Service Orientation for Service Innovation in eGovernment

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The vision of a service-oriented world

- Automated B2B commerce
- Electronic trading marketplaces
- Business process outsourcing and integration on the Web
- Resource sharing, distributed computation

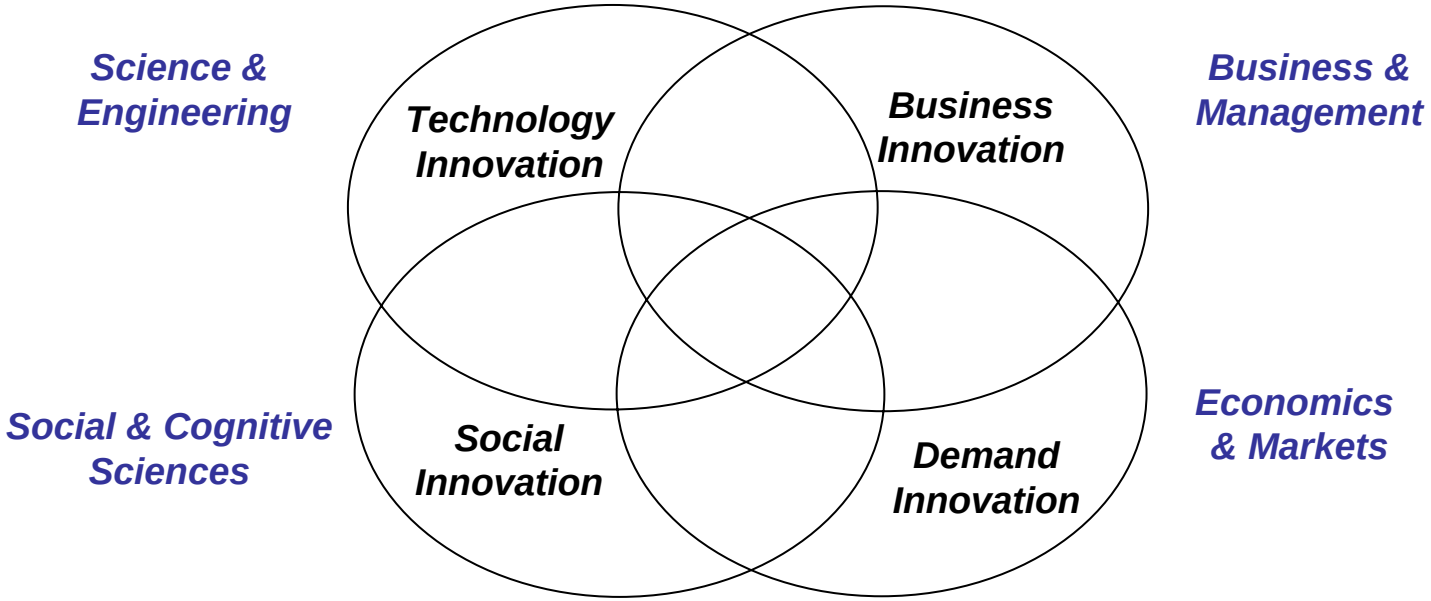
Services Sciences, Management, and Engineering (SSME)

- The application of scientific, management, and engineering disciplines to tasks that one organization beneficially performs for and with another ('services')
  - Understand the evolution and design of service systems
  - Make productivity, quality, compliance, sustainability, and innovation rates more predictable
  - Services are value coproduction performances and promises between clients and providers
- **Science** is a way to create knowledge
- **Engineering**: a way to apply knowledge & create new value
- **Management** improves process of creating & capturing value

