MANAGING RISK DNV

Semicolon

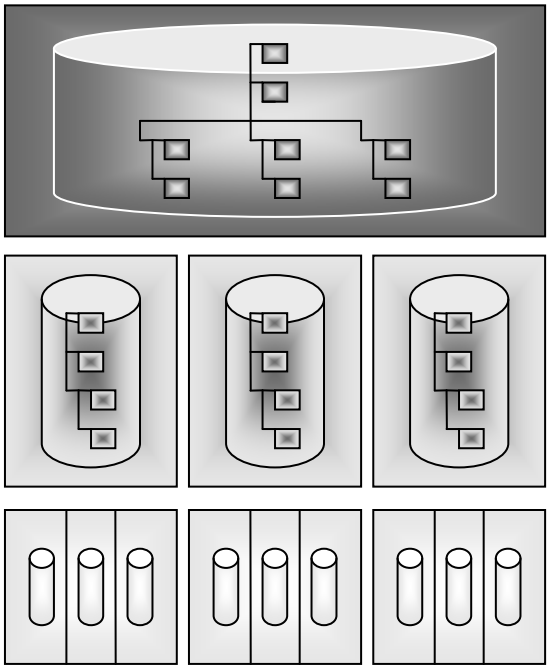
Semantic and Organisational Interoperability Issues in Public Sector in Norway

Terje Grimstad, Karde and Det Norske Veritas (Project manager)

1st forum on interoperability and applicative cooperation in e-government
Regione Marche and University of Camerino
Camerino, Itlay, 15th-16th October 2009

Background

Semantic and Organisational Interoperability in Communicating and Collaborating Organisations



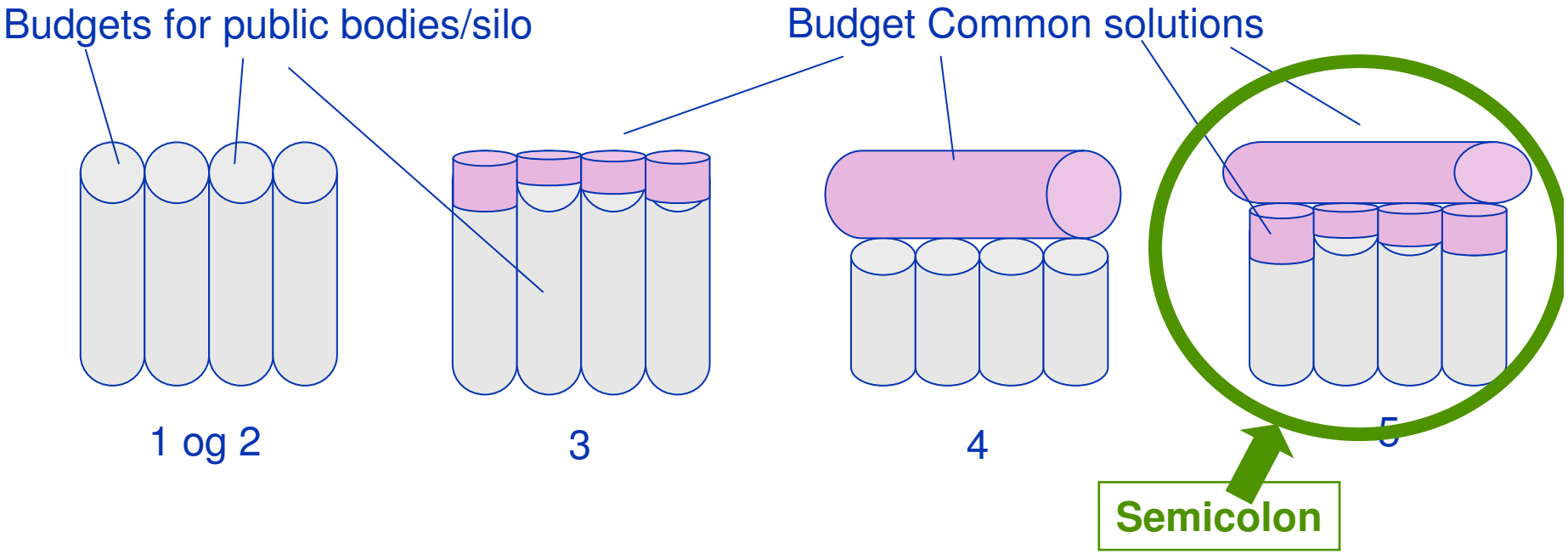
Public sector organisations

Collaboration between public sector organisations

Collaboration inside public sector organisations

Fragmented public sector: isolated information models

Management models – from FAOS-report



Management and budget model – stepwise development

1. Stovepiped budgets – talk about collaboration in management docs
2. Stovepiped budgets – requirements for collaboration in management docs
3. Budgets for common solutions in stove pipe budget
4. Budgets for common solutions administered centrally and distributed
5. Combination of 3 og 4

