

[Stable environment, distrust in government, government focus on core business]



Contract no: IST-4-27139

People have become more and more individualistic. They want to get the maximum out of their potential, and take it as an individual responsibility to be successful. Government should take care of essential facilities, but it cannot meet the high expectations of demanding citizens.

Society and context

Cosmopolitan

Europeanization

Data protection

Stable environment

Inclusive society

Self-responsibility

Individual networks

Clans und cliques play an important role

Government

Legal power is fairly distributed

Distrust in government

Low Participation

Outsourcing, Public-Private-Partnerships (e.g. health care)

Focus on core business

Flattened hierarchies

ICT

Monitoring technologies

Dealing with information overload

Context-based translation service

Networks of contact using P2P exchange mechanism

Information and knowledge management

Personal broker



Ambient government

[Stable environment, trust in government, government focus on inclusive services]



Contract no: IST-4-27139

Government is all around. Citizens have a high confidence in government to effectively and efficiently settle issues for the common good. They are helped by a stable development of key environment variables.

Society and context

Europeanization

Standardisation

High investments into education as prevention measurement

Internet communities

Government

Cooperation between Europe's governments

Central EU eProcurement

No physical contact (high quality of eServices)

Political power at EU and local level raises, decrease at national level

Transparent decision-making

Public-Private Partnerships

ICT

Communication across cultures

ICT as driver e.g. economic growth

Universal wireless networks

Security standards

Sector-specific regulation

Service-oriented architecture



Government keeps on trying

[Stable environment, distrust in government, government focus on inclusive services]



Contract no: IST-4-27139

Despite its efforts to be involved in improving the quality of life at all fronts, trust in government is low. Mainly caused by a lack of modernization of participation mechanisms, people experience a big gap between the technocratic government and their own wishes and sorrows.

Society and context

Europeanization

Stable environment

No digital and social divide

Data protection

Simplification of legal framework

Multinationals get more power

Government

Governments competing with each other

Decreasing national power

government focus on inclusive services

Personalised services

Public-Private Partnerships

Low participation

ICT

Automated processes

Networking of ICT-systems



Middle ages

[Disruptive environment, distrust in government, government focus on inclusive services]



Contract no: IST-4-27139

In a highly polarized world, governments focus on key state tasks. The socio-economic policy is aimed at individuals taking their own responsibility, a mentality that rests on great support in 2020's society.

Society and context

War on resources
Rapid growth of world economy
critical international relationships
Security vs. privacy
Mobility and welfare
Social divide
Distrust in government

Government

Outsourcing of (e)Services
No user-centric service production
Increased participation in decision-making

ICT

Built-in technology and information infrastructure
Transparency
New, innovative participation mechanisms
Global and local standards
Open-Source-Software becomes less important, robust quality through proprietary software



Nomadics

[Disruptive environment, distrust in government, government focus on core business]



Contract no: IST-4-27139

Always on the move, and always on the run. Society has become largely individualistic, with only a small role for government that is distrusted.

Society and context

Social exclusion, digital divide
Instable environment (terrorism, religious wars)
Ageing society
Privacy subordinated to security
Individualism and self-responsibility
Nationalism, Europe breaks down

Government

Problems with providing essential services
Restricted role in legal & governmental issues
Simplification of procedures and organisational structures
Cooperation and common policy
Depersonalised interaction between government and citizens

ICT

Remote monitoring
Implanted devices
eParticipation
eServices
Ubiquitous Digital Right Management



Liberal government

[Disruptive environment, trust in government, government focus on inclusive services]



Contract no: IST-4-27139

Though society has changed dramatically because of demographic and security-related developments, government has been able to catch up with the high expectations from citizens and fulfils a key role in the provision of eServices, using state-of-the-art technology.

