eGOVERNMENT FRAMEWORK

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Learning Targets

- What is the content of the Lisbon Declaration?
- How can we define eDemocracy and eGovernment?
- What is the difference between eGovernment, eBusiness & eCommerce?
- Which are the main exchange options in eGovernment?
- How could a maturity model for eGovernment look like?
- What are the chances and risks in a digital economy?
Objectives

- Preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as
- By stepping up the process of structural reform for competitiveness and innovation and by completing the internal market.
- Modernizing the European social model, investing in people and combating social exclusion.
- Sustaining the healthy economic outlook and favorable growth prospects by applying an appropriate macro-economic policy mix.
i2010 eGovernment Action Plan:

- **No Citizen Left Behind** → Avoidance of Digital Divide.
- **Making Efficiency and Effectiveness a Reality** → Benchmarks for governmental services.
- **Implementing Impact Key Services** → Public services for citizens and companies.
- **Putting Key Enablers in Place** → Privacy and Security.
- **Strengthening Participation and Democratic Making** → Civic education and community support; providing eElections and eVoting.
THE BERMUDA TRIANGLE OF eBIZ & eGOV

also see Larry Kusche: The Bermuda Triangle Mystery Solved, 1975

A
Administration

B
Business

C
Citizen
How Should we Define eBusiness et al.?

• “Electronic Business is a general term for the conduct of business with the assistance of telecommunications and telecommunication-based tools.” [Clarke 1999]

• “Electronic Commerce can be defined as the execution or carrying out of a business transaction by advanced information technology to increase the effectiveness of the business relationship between trading partners.” [cnec.org 1997]

• “Electronic Commerce refers generally to all forms of transaction relating to commercial activities, including both organizations and individuals, that are based upon the processing and transmission of digitized data, including text, sound and visual images.” [OECD 1997]

• “The utilization of information and communication technologies to support the processes of creating value added in an economical sense.” [Schmid/Zimmerman 1998]

• “Electronic Commerce consists of electronic transactions between business partners completed over telecommunication networks.” [Strauss/Schoder 1999]

• “Electronic Commerce provides to run digital business processes between companies and their customers over the global public and private networks (internet).” [Thome/Schinzer 1997]
<table>
<thead>
<tr>
<th>Author</th>
<th>Information &amp; Communications Technology</th>
<th>Business Transaction</th>
<th>Actors</th>
<th>Effectiveness/Value added</th>
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<td>[Clarke 1999]</td>
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eBusiness is the electronic handling of business processes between:
- Business companies (B), 
- Citizens or Consumers (C), and 
- Administration (A)
over public communication networks, e.g. Internet in order to achieve a “value added”.
Nine Exchange Options for eBiz
WHAT IS eCOMMERCE?

Business to Business (B2B)
Business to Citizen or Consumer (B2C)
1.2.1 Electronic Shop (B2C)

There are a multitude of electronic shop systems in the electronic market. This spectrum ranges from free software packages (open source) to extensive and expensive standard products which can cost several hundreds of thousands of Euros.

An electronic shop (also often called a webshop or an online shop) is a Web-based software system that offers goods and services, generates bids/orders, accepts orders, and handles delivery and modes of payment.

Figure 1.2 shows a rough outline of an electronic shop based on the product Interaction of the storefront with the backfront. In principle, any webshop consists of a storefront and a backfront. The online customers only have access to the storefront and can seek information on products and services, order them as needed, pay and receive them. Access to the backfront is exclusively reserved for the shop operator. Here products and services are inserted into the product catalog and the various procedures employed for ordering, paying, and purchasing are stipulated. The most important functions of an electronic shop are now discussed using Fig. 1.2.

