Open ICT e-Government Architecture as an Interoperability Framework

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Introduction

- Open voluntary group „Communication Framework“ established by Czech Republic Ministry of Informatics
- Interoperability within public administration
Results of analysis

- e-government and e-government back office
  - Political, legal and organizational level vs. ICT
  - E-government vs. e-government back-office
- Distribution of competence
  - Thousands of procedures
  - Thousands of institutions and organizational unit with more or less independent management (central, regional, local government)
- Dynamics of opinion-forming and demands
  - Own practical experience with ICT changes opinion and demand
  - Experience of others changes opinion and demand
- ICT development
  - ICT has own short lifecycle
  - Long term ICT development is not predicable
  - Government of one state has minimal influence on global ICT development
Results of analysis

- **Management methodology**
  - Centralized design
  - Standard-based design
  - e-government system can not be one centrally managed and centrally funded project
  - Combination of standard-based and centralised management of single ICT systems should be used

- **Open international standards use**
  - Developing of separate government standards has no sense
  - Systematic use of selected open international standards is the right way
  - Internet community is great source of know-how in interoperability

- **Value of using the results of detailed analysis**
  - Detailed analysis contain historical state of affairs
  - Detailed analysis cannot remove risk of indefiniteness from e-government
Architecture requirements

- Respect and support the distribution of competences between PAOs
- Enable full electronic support of PA agendas
- Support different communication channels between the PA and citizens in different locations
- Support flexibility
- Support effective information-security management
- Support technology-neutrality
- Support scalability for great numbers of instances
- Support management of all processes linked with ICT lifecycle
Description of architecture - organization

- PAO portal
- PAO portal
- PAO
- PACF & PAIN specification
- officer
- officer
- officer
- officer
- Controlled interoperability area
- Communication Framework & PA Interconnection Network
- PA
- PAO
- firm manager
- agent
- citizen
- firm manager
- agent
- citizen
- firm information system
- firm manager
- agent
- citizen
- PA public interface specification
Description of architecture - technology

PAO A

PAO B

Organizational, legal and political regulations

ICT e-government architecture

VPN Communication Infrastructure X

PAO A IP Network

Telecommunication Services of provider I

PAO B IP Network

VPN Communication Infrastructure Y

Telecommunication Services of provider II

Telecommunication Services of provider III

PA Interconnection Network
PA Interconnection Network

PA A IP Network

PAO A IP Network

Interconnection Subnet X

Interconnection Subnet Y

Interconnection Subnet Z

PAO B IP Network

PAO C IP Network

PAO D IP Network
Description of architecture - technology

Organizational, legal and political regulations

ICT e-government architecture

PAO A

- PAIS
- PAO A Internal Communication Framework
- PAO A IP Network
- VPN Communication Infrastructure X
- Telecommunication Services of provider I
- Telecommunication Services of provider II

PAO B

- PAIS
- PAO B Internal Communication Framework
- PAO B IP Network
- VPN Communication Infrastructure Y
- Telecommunication Services of provider III

PAO Interconnection Network

Telecommunication Services of provider I

Telecommunication Services of provider II

Telecommunication Services of provider III
Description of architecture - technology
Evolution management

- **Architecture**
  - High-level fixed abstract model

- **Specification**
  - Detail description of the interface with controlled lifecycle
    - Selection of international open standards on the interface
    - Additional rules and limits (how to use the standard)
    - Testing of interoperability
    - Operational data description and rules for generic services
    - Rules supporting management of implementation process

- **Implementation**
  - Particular ICT projects. Specification is used as additional:
    - Project requirements
    - Approval procedure
Conclusions

- Compatible implementations exist
- No systematic interoperability support
- Architecture exists
- Innovation step zero was started – first specification based on successful compatible implementations

- Thank you for your attention
- Questions?