



eGovRTD2020 regional Workshop at HICSS
3 January 2007, Hawaii

Roadmapping eGovernment 2020

Sharon Dawes
Marijn Janssen

Today's agenda



Contract no: IST-4-27139

12:00 – 12:30	Welcome and Overview (Sharon Dawes)
12:30 – 01:15	Presentation of Scenarios, Overview of Gaps & Research Themes, Count off into groups (Marijn Janssen)
01.15 – 02.15	Group discussions
02.15 – 02.30	break
02.30 – 03.30	Report Out and Prioritizing



Hoe redden we de overheid?

Tegen de Brusselse stroom in doet de TU Delft onderzoek naar de e-overheid in 2020. Via een aantal toekomstscenario's buigen wetenschappers, consultants, ambtenaren en adviseurs zich over de toekomst van de elektronische overheid

PETER LEEUWINK

In een verdrukt vergaderzaal op de Faculteit Techniek, Kunst en Management van de Technische Universiteit in Delft zit een gemiddeld gezelschap - allemaal een laptop voor zich - in ontzettend een PowerPoint-dia te staren. Ze weten maar één verouderde - een promovendus-wetenschappers, consultants, ambtenaren, adviseurs. Ze wisselen in dit verhaal niet met name genoemd worden omdat dat hen niet in de groepdynamiek. Ze moeten zich vrij kunnen uiten, ze zitten tenslotte samen in een werkschip. Op de dia een lijst met de 16 'bemoedigde' Gaps, kloven, nissen het huidige en toekomstige gebied van de overheid en het

doel. Een gring economische groei, enkele groepspelers bepalen de (proprietary) ICT-markt, duurzaamheid, geringe inzet van ICT, tevredenheid en nachterheid. Het rouwrad draait ook in een sociale samenleving maar met veel vertrouwen in technologie: open markten, outsourcing, centrale systemen die lokaal aangepast kunnen worden. Een sterke overheid die volop gebruik maakt van innovatieve diensten. Publiek accepteert dat zaken als privacy beperkingen komen.

Buigbaar het toe met de betrouwvoerder in de sociale wereld die technologie adapteert: respectievelijk in de wereld en in de toekomstige van kleine ICT.



Overall objectives

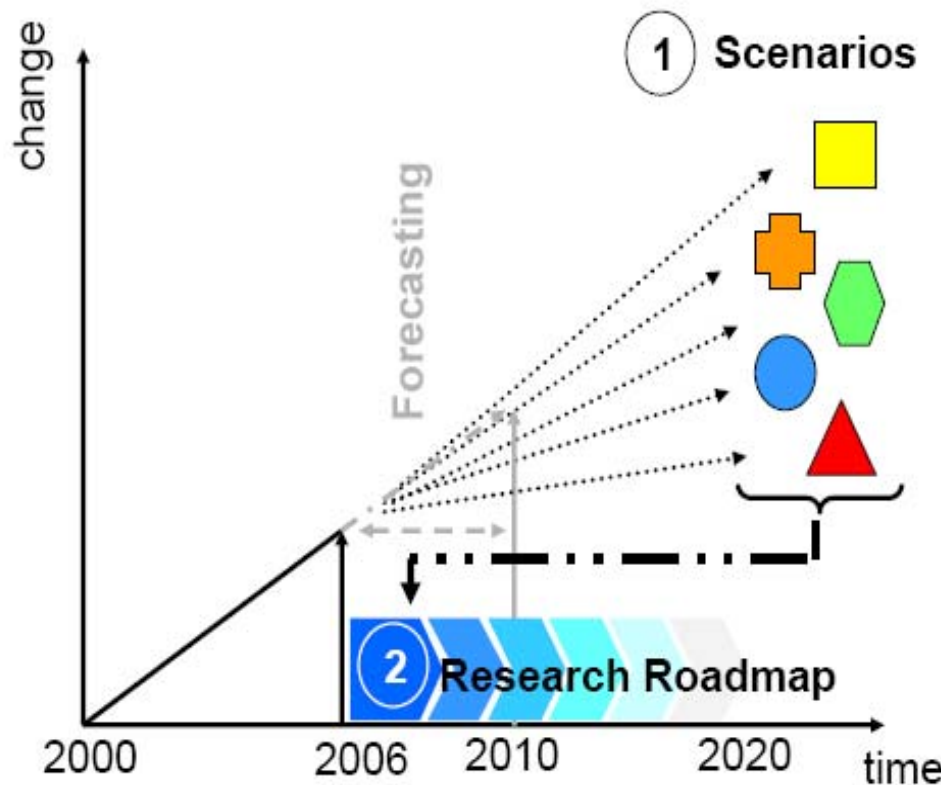


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- Identify and characterize key **research challenges** and an implementation model for dynamic governments in 2020
 - Develop **visionary scenarios** of eGovernment for 2020
 - Develop a **detailed research roadmap** for the transformation process
- **Vision**
 - transform the EC Government **landscape into a coherent community**
 - contribute to the development of the EC as a **leading knowledge society**



