

World Class ICT Based Value Creation

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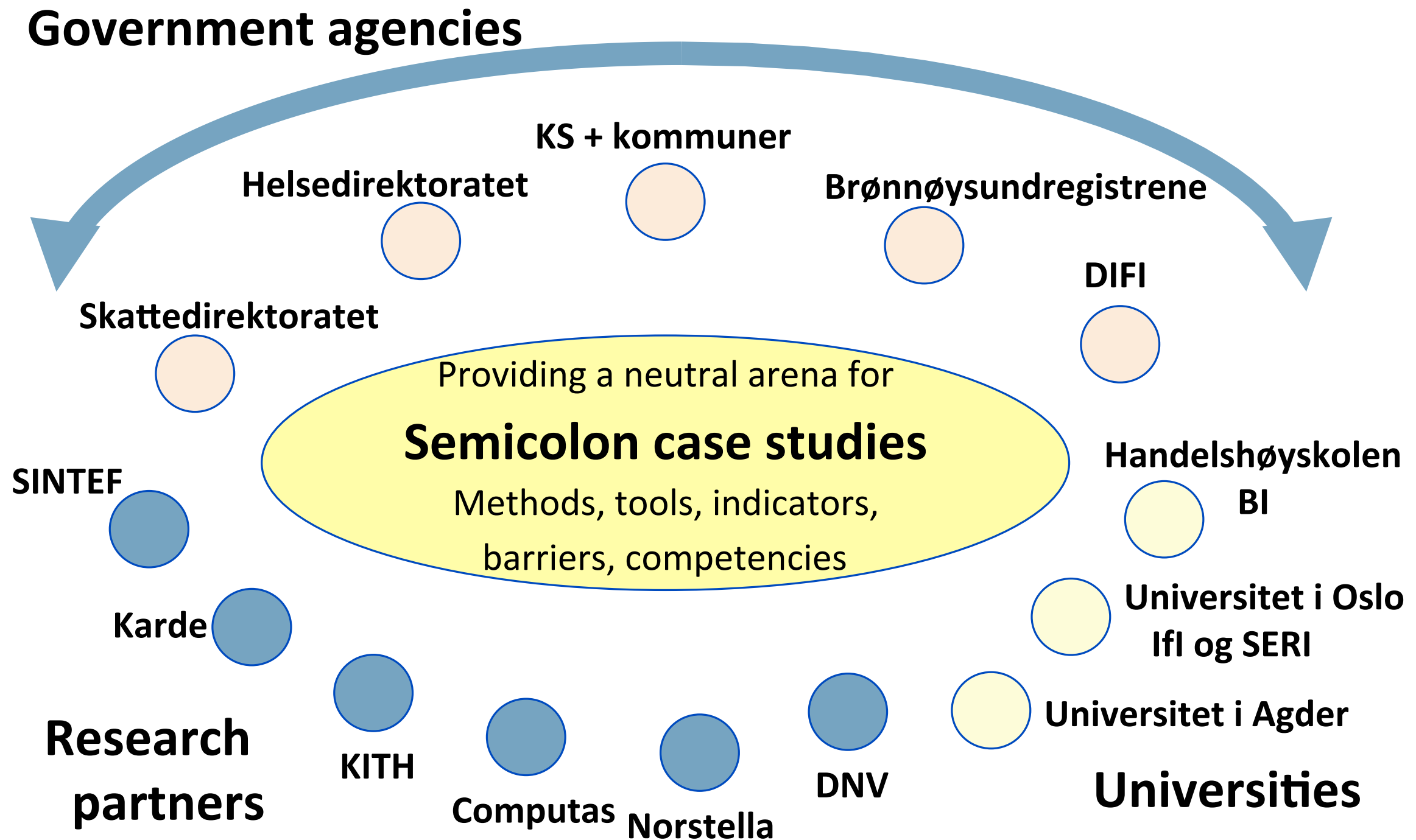
<http://www.semicolon.no/>

Interoperability in public government:

How legislation and running code should be connected

Erlend Øverby - Senior Advisor R&D, Standardization
Chair ISO/IEC JTC1/SC36 - Information Technology for Learning,
Education and Training

Semicolon project – organization



Semicolon

- Semicolon I
 - 2007-2010
- Semicolon II
 - 2010-2013
- A **neutral** ground for public government agencies to explore and get experience with challenges they will face in a 2-3 year timespan
- Explored:
 - Linked Open Data/Interoperability/Measuring eGovernment performance etc...

