

ICT for Development: The Role of e-Government

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Structure

- Knowledge Society, Development and Government
- E-Government – essential features
- E-Services - the core is Online One Stop Government
- Drawing on experience and innovation solutions
- European state of development: patterns and sophistication
- Challenges: cross-border services; collaboration and knowledge enhancement; citizen participation

The Knowledge Society

- Davenport cites on knowledge: “Knowledge is information combined with experience, context, interpretation, and reflection”
- The Knowledge Revolution is under way. Here three citations:
 1. “It is hard to say exactly when it happened, but at some point in the last 20 years the word “knowledge” became an adjective” (Bill Gates)
 2. “I would like the Web ... in which individual knowledge can be connected to corporate, even global knowledge, which is greater as the sum of its parts” (Berners-Lee, inventor www)
 3. “The Knowledge race is intimidating and exhausting” (Thomas Friedman, author “The world is flat”)

Knowledge Society and Public Governance

- Just for starting to cite Klaus Schwab, the Founder of the World Economic Forum. He speaks of a new global governance marking the new decade.
- Robert Metcalf found that the value of a network goes with the square of the user number.
- It is the growing competition among countries, companies and people to dominate .. the key asset: brains (Richard Smith, Chairman Newsweek)
- Thus, Public Governance has a lot of connections with the Knowledge Society

The State as Promoter

- The state is acting as driver and promotes a lot of activities as the Knowledge Society may give leverage to progress.
- The state fosters availability and access to ICT.
- The state spurs e-Inclusion, so especially on focused topics.
- Knowledge (and its support by ICT) is seen as key success factor for economic development.
- Offering e-Services and building Online One Stop Government
- Providing public information is an important part performed by Government.
- The state promotes e-Participation.
- European Knowledge Networks promoted by the EU are on the rise in every field.

The State as User

- Second, the state itself has to keep up with the knowledge society.
- Government needs self-reflection as intelligence organization.
- Government as a whole becomes knowledge enhanced; and the feedback cycles of governing needs information as input.
- The “governance cycle” has diverse steps and each of them gives an opportunity of practicing knowledge enhancement:
 1. Democratic deliberation and citizen involvement
 2. Exploiting knowledge repositories
 3. Policy formulation and legal drafting
 4. Execution of policies (The Machinery of Administration)
 5. Evaluation

The State promotes Knowledge Management in its own Realm

- *Significant chances* for KM in Government are present.
 - A big part of administrative work is on information and data sharing and elaboration
 - Huge bunch of domain expertise that could be usable for colleagues in similar matters
- Integrating KM in governmental work is necessary:
 - to improve public services
 - to improve internal efficiency and quality
 - to facilitate inter- and intra-organizational collaboration even across national borders (required in many public services)
- Our Institute has run several conferences on this theme all edited by Maria Wimmer (now Professor at Koblenz University)

E-Government has a Key Role

- Promoting e-Services and e-Participation has a big impact.
- The EU defines e-Government as following.

„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.“

http://europa.eu.int/information_society/soccul/egov/index_en.htm

e-Government has a History

- Concepts on Government and IT have changed.
- The *praxis*: Big administrative projects 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.
- *Further concepts* have emerged: some replacing “e” with “m” for mobile or “k” for knowledge; others such as “*drop the e*” bring a radical view.
- Now a focus on *Public Governance* broadens the scope. This is sometimes mirrored in a label *e-Governance*.

Good Governance and Good Government

- People want to live under “good governance”. Its main traits that are broadly favoured:
 - Democratisation
 - Coherence
 - Accountability
 - Transparency
 - Effectiveness.
- These ideals have to be mirrored in the way Government is built. Good government has four key marks:
 - *Citizen-centric* in attitude
 - *Cooperative* in nature
 - *Seamless* and joined up seen from the clients
 - *Multilevel and polycentric* in composition

e-Government as Vision and as a Construction Site

- E-Government cannot happen in a vacuum. Its further success is closely linked to fundamental change which is about to transform public governance and administration.
- E-Government is one way to improve government; it *goes further than earlier approaches* to modernisation (e.g. New Public Management).
- It aims at *fundamentally transforming* the production processes of public services (not only managing them as in NPM).
- e-Government thereby transforms the *entire range of relationships* of public bodies to clients and partners.
- ***e-Government is a vision and a construction site as well***