Overall methodology



WP 1: State of play

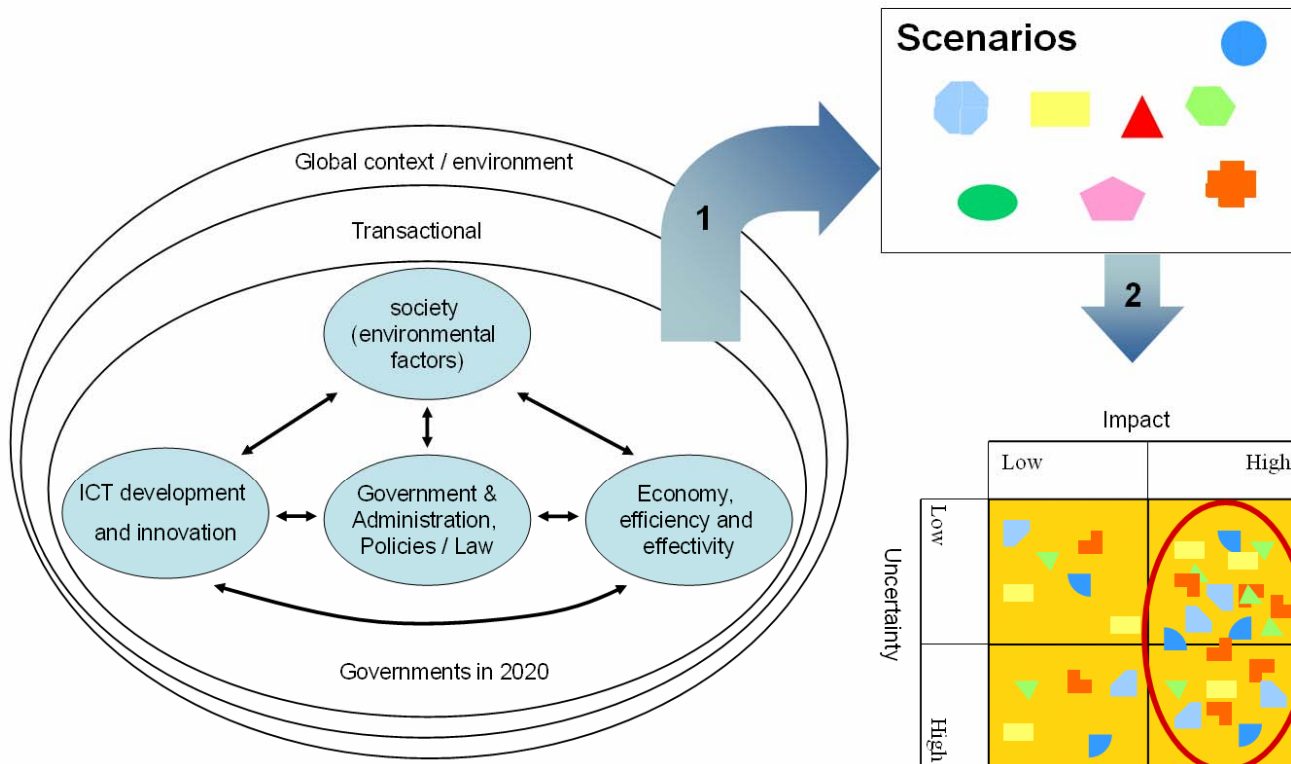
1 WP 2: Scenarios development

WP 3: Gap analysis

2 WP 4: Roadmap development

WP 5: Dissemination & Book eGovRTD2020

Basic concept of scenario building



1. Scenario building based on a holistic approach

2. Extraction of issues from the scenarios and classification of issues to their uncertainty and impact on eGovernment

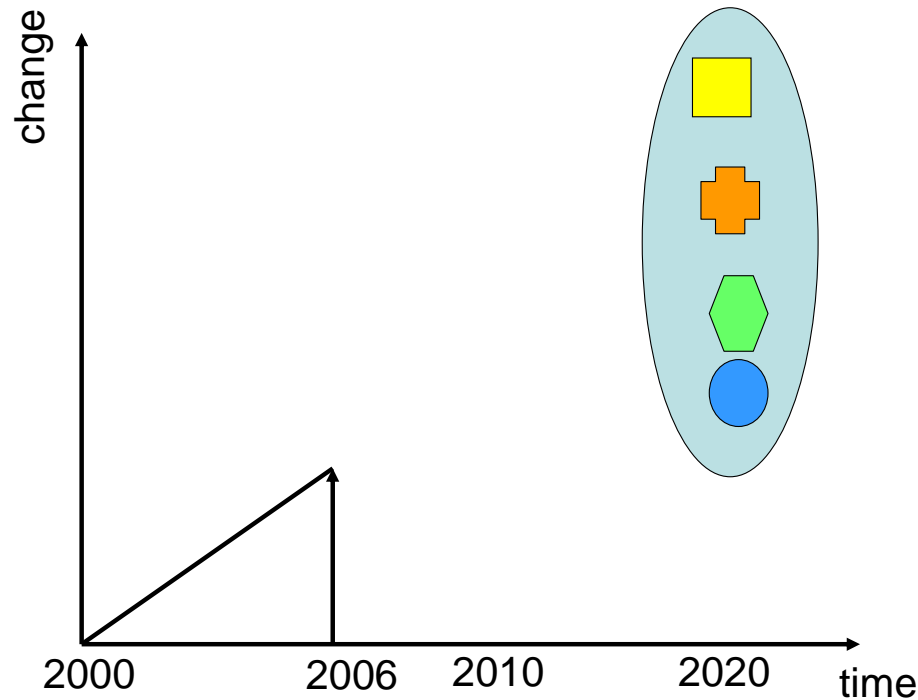
3. Validation of the workshop results and consolidation of aspects; extraction of three key dimensions