Society and context

Increasing social tension

Job mobility

European Union becomes common economy

Crisis because of unequal resource allocation and welfare

Privacy subordinated to security

Huge shared service centres

Government

eServices

Investment in participation

Back warding delivery of public services

Media is still most important power in decision-making

High quality and omnipresent service delivery

Networking agencies

Unique European identity

ICT

Technical and legal measures for data collection and data processing

Rights management: anonymous & encoded access to automated data

Technology is transparent and does not disturb human interaction in a negative way



Social government

[Disruptive environment, trust in government, government focus on core business]



Contract no: IST-4-27139

*In a rapidly changing, confusing world, citizens trust in public administration.
The government persists in its role as care-taker for society.*

Society and context

Individual mentality

Ageing society

Social divide (education, income)

Protectionism of economy

Failure of Europeanization

Mobility in Europe

Intensive international tensions

Government

Less protection of privacy

Trust in government

No interest in decision-making

No transparency within the decision-making process

Private parties are excluded from the service delivery process

ICT

Security measurements

Development of technical standards for identity management





Gap analysis methodology

Gap analysis methodology

Project Phase 1:
State of Play

Project Phase 2:
Scenario Building

Step 1:

Identify commonalities and analyze weaknesses

Step 2:

Identify topics of interest mentioned in the scenarios but not in the state of play

Step 3:

Assess topics of interest according to their relevance
(governance: policy formulation, execution and enforcement)

Step 4:

Develop story lines from the identified gaps
in respect to the scenarios

Short description of research gaps (I)



Contract no: IST-4-27139

■ Gap 1 Lean Government

- The conditions for efficient sub-contracting (outsourcing) to private sector with respect to general interest service requirement is a major issue. Research aiming at comparative legal and policy analysis could be useful as well as research on cooperation between private organisations and government
- Lack of studies about the efficiency of the cooperation through these Public-Private Relationships structures. Studies needed for the comparative analysis in various member states of such partnership's
- Research is needed to identify and set up a portfolio of services which assess their potential for outsourcing and those which must be provided by governments.

■ Gap 2 Outsourcing of Public Values

- The conditions for efficient sub-contracting (outsourcing) to private sector with respect of general interest service requirement is a major issue.
- Research aiming at comparative legal and policy analysis could be useful as well as research on cooperation between private organizations and government
- Lack of studies about the efficiency of the cooperation through these Public-Private Relationships structures.
- Studies needed for the comparative analysis in various member states of such partnership.



Short description of research gaps (II)



Contract no: IST-4-27139

■ Gap 3 Incident Politics

- The missing technologies for full automation of public-services have to be created as well as the solutions for some legal, social and ethical problems (e.g. privacy, security, etc.) have to be found. Full automation could help to solve the problem of increasing bureaucracy, but the ways how to re-qualify and re-use the free human resources must be found, contrarily there will be a huge bureaucratic resistance to front- and back-office reengineering. The software tools for the transparent political decision-making must be implemented

■ Gap 4 Competition among regions/nations

- Lack of knowledge concerning the role of eGovernment policy and eGovernment services quality in the decision of citizens and companies to select a regional / national government.
- The gap is related to the problem of identifying how ICT can help a government improve its attractiveness to citizens and organisations.



Short description of research gaps (III)



Contract no: IST-4-27139

■ Gap 5 Transparency

- The need to understand better what are the conditions of access and use of these data so that the rights of citizens and organisations guarantee by law can be protected and enforced . Also how government can in a legitimate way use ICT to provide services which add value the public data.

■ Gap 6 New Types of Governance

- Improving the supply of general interest services in a transparent way to citizens and companies including when activities are crossing national state borders. Research on how to imbed knowledge based application and models in eGovernment application to provide better services to the citizens and companies is highly useful.
- A better understanding of new types of governance mechanisms enabled by ICT is necessary to deploy shared services in public service networks.



Short description of research gaps (IV)



Contract no: IST-4-27139

- **Gap 7 Government Network**
 - R&D are necessary in order to:
 - ❖ achieve government system's integration and virtualization
 - ❖ create one single access point
 - ❖ define, enable cooperation among private and public agencies.
- **Gap 8 Distribution of decision-making power to local government**
 - Decision: Local vs. central power (dependent on size of a country, its political traditions and the settled administrative structure)
 - The impact of distributing the decision-making (related to eGovernment issues as well) power at local government concerning the specific administrative structures of a country towards the economy, governments and society is not clearly understood.



Short description of research gaps (V)



Contract no: IST-4-27139

- **Gap 9 Standardization of legal framework and taxes**
 - How to achieve more unification of eGovernment legal framework between member states as at the moment almost every country has its own distinct legislation in the area.
 - Regulatory framework must implement the national traditions of the countries as well as to be compatible with the common EU guidance.
 - Find out to what extent the framework should be national and to what extent common for all EU member states.
 - Understand to which extent the existing differences concerning national law, regulation and taxes are an obstacle to free trade and equality (or better “equité”) between the citizens of the EC.
 - Lack of regulation according to the deployment of ICT regarding the access to and use of data, in particular intellectual property .