Distinctive Features of Government

- There is a big difference between e-Commerce and e-Government.
- A mere transferring of solutions does not suffice.
- There are quite characteristic features of the public sector. Here several points of distinction are given:
 1. Distinctions – Law and negotiation
 2. Distinctions – Institutions
 3. Administrative processes
 4. Administrative knowledge
 5. Multidisciplinary discipline

Law and Negotiation

- Extraordinarily complex goal structure of the public realm.
- Administration works via a complex tissue of cooperation of acting entities.
- Legal norms are a standard vehicle of communication between government and executive agencies.
- Often norms establish a framework and leaves leeway for interpretation and situative decisions.
 - Here consensus building and negotiation come in. Quasi as supplementary mode of work.
- Legal norms give particular meaning to administrative structures:
 - protecting the rights of citizens,
 - procedures bound to the rules of law or safeguarding legal validity.

Institution-bound Features

- Public agencies - unlike in the private field - are not spurred by competition.
- Administrative culture and historically grown structures may impede change.
- Administrative acts are a particular type of products :
 - providing licenses,
 - decreeing obligations.
- Responsibility seems to be often diluted, due to a multitude of actions in complex networks.
- Inertial forces are reinforced by bureaucratic attitudes.
- Administrative work appears as complex and rather strange.

Different Types of Administrative Processes

- We differentiate in four main categories:
 1. Recurrent and well structured processes
 2. Processing of cases: individualised decision-making
 3. Negotiation processes
 4. Weakly structured processes in the field of policy-making including democratic deliberation

The Cosmos of Administrative Knowledge

- First perspective: A coarse distinction in clusters
 - Registers
 - Legal databases
 - Management information

- Second perspective: A view on the layers of Government
 - Governance as strategic-political layer
 - Administrative bodies as tactical layer
 - Agencies as executive layer

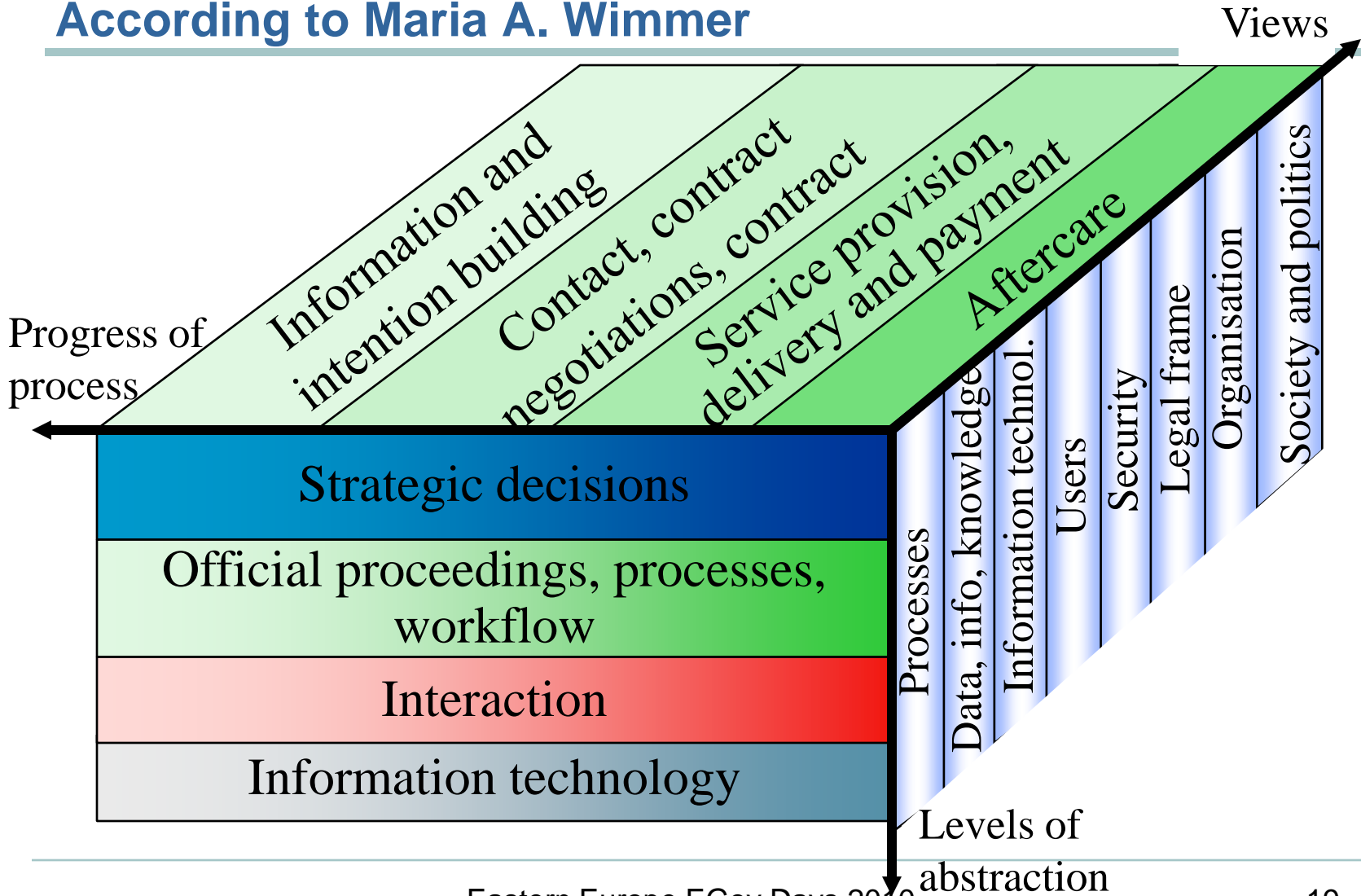
A Closer View on Action ...

