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# REPORT ON POLICIES AND INITIATIVES ON SHARING AND RE-USE OF ASSETS

ISA Action 4.2.5  
SHARING AND RE-USE FRAMEWORK

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# Agenda

- Objectives and context
- Content of the document
- Survey questionnaire & interviews
- Findings
  - policies on sharing & re-use
  - types of assets shared & re-used
  - trends in sharing & re-use
  - lessons learned
- Presentation of a selection of policies



# Objectives and context

## Objective of ISA action

- Holistic approach to cross border sharing and reuse (public administrations assets).
- Common Framework

## Identify Member States' and European Commissions' policies and initiatives for sharing and re-use of assets

- Survey and interviews
- Desk research



# Content of the document

1. Introduction - approach
2. Policies and initiatives in Member States, and feedback on their results
  - replies from 10 Countries: BE, CH, DE, DK, ES, IC, NL, RO, SE, SK
3. Policies and initiatives in the European Commission
  - six contacts: DIGIT 01, DIGIT ePrior, DIGIT OCS/NOAH, ESTAT, JRC, DG MARKT
4. Overview table
  - policies and initiatives
  - assessment
  - type of assets shared or re-used
5. Conclusion section presenting the findings



## Survey questionnaire & interviews

- Description of sharing and re-use initiatives and policies
  - Level (governance or operational)
  - Cost models and measurements of buy-in, if they exist
- Types of assets shared and re-used
- How long have these initiatives been in place and are they considered successful?
  - Feedback on efficiency of the policy or initiative
  - Lessons learned
- What are perceived barriers to sharing and re-use and which one is considered the most difficult to overcome?
- Which are the enablers and quick wins? Which one is considered the most efficient, which one is considered the most difficult to implement?



## Findings: policies on sharing & re-use (1)

- Policies are included in eGovernment or government ICT strategies and/or in the National Interoperability Frameworks
- All MS have addressed S&R of assets in their policies. However, there are no “S&R strategies” per se which cover various types of assets.
- +- 50% MS: legislation enforcing a sharing or re-use policy
  - When it is mandatory to implement the strategies and apply (parts of) interoperability frameworks
  - concerns the use of a common list of standards or a policy on sharing and re-use of software



## Findings: policies on sharing & re-use (2)

- S&R: not goals in themselves.
  - seen as tools enabling interoperability and/or efficiency of ICT/eGov strategies
  - sometimes included in the procurement aspects of these strategies
- MS report no cross border sharing or re-use policy
- S&R policy management is usually linked to the strategic management of eGovernment
  - for which all Member States have a central management and coordination function or institution
  - its character and capacity vary across the countries
  - many MS rely on guidance and loyal implementation



## Findings: types of assets (1)

- **Technical assets**

- Standards
- Software
- API
- Common components
- Technical architectures
- Software evaluation guidelines for procurement

- **Semantic assets**

- XML schemas
- Glossaries
- Ontologies
- Code sets



## Findings: types of assets (2)

### Organisational assets

- shared services, web services
- common procurement of shared services
- regulation and standardisation for cloud computing
- standards for the central coordination in the area of procurement
- Service Oriented Architecture, Enterprise Architecture methods and models, procedures, architectural frameworks reference architectures
- process descriptions, services process models (in BPMN), business process modeling service, business process models and standards
- project management methods, IT project framework documents (business cases, quality plans), project management methodologies, application development methodologies and frameworks, project evaluation methods



## Findings: types of assets (3)

### • Legal assets

- Regulatory aspects, legislation
- Open Source licenses
- Common procurement and best practices of shared services
- Common contract clauses for procuring based on open source
- Templates for government contracts for procuring services
- Guidelines on how to re-use data from a legal perspective

### • Other types of assets

- Guidelines and instructions (ex: for implementing re-usable assets)
- Code of practice
- Functionality
- Requirements
  - Building blocks of requirements (used when procuring)
- Data



## Findings: types of assets (4)

- **Conclusions**

- organisational assets are also widely shared (not only technical and semantic)
- eGovernment regulations focus on interoperability, standardisation and on functionality. However, very little assets related to functionality are shared (common requirements, lists of functional requirements, ...) besides services.
- Legal assets: no S&R of content of legal texts
  - in line with the results of the LEOS study (ISA action 1-13)
  - no need for a common EU standard on content of a legal text.  
*“There has not been so far any use case or business case [...] proving the necessity of being [interoperable to exchange content] across different legal systems in the EU”.*
  - Common URIs, metadata, yes (semantic assets)