Source: IBM 2006

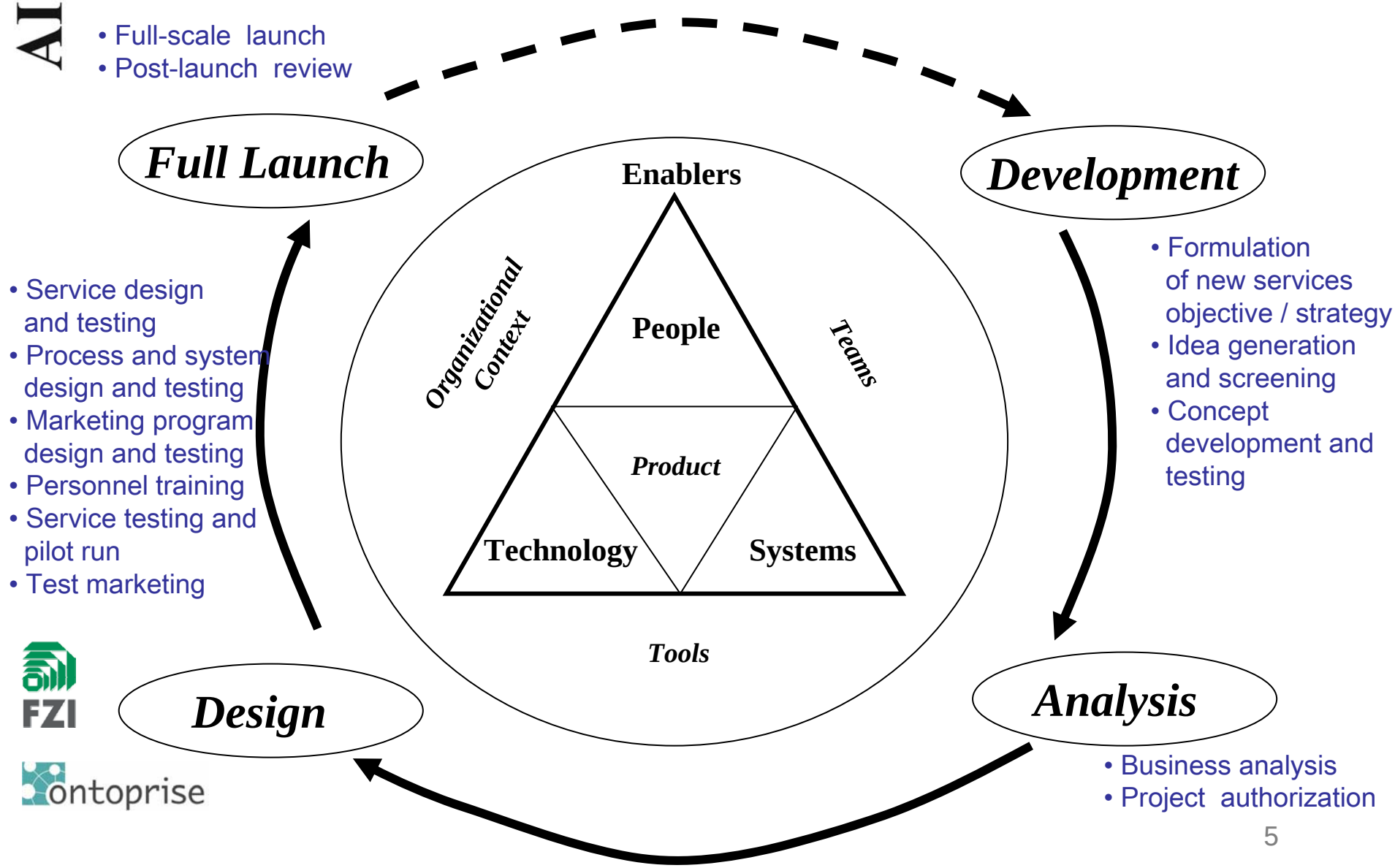
Service Engineering as an interdisciplinary endeavour

- Services depend critically on people, technology, and **co-creation** of value
- People **work together** and with technology to provide value for clients
- So a **service system** is a complex **socio-techno-economic** system
- Growth requires innovation that combines **people, technology, value, clients**



Source: IBM 2006

New service development cycle



Service Science & Service Innovation

- **Studying coordination** among individuals, groups, and technology
  - communication, information, action, and interaction
- **Measuring impact** of individuals, groups, and technology
  - connecting business impact with activity
- **Modeling service systems** with details of individuals, groups, and technology
  - to predict the effects of changes
- **Innovating** to support coordination and impact
  - technologies, learning, organizations, other structures