- Third perspective: a closer view on administrative action.
- Manifold types of knowledge.
- Here only some points:
 - Knowledge about the policy field to be influenced
 - Knowledge about the respective environment
 - Knowledge on the own means and modalities of action
 - Knowledge on legal regulations
 - Knowledge on the effectiveness of various measures and about the evaluated effects of previous actions
 - Knowledge how to protect basic citizen rights
 - Knowledge about standards
 - Knowledge about attitudes of stakeholders

Many Dimensions of e-Government

- We regard a rather complex system
- Surrounding: society, economy and market, environment and culture
- Governmental system: public authorities, public services, political decision making, legislation, jurisdiction and executive bodies
- Technological and political drivers: societal needs, political decisions, ICT innovations,
- Goal functions: efficiency, effectiveness, economic and public value

Holistic e-Government Framework According to Maria A. Wimmer



The Core is One-Stop Government

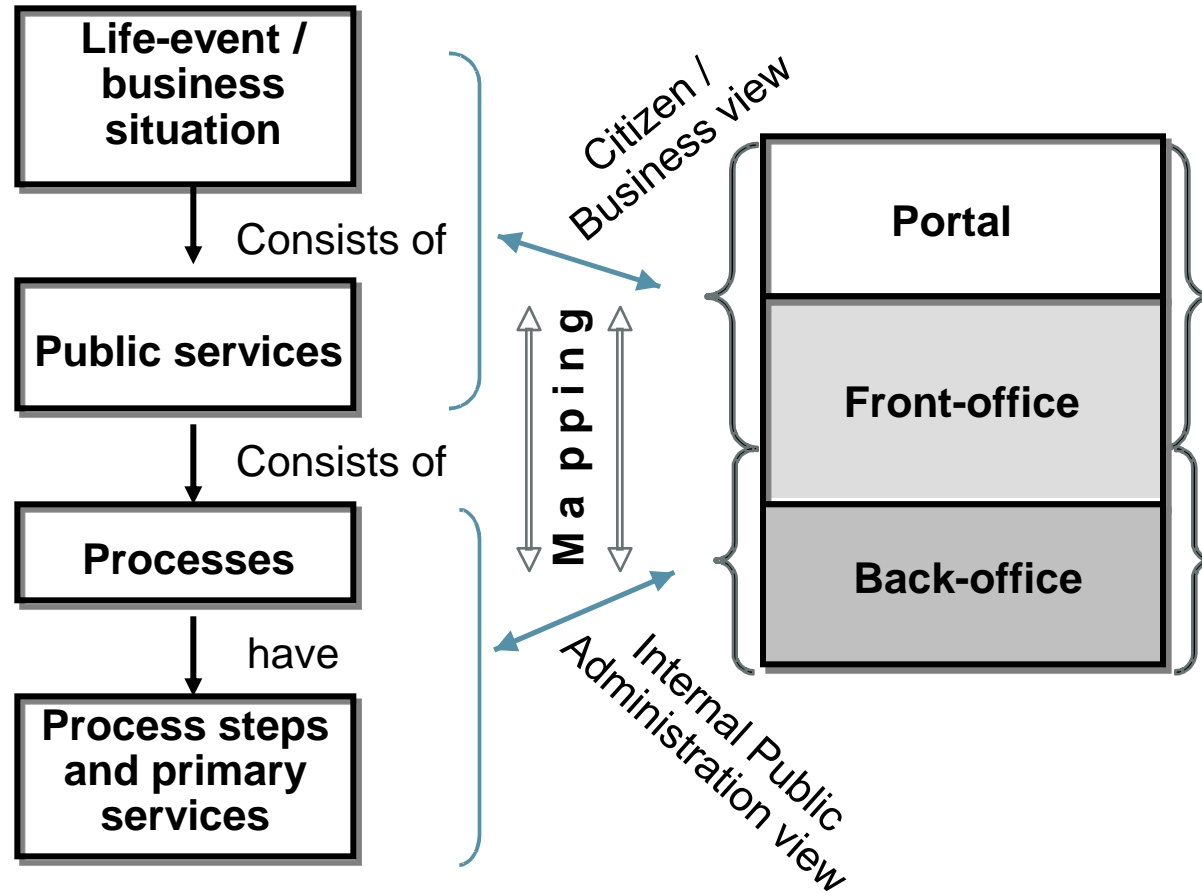
- The innovative idea comes from One Stop Shopping Malls: One Parking gives many shopping opportunities.
- In a similar way e-Commerce creates virtual shopping malls. One access gives a window for many services.
- Logging in once – many virtual mall shops can be visited and so buying is easy.
- The idea of a unique access point can be transferred to public services and information.