Source: Karl Olav Wroldsen, Tax

Semicolon, participants

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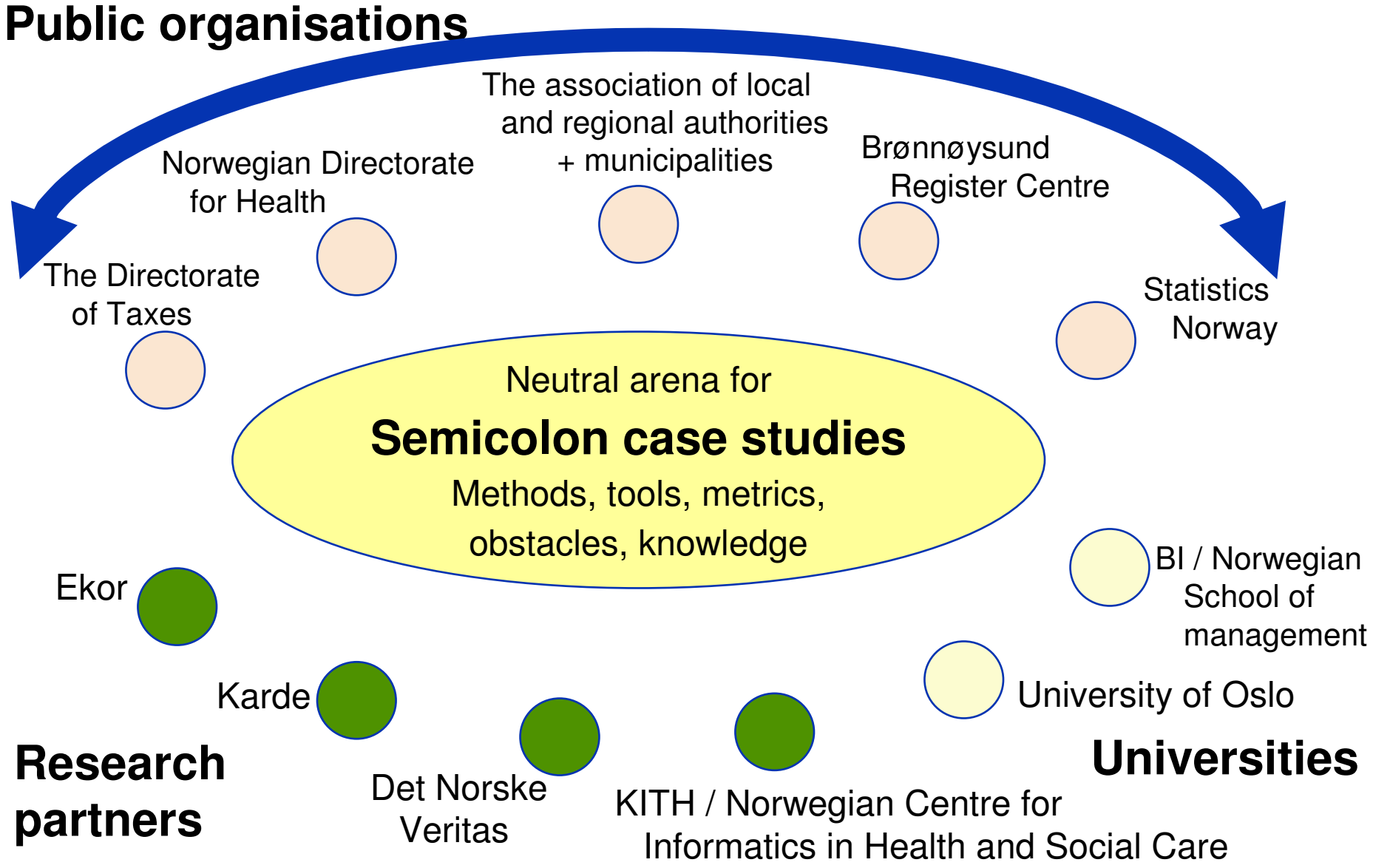

Goal of Semicolon

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- Develop and test ICT-based **methods, tools and metrics** to obtain faster and cheaper semantic and organisational interoperability both with and within the public sector.

- Establish a set of useful recommendations for public sector as an aid to increase interoperability
  - To be maintained by The Agency for Public Management and eGovernment (DIFI) and the **Council of Public Sector Standards**

Facts

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- **User directed innovation projects**
- **Verdikt-programme in the Norwegian Research Council**
- **Web-site: www.semicolon.no**
- **3 years, Oktober 2007 – December 2010**
- **3 postdoctors, 2 from UiO and 1 from BI**
- **Total budget: 7,5 mill euro (60 million NOK)**

- Financing from Research Council: 2,25 mill euro (17,65 mill NOK - 35%)
- Contributions from public sector (money): 1,25 mill euro (9,8 mill NOK)
- Contributions from public sector (labour): 4 mill euro (18,4 mill NOK)

- Contact person:
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    Tel: + 47 - 908 44 023

Semicolon cases

Cases, initiated by the public organisations

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- eDialogs: long lasting cross sector services to citizens and business
  - E.g in life cycle situations for persons:
    - Birth, death, move to another country, the never ending taxing regime
  - E,g in life cycle situations for companies
    - Foundation of a new company, the never ending taxing regime
- Metadata model
  - The use of meta data for internal and external purposes
  - Establishment and use of a common component for semantics for service development, systems development and modernisation of systems
- Open data and metadata i eGovernment
  - Which organisations in Public sector has what information
  - To ensure the reuse of Public Service Information (PSI), both for internal cross sector purposes, but also for commercial purposes
    - Market value of PSI in Europe is €27 billion

Sub-projects, initiated by the research group

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- Measuremets and metrics
  1. Organisational stage and growth model
  2. Organisational obstacles and drivers
  3. Semantic growth model, obstacles and drivers
  4. Cost/benefit analysis and metrics
- Business model for public sector
  - (tightly connected to Open Data and Metadata)
- Social networks and eGovernment, web 2.0, twitter, facebook
- Semicolon-method, input og consolidation from all cases
  - Generel metod for the establishment and imrovement of collaboration
  - Public sector as test bed

Some snapshots

Organizational barriers to interoperability: Norwegian case study

Dr. Riitta Hellman

Senior adviser R&D

Karde AS, Oslo, Norway

Eighth international EGOV conference

Linz (Austria), August 30 - September 3, 2009

Motivation, or snapshots of the “big picture”

- **IDABC: European Interoperability Framework:**

  “RECOMMENDATION 3: Setting-up eGovernment services at a pan-European level requires the consideration of interoperability issues with regard to organisational, semantic and technical viewpoints.”

- **United Nations e-Government Survey 2008: From e-Government to Connected Governance:**

  “Striking a new balance between hierarchy and flexibility, between vertical and horizontal dimensions of accountability is the nexus of technological and organizational interoperability and innovative leadership.”

