

Semantic interoperability for public sector in Norway

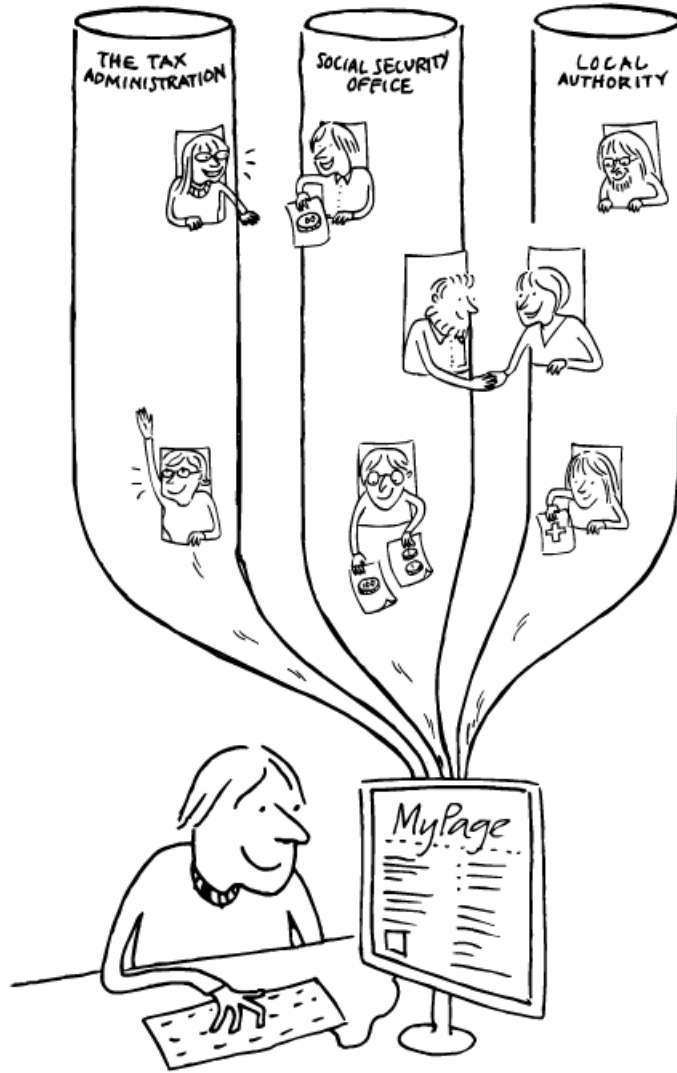
Semantic days 2009

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Agency for Public Management and eGovernment, Norway

Agency for Public Management and eGovernment

- ▶ In short Difi, established 1 January 2008
- ▶ Organised under the Ministry of Government, Administration and Reform
- ▶ Aims to strengthen the government's work in renewing the Norwegian public sector and improve the organisation and efficiency of government administration, including efficient use of ICT and development of egovernment.
 - ▶ The user shall be met by an *open, accessible and coherent public sector* offering integrated and fully digital services via sound electronic self-service solutions
 - ▶ *Through the use of ICT make more efficient and free up resources* in order to strengthen public welfare provisions while reducing administrative burdens.



Status

- ▶ Currently (political) focus on ICT architecture and interoperability
 - ▶ White paper to the Parliament
 - ▶ Report on common ICT architecture in the public sector
- ▶ Semantic interoperability is emphasised as an important area for standardisation
- ▶ Large and complex task, currently no real centralised initiative
 - ▶ Several independent initiatives in sectors or with limited number of participants
- ▶ The Standardisation board has started a work item on semantic interoperability(for ICT in the public sector)
 - ▶ Working groups on technology AND lawyers and practitioners
- ▶ Main focus on the semantics – the terms and words – not the technology!