- **So we come to One Stop Government.**

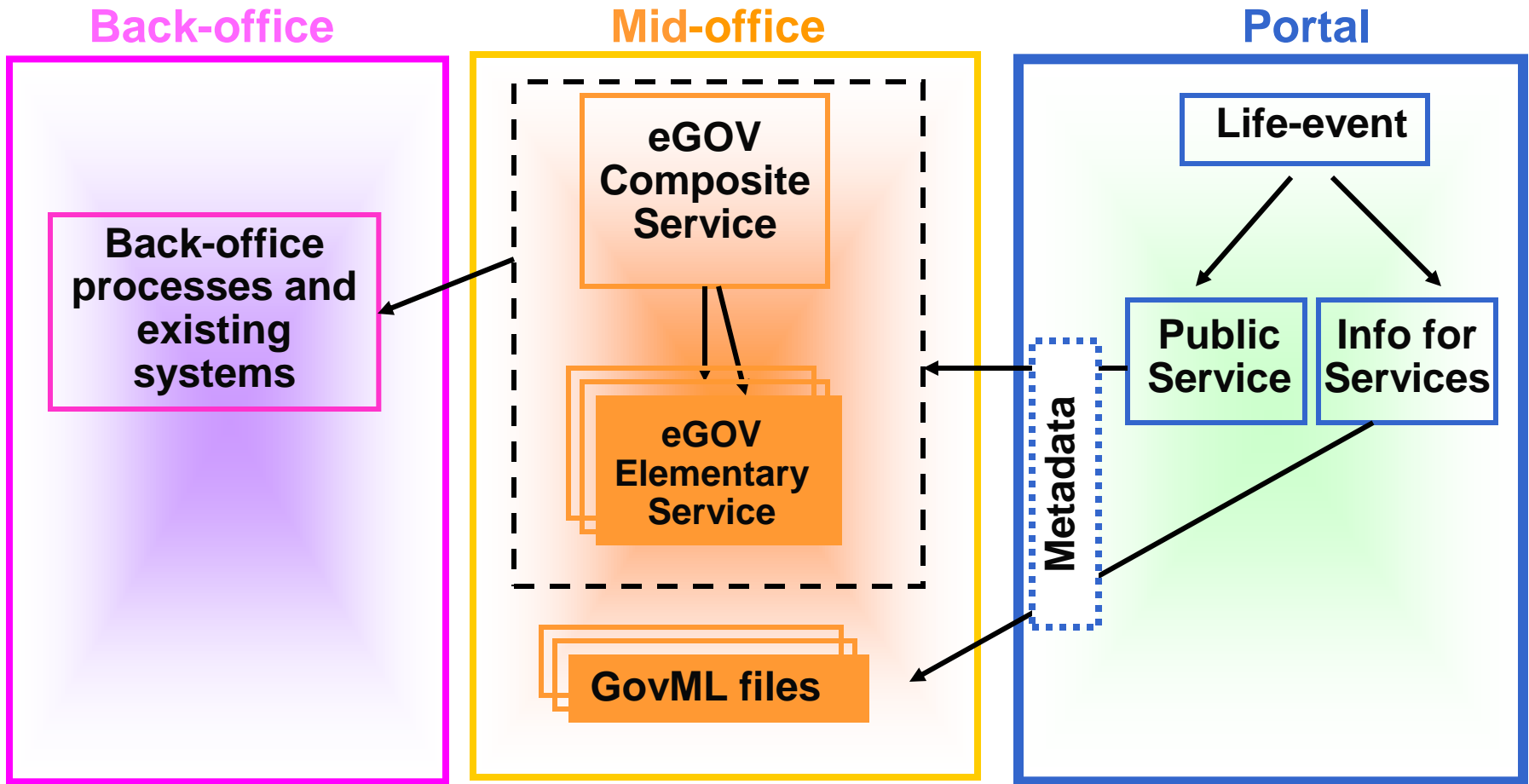
Building One Stop Government

- A single-window access for all services regardless of government level and agency.
- A multi-channel access mix with a diversity of contact points:
 - Home and mobile
 - Kiosk
 - Citizen office
 - Multifunctional service shops
- Design has to consider all stages of service provision:
 - Information
 - Intention
 - Contracting
 - Settlement
 - Aftercare.
- Usability becomes prime, personalisation is preferable, multi-lingual functions become crucial.

Basis Model Life Event



Conceptual Model



Online One-stop Government Needs Data Interchange ...

- Taking as an example the life situation of civil marriage. In a systemic view it is a rather simple case that will comprise initiation by citizens, proof of legal grounds, proclamation.
- Yet in any concrete case a variety of transactions and repositories is concerned; so internally it is just the opposite from simple what goes on in Online One-stop Government
- In the life situation of civil marriage a lot of transactions and number of repositories are involved - data are brought together from diverse data sources and disseminated to several repositories
- So before the event documents located in different agencies have to be checked; afterwards many updates on documents have to be made (change of name, civil status, common domicile etc.)

... and Cooperation as well

- Processes in Government are very particular, often they cut across different government levels – local, regional or national - and different types of agencies