Semantics

- It is all about meaning and understanding
 - in our context how: to provide that meaning to computers.
- So that we can share information between systems
 - To develop better services for the citizens

We could assume that this is a phone number:

+47 90129642

We could assume that this is a time:

22:43

This one is harder:

We need to provide some context/meaning to be able to interpret the number correctly.

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Meaning

- Is basis for all communication
 - sharing of information and knowledge
- To know for sure what we communicate we need to know that the ones we communicate with understands our meaning, and how do we know?
 - By sharing a common language and vocabulary

Vocabulary

Term

Definition

Vocabulary

- To share information - to communicate - we need to have a common vocabulary
- To make meaningful exchange of information we need to know that what I get is what I expect, and what I understand
 - We need to know that we have the same encoding and decoding of the information we receive and transmit

How is this related to IT?

Interoperability

- To share information between IT systems, the systems need to be interoperable, they need to understand - to be able to process in a predictable way the information being shared, to process this information and produce expected results we need to know what type of information we receive
 - The semantic of the information
 - The information model

Types of interoperability

- Political
 - Goals and frame conditions are aligned
- Juridical
 - Legal compliance. Related to processes, actions, agreements, data exchange, data governance etc.
- Organizational
 - Goals, budgets, knowledge and processes are aligned
- Semantic
 - The meaning of exchange data is well understood.
 - Trust and quality in data.
- Technical
 - Communication protocols and security, exchange format