Initiatives

- ▶ Norway Digital
- ▶ SEMICOLON Semantic and Organisational Interoperability in Communicating and Collaborating Organisations
- ▶ SERES Semantic register for electronic collaboration
- ▶ SSB Statistics Norway
- ▶ And many others

What is semantic

- ▶ The meaning of words
- ▶ Or also syntax

- ▶ Different purpose – different focus
 - ▶ Publishing
 - ▶ Exchange of data
 - ▶ Statistics
 - ▶ etc

Norway Digital

http://www.statkart.no/Norge_digitalt/Engelsk/About_Norway_Digital

- ▶ the Norwegian government's initiative to build the national geographical infrastructure
- ▶ a working co-operation and infrastructure with reference data and thematic data available, more than 100 operational web map services, geoportal and other services
- ▶ an implementation of the infrastructure described by the Inspire Directive
- ▶ The aim is to enhance the availability and use of quality geographic information among a broad range of users, primarily in the public sector
- ▶ Metadata portal geoNorge <http://www.geonorge.no/Portal/>
 - ▶ ISO 19115 *Geographic Information – Metadata*
- ▶ Result: Extensive use, cooperation and development of services; based on needs of and demands from private and public parties

SEMICOLON

Semantic and Organisational
Interoperability in Communicating and Collaborating Organisations

<http://semicolon.no/semicolon-web/Hjemmeside-E.html>

- ▶ A research project addressing the challenges to establish compatible ontologies, information models and the necessary organisational coordination and collaboration to simplify public service production across several public bodies. Runs for 42 months from Oct 2007
- ▶ Several private and public partners, the latter providing collaboration cases as study items for the project
 - ▶ Birth and name dialogue
 - ▶ Data to researchers
 - ▶ Result XML for kindergarten-applications
- ▶ The project will develop ICT-based methods, tools and metrics through research based experiences in real collaboration cases where the aim is to produce public electronic services to industries and citizens
- ▶ Challenges: Proper commitment and motivation from public institutions

SERES Semantic register for electronic collaboration

<http://www.brreg.no/samordning/semantikk/>

- ▶ Run by the Brønnøysund Register Center, responsible for several national registers organised under the Ministry of Trade and Industry
- ▶ Contains metadata on describing the semantics and information structure of data being exchanged with and between public institutions.
- ▶ Focus on structured information, and use of the metadata in production of electronic forms by defining the content of data flows
- ▶ Two-fold aim:
 - ▶ Establish tools and methodology for the Register center and their task to coordinate reporting obligations for enterprises
 - ▶ Provide metadata to Altinn, the common portal for public reporting
- ▶ Challenges: Must support the needs of public institutions that already rely on their metadata; mandate restricted to axis enterprises - public sector; balance ambitions and immediate needs