4. Synthesis of results into final eight alternative scenario pictures



Results of *all* scenario workshops

Egovernment 2020 scenarios



Seven regional workshops for scenario building

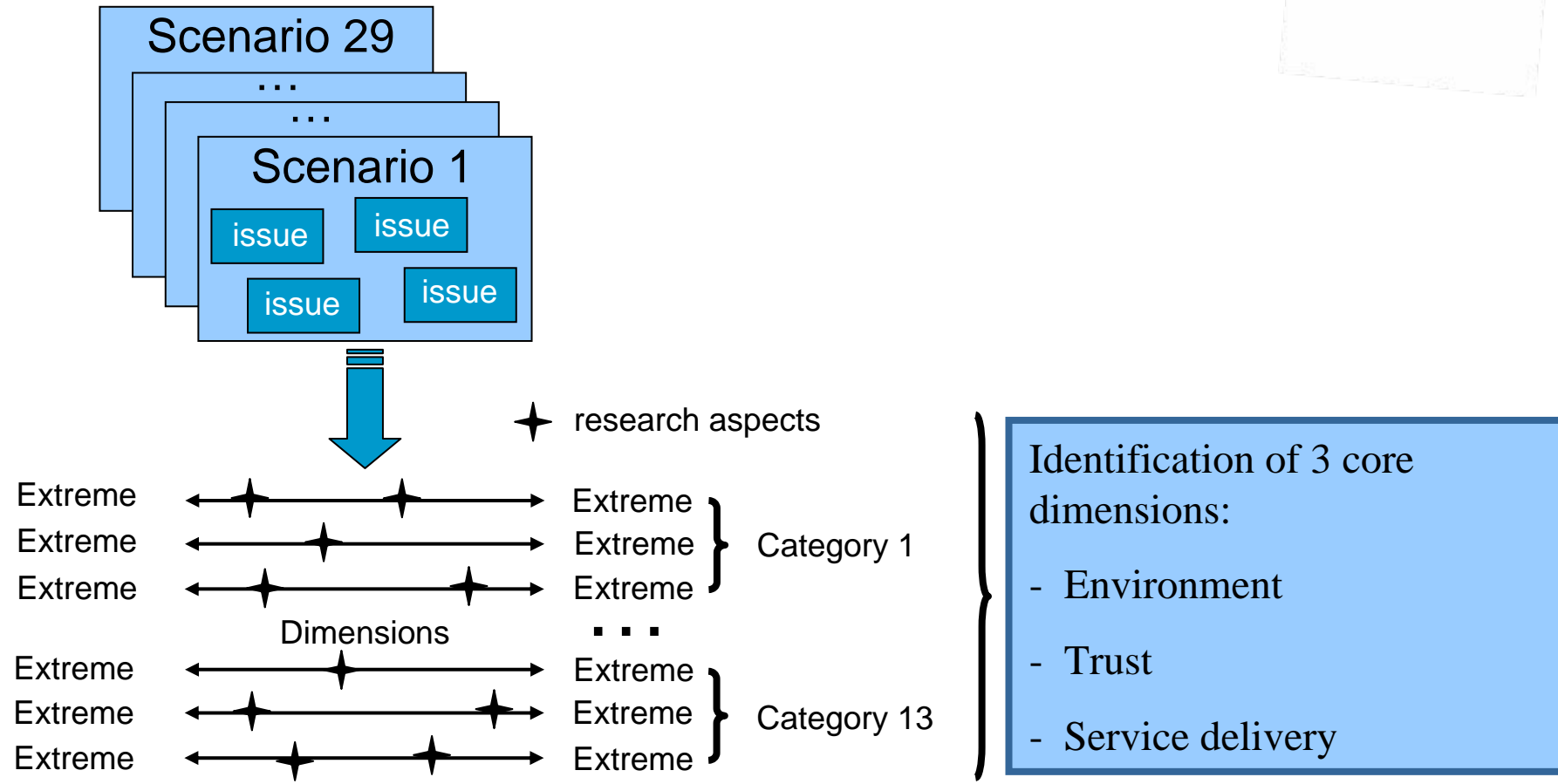


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Region	Participants
Western Europe NL: Delft	4 Government, 7 Research, 8 Business
Northern & Baltic States LI: Vilnius	5 Government , 8 Research, 5 Business
Central Europe DE: Koblenz	2 Government, 13 Research, 4 Business
Central Europe AT: Linz	11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