- **Professor Jeremy Millard:**

  “The promise of (e)governance: achieving balance: Interoperability (top-down) vs. innovation (bottom-up) is the most difficult balance of all; it is not just technical but much more organisational and political…” (e-Society, Barcelona, 2009)

Examples of barriers (1)

1. Leadership failures.
2. Financial inhibitors.
3. Digital divides and choices.
4. Poor coordination.
5. Workplace and organizational inflexibility.
6. Lack of trust.
7. (Poor technical design.)

[12] R. Eynon & H. Margetts

Examples of barriers (2)

1. Administrative interoperability, containing conflicting, exclusive or overlapping jurisdictions and accountability.
2. Legal interoperability, meaning different legal regimes with conflicting rights and obligations, e.g. in relation to privacy and safety regulations.
3. Operational interoperability, i.e. different working processes and information processing, routines and procedures.
4. Cultural interoperability, addressing conflicting organizational norms and values, communication patterns, and grown practices.
5. Etc.

[13] V. Beckers

Semicolon findings

1. Competency gap.
2. Lack of measurables
3. Money talks
4. The absence of national joint efforts
5. Archipelago of small uncoordinated project islands
6. Disharmony in legislation
7. Anaemic arenas
8. Invisible best practice
9. People and their leaders; some people do nor want to cooperate
10. Ubiquitous heterogeneity; unequal levels of competency in general and digital literacy in particular

1. Competency gaps (!)

- Knowledge of own or others' business processes is low.
  Modelling of business processes has not taken place.
- ICT suppliers' knowledge of the business processes in public organizations is truly poor.
- Digital illiteracy and resistance against new applications of ICTs reduce the ICT potential including interoperability.

2. Lack of “measurables”

- Instruments for measuring organizational interoperability are missing.
  (This has negative impact on both planning, execution and evaluation of organizational interoperability.)
- Economic indicators which describe the effects of successful interoperability are missing.

3. Money talks (!)

- Governmental departments and agencies operate according to a strict fiscal sector principle without interoperability considerations.
- The letters of allocation from the government to the sector departments do not instruct the departments or the governmental agencies to spend money on interoperability actions.
- Costs of initiatives for increased collaboration are placed in one department or agency, and if the immediate benefits appear in another.

Cure (examples)

- Competency measures within process modelling and uses of ICTs.
- Development of indicators and barometers for measuring organizational interoperability.
- Fiscal measures for dedicated funding of interoperability projects.
- Establishment of large ICT-projects with cross sector participation.
- Catalogue/database on previous and current ICT-projects and appointment of coordinating project officer(s).
- Catalogue/database on best practice within formal contracts, project management, design of interoperable systems and services.
- Actions for organizational alignment (organization development projects).
- Governmentally organized and financed innovation projects.
- Financial support for interoperability actions (governmental financing).

Metadata model

Characteristics of a public organisation

- Strategies are also about collaboration with others, national and international
- The Office of the Auditor General in Norway is commenting on the lack of collaboration in public sector (Dok 3:12, 2007-2008)
- Quality challenges in the production
- Capasity challenges (claim: ICT is under staffed and under financed)
- Huge maintainance costs
- Stove-pipes inside large public organisations and externally between organisations

Motivation

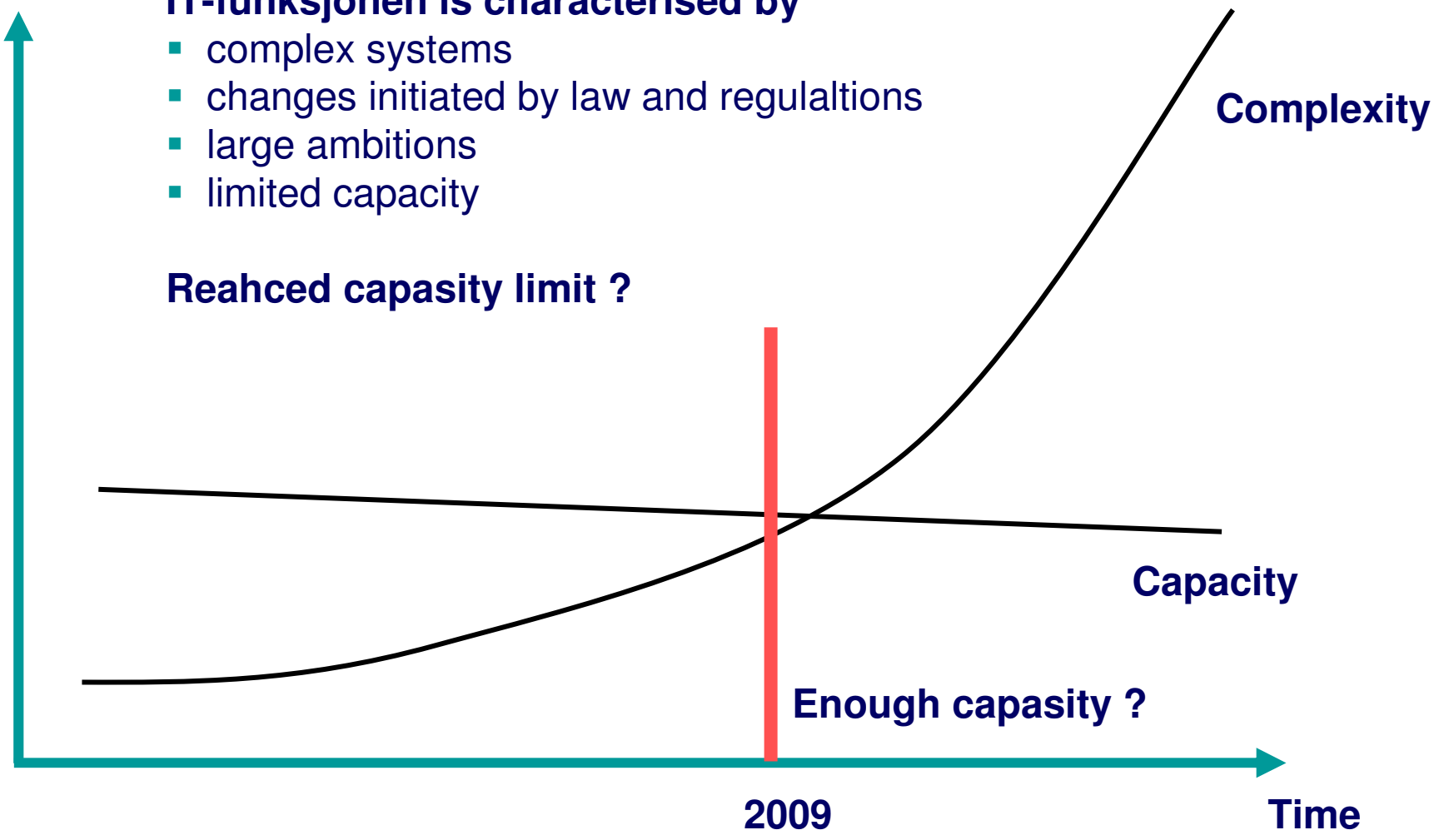
- Keep order in own house
- Not adequate overview of own systems
- Overview is necessary to implement changes decided by laws inside given time limits
- Prepare for improvements in the present way of working
- Efficient and effective service development
- Exploitation of national metadata register for
  - Service development
  - Systems development
  - Systems modernisation
- Work smarter; more effective and efficient