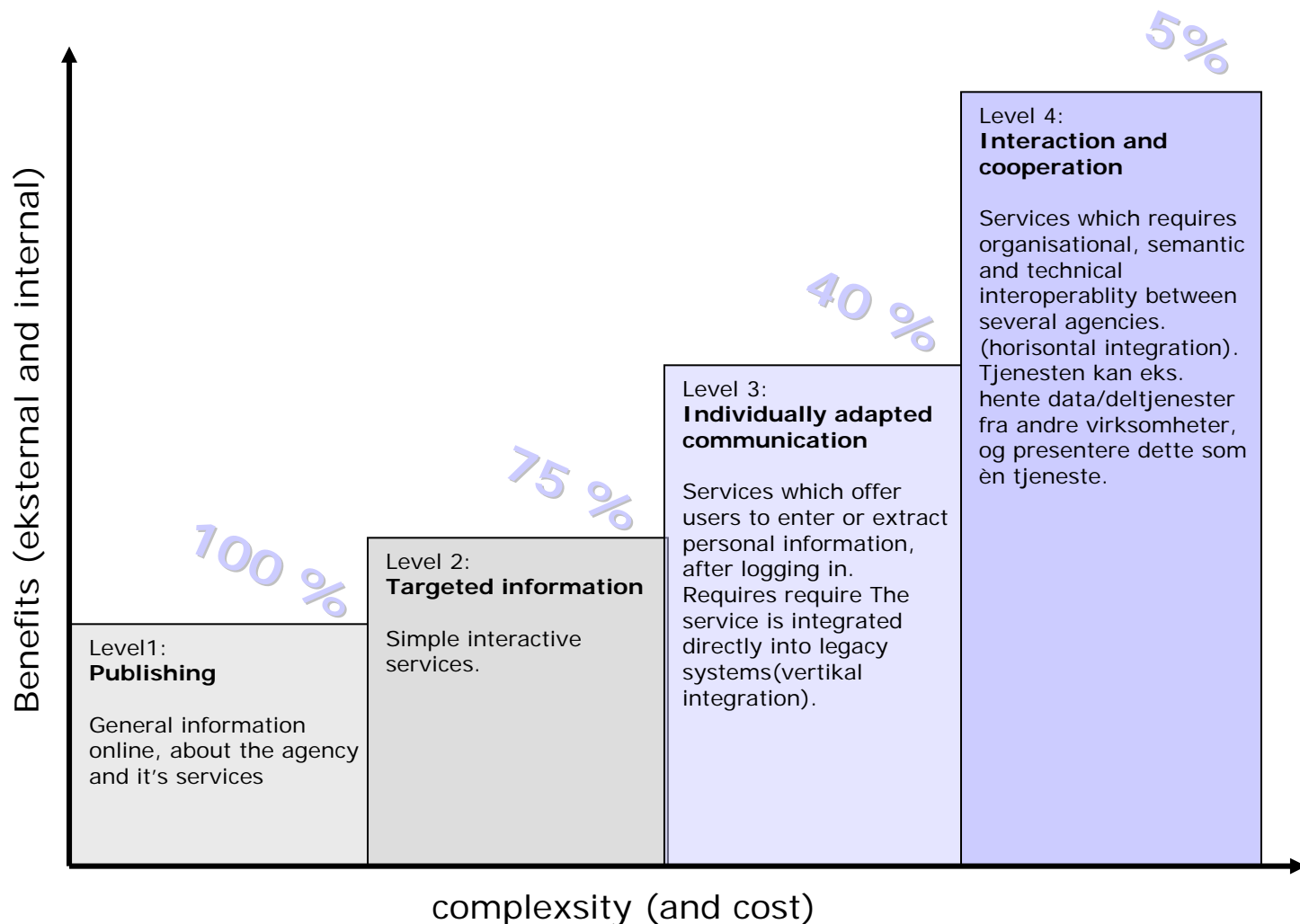
SSB Statistics Norway

<http://www.ssb.no/english/>

- ▶ Metadata strategy from 2005
- ▶ Aim is to create a comprehensive metadata system that will contribute to an efficient production and dissemination of statistics, and at the same time improve the quality of the statistics. The metadata should be created and updated in one place.
- ▶ Metadata and metadata systems available on Internet
<http://www.ssb.no/metadata/>
- ▶ Stabas - Database for statistical classification
<http://www3.ssb.no/stabas/MainFrames.asp?Language=en>
- ▶ Focus on terms and descriptions – not technology

Experiences from current semantic projects

- ▶ No or little demand
 - ▶ Not in accordance with the immediate needs of the public institutions
 - ▶ Time consuming and in conflict with more pressing and compulsory commitments
- ▶ Lack of maturity and motivation for collaboration
- ▶ Lack of commitment from the institutions
- ▶ Lack of overview and documentation of internal ICT systems
- ▶ Technology too ambitious
- ▶ Organisational challenges – not attention from leaders
- ▶ Lack of common methodology



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Our observation

- ▶ Lack of understanding of the origin of terms and their fluctuant nature – must not overwrite legislators purpose through harmonisation and simplification
 - ▶ Terms defined in legal rules and through interpretation and by the context and purpose
- ▶ Semantic interoperability not only solution – must be suitable and give added value
- ▶ Efficiency of point to point communication/data exchange not to be underestimated.
- ▶ Several approaches possible
- ▶ Successful when meeting demands and needs, and when resulting in new or improved services

Future work

- ▶ A common meeting place and mutual platform for technical staff, lawyers and practitioners.
- ▶ Deciding on standards for how to define and defining a process for how to define
- ▶ Identify inconsistencies and needs for coordination (based on actual needs – sample projects)
- ▶ Identify and quantify benefits of semantic interoperability
- ▶ Define the first few words in a thesaurus, and the link between them.
- ▶ Developing a national strategy for semantic interoperability

So....

- ▶ Not really motivated public sector
- ▶ Some initiatives but they are all doing their own stuff
- ▶ This kind of work takes time
- ▶ The standardisation board is starting up a national initiative. First of all on semantics alone, and very narrowly – learning and expanding as we go along, and the different public agencies start to involve themselves in the work.

Thanks to you all for your utterly undevoted attention!

Except you guy's, yeah you far back on the right hand side, you that fell asleep.
They do have beds in this hotel you know.