- Cooperation joins up different branches and levels needing close and pertinent contact among all actors involved.
- Public administrations work via a complex tissue of cooperation involving quite many acting entities.
- Here also rebuilding comes in:
 1. It starts with thinking in service categories;
 2. then understanding the nature of an administrative process is essential;
 3. later rebuilding of cooperation comes in.

In Concrete Projects: Experience and Innovative Solutions

- Best Practice Cases
- Knowledge transfer mechanisms
- Building alliances
- Mentoring development
- Twinning projects
- Fostering grass-root approaches

Knowledge Transfer Mechanisms

- *There is no use re-inventing the wheel* – so the need for Knowledge Transfer increases. Best practice is recognised by evaluation best by an independent panel of experts identifies. Examples:
 1. Good Practice Framework of the EU <http://www.egov-goodpractice.org/>
 2. eEurope Awards earlier organised by EIPA and since 2007 bei CEPA.
- Best Practice not an exclusive transfer mechanism.
- One has to supplement with other means:
 - *Knowledge transfer conferences*
 - *Vendor neutral transfer spaces*
 - *Learning journeys*
 - *Virtual communities of knowledge sharing*
 - *Including face-to-face collaboration*
 - *Involving facilitators and mentors*
 - *Organising twinning projects*

European State of Development: Communalities and Differences

- Development comes in waves.
 1. Wave 1: Promote Access
 2. Wave 2: Provide Services Online
 3. Wave 3: Transform the Institution
 4. Wave 4: Next Generation Government
- Differences occur:
 - in pace
 - in country context
 - in sophistication
 - depending on the service area