Scenario analysis - Extraction of research aspects and dimensions

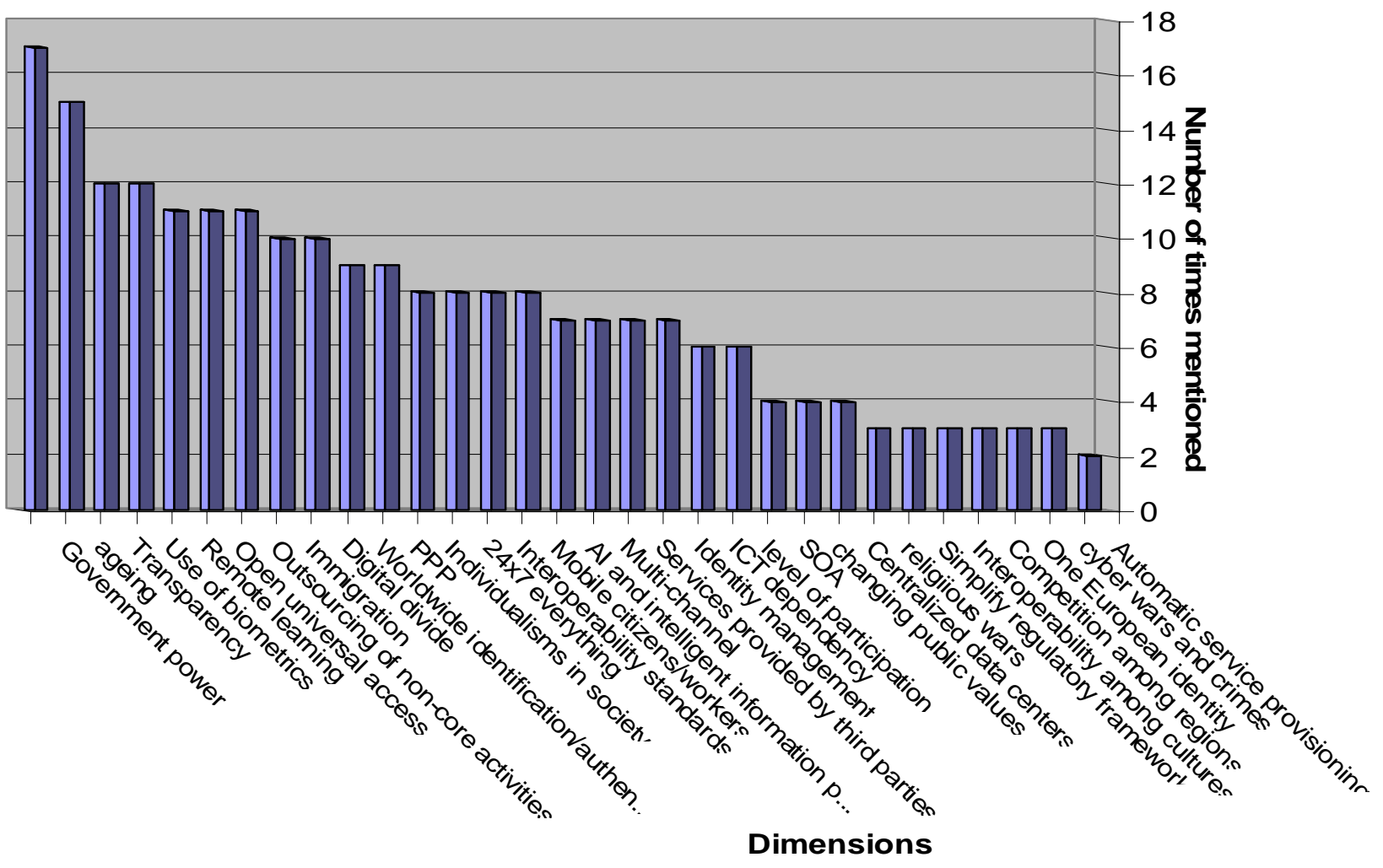




Most common dimensions

eGov RTD

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Overview final set of scenarios



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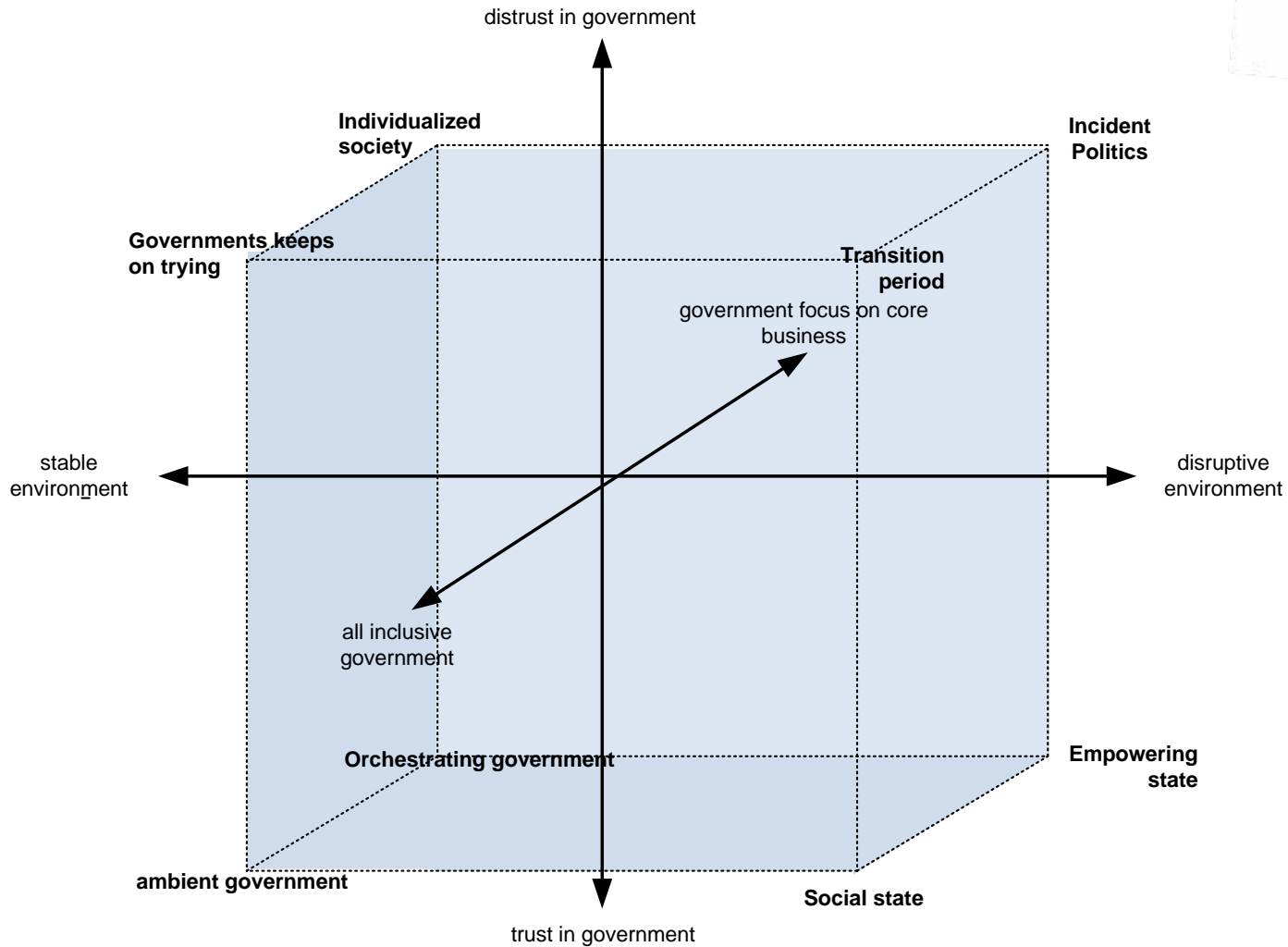
	Environment	Trust in Government	Scope of Government
Scenario 1: Orchestrating government	Stable	Trust	Core Business
Scenario 2: Individualized society	Stable	Distrust	Core Business
Scenario 3: Ambient government	Stable	Trust	All Inclusive
Scenario 4: Government keeps on trying	Stable	Distrust	All Inclusive
Scenario 5: Transition period	Disruptive	Distrust	All Inclusive
Scenario 6: Incident politics	Disruptive	Distrust	Core Business
Scenario 7: Social state	Disruptive	Trust	All Inclusive
Scenario 8: Empowering state	Disruptive	Trust	Core Business