Registration of online customers. A visitor to the electronic shop can find out about the products and services offered by it. Intending to buy, he communicates a minimum amount of data about himself and establishes a user profile, along with payment and delivery arrangements.
The electronic business known as eHealth is worthwhile, particularly among care providers, between care providers and their suppliers (e.g., of pharmaceuticals), as well as between care providers and insurance companies. In Europe, billions of invoices per year are made out and conveyed predominantly by post to insurance companies, recorded manually or partly with optical scanning technology, and then paid. In the future, data exchange between care providers, clearinghouses, and insurance companies will take place electronically, as in the following example. If a hospital requires a cost assurance for a treatment, this is given automatically with sufficient coverage by the information system of the appropriate insurance company. After the treatment, the hospital makes out an electronic invoice to the insurance company; electronic data exchange formats based on XML (Extensible Markup Language) have been defined and published in Europe. The insurance company in turn subtracts the customary deductible from the patient with the appropriate software, and checks the invoice with a regulation-based software package. In addition, an electronic tariff database for medical services is applied. Afterwards, the necessary computer-aided payment streams are run through the customary clearinghouses such as banks, post offices, via communication networks. Only the final statement is sent in paper form to the insurant, assuming that this person has no Internet connection or wishes to receive correspondence in paper form.
What is eGovernment?

Administration to Administration (A2A)
Administration to Business (A2B)
Administration to Citizen (A2C)
Main Exchange Options

A2A
- Information and exchange relations on a certain communal level (e.g. virtual community) or between different levels on governmental institutions.

A2B
- Governmental services for companies and organizations (eight service areas such as corporation tax, registration of new company, customs declaration, public procurement etc.).

A2C
- Public services for citizens (twenty service areas such as social security, certificates for birth or marriage, passport, car registration, education, public libraries, health services etc.).
# Overview of Exchange Options

<table>
<thead>
<tr>
<th>SERVICE DEMAND</th>
<th>Administration</th>
<th>Citizen</th>
<th>Business</th>
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<tbody>
<tr>
<td><strong>Administration</strong></td>
<td>Administration to Administration (A2A)</td>
<td>Administration to Citizen (A2C)</td>
<td>Administration to Business (A2B)</td>
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<td></td>
<td>e.g. Types of collaboration of virtual communities</td>
<td>e.g. Opportunity for electronic voting</td>
<td>e.g. Open tendering of project schemas</td>
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<tr>
<td><strong>Citizen</strong></td>
<td>Citizen to Administration (C2A)</td>
<td>Citizen to Citizen (C2C)</td>
<td>Citizen to Business (C2B)</td>
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<td></td>
<td>e.g. Citizens evaluate public environmental projects</td>
<td>e.g. Small advertisement on personal homepage</td>
<td>e.g. Web site with personal qualification profile</td>
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<tr>
<td><strong>Business</strong></td>
<td>Business to Administration (B2A)</td>
<td>Business to Citizen or Consumer (B2C)</td>
<td>Business to Business (B2B)</td>
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<td>e.g. Electronic services for public administrations</td>
<td>e.g. Products offer in a eShop</td>
<td>e.g. Order from suppliers (supply chain)</td>
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What is eDemocracy?

eDemocracy refers to the support and enhancement of civil rights and duties in the information and knowledge society:

- Focuses on participation with help of ICT (Information and Communication Technology) regardless of time and place.
- No citizen left behind
- Providing discussion channels
- Stimulating involvement of citizens
- Formation of communities
- Offering electronic services for citizens and institutions
- Stimulating web-based voting and elections
- Improving “Political Controlling” and “Public Memory”
Examples of A2C Options

<table>
<thead>
<tr>
<th>eAssistance</th>
<th>eProduction</th>
<th>eDemocracy</th>
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</thead>
<tbody>
<tr>
<td><strong>Transaction</strong></td>
<td>• electronic reservation of</td>
<td>• electronic tax declaration</td>
</tr>
<tr>
<td></td>
<td>public areas</td>
<td>• registration</td>
</tr>
<tr>
<td></td>
<td>• electronic orders</td>
<td>• census</td>
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<tr>
<td><strong>Communication</strong></td>
<td>• web services for</td>
<td>• electronic elections</td>
</tr>
<tr>
<td></td>
<td>• inquiries</td>
<td>(eElection)</td>
</tr>
<tr>
<td></td>
<td>• feedback</td>
<td>• electronic voting</td>
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<tr>
<td></td>
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<td>(eVoting)</td>
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<tr>
<td><strong>Information</strong></td>
<td>• announcements</td>
<td>• discussion forums for</td>
</tr>
<tr>
<td></td>
<td>• rules of behavior</td>
<td>elections and voting</td>
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<td></td>
<td>• recommendations</td>
<td>• notifications</td>
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In order to ensure the above security and protection conditions, procedures and special algorithms were developed (see the sections on electronic contracts and digital signatures in Chap. 5). Pilot attempts at eVoting could only be successfully accomplished after the legal basis for such business had been created. The following example illustrates this. In 2003, a total of 741 voters in the municipality of Anières near Geneva took part in a vote. 323 of these citizens (43.7%) voted electronically. The voter turnout for the conventional and electronic elections combined was about 63.77%. It is obviously important to take into account that in this field test the public was particularly motivated to either go to the ballot box or to try out the new electronic voting channel.
Maturity Model for eGov