- **Gap 10 Information and Knowledge Management**
 - Lack of efficient information and knowledge management tools promoting and supporting citizens and companies to operate eGovernment services.
 - **Ontology and Semantic Web**
 - ❖ Common European eGovernment ontology and agreed European eGovernment glossary are not established. Common specifications for semantic interoperability are claimed in as being needed for instance through a regular eGovernment service terminology and service information model.
 - ❖ In regard to globalization, a need and likely a successful development of automatic translation machines will progress, which will help to bridge the distance between people speaking different languages. For assuring this, more research is needed to be focused in this field.



Short description of research gaps (VI)



Contract no: IST-4-27139

■ Gap 11 ICT as driver

- There is a lack of integrated research before, whilst and after the implementation process of new and innovative ICT to prevent and avoid misplaced investments and ensure quality standards of the implemented system.

■ Gap 12 Ubiquitous systems

- Integrated research is needed to identify opportunities to merge the deployment of different ICT for government modernization purposes, particular at the back-office to increase efficiency and at the front-office regarding multi-channel access and eInclusion issues.



Short description of research gaps (VII)



Contract no: IST-4-27139

■ Gap 13 Level of Participation

- Find out how to ensure active participation with the increasing mobility of citizens across the Europe.
- Determine the relation between the activity of participation and the changing landscape of governance (increased role of private sector in the decision-making, reduction of number of political parties, etc.).
- **eParticipation**
 - ❖ Lack of research concerning media competencies citizens will need to participate in policy formulation and decision-making process, and the deployment of ICT to support decision-making.
 - ❖ Lack of technical research concerning ICT dependency.

■ Gap 14 One European identity & Worldwide Identification/authentication & use of Biometrics

- Further development and research programs focused on establishing one European identity system
- Unique identification and authentication for all needed services are offered by chip technology in all areas of life.
- Future research and development programs should be focused on usage of chips and biometrics data in worldwide identification. Also, relating worldwide identification, privacy is becoming very important issue in the future.



Short description of research gaps (VIII)



Contract no: IST-4-27139



■ Gap 15 **Automatic monitoring and enforcement**

- Automating monitoring for data collection and enforcement would be important future research topics. It is closely connected to privacy issues and remote monitoring dimension. In order to provide automatic judgment, intelligent judgment, control over information gathering and use, monitoring for data collection and decision making more research is needed in this field for the future.
- Embedded Chips:
 - ❖ Lack of studies about how the embedded chips can be widely deployed to support eGovernment policy enforcement (e.g. monitoring, crime prevention and prosecution), as well as policy execution in cases of explicit identification purposes and service delivery, e.g. mobile public service delivery.
 - ❖ Lack of studies on what are the crucial non-technical barriers for the wide application of embedded chips?

■ Gap 16 **ICT dependency**

- How can we guarantee a secure and reliability infrastructures for the use of eServices in the future.
- Investigate possible impacts of ICT dependency towards eGovernment
- This topic should be also investigated in relation to eParticipation and ICTs influence and impact to eParticipation.
- Research should focus more on issues regarding reliability, continuity, correctness, fault tolerance, efficiency, portability, recovering, etc. of software.



Short description of research gaps (IX)



Contract no: IST-4-27139

■ Gap 17 **Crisis Management**

- Lack of knowledge concerning the identification of critical situations with high impact on people life, health and property with huge economic and ethical consequences . The same is true concerning the impact on organisations . How ICT can contribute to detect , prevent and help government manage these situations.
- Lack of knowledge on how different national and/or regional governmental agencies can better be coordinated in a efficient way using ICT system when natural disasters occur.

■ Gap 18 **Problems with social security and pensions**

- Lack of knowledge concerning the evaluation of the efficiency of these services and lack of development of pan-European eGov services concerning the basic three public services: health care financing, state pension, state support for unemployed.
- Lack of research about the psychological, societal, legal, institutional and economic aspects of using ICT to balance between security control and privacy protection



Short description of research gaps (X)



Contract no: IST-4-27139

■ Gap 19 **Globalisation**

- Research is needed to identify and develop business models which cover the challenges eGovernment will face if Europe citizens continuing to become more mobile and the Europeanization will raise, and Globalisation will continue.

