

ANALYTICAL FRAMEWORK FOR eGOVERNMENT INTEROPERABILITY

Hans Solli-Sæther, PhD
BI Norwegian School of Management

- Government agencies face different challenges, expectations and goals with interaction based on their maturity level
- Traditional economic considerations are not sufficient to measure the benefits of eGovernment projects across agency boundaries

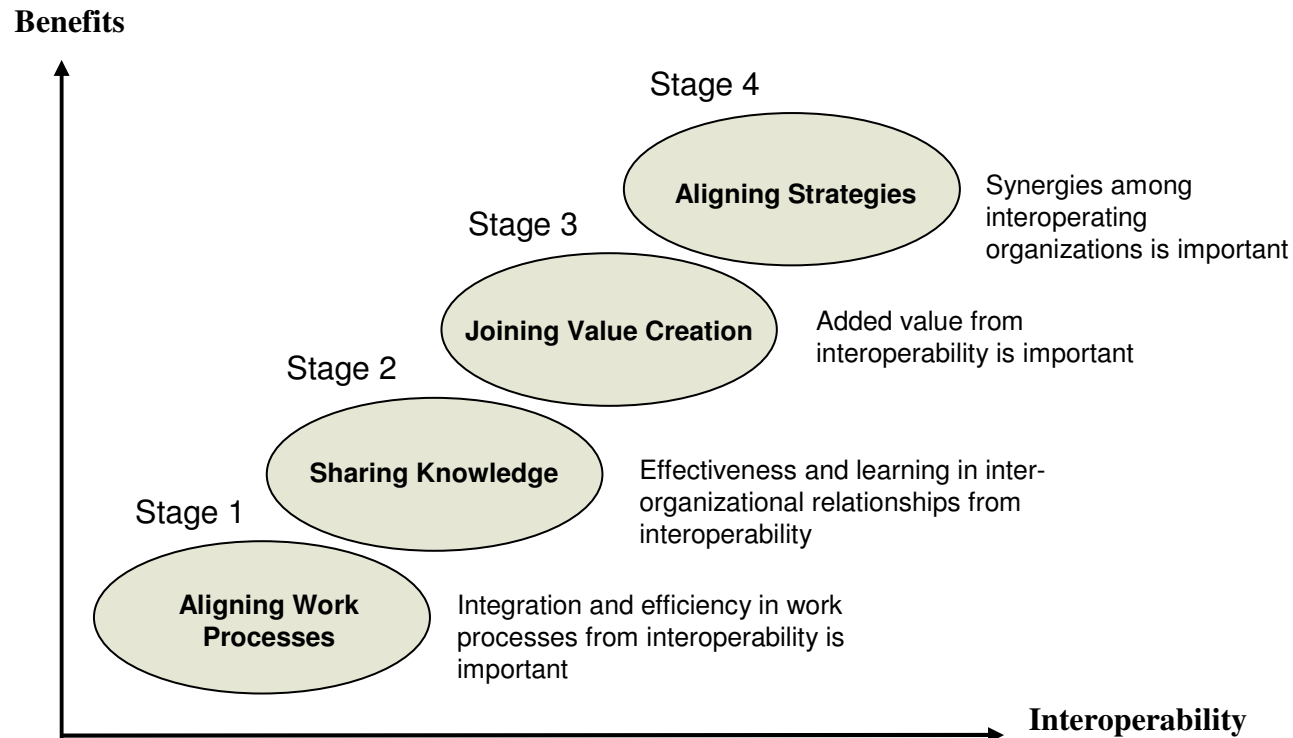
How does eGovernment interoperability mature and evolve?

What is the potential impact of eGovernment interoperability?

- Two eGovernment research case studies in Norway

Government organization	Focus area	Services involved	Start of cooperation	Users
The Norwegian Tax Authority, Norwegian Directorate of Health, Norwegian Centre of Informatics in Health and Social Care	Notification of births from hospitals to the National Registry	Birth message, choice of name, personal number	2008	Hospitals, the National Registry, parents
The Norwegian Tax Authority, The Brønnøysund Register Centre, Statistics Norway	New information portal	Tax, VAT, salary and account, annual reports	2002	Unique citizens, companies and enterprises, public agencies

- Total of 12 interviews with questions addressing: e-services, dominant problems, benchmark variables, description of evolution, the economies of interoperability





- Common work processes between partner agencies is clearly defined
- Some activities carried out in an agency and other activities of another agency
- Efficient production requires integrated activities and forms of electronic or physical data exchange between systems
- Data specified on the specific areas

- Agencies show their ability and willingness to share knowledge and learn from each other and are thus important for innovation and renewal of public sector
- Agencies devote resources to defining best practices, metadata, methods and technical standards for infrastructure, systems and data exchange
- Bilateral exchange of knowledge requires the meeting places and support knowledge management systems

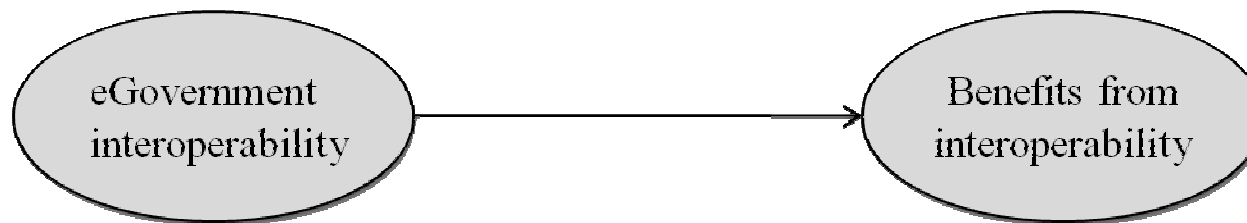
- Establishment of joint value creation logic is fundamental to creating value
- Common information models and service directories are necessary for development of shared services for common customers
- Agencies are willing to incur costs even if the greatest benefit is created by another agency