## Findings: trends in sharing & re-use (1)

- Policies focusing on open source software or on the re-use of software:
  - in several Member States: ES, ES Basque Region, EE, FR, IT, MT, NL
  - Eurostat: drafting a sharing policy for software
  - IT: focus on sharing
  - Some policies have just started, others have been in place for a long time, and some are ending.
- Initiatives on sharing OSS are changing their model: moving to shared services / cloud.
  - Technical barrier for installing software
  - Shared services: easier model to share on a wide level (economies of scale)



## Findings: trends in sharing & re-use (2)

- Many organisational assets are shared,
  - Architectures, services
  - Some MS focus on identifying common processes, sharing processes, process modeling techniques and process modeling services.
- Many initiatives aim at organising procurement.
  - Ex: use of framework contracts for open source solutions and services.
  - PAs collaborating at local levels on the pooling of solutions, based on common needs.
- Many government strategies set a basis for efficient eGovernment by implementing common infrastructures and sharing components.
- A need for better communication on existing assets.



## Findings: lessons learned (1)

- Assessment of S&R usually not linked to formal measurements.
  - Exceptions: UK - metrics in IT strategy on sharing and re-use of assets and services and use of open source
  - eGovernment Benchmarking: insight in the progress of eGov in general for each country, but sharing and re-use policies are not measured
  - *“policy effectiveness is never established officially”*
- Policies and initiatives are often “overall successful” or “successful”
  - In some cases, re-use of software is considered unsuccessful
  - No respondent provided concrete re-use targets
- No enforcement of policies
  - No “watchdog” approach
  - Usually on a “comply or explain” approach



## Findings: lessons learned (2)

- Legislation sometimes covers only the sharing of software. How to include re-use of software in legislation?  
Implementing the Public Sector Information (PSI) Directive and applying it to software.
- Re-use of open source software
  - need for service management and maintenance of the software
  - feasibility studies to evaluate re-usability of the solution in the organisational, legal and technical environment of the administration
  - quality assurance and assessment of adequacy of software can be set up in an organised manner (ex: FR)



## Findings: lessons learned (3)

- Need for political drive and support, with less focus on technical matters.
  - (NL) Communication should address the policy stakeholders in public administrations, not just the IT staff
- Lack of coordination
  - Difficult to co-ordinate the joined effort at different levels of government
- Legislation process: no opportunities for S&R
  - impact assessment of legislation: should also address the impact on the ICT systems
  - common process for implementing EU legislation in MS => more opportunities to develop shared systems
  - define in the regulation a common shared solution



## Findings: lessons learned (4)

- Publish prior information on procurement of IT systems benefits S&R
  - provides time for analysing existing systems which could be re-used
  - Allows to identify common needs and to pool procurement
- Business cases do not reflect sharing or re-use.
  - Do not include the benefits of sharing and re-use, as well as the costs
  - Business cases models can be adapted to support projects with a “whole of government” approach, focusing on re-using existing ICT solutions and on existing working procedures



## Findings: lessons learned (5)

- Information gathered in the study suggests that mandatory policies are not more efficient, but rather that a complete set of factors influences better sharing and re-use.
- A holistic approach leads to higher levels of success:
  - A high level goal to achieve. Ex: interoperability, sustainability, saving costs or rationalisation. S&R are not goals per se.
  - Awareness raising about the goal
  - Understanding of the means and methods to reach the goal. This is done using extensive communication, creating a “culture” for S&R (ex: business case)
  - Promote the practice of S&R, with instruments. Ex: procurement terms, platforms for sharing, guidelines and rules - including processes in procurement, or defining licensing rules
  - A legal certainty to S&R - in the goal or in the methods



## A selection of policies > BE

### ● Governance:

- Sharing of custom-made software (OS) - decision of the council of Ministers at the federal level 2004.
- Royal Decree 11 May 2001 : creation of FEDICT (ICT Federal Public Service) - aims to develop projects and services for all federal public services