■ Gap 20 **Cyber wars and crimes**

- Distrust in eMoney and raising occurrence of cyber crime result in needs for additional information and data security for eGovernment infrastructures
- develop concepts, methods and tools to detect and counteract corruption, crime and terrorism activities taking e.g. place via the Internet or being prepared via the Internet
- need for cooperation and networking information security policies on at least EU level
- focus on related domains like psychological, societal, institutional, legal or economic aspects which can prevent eCrime



Short description of research gaps (XI)

eGov RTD

Contract no: IST-4-27139



- **Gap 21 Virtual borders and citizenship**
 - No research deal with issues like: What is virtual citizenship? What kind of virtual borders exist already and will come into existence? How will those virtual borders affect citizenship.
- **Gap 22 Changing public values**
 - The scope of public values research need to be expanded. Combining sources by different types of agencies situated in different (EU) countries and the relationship with public values is not explored yet.
 - Public values vary from country to country which makes comparison difficult.
 - Public values change over time which make new type of services possible, for example related to monitoring.
 - Privacy protection is sometimes subordinated to the public welfare and fight against terrorism and might be considerably different from how they are now.



Short description of research gaps (XII)

eGov RTD

Contract no: IST-4-27139



■ Gap 23 **Aging**

- Find the ways how to encourage elderly people to assimilate ICT and make modern technologies to become the integral part of their every day life.
- Offer the ways how eGovernment could ease the tension that grows between the young part of the population and the elderly one because more and more financial responsibilities lies on the shoulders of the young working people to sustain the elderly part of the population.

■ Gap 24 **Data access and regulations**

- New ways of communicating and interacting with ICT systems to access data are required, e.g. human formulated questions instead of keyword research.
- Besides regulations regarding data accessible through the internet are still in its initial stage and have to be enhanced (see information ownership).



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



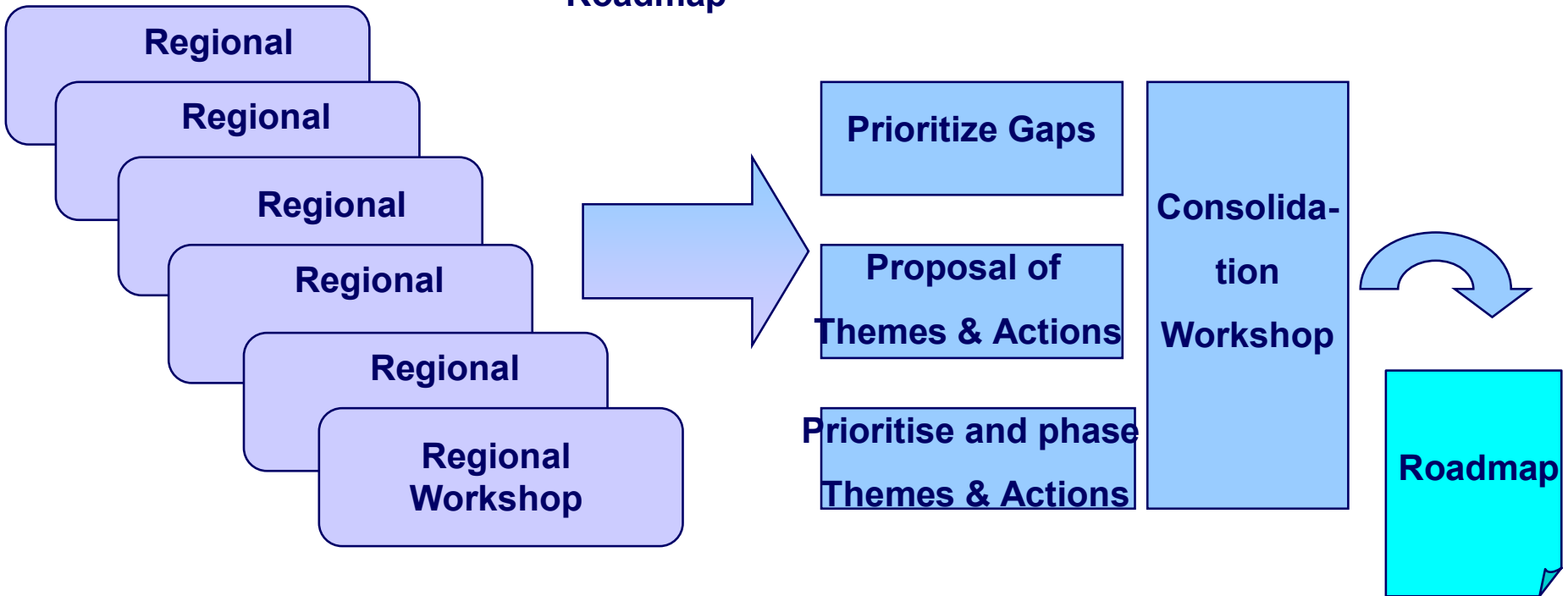
Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up