Diversity in Pace

- With a similar pattern there was a different pace for every country.
- Also countries had their own priorities.
- Reasons for differences are diverse:
 - History (centralised vs. federal)
 - Geography (dispersed population)
 - Attitude (bureaucratic vs. citizen-oriented)
 - Openness (state-only vs. PPS)
 - Economics (income level)
 - Technology friendly-ness (mobile, broadband)

Country Context

- Differentiating factors are plentiful. Here some points on the “*Country Context*”
- *Government structures* vary concerning centralisation (France vs Germany) and in roles of agencies.
- Even countries with states are different (Austria vs. Germany)
- e-Government *strategies* are based on *different priorities*:
 - Using Broadband (UK)
 - Mobile applications (Finland)
 - Creating Public-Private-Partnerships (in Eastern Europe)
 - One data base containing all files of all Ministries (Austria),
- *Legal framework* and *administrative cultures* are diverse within and between countries.

Diversity in Sophistication

- Some areas of e-Government are more advanced.
- Regarding all countries, only few services such as taxation and procurement are sophisticated.
- In many countries centralised services are rather well run.
- In areas where there is a greater variance (such as education, employment and health) several initiatives emerge.
- This has the advantage of learning from advanced cases.

Patterns of Sophistication

- Even within a specific area special patterns may occur:
 1. Areas well supported on the central level, weak in the regions.
 2. The case vice versa.
 3. A high ICT-level in administration, yet weak in core activities.
 4. Within core activities a general low level, but some outstanding examples of usage.
- Respective examples include:
 - Ad 1: Employment
 - Ad 2: Transport
 - Ad 3: Law
 - Ad 4: Health

Challenges: The Topic List of the Roadmap 2020 Project

- 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

Focussing three Challenges Ahead

- So a lot of challenges are ahead. We will discuss three important topics:
 1. Pan-European public services – that means interoperability and identity management on the national and international level
 2. New modes of work - collaboration and knowledge enhancement.
 3. Citizen participation and the use of Web 2.0.

First Challenge: Establishing Pan European Public Services

- A decisive signpost which was set by the European Commission (EC) runs under the name “Accelerating e-Government in Europe for the Benefit of All”. So the i2010 Government Action Plan states:
 - Implementing high-impact key services for citizens and businesses - by 2010, 100% of public procurement will be available electronically, with 50% actual usage, with agreement on cooperation on further high-impact online citizen services;
 - Putting key enablers in place - enabling citizens and businesses to benefit, by 2010, from convenient, secure and interoperable authenticated access across Europe to public services;
- Even national public services have strict demands on interoperability and identity management.
- More, Pan-European public services need a very high level of interoperability and identity management.

The EIF Distinction and Extensions

- The European Interoperability Framework **EIF** endorses three main aspects (see below i,ii,iii).
- Then one more point is added:
 - i. **Technical interoperability*** covers the technical issues of computer systems. It includes also issues on platforms and architecture.
 - ii. **Semantic interoperability*** ensures that the precise meaning of exchanged information is understandable by other applications.
 - iii. **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.
 - iv. **Extension of iii*** : The Modinis project extends iii also covering political, legal and structural conditions.

Semantic Standards for Data Interchange

- Building semantic standards is a necessary condition for EDI.
- Legal and administrative semantics of data need to be represented carefully, to allow global use of local data. Otherwise correctness cannot be granted.
- Legal modelling becomes a must. A lot of work is going on in description on XML basis and RDF for structures.
- With RDF a minimum on semantic structures comes in.
- Advanced work is focussing on building legal/administrative ontologies.

Obstacles in Translating

- In the EU of tomorrow Cross Border Data Interchange is the rule.
- Further problems appear in translating terms for cross border usage:
 1. It is different to find adequate meaning of terms.
 2. The nature of the administrative process allows some openness; discretionary power of street level bureaucrats.
 3. There is an increasing dynamics and complexity in law.
 4. Difficulties comprise adequate meaning of terms (taking licenses, certificates)
 5. Also different connotations of terms occur: boundaries of professions as in the case of lawyer and barrister
 6. Non-existence of counterparts poses problems: public honours, awards, and titles

Identity Management

- In administrative matters an e-identity is needed in most transactions.
- Differences in urgency appear between sectors. So in e-Commerce having a 3 % loss by bouncing cheques is tolerable and included in the cost-schema; administrations could not tolerate 3 % wrong passports.
- Digital signatures are the solution.
- Using digital signature cross border poses severe problems.