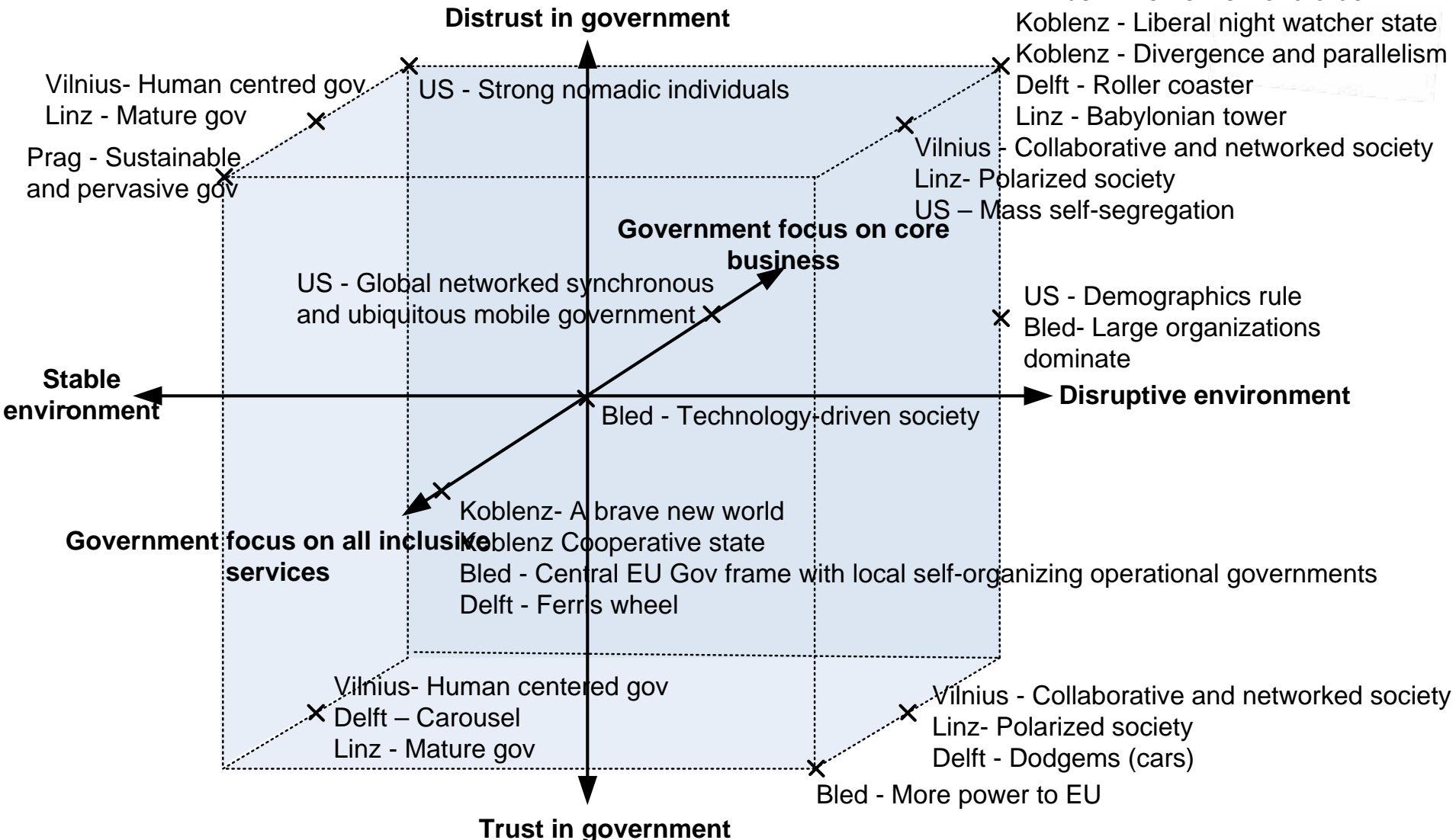
Consolidated scenario results



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Allocation of 29 scenarios in three core dimensions



Orchestrating government

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



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Disruptive developments that were predicted at the start of the 21st century did not occur or had only a modest effect on societies. Because of the benign and stable environment, along with greater equality and productivity, government adopts a facilitating, but limited, role in society, which is broadly supported by citizens who turn to the private sector for many services. Technology does not dominate but serves to support interaction and coordination among different systems and service channels.

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]



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People have become more individualistic and self-reliant. They want individual choice as a means to maximize their own potential and social security. Interest in politics declines and government only takes care of essential facilities and services. Because of the stable environment, the private sector is in a position to compensate for the lack of service capacity in the public sector. Technology serves individual needs to manage information and relationships and bridge cultures and languages.

Society and context

Government

ICT

Cosmopolitan

Legal power is fairly distributed

Monitoring technologies

Europeanization

Distrust in government

Dealing with information overload

Data protection

Low Participation

Context-based translation service

Stable environment

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

Networks of contact using P2P exchange mechanism

Inclusive society

Focus on core business

Information and knowledge management

Self-responsibility

Flattened hierarchies

Personal broker

Individual networks

Clans und cliques play an important role



Ambient government

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



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Government is all around us with high levels of cooperation across boundaries and more emphasis on local government. Social tensions are low and citizens have high confidence in government to effectively and efficiently settle issues for the common good. Technology supports personalized services and high levels of citizen interaction and participation

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]



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Despite its efforts to be involved in improving the quality of life on all fronts, trust in government is low. Privacy continues to be a challenge and the organization of government remains traditional and highly structured. A wide gap exists between a technocratic government and the ability of individuals to take part in it.