Public Sector

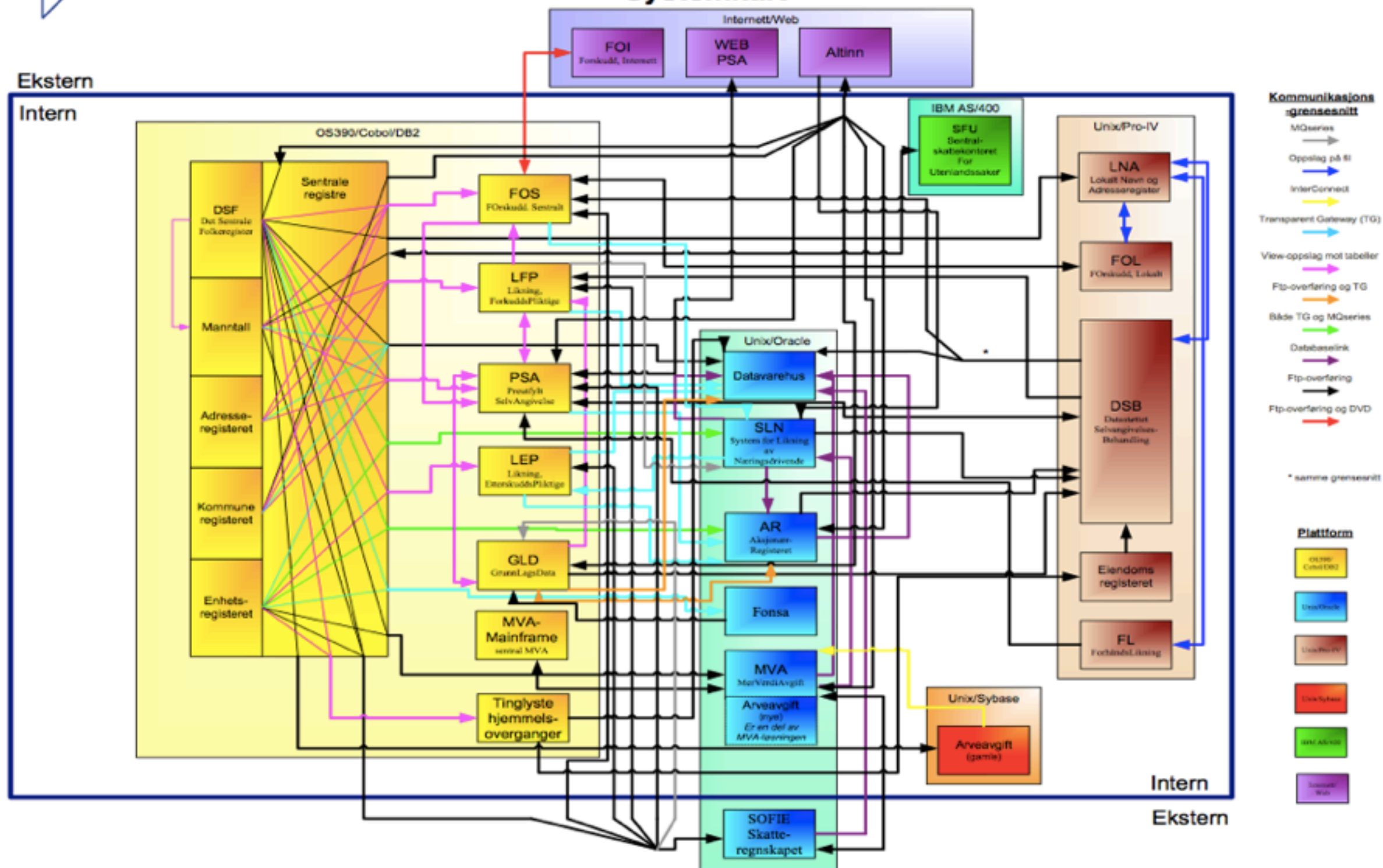
Is governed by rules and legislation

- Each government agency are mandated by its own set of rules, regulations and legislation
- Each government agency have its own set of criteria for governing their activities
- Each government agency are organized slightly different
- We have silos of information and responsibilities
 - In many cases - one agency is depending on information from another
 - Today this exchange is done by s-mail, email, phone



Forenklet modell av en del av IT-systemene... Skatteetaten

Systemkart



Government agency and IT systems

Governs how the agency work/
responsibilities etc

Implements the «Legislation»