Second Challenge: New Modes of Work

- Up to now there has been a pronounced attention on operational processes of the workflow. New modes of work are regarded.
- Long ago, it started with document systems that developed into workflow systems.
- In conjunction with a reorganization view the process perspective became dominant.
- Soon deficiencies became apparent (Working to rule)
- This has spurred the development of alternative aspects.

Emerging Topics in Collaboration and Knowledge

- So supplementary views come in focus: Collaboration in various forms - as anti-thesis to structured work processes
- New Topics are emerging:
 - Collaborative platforms
 - Sustaining weakly structured processes (Policy making)
 - Communication via multimedia
 - Knowledge Management
 - Knowledge enhanced processes
 - Social media by using Web 2.0

Knowledge Enhancement

- Government has to keep up with the knowledge society needing self-reflection as intelligence organization.
- Attention shifts away from structures and processes towards issues of content, so reaching the very heart of administrative work: making decisions.
- There are many facets, so government as a whole becomes more knowledge enhanced. This is mirrored in steering models and feedback cycles of governing.
- Knowledge management has a very broad scope. To give examples it reaches from sustaining political decisions, drafting legislation to the building repositories, “learning lessons” and to an enhancement of processes.

Knowledge Enhanced Processes

- Just to give two examples:
 1. Building repositories for process knowledge for novices in work;
 2. Translating the demand for a service. This is a core problem: *bridging the gap between customer language and the legal-administrative jargon* of public administration.
- Multiple means are already available: conventional databases, more advanced forms of repositories using knowledge ontology, software agents, avatars, establishing a knowledge cartography.
- Also expert knowledge and its access is part of it. Examples are invoking remote persons via multimedia or building learning communities.

Third Challenge: Citizen Participation

- The role of citizens in the democratic process has evolved with introducing e-Government.
- Prime is empowering people through debate and discussion, then enhancing the transparency.
- Thus e-Participation develops and implements new forms of participation the communication should involve citizens, public authorities, elected representatives etc.
- One challenge is the perceived democratic deficit requiring new relationships between state and citizens. Public responsiveness should be improved, one wants to reconnect citizens with politics and policy making.
- Then, given the complexity of decision making and legislation knowledge and expertise of citizens should be tapped in a well.

Web 2.0 brings Improvement

- Under the name of Web 2.0 a new wave of web-based applications has emerged.
- These applications rely on the concept of the user as a producer of information (social media)
- Web 2.0 means collaborative creation *and* knowledge sharing.
- Can be defined as a set of technologies, applications, values:
 1. Technologies: XML, Open API, Microformats etc.
 2. Applications: Blog, Wiki, Podcast, Tagging, Social networks (Facebook, MySpace)
 3. Values: User as producer, wisdom of the crowd, collaboration and networking, social networks

Campaigning

- Citizens may become quite active in supporting their representatives at elections. Earlier Campaigning in was performed by print media, party meetings, rallies, public speeches.
- Then electronic media, radio and TV, arrived. Since the mid-Nineties the Web 1.0 got used, a new medium but an old message.
- Now there is a move to Web 2.0 as new medium bring additional messages.
- E-Campaigning is about raising awareness about issues as well as engaging with people and encouraging people to engage with each other. So it channels the power of public opinion to advance a progressive drive.
- One has to be aware that the context is quite different: Citizen-based, decentralized, individualistic using social micro-networks and flowing continuously.

Petitions

- Here two examples are given:
- European Parliament has an e-Petitioning system for complaints or requests on certain issues.
- The Petitions Committee of the European Parliament examines electronic petitions and takes action considered appropriate to resolve the issue in question.
- The initiators of the petition are informed on the process and outcome.
- Also the UK has an E-Petition system.
- This System allows citizen to submit petitions directly to the Prime Ministers Office. Reach 2 millions in 6 months.

Monitoring

- There are several targets of monitoring.
 - Persons such as politicians
 - Groups such as political unions
 - Events such as elections
 - Modes such as proper fund-spending
 - Compliance in behavior
- On EU level a website was launched "Financial Transparency system" that will allow free access to the details.
- Many European Member States have put in place a website containing information on the payments from the European Agricultural Fund for Rural Development.