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



Transition period

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



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In a highly polarized world with cultural tensions and intense competition for key resources, governments provide an extensive range of services. Socio-economic policies emphasize individual responsibility, a position widely supported by society. Many formerly public services are provided by the market under strong government regulation. Individuals identify strongly with their local communities, feel alienated from government and use their extensive ICT skills for both personal and political activities.

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



Incident politics

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



Contract no: IST-4-27139

A two-class society exists due to massive immigration: young, well-educated citizens always on the move and older citizens with a strong attachment to place and only limited understanding of ICT. Society has become largely individualistic, with only a small role for government. The environment is characterized by severe tensions in the world, low trust in government, and a large social divide. Citizens demand security, and government deploys ICT for that purpose, as well as to increase efficiency and effectiveness.

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



Social state

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



Contract no: IST-4-27139

Society has changed dramatically because of demographic and security-related developments stemming from immigration, ethnic and religious tensions, and unequal distribution of wealth. Government keeps its focus on the common good and has been able to keep up with high citizen expectations for all inclusive, coordinated services, using state of the art technology with sophisticated security controls.

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



Empowering state

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



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In a rapidly changing, confusing world, characterized by continuing economic and age-related tensions as well as ongoing terrorism, citizens rely heavily on basic government services to become more self-reliant. Personal ICT devices help them deal with the complexities of life. Government focuses effectively on its core business, it also persists in its role as care-taker for society but continues to be ineffective.

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

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

What is a gap?

- Often no consensus what makes up a gap
- Creating a shared understanding proved to be difficult
- Gaps that we did not consider
 - Leadership (no ICT)
 - Transformation support (no clear research need)
 - One stop shop (already available)
 - Culture (no ICT)
 - Ageing society (development, no e-government)
- Therefore 'themes' are used
- The themes are used for inspiration and should help you to select a theme

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

- 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 Transparent government

- 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 “équité”) 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 inclusion 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)

eGov RTD



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■ 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

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■ 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 **Social divide**

- 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**

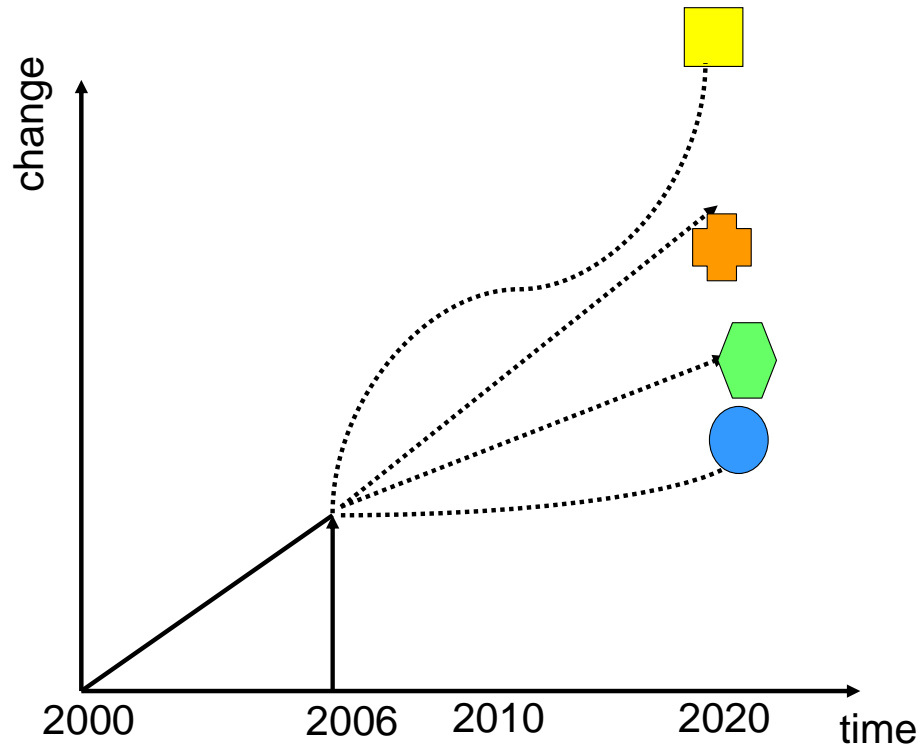
- New ways of communicating and interacting with ICT systems to access data are required, e.g. human formulated questions instead of keyword research.
- Besides regulations regarding data accessible through the internet are still in its initial stage and have to be enhanced (see information ownership).