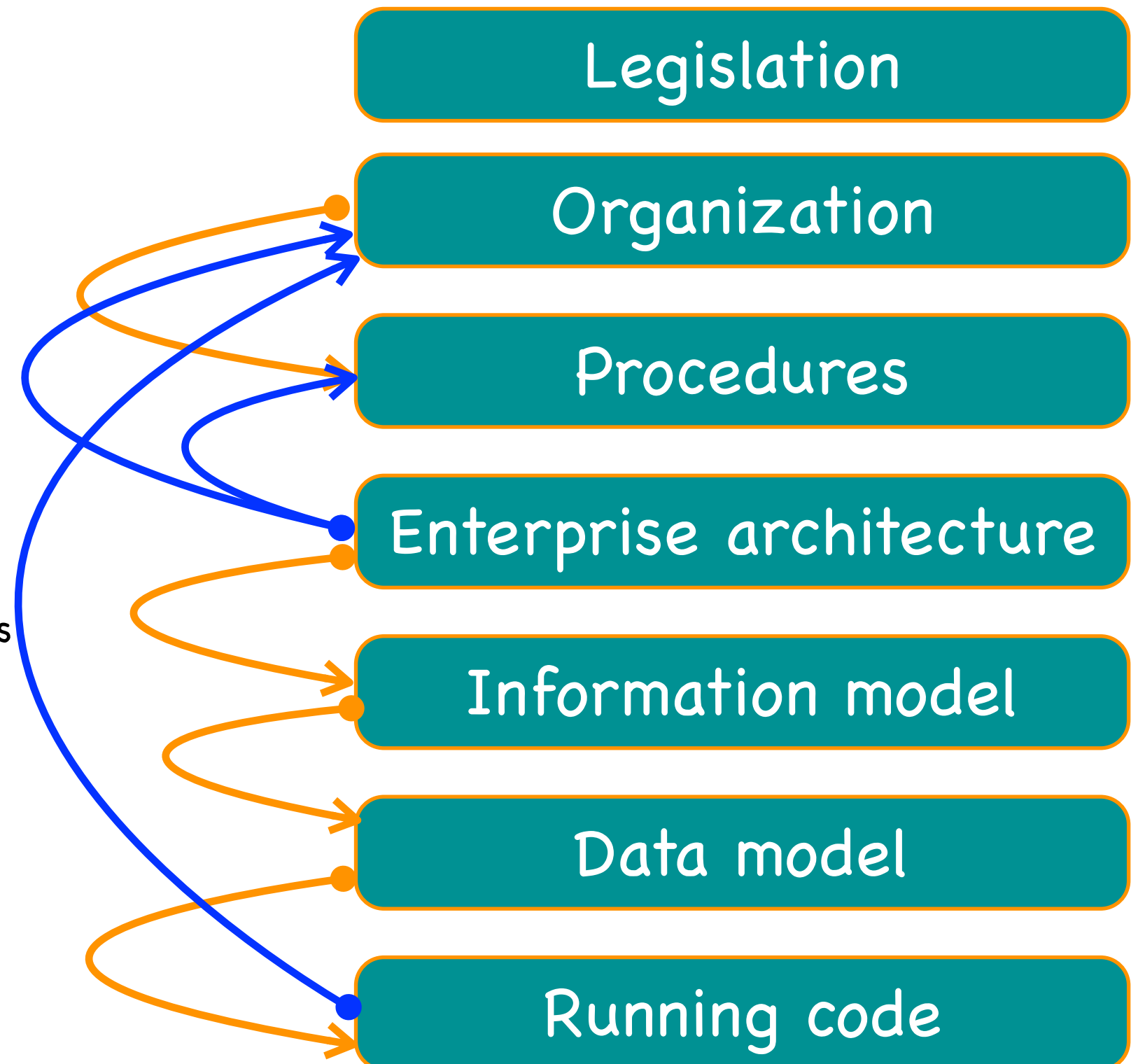
Org. have a set of procedures

Models the organization

IT-Systems supports

Informs

Realized by



The commonality

- Vocabulary
 - The words used in the legislation influences how IT systems should behave
 - The same term/definition to be used coherent through all levels
 - All levels **must** agree on the same understanding and definition