Complexity and capacity

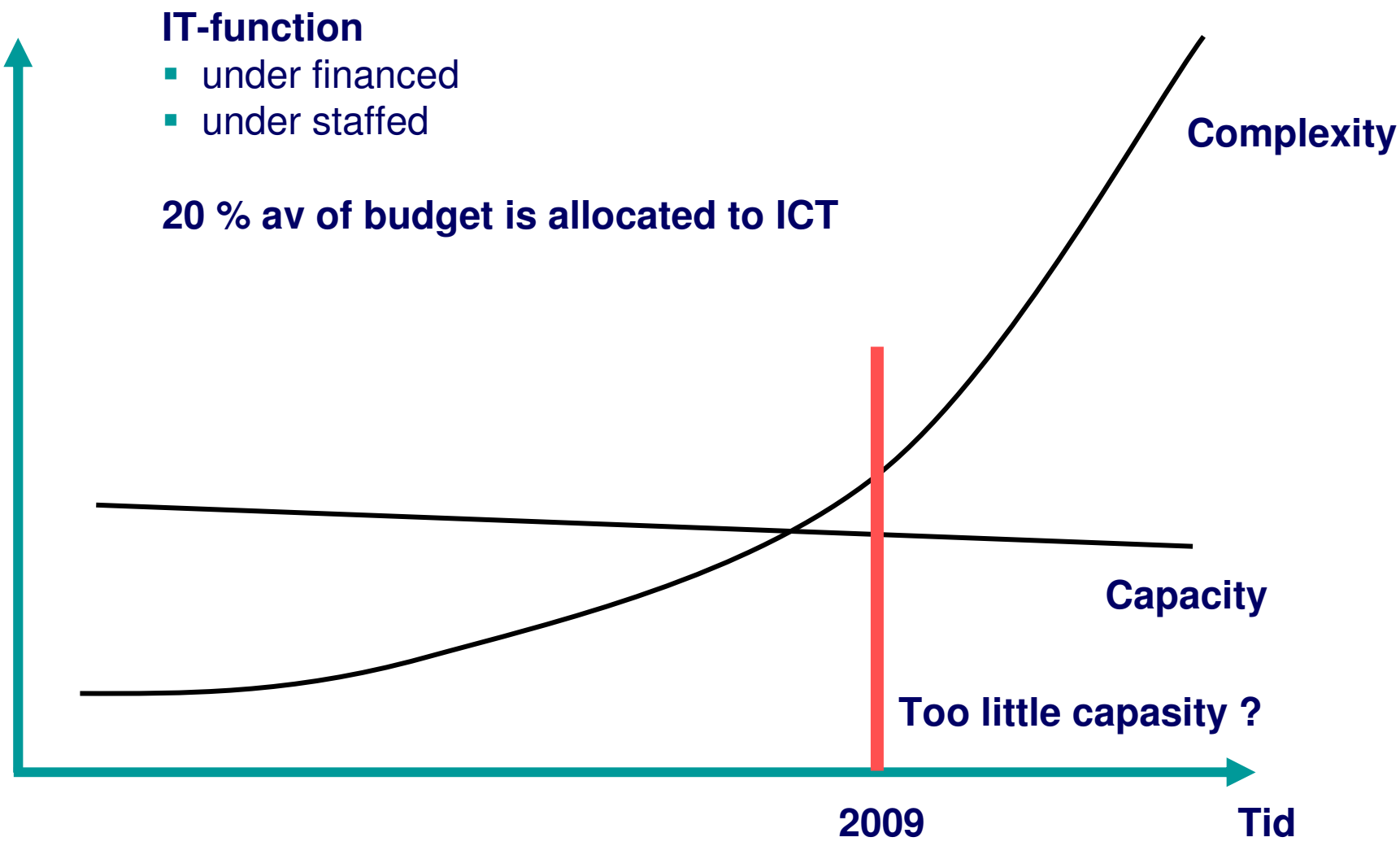
IT-funksjonen is characterised by

- complex systems
- changes initiated by law and regulaltions
- large ambitions
- limited capacity

