e-Government, interoperability, standards and public procurement

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Interoperability

- Communication is only possible if there is a “common language”
  - Interoperability is the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common objectives, involving the sharing of information and knowledge between the organisations via the business processes they support, by means of the exchange of data between their respective ICT systems

- Based on agreements (technical specifications, standards, common interfaces, SLAs, legal acts, …)

- Interoperability is best understood as “a shared value of a community” (“multi-lateral”)
Interoperability Dimensions (I)

Political context

Legal Interoperability
- Legislative Alignment

Organisation Interoperability
- Organisation & Process Alignment

Semantic Interoperability
- Semantic Alignment

Technical Interoperability
- Syntax, Interaction & Transport

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Interoperability Dimensions (II)

- **Interoperability within the organisation**
  - One of the goals of Enterprise Architecture

- **Interoperability over time**
  - Change, piece-wise evolution, working with legacy
  - Ensuring long-term access to information

- **Interoperability between organisations**
  - Interoperability Frameworks:
    - European Interoperability Framework (EIF)
    - National interoperability frameworks in most Member States
“Standards” in the context of interoperability are agreements between all stakeholders on what information to exchange and how to exchange this information. This covers interfaces between systems and formats of long living data sets (in order to cover interoperability over time). These agreements should allow all participating partners the maximum degree of freedom while still achieving the goal of information exchange. Too much standardisation will limit flexibility and hinder innovation, to little standardisation will hinder interoperability.
Public procurement

- May lead to an accepted, temporary monopoly for the provision of goods and services
  - For a well-defined period of time
  - With a well-defined scope
  - Within a well-defined context
- Given via a transparent process and based on objective criteria
- Such accepted, temporary monopoly should have no consequences on decisions about the provision of goods and services
  - Outside the pre-defined period of time
  - Outside the pre-defined scope
  - Outside the pre-defined context
Standards and public procurement

When Enterprise Architectures or Interoperability Frameworks have been agreed, the “standardised” interface definitions that are part of these agreements become mandatory, functional requirements for the ICT systems that are constructed (bought) within the context of these architectures or frameworks.

Hence it is possible (and necessary) to reference these “standards” in public procurement.

Is the “or equivalent” clause relevant in this context?
Selecting standards

- When existing standards are evaluated in the context of a specific interoperability goal, the a number of criteria should be considered:
  - Suitability: applicability, relevance and conformance
  - Potential: impact, stability, scalability, extendibility
  - Openness: openness of the process, openness of the deliverables of that process – choosing a standard should not limit the choice of products/vendors
  - Market conditions: maturity, support by the market
- The importance of the various criteria depends on the context
Standards and interoperability: challenges

- Vendors use “standardisation” as a competitive weapon, leading to overlapping and duplication, hindering interoperability and creating barriers in the market.
- Too much emphasis on the technical interoperability level
  - The internet, together with service oriented architectures have created a level playing field.
  - But sometimes, choices have to be made.
- The real benefit of interoperability will come when we move up to semantic interoperability
  - Much less standardised today.
  - Public Administrations should be active standardisation stakeholders in areas of particular interest to them.
Open standards and open source software

- Both favour collaboration over competition
- Both are based on information sharing as the most important element to achieve an efficient market
- The openness continuum:
  - The right to study the information
  - The right to use the information
  - The right to share the information
  - Open Source Software:
    - The right to change the code (and to share these changes under the framework of the license)
  - Open Standards & Specifications:
    - The right to participate in the process
- Restrictions create inefficiencies (that may favour individual organisations)
Suggestions for public administrations

- Collaborate

- Define “your” interoperability framework and your enterprise architecture
- Select “market standards” where relevant
- Become active in standardisation where it matters (semantic and organisational interoperability)
- Share your standards, share your code

- The golden rule of interoperability: Be liberal in what you accept but be strict in what you generate

- But do not forget: “everything flows” – political priorities, functional needs, technology
Suggestions for standardisation bodies

- **Collaborate**

- **Bring all stakeholders to the table**

- **Consider your position with regard to the openness continuum:**
  - Do you have a clear IPR policy?
  - You want your standards to be studied and used? If so, is your “business model” adapted to this goal?

- **What are conformant implementations?**

- **Ensure maintenance and evolution of your standards**
References

- IDABC Programme
- European Interoperability Framework
- Common Assessment Method for Standards and Specifications
- Semantic Interoperability
- Open Source Observatory and Repository
  [http://www.epractice.eu/community/eprocurement](http://www.epractice.eu/community/eprocurement)
- Promotion of Open Document Exchange Formats
- e-Procurement Forum
  [http://www.epractice.eu/community/eprocurement](http://www.epractice.eu/community/eprocurement)