Legislation

Organization

Procedures

Enterprise architecture

Information model

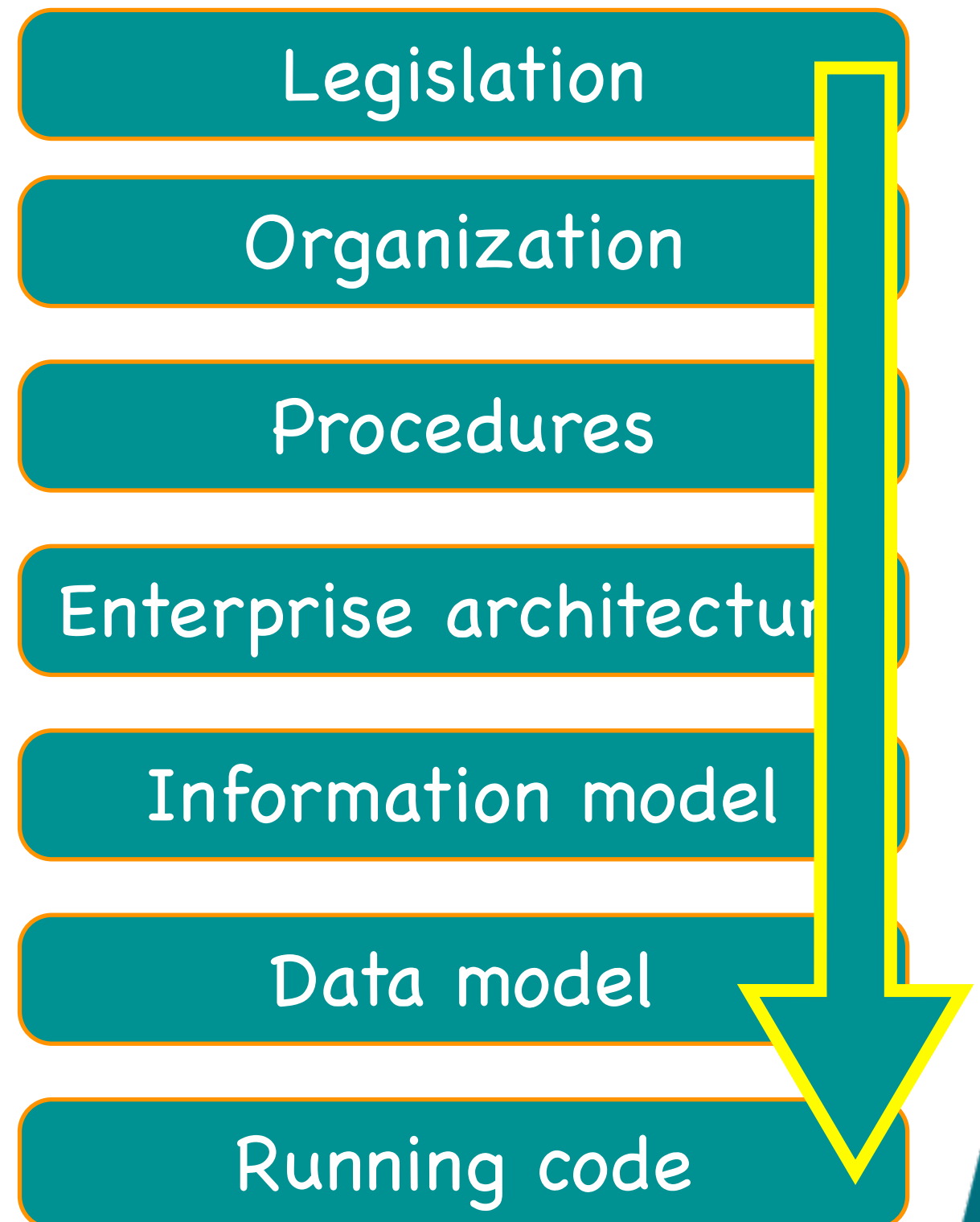
Data model

Running code



Connecting the code and legislation

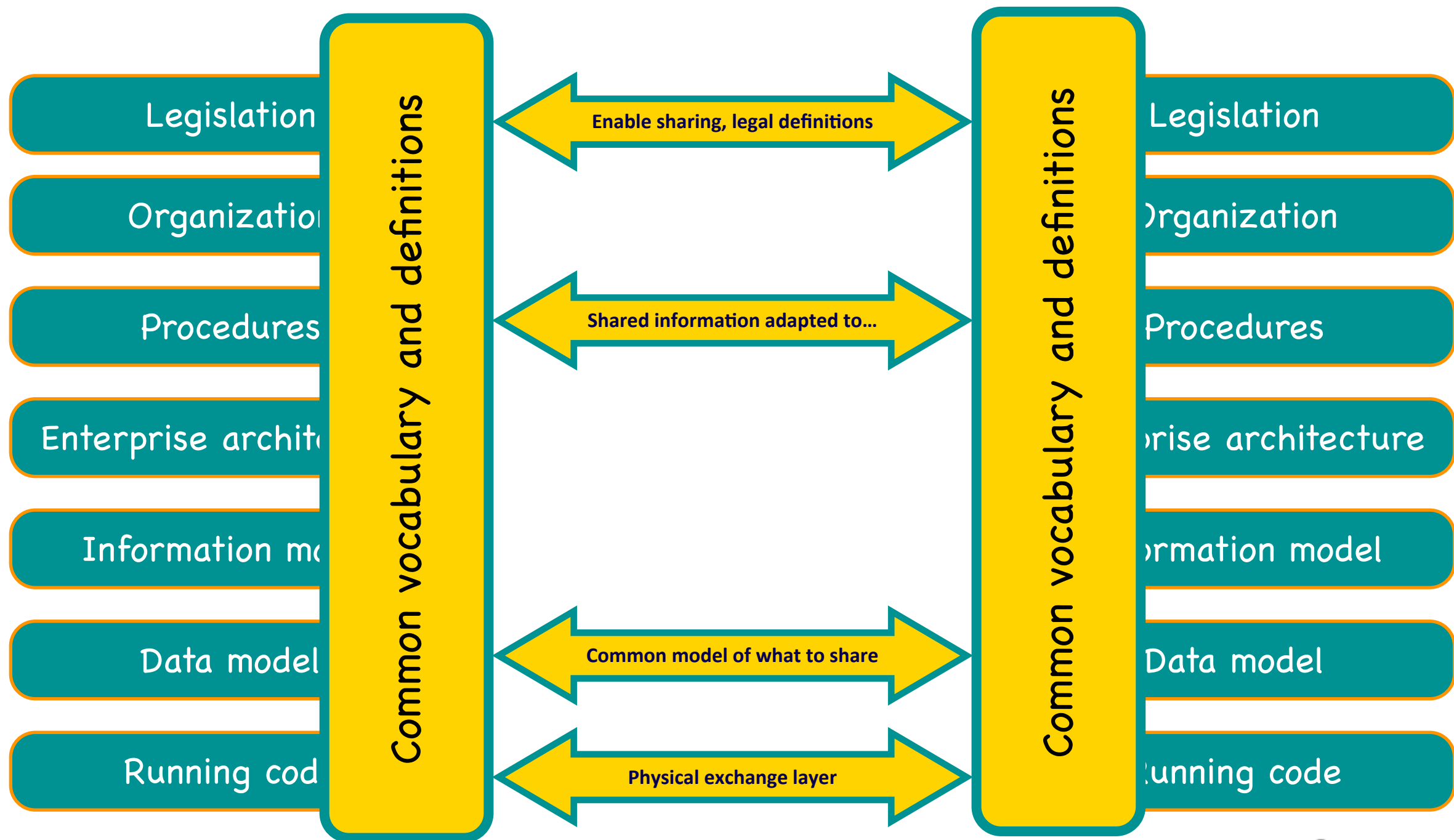
- This is not a stable system!
 - Legislation changes
 - Procedures changes
 - IT changes
- Still it need to be coherent
- Influenced by:
 - EU legislation
 - UN ratifications
 - Rulings in court
 - Changed practice due to complaints