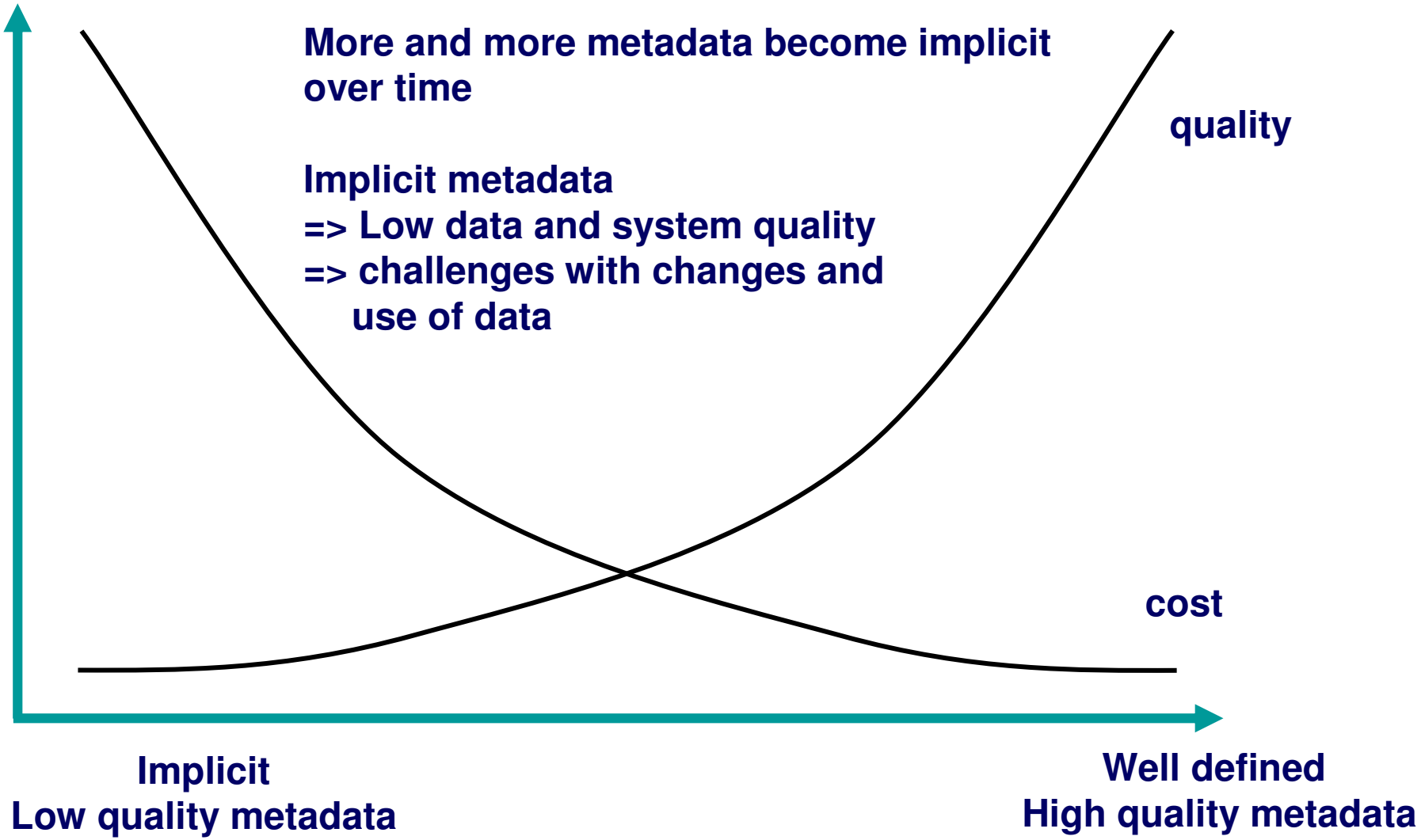
Reahced capasity limit ?