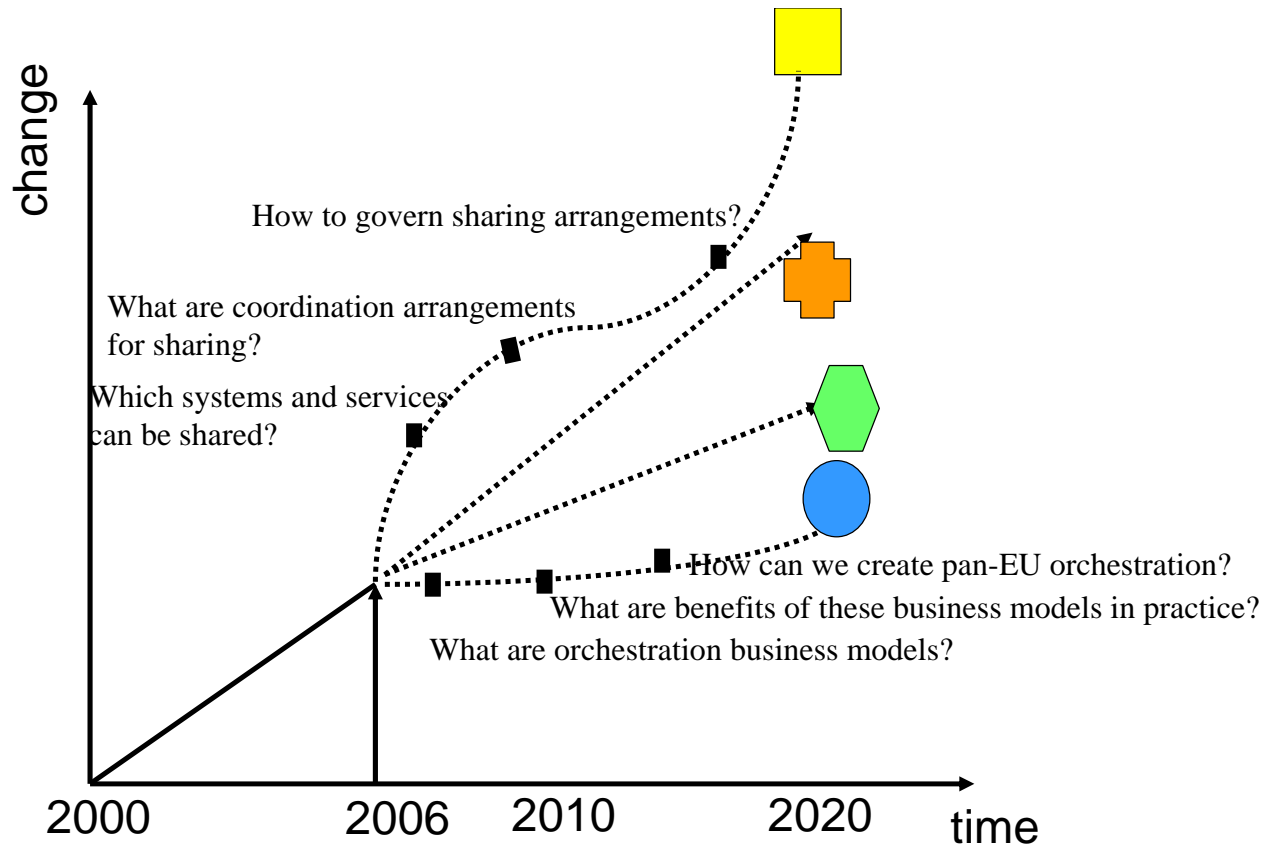


Roadmapping

Roadmapping per gap



An example



1. Governance of public-private relationships



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In PPP situations like social welfare and crisis management there is no one stop-shop integrating and combining information from various public and private parties. Often there is failure (and a lack of incentives) for cooperation among different organizations and existing ICT reinforces current structure instead of creating transparency. New third parties, (brokers) might aggregate information from various sources and provide the information to users. This requires not only new architectures, but also knowledge about metadata and the business processes that produce and use the data.

- *Main research question:* How to create a scalable and adaptive exchange platform for exchange information among diverse public and private organizations satisfying public requirements and generating public value
 - Which functions and tasks should be performed by governments in such a setting?
 - Develop semantic-based information processing and aggregating mechanism
 - Create policies and strategies for ensuring PPP integration
 - Develop effective governance structures for such arrangements
 - Set conditions for operating and ensuring public value and requirements



2. Building block industry (Service-Oriented Architecture)



Contract no: IST-4-27139

SOA has the potential to reform the ICT sector and system development, but there are no business models for this. The ideal is to have a large collection of building blocks that can be used for creating any kind of system. However, scalability and reusability across different processes due to semantic differences are major barriers. Another problem is the connection and interoperability among building blocks. While there are some standards, they have different life-cycles and various applications. The development of standards can create a new building blocks industry enabling governments to rapidly assemble new systems out-of-existing building blocks. However, there is no overview of current building blocks nor do we have business models that create added value. We do not know if building blocks work, in which situations they can be used, if they are reliable, and so on.

■ *Main research question:* How can we create a building block industry for e-government?

- What will a Building block industry look like?
- What are feasible business models?
- How can we create a repository of building blocks (broker)?
- How can building blocks be made scalable?
- How can we ensure secure, reliable and available services?
- What are the conditions and incentives for creating a building block industry?
- Create standard for enabling a new building block industry



3. Information quality (in decision-making)



Contract no: IST-4-27139

Information quality is an ongoing challenge. Some of the main problems with information quality are 1) finding the right information 2) interpreting the information, and 3) trusting the information. We still do not know what determines high and low information quality or how to measure it. It is likely that guaranteeing information quality will become more difficult (and more important) in the future as 1) the social web takes off 2) semantic web starts and 3) persons have multiple aliases and pseudonyms. For governments, a major challenge is to make their decision-making and processes more transparent and rational (i.e. consider all arguments). Governments might also use their authority to certify or recommend information sources to be used in decision-making processes.

- *Main research question:* how can we ensure that correct information is used in government decision-making?
 - How can we establish trust in information?
 - How to certify information sources?
 - Develop recommender mechanisms?
 - Can we create mechanisms for automatically assessing the trustworthiness of information sources?
 - How can technology be used to automatically compare information sources?
 - How can governments use recommender systems in their policy-making processes?
 - What is the role of government in social webs and quality of decision-making?
 - Can we create incentives for creating higher quality information?
 - How can we use social networks for ensuring information quality?