Collaboration – sharing information

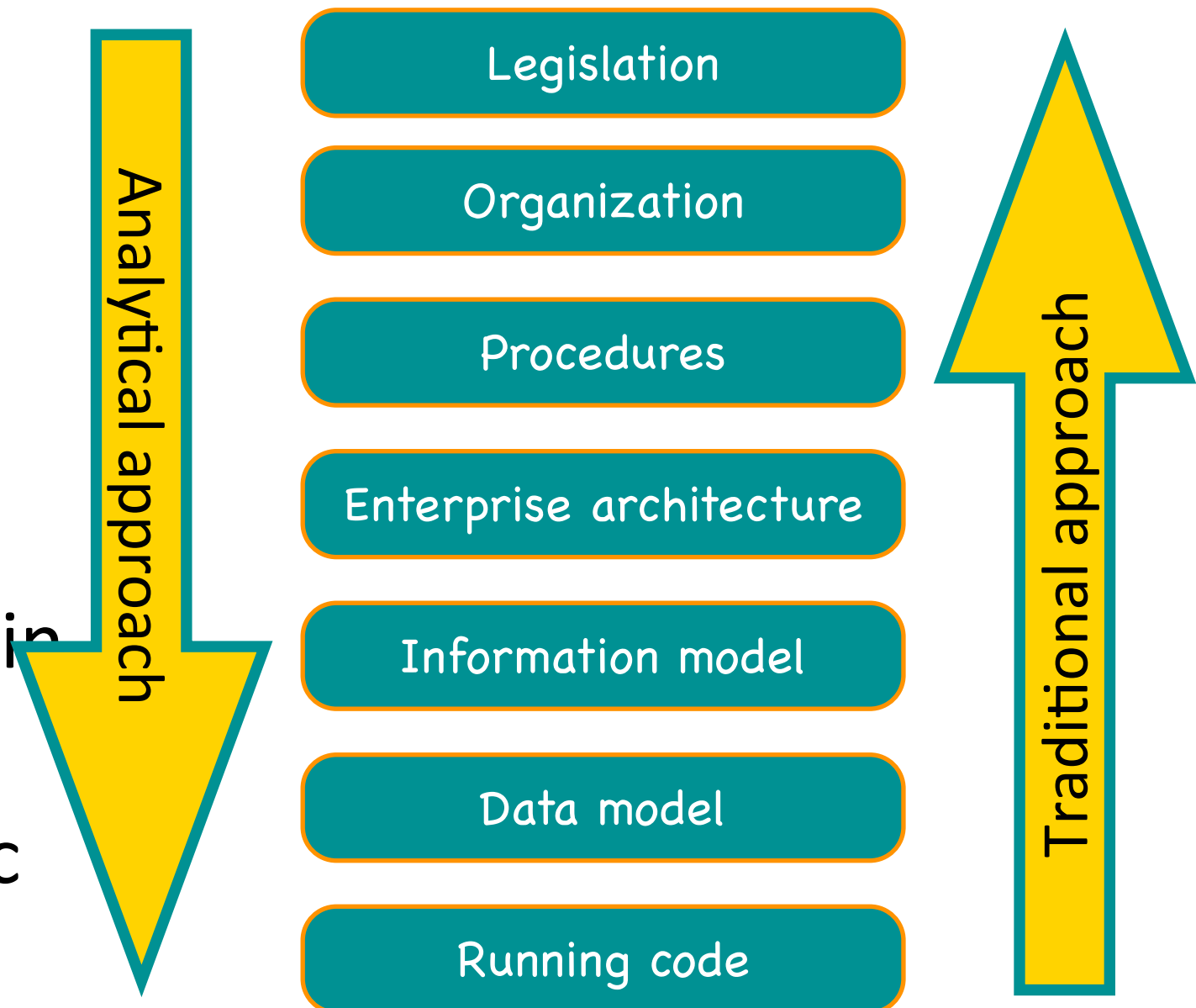
- To provide better on-line services, systems need to share information
- To make public sector more efficient, systems need to share information
- To enable a «digital first choice», systems need to share information
- To develop user centered services, systems need to share information