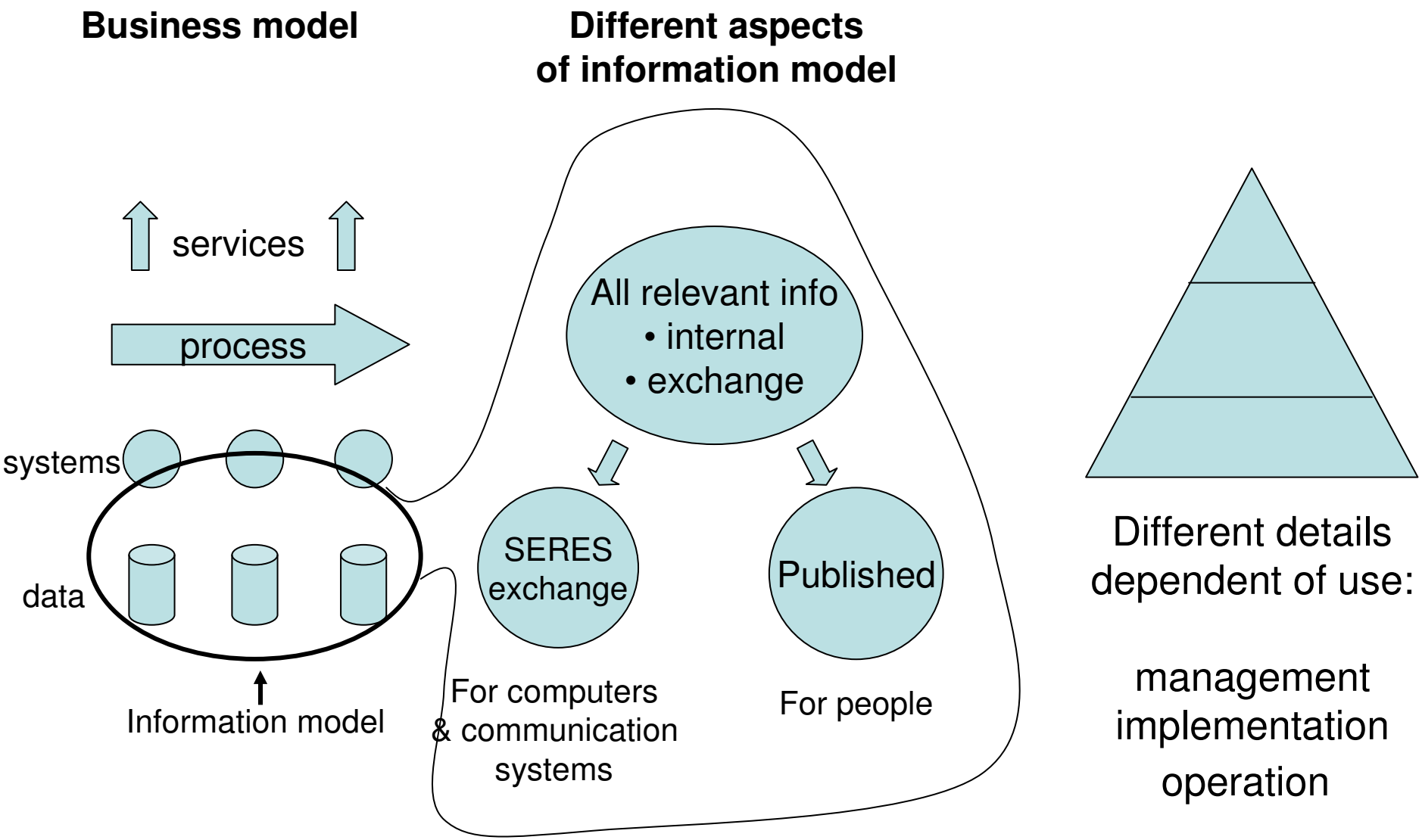
Complexity and capacity



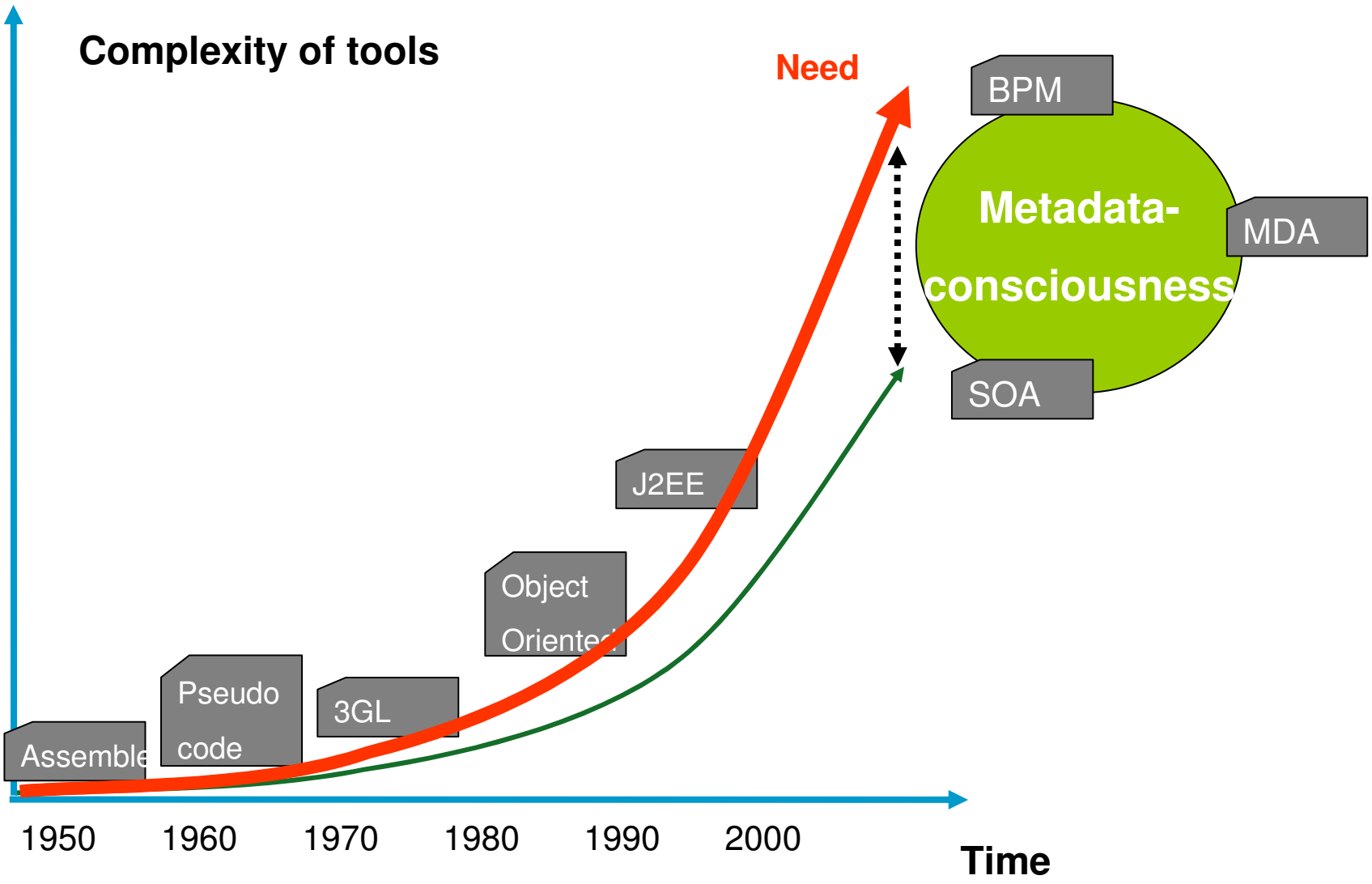
Well defined metadata: reduced costs, increased quality