Roadmapping methodology

Roadmap



Group Discussion Agenda (I)



Contract no: IST-4-27139

Warm-up	5 Min.	Participants introduction
		Deciding who will do the presentation of group results
Explanation of the expectations	10 Min.	Explanation of the group discussion material, procedures and expected results
		Allocation of the needed material
		Explanation of the gap assessment using the table template for the reason participants could do the assessment at home
Individual brainstorming	30 Min.	Everybody writes down her/his proposed research themes on the template (0-4 research themes for each gap)



Group Discussion Agenda (II)



Contract no: IST-4-27139

Group brainstorming	40 Min.	Everybody explains and clarifies their research themes and the reasons
		Clustering and naming similar research themes
		Ranking the most important research themes which should be supported by research measures (actions)
Wrap-up and preparation for presentation	5 Min.	A group member presents the results (should not be the facilitator!)





eGov RTD

Contract no: IST-4-27139

Grouping of participants

GROUP 1

Government and Public Management

Issues to be discussed:

- Lean Government
- Outsourcing public services
- Incident politics
- Competition among Nations/Regions
- Transparency
- New Types of Governance
- Government networked
- Distribution of decision making power at local level
- Standardization of laws, regulations and taxes

GROUP 2

Technologies and Applications for eGovernment

Issues to be discussed:

- Information and knowledge management
- ICT as driver
- Ubiquitous systems
- eParticipation
- One European Identity & worldwide Identification/ Authentication & use of biometrics
- Automated monitoring and enforcement
- ICT dependency

GROUP 3

*Communication relation to Government/Society/Business
Impact of ICT application*

Issues to be discussed:

- Crisis management
- Problems with social security and pension
- Globalisation
- Cyber-Crimes
- Virtual borders and citizenship
- Change of public values
- Aging
- Data access and regulation



Group distribution



Contract no: IST-4-27139

GROUP 1

Government and Public Management

Group moderator:
Prof. dr. Rimantas Petrauskas

Group members:
Zigmas Bigelis
Vytautas Krasauskas
Dr. Kęstutis Juškevičius
Vita Sinicienė
Inga Malinauskaitė
Dr. Guoda Steponavičienė

GROUP 2

Technologies and Applications for eGovernment

Group moderator:
Eglė Malinauskienė

Group members:
Romualdas Krukauskas
Rimgaudas Žaldokas
Dr. Ramūnas Šablinskas
Doc. Dr. Dalia Krikščiūnienė
Dainius Balnius
Edmundas Žvirblis

GROUP 3

Communication relation to Government/Society/Business

Impact of ICT application

Group moderator:
Tadas Limba

Group members:
Ignas Griškevičius
Aušra Kačinskienė
Gailutė Kaklauskaitė
Natalija Selskaitė
Algirdas Cibulskis
Dr. Rimantas Gatautis



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:25	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:25 – 13:55	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
13:55 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 15:40	Group work on proposing R&D actions along short-, medium- and long term
15:40 – 16:00	Coffee Break
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up



eGovRTD2020 Workshop

Roadmapping eGovernment 2020:



Contract no: IST-4-27139

13:20 – 13:30	Introduction and welcome (prof. dr. Rimantas Petrauskas)
13:30 – 14:00	Presentation, discussion and clarification of scenarios and gaps (Eglė Malinauskienė)
14:00 – 14:10	Introduction of group work: roadmapping methodology and group assignment (5-8 persons per group) (prof. dr. Rimantas Petrauskas)
14:10 – 14:30	Coffee Break
14:30 – 16:00	Group work on proposing R&D actions along short-, medium- and long term
16:00 – 16:50	Presentation of group results and discussions
16:50 – 17:00	Conclusions and Wrap-up