Sharing of information

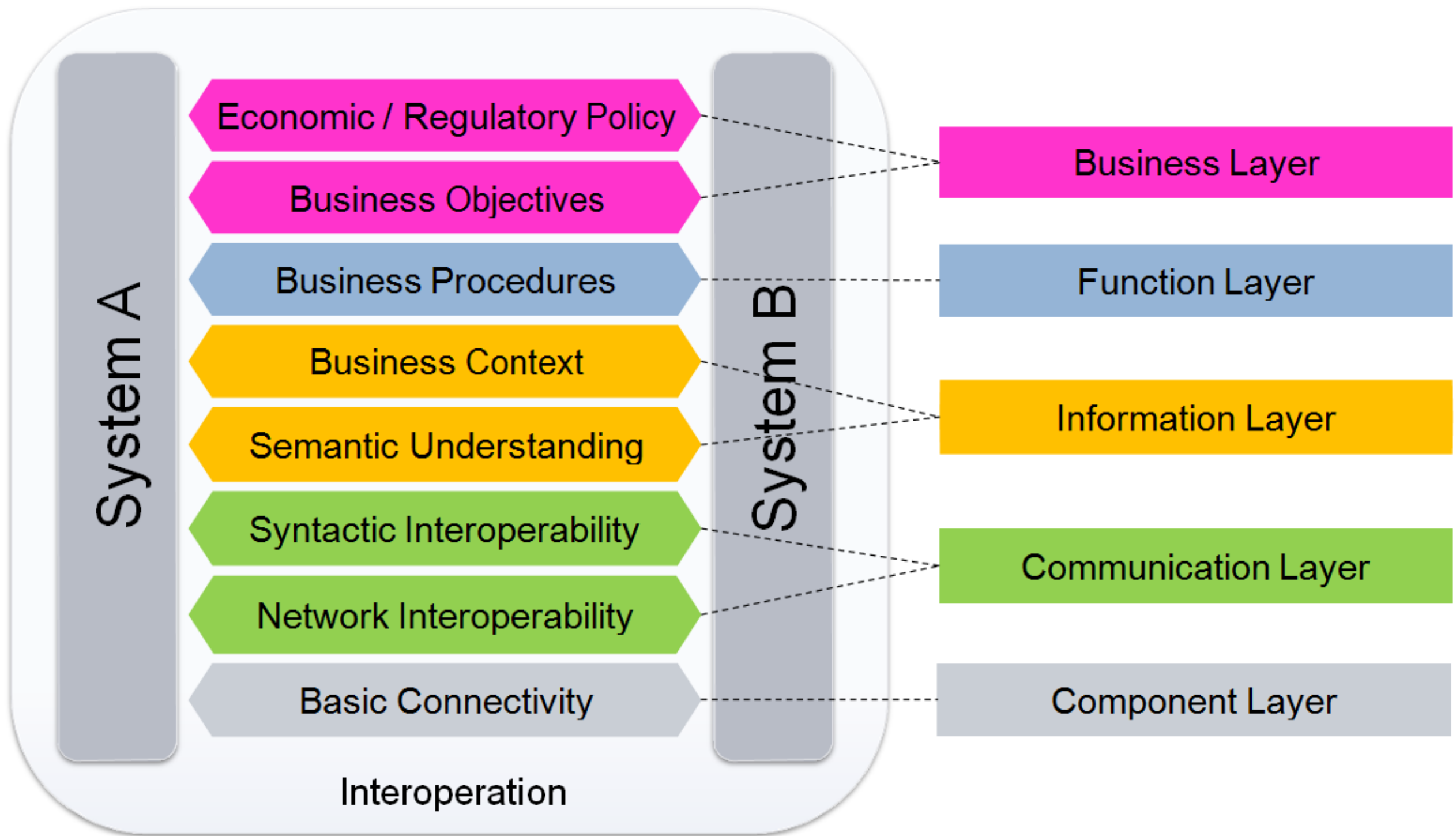


Today's practice

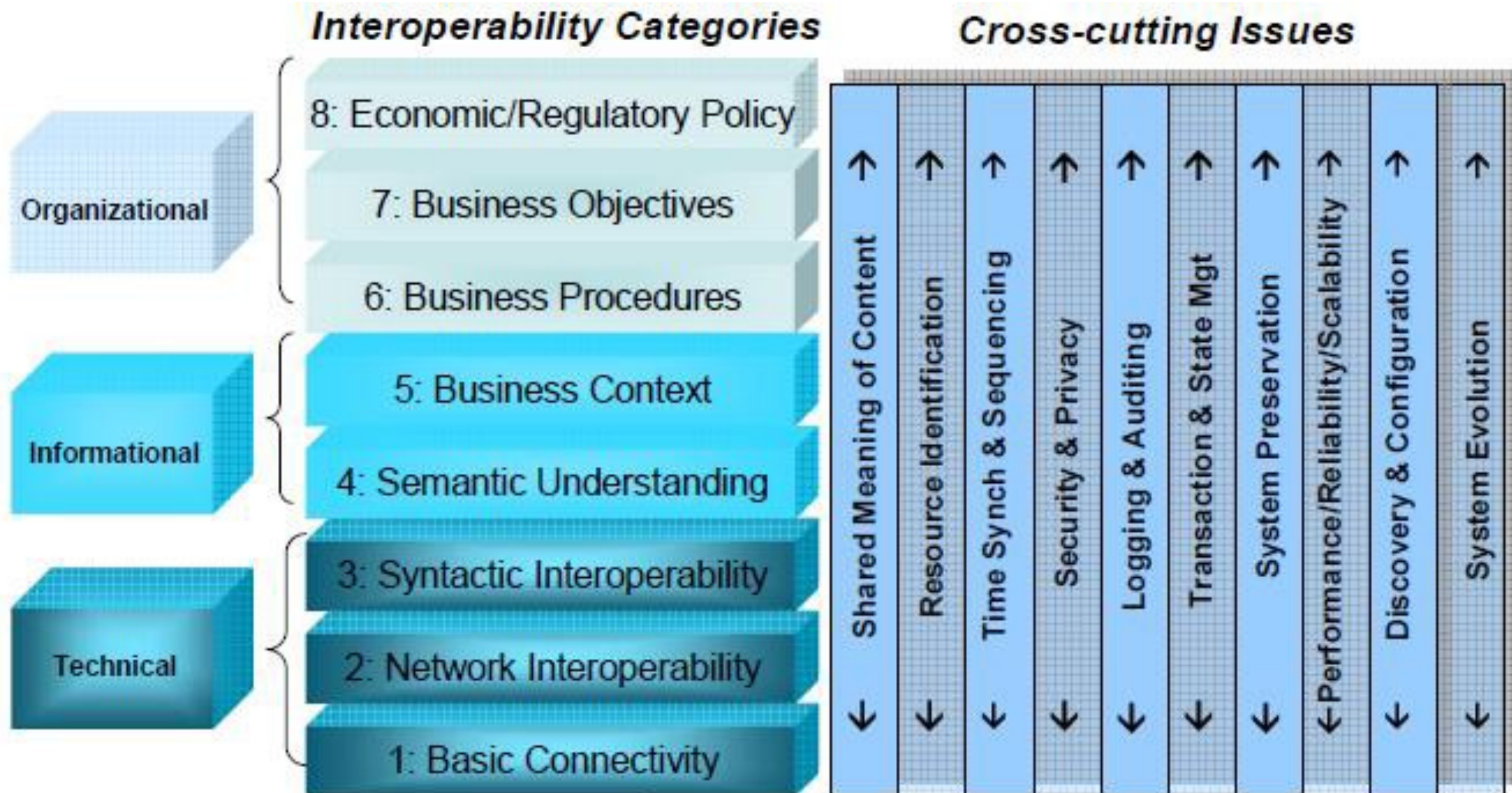
- We see everything as an IT problem
- Lack of analysis of problem domain
- Underestimating complexity of collaboration
- Lack of professionalism within IT industry
- Lack of competency in public government organizations



CEN/CENELEC-ETSI Smart Grid Reference Architecture



CEN/CENELEC-ETSI



Semicolon activities

- Establish a methodology for harmonizing legal definitions between legislation
- Establish a methodology for analyzes needed when starting a project for sharing information between governmental agencies (and others)
- Evaluate tools for managing vocabularies in and among organizations
- Semantic web technologies
 - How to use «Open Linked Data» technologies on open and closed information sources
- How to make aggregated health information available as a open data source.

Building blocks

- The small building blocks need to be available
 - A small tuft can topple a big load
- Need to establish a common registry of authoritative vocabulary and the information models that go with them
 - To ease sharing of information
- Need to realize that computers are connected, and that public services should reflect this, sharing of information between systems
- I as a citizen are interested in the service
 - Services and systems need to be closely integrated

Thank you

erlend.overby@karde.no
@erlendoverby

@karde_as