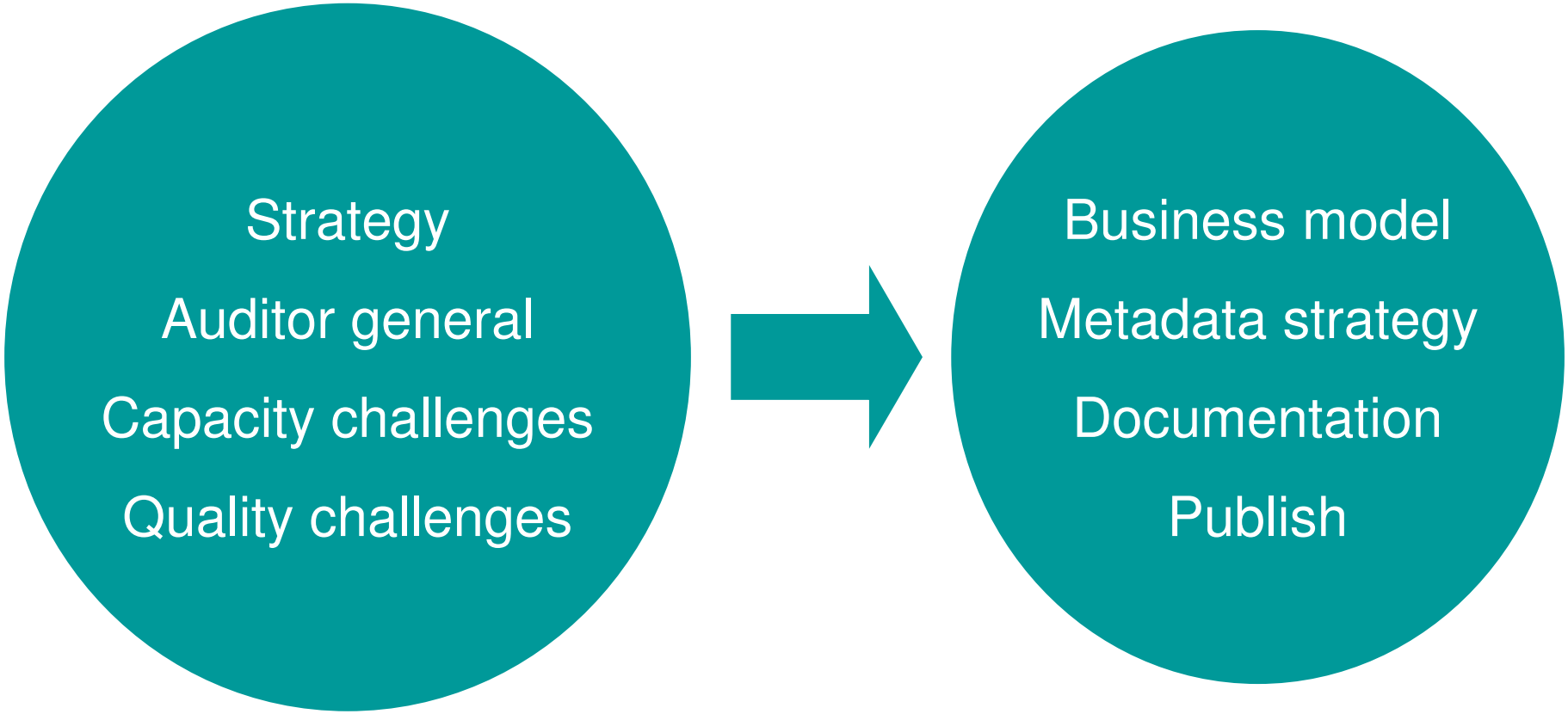
Connection between models



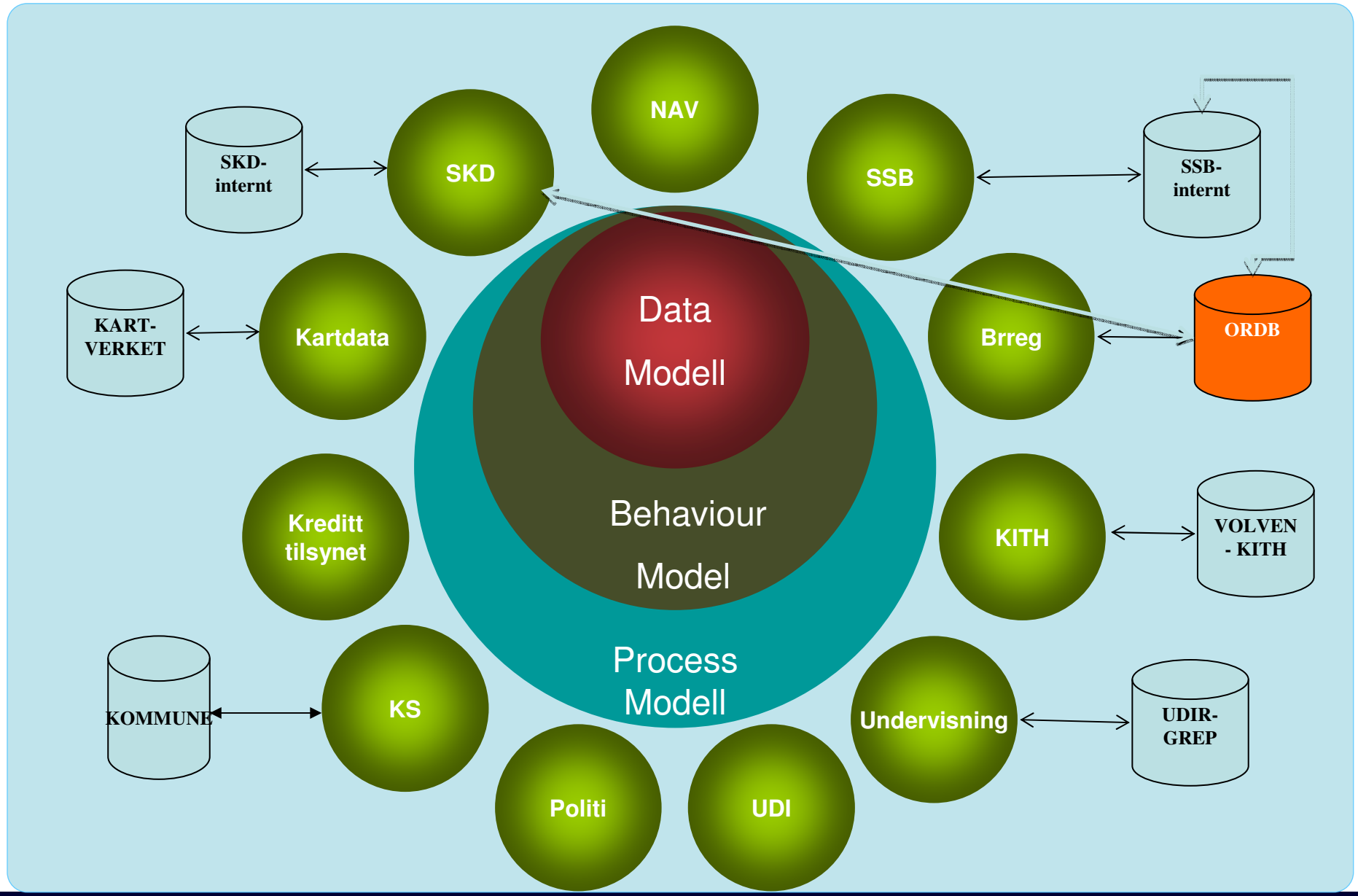
Why metadata: ”No silver bullet”