### ● Operational

- [http://www.fedict.belgium.be/en/service\\_catalogue/](http://www.fedict.belgium.be/en/service_catalogue/)
  - Authentication
  - service bus for exchange of information
  - eID building blocks

### ● Assets

- Services, components, semantic schemas in social security and financial sectors. Re-use of procurement terms

### ● Assessment

- overall successful, but needs more collaboration
- business cases on the re-use of assets would be helpful



## A selection of policies > CH

- Governance: eGov strategy
  - Reduction of cost through standardisation and common solutions
  - Decentralised implementation, in collaboration with cantons and municipalities
- Operational: coordinated by a programme office (PMO)
  - Catalogue of Priority Measures + Strategic planning (Roadmap) + Process for controlling
  - A lead organisation for each priority project
  - Budget is 2 Million CHF / year. The choice for financing the projects takes into account if they implement re-usable solutions as shared services and use open standards => *incentive to create shared and re-usable solutions in a decentralised organisation.*



## A selection of policies > CH (2)

- Assets

- Project management methods
- Evaluation methods
- Enterprise Architecture methods
- Software
- Standards
- Services
- Infrastructure
- Processes

- Assessment

- Strong federalism - effective but slow to implement (5 years)
- Enablers
  - common understanding or a common strategy and plan
  - common standards and processes
  - standardization and Interoperability of systems
- Barriers
  - Different priorities
  - Different lifecycles
  - Lack of political awareness
  - Different processes in cantons
  - Different basic infrastructures and lack of interoperability
  - Different procurement policies
  - Different infrastructures



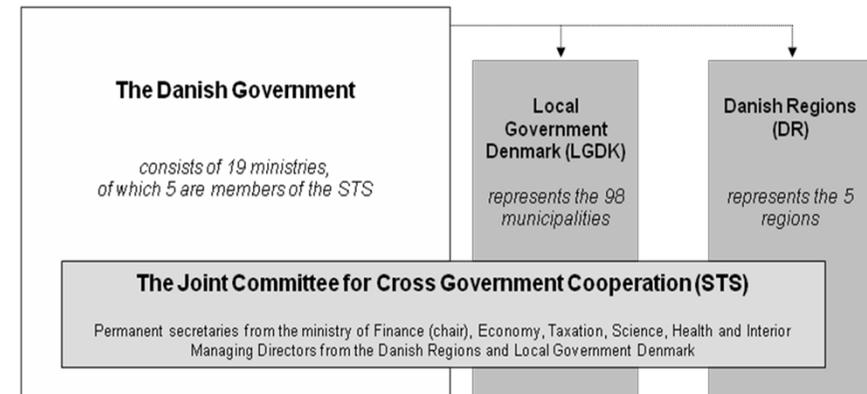
## A selection of policies > LU

- Governance: IT Strategy
  - CTIE centrally coordinates all IT initiatives and interoperability is achieved due to this central approach.
    - Usage of open standards is part of the policies
    - Coordination of a master plan in line with priorities (PMO approach)
    - Focus on optimisation of business processes
      - Re-use of business process models successful
      - Goal to be reached in several years: to map all system requirements to re-usable blocks of processes
- Assets
  - Business process modeling service
  - Business process models and standards
  - Building blocks of requirements (used when procuring)



## A selection of policies > DK

- eGov strategy includes “Closer digital public cooperation”



- **Assets**

- Public sector software
- Public common components - ex: eInvoicing component
- Cross-governmental XML-schemasXML schemas
- Enterprise architecture frameworks and standards , common architecture requirements
- IT project framework (business case, quality plan) -projects >10M€
- mandatory standards (comply or explain)
- FORM (Common Public Reference Model) - public sector domains



## A selection of policies > DK (2)

- Assessment
  - Re-use targets met on most components
    - log-on solution,
    - eInvoicing solution
    - other OSS never re-used. Must be promoted and easy to use off the shelf.
  - OECD recommendations - strengthening the STS and coordination:
    - Strengthen role and responsibilities of the STS as a political driver for eGov => support visionary cross-governmental projects pushing for integration (e.g. adoption of standards and establishment of a common ICT architecture); mandate is neither sufficiently clear nor authoritative
    - sharper link between the political and strategic discussions supported by more technically-oriented ones => more decision making
    - Improve cross-governmental collaboration through concrete activities and projects (e.g. the law on geospatial data)
    - adoption of a new vision sufficiently robust for the next five years