Guidelines



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- Focus on *key* research themes
- Detail these research theme
- Determine research actions (in the form of questions)
- Explain the relevance and urgency
- Should be related to e-government (policy making, executing, enforcing or government operations)



Research questions should be



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- Should be
 - Specific
 - Action (result)-oriented
 - Feasible
 - Focus on content
 - Testable
- Aimed at
 - Creating knowledge
 - Solving a problem
 - Evaluating
 - Transformation or
 - Implementation



Instructions for Small Group Discussions



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Goal for the group discussion: *a prioritized list of research themes and some elaboration of the top 3 themes to share with the larger group. You have one hour to do this*

- Steps:
 - Introduce yourselves
 - Select a discussion leader and a reporter (not the same person)
- Then, work *individually* for up to 10 minutes *without* discussion while each person:
 - Briefly reviews the Scenarios and Sample Research Themes
 - Makes a list of Research Themes that reflects your own perspective
- Then, as a group:
 - In round-robin fashion, allow each person to share his or her list with the group while the recorder makes a consolidated list on the flip chart. Hold off on discussion until after all people have contributed their themes to the list
 - Discuss the list
 - Ask questions of clarification to be sure everyone understands what is meant by each theme
 - Take a preliminary vote asking each person to indicate high, medium, or low importance for each theme on the list
 - Further discuss the list and the results of the vote
 - Re vote to get to the top 3
 - Write *just the names* of the top three on yellow sheets (one theme per sheet)
 - Draft a short write up of the top three themes using the template provided. The reporter will use these in the report-out to the full group



Ground rules for discussion



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- All themes should go on the list - no consensus is necessary
- *Your* unique expertise and ideas determines success
- Do not criticize each other
- Listen carefully to each others ideas
- Vote only after discussion





Group presentations and discussions



Wrap up and what's next?

Next steps



Contract no: IST-4-27139

- High-impact workshop (Brussels, January)
 - Finalizing roadmaps (January/February)
 - Writing a book (March)
 - Dissemination of results
-
- More information: www.egovrtd2020.org





**Thank you for your productive work
and participation !!!**

The eGovRTD2020 Consortium.
<http://www.egovrtd2020.org/>

**Results of Roadmapping Workshops will be published mid
February 2007**

Examples gaps



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- Lean government (efficiency, outsourcing, ..)
- We know what we want, but still fail in doing
 - Transparency, accountability is not easy!
- Operational efficiency is hard to achieve and might require new administrative structures
- Lot's of research in semantic, ontologies and interoperability and still we are not there
- E-participation remains science fiction
- Cross-disciplinary research
- Pan-European research



1. Participation and direct democracy



Contract no: IST-4-27139

Participation in policy-making and in improving services. Citizen-driven innovations by measuring services and listening to customers. Representation can be flexible, based on a certain them.

■ *Main research question:*

- Create mechanisms for measuring service quality and providing feedback mechanisms
- Develop new tools for self-service (know which information is available for reuse)



2. G-to-C relationship management



Contract no: IST-4-27139

Governments interact with citizens and these relationship need to be managed. Often there is a balance between citizens needs and general (societal) interest need to be balanced. Also the citizens value remain often limited due to all kind of legal requirement. Often measurements are focused on efficiency instead of improving the effectiveness of the government interactions.

- *Main research question:* How to manage the relationship between citizens and governments in such a way that government become integrated (part of) society
 - ❖ How to overcome language barriers
 - ❖ How to improve the level of participations
 - ❖ Develop architecture for managing the government-citizens relationships
 - ❖ Create incentives for stimulating joined-up government from the citizens point of view (v.s. allocating budgets to single agencies)
 - ❖ What makes up good government and how to access government effectiveness (vs. efficiency).
 - ❖ How to create more citizens value and meet the general interests and requirements.



3. Adaptive cyberinfrastructures



Contract no: IST-4-27139

There is a need for a cyber infrastructure which support collaboration among all levels of governments. Interoperability should be created among systems by harmonizing legislation, creating standards and enabling semantic interoperability. This includes the harmonizing legislation and customs to enable seamless cross-border passing. Adaptive services are needed which can be reconfigured and adapted to different levels of government and meet changing environment conditions.

■ *Main research question:* Create a cyberinfrastructure with enables collaboration among governmental agencies among all levels of government.

- Harmonizing of legislation and customs among countries
- Develop standardize and reference models for enabling government-to-government interactions
- Develop semantic integration of e-services
- How to adapt services to meet ever-changing requirements?
- Which building blocks can be developed to support adaptive services?
- How can services (and issues to be solved) shifted among different levels of government).
- How to solve problems having a global/transnational nature?
- How to



4. Mission-centric design/research of government.



Contract no: IST-4-27139

Many of the changes are IC

- *Main research question:* How to create a scalable and adaptive exchange platform for exchange information among diverse public and private organizations satisfying public requirements and generating public value
 - Which functions and tasks should be performed by governments in such a setting?
 - Develop semantic-based information processing and aggregating mechanism
 - Create policies and strategies for ensuring PPP integration
 - Develop effective governance structures for such arrangements
 - Set conditions for operating and ensuring public value and requirements



1. Governance of public-private relationships



Contract no: IST-4-27139

In PPP situations like social welfare and crisis management there is no one stop-shop integrating and combining information from various public and private parties. Often there is failure (and a lack of incentives) for cooperation among different organizations and existing ICT reinforces current structure instead of creating transparency. New third parties, (brokers) might aggregate information from various sources and provide the information to users. This requires not only new architectures, but also knowledge about metadata and the business processes that produce and use the data.

- *Main research question:* How to create a scalable and adaptive exchange platform for exchange information among diverse public and private organizations satisfying public requirements and generating public value
 - Which functions and tasks should be performed by governments in such a setting?
 - Develop semantic-based information processing and aggregating mechanism
 - Create policies and strategies for ensuring PPP integration
 - Develop effective governance structures for such arrangements
 - Set conditions for operating and ensuring public value and requirements