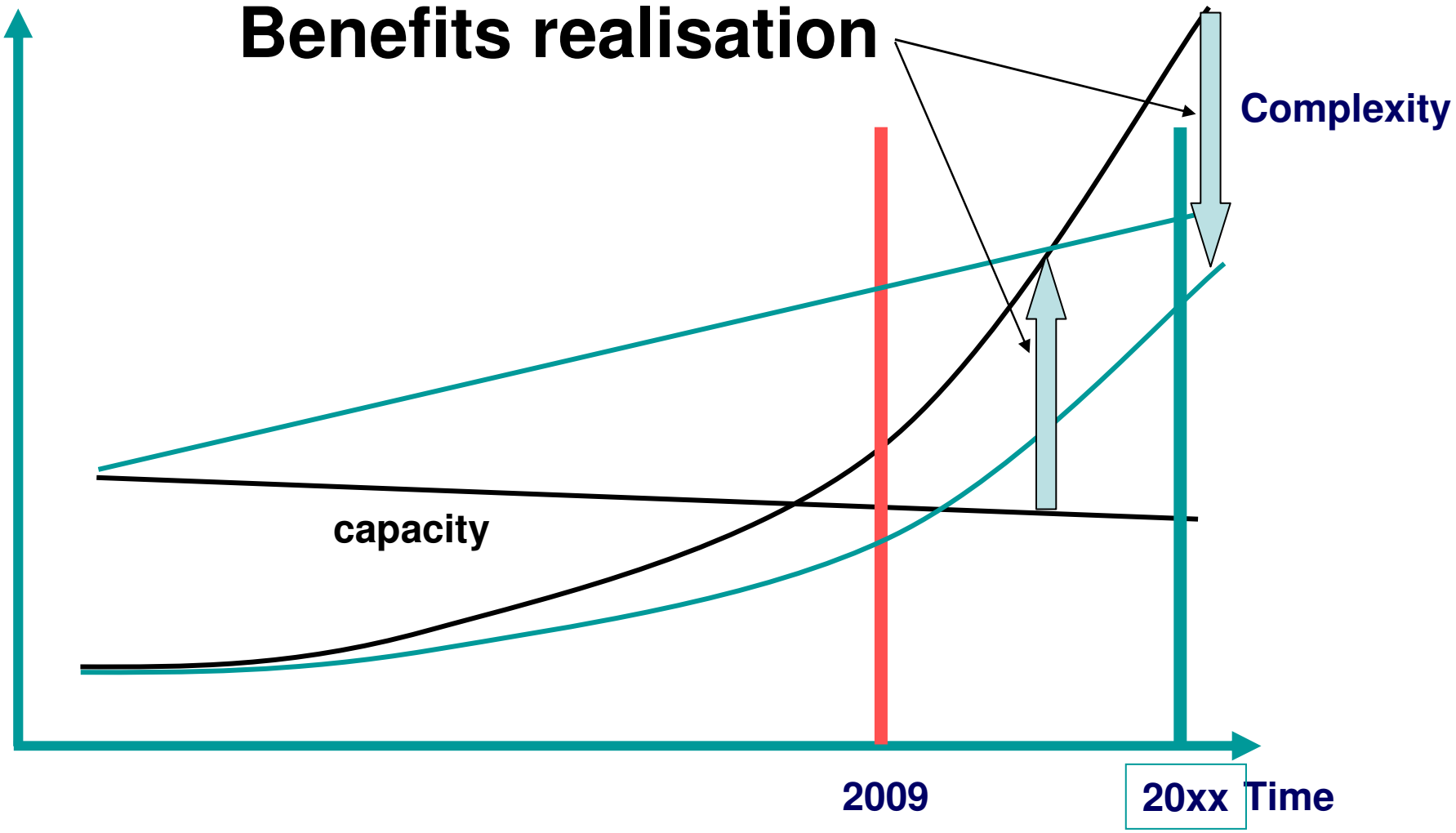
Keep order in own house



National metadatamodel: collaboration and communication



Complexity decreases and capacity increases



Future research

Topics for more research

Social sciences, politics and macro economy

- The development of society as a fuction of the development of public sector
- The impact og interoperabilty on the development of public sector and society as a whole

Legal aspects

- The emphasis of laws and regulations on interoperability inside public sector and interoperability between public and private sector. There is a need for tools support to increase the ability to make a coherent set of laws and regulations.

Measurements and metrics

- The emphasis of laws and regulations on interoperability inside public sector and interoperability between public and private sector. There is a need for tools support to increase the ability to make a coherent set of laws and regulations.

Topics for more research

Organisational issues

- The importance of organizational aspects, governance, competence and understanding, strategies and leadership, since organizational interoperability can be seen as an important enabler of all interoperability, semantic as well as technical. Common goals and practical agreements have to be in place before any collaboration can take place.

Obstacles and drivers

- Analyses of organizational, semantic and legal obstacles to interoperability in order to improve methodologies for interoperability.

New social media

- The role of new social media such as Google wave, Twitter, Facebook, Youtube, Linkedin (Web 2.0) etc. for professional use, and in this context arising interoperability issues.

Thank you to the Region of Marche and the University of Camerino for organising this interoperability event.

Thank you for your kind invitation.

Thank you for your attention.