## A selection of policies > DK (3)

- OECD recommendations:
  - STS's focus on technical related-matters has outbalanced the space devoted to the decision making on the national vision
  - barriers for e-government service delivery are the lack of financing mechanisms for shared services and incompatible technical standards
  - revising the business case model:
    - better takes into account a broader set of criteria that sustain the selection of projects supporting a whole-of-government perspective
    - putting more emphasis on the ICT standards and on the working procedures (definition and description of processes and tasks)
    - => could lead to the selection of smaller projects, where it could be possible to use standard software components. The requirement specifications could be more process oriented, increasing the emphasis on having to show how things are done as opposed to solely proving narrow administrative savings potentials.



## A selection of policies > NL (1)

### • The NoiV Action plan (2007):

- increase interoperability by promoting the use of open standards
- reduction of supplier dependence through a faster introduction of open source software, open standards and the use of ODF;
- promotion of a level playing field in the software market (...) by boosting the use of open source software, and by giving preference to open source software during the process of IT procurement.

### • Assessment

- Thesis: evaluate impact of the policy on procurement
- Outcome: theoretical and interpretative framework => help policy makers to evaluate (ex post) and possibly forecast (ex ante) IT related policy outcomes
- research results show that for NOiV, elements in the framework have been partially disregarded by the policy maker (see next slide).



## A selection of policies > NL (2)

- Framework

- “Awareness knowledge” : does the stakeholder know there is a problem, and that he is part of the solution?
- “Persuasion stage” - 4 dimensions to barriers and instruments
  - Technical
    - Legacy, architecture, compatibility with existing platforms
    - Offer an alternative free product
  - Legal
    - Monopoly => pressure with IP law: no cooperation from vendor to make his solution interoperable with a new one, ...
    - Laws on obstruction of competition/ interoperability
  - Financial
    - Cost of migration
    - Financial incentives => government grants
  - Knowledge/experience
    - Compatibility of policy outcomes with the personal experience the policy taker has with a certain technology
    - Guidelines and good practices



## A selection of policies > NL (3)

### - Recommendations

- communication about the overall goal of the strategy (not only about open source and open standards)
- policy should contain the use of one or more policy instruments within the four dimensions.
- research results clearly indicate that the mere use of the legal instrument (e.g. the European Public Procurement Directive) is not enough to change behaviour
- Lack of sharing because it implies sharing of budget (in a way)
- In order to make such an action plan more efficient, one should identify those who decide on sharing and re-use, and these are not in the IT departments. *“You must address the government, the politicians, and those procuring solutions, not the IT people.”*
- *“Do as we do, not as we say”* - communication between NOiV and PAs used MS Word documents, not ODF.
- Adoption of OSS and open standards: a long term process.



# A selection of policies > ES Basque(1)

## Governance and operational levels

- Decree 159/2012 explains how to open and re-use source code applications of Basque Government Public Sector.
  - Article 5.- Conditions that enable the Re-use of the Computer Applications
    - Before procurement, consult the Open Source Computer Application Directory for applications which could be re-used
    - If no solution is available, a report is published explaining this, and:
      - A functional description of the new computer application.
      - A description of the composition or modular architecture of the source code
      - A description of the measures taken to facilitate its re-use:
        - detailed timeline / milestones
        - technological, architectural and functional characteristics of each of the planned milestones
        - the reasons to any dependency on third-party products
    - Explain if there are security reasons not to share the software, or reasons linked to PPP



## A selection of policies > ES Basque(2)

- Assessment
  - Inspires the future policy developments in Spain
  - Article 9: develop metrics for measuring the implementation of the decree
  - Draft of Decree reviewed by 100 PAs
    - No formal auditing of the publication of the applications' source code. What is mandatory is to report on what is being re-used and what is not.
    - Transparency of the tendering process and the publication before procurement of what will be re-used in the new system, and what will be tendered, as well as the cost of each deliverable.
  - Challenge: how to implement the new procurement processes? who will support these changes?



Thank you