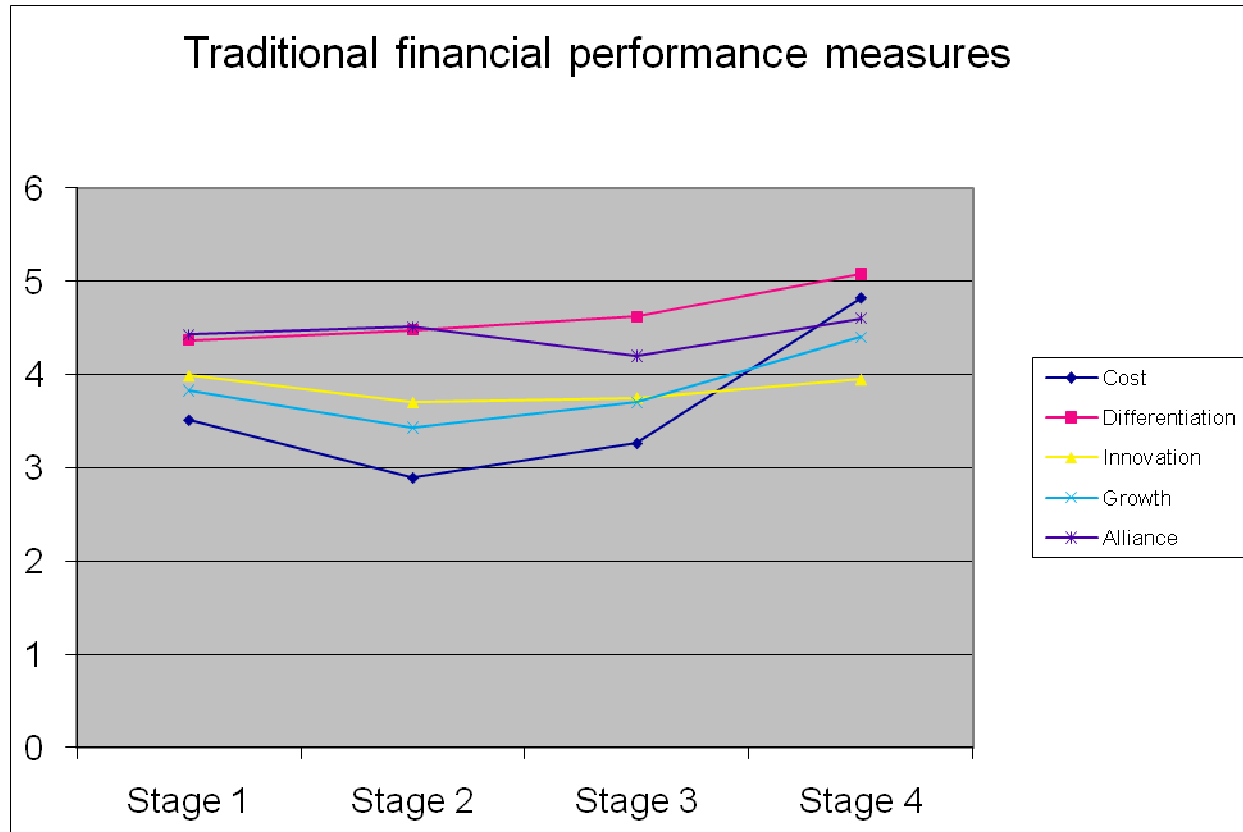
- Joint strategic positioning requires political consensus and common goal
- Joint funding of projects and the adaptation of rules helps to create an economic benefit

<i>Stage Benchmark area</i>	Aligning Work Process	Knowledge Sharing	Joining Value creation	Aligning strategies
Organizational interoperability	Efficient operation requires integration of activities and schemas (B) (A)	Best practices (A) Real-time knowledge transfer (A) Change of organizational culture	Cross-agency value configuration New services based on business cases Inter-organizational control mechanisms and trust	Political decision-making Socio-economic benefits
Semantic interoperability	High degree of specificity and common data definitions in certain areas (B)	Meta data specification (A) Knowledge management system	Service catalogues Information models	Adaptation of laws and regulations Business models
Technical interoperability	Physical or electronic data exchange among separate applications (B) Closed systems (B)	Common architecture (A) Technical standards (A)	Joint application development Common databases Information security (A)	Joint financing

(B) = Notification of birth, **(A)** = New information portal

Cooperating agencies creates more value when work processes are coordinated, shared knowledge, value creation is shared and strategies are coordinated





(*) Pilot survey conducted Nov-Dec 2009 among government agencies, hospitals and municipalities

<i>Maturity level</i>	<i>Benefits</i>	<i>Indicators</i>
Aligning work processes	Integration and effectiveness in work processes	Financial gains Reduced administrative burden
Knowledge sharing	Effectiveness and learning in inter-organizational relationships	Better empowered employees Better organisational and IT architecture
Joint value creation	Added value from interoperability	Increased user value and satisfaction Better public services
Strategic alignment	Synergies among interoperating organizations	Openness Transparency Participation

- The study suggests a multidimensional analytical framework incorporating organisational, semantic, and technical interoperability
- Investments in e-government interoperability improve value for government agencies, businesses, and citizens, but traditional performance measures are found difficult to use in measuring the success