The eGov Framework of the University of Fribourg
eAssistance

- Developing and maintaining a governmental portal
- Offering a barrier-free web access
- Helping citizens with disabilities
- Providing a discussion platform for citizens
- Offering Web 2.0 (social web) options
- Analyzing the potential of Web 3.0 (social semantic web)
- Establishing a citizen relationship management
- Avoiding digital gap
eProcurement, eService, eContracting & eSettlement

- Establishing a web-based procurement process
- Enabling public offering via Internet
- Offering electronic services for citizens and institutions
- Pushing eHealth options and mobile services
- Developing the Public Key Infrastructure
- Supervising trust centers for digital signatures
- Giving guidelines for ePayment options
- Enabling eDistribution channels
- Improving data protection and data security directives
eCollaboration, eDemocracy & eCommunity

- Enabling collaborative working environments
- Testing political blogs
- Let nobody behind (eInclusion)
- Establishing eParticipation platforms
- Enabling eElections and eVoting
- Providing ‘affordable education to anybody who wants it’ (Anant Agarwal, MIT Boston)
- Developing digital libraries (Public Memory)
- Pushing an open society

MOOC’s Massive Open Online Courses
Towards an Information Society

<table>
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<tr>
<th>Physical Good</th>
<th>Digital Good</th>
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eBiz & eGov Framework

CITIZEN

Market Transaction

- Information
- Negotiation
- Processing

 GOVERNMENT

Communications Infrastructure

BUSINESS (Company)

- E-Business Model
- Business Processes
- E-Business Tools
- Software Technologies
WHAT ARE THE CHALLENGES OF eBIZ?

- **Economic View**
  - Market Transaction
  - Business Management View
  - E-Business Mode
  - Business Processes
  - E-Business Tool
  - Software Technologies

- **Business Informatics View**
  - Communications Infrastructure
  - Government

- **Business View**
  - Information
  - Negotiation
  - Processing

- **Individual & Society View**

- **Legal View**
## Economic View
- Electronic money (cyber cash)
- The tax problem
- Distributed work
- Multi-option society

## Business Management View
- Marketing, new channels for distribution
- New forms of organizational structures (virtual company)
- Project management
- Business plans spanning over several companies
## Risk and Challenges II

### Business Informatics View

- Digital agents
- User and operator guidance
- Communication networks
- Limit catastrophes
- Data protection
- Data security

### Legal, Individual & Society View

- Digital signature
- Copyright for digital products
- Liability
- Trustworthiness
- Protection of privacy
1.3 Arguments for Internet Economics

The creation of value is digitized. A change to the digital economy takes place, with the products and services becoming more and more digitized. Digital objects fundamentally differ from material economic goods because they can be easily copied and distributed. Their value grows through use; however, they may be poorly identified and protected.

Critical mass as a key factor. Not scarcity but abundance determines the value of goods. A large customer base must be found in a short time in order to obtain the lead in the market. By achieving critical mass, standards can be set, an important condition for success. Only standards allow navigation in the network economy.

Cannibalizing yourself. Traditional distribution channels are placed in competition as digital products and services are offered and sold over the Web. The challenge, "cannibalize yourself, before others do it!" means that a company should align its marketing and sales to the electronic market. Thus, transaction costs remain low, a wider variety of more individual services develop, and attractiveness in the market rises.

Follow the free. Giving away partial products and partial services can be a recipe for success. Using an appropriate price strategy (see Sect. 2.5), components...