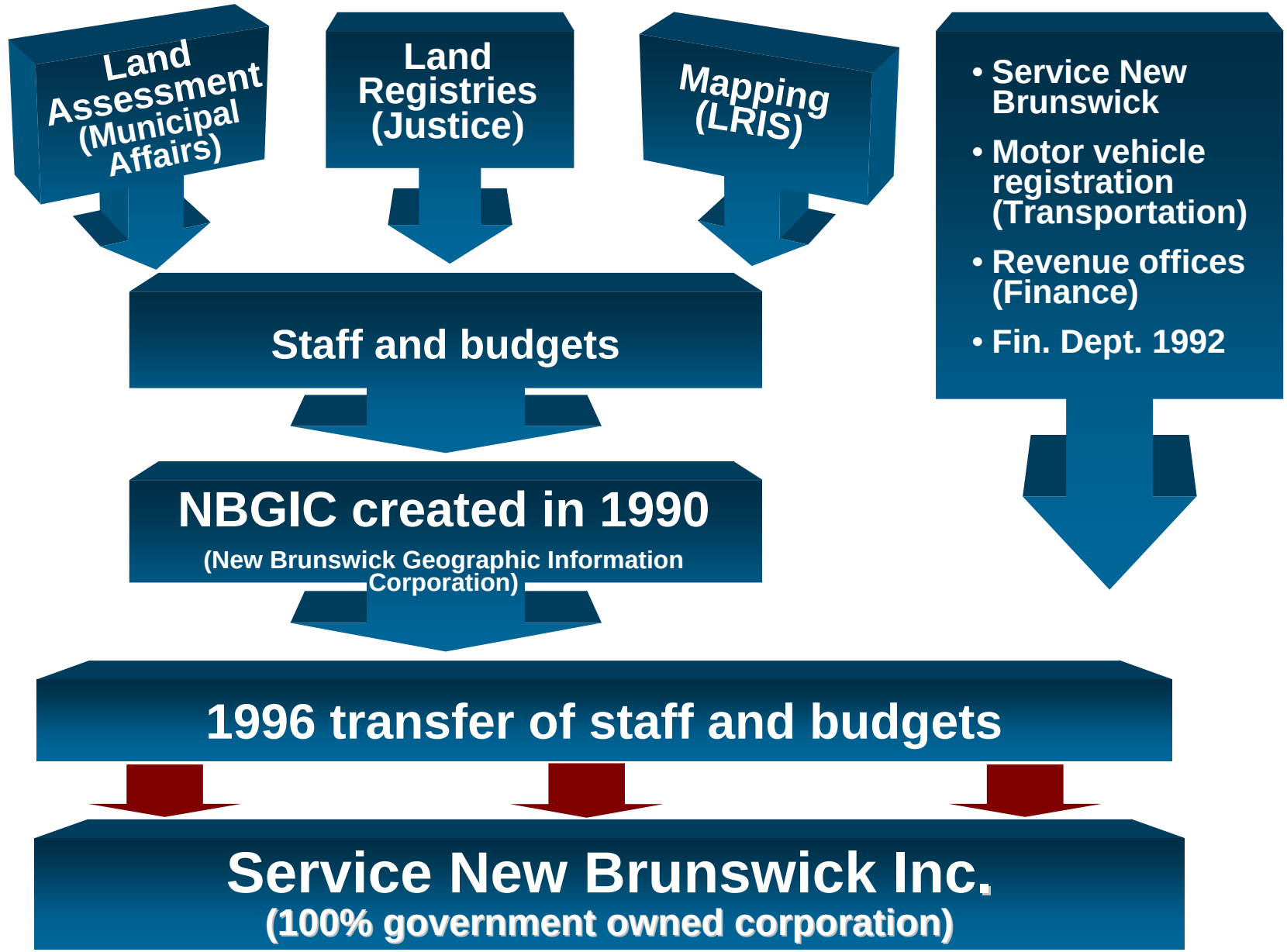
Innovation as an eGovernment Challenge

Innovation in the public sector can produce:

- a new or improved service (for example a PDA-enabled service) , or
- process innovation (a change in the way of delivering a service or product)

eGovernment Innovation Challenge

- **administrative innovation** (for example the use of a new policy instrument, which may be a result of policy change)
- **system innovation** (a new system or a fundamental change of an existing system, for instance by the establishment of new organizations or new patterns of co-operation and interaction)
- **conceptual innovation** (a change in the outlook of actors; such changes are accompanied by the use of new concepts, for example integrated water management or mobility leasing)
- **radical change of rationality** (meaning that the world view or the mental matrix of the employees of an organization is shifting)


Land Assessment (Municipal Affairs)
Land Registries (Justice)
Mapping (LRIS)
• Service New Brunswick
• Motor vehicle registration (Transportation)
• Revenue offices (Finance)
• Fin. Dept. 1992
Staff and budgets
NBGIC created in 1990
(New Brunswick Geographic Information Corporation)
1996 transfer of staff and budgets
Service New Brunswick Inc.
(100% government owned corporation)

Why Service Level Innovation?

General Objectives:

- Improve Efficiency
- Increase Speed
- Improve Take-up
- Improve the Learning Experience

eGov Specific:

- Ease of access
- Transparency
- Compliance, comparability
- … What else … ?

Barriers for innovation in eGovernment

- Size & complexity
  - public institutions are part of a larger chain of command and control (levels of political decision making)
- Public/political profile and accountability
  - the political aspect is (often) more important in the public than in the private sector
- Professional resistance
  - lack of management incentives
- Risk aversion
  - no willingness to take risk
- Heritage and legacy
  - “if it isn’t broke, don’t fix it”.

A long trip: Service-orientation in eGovernment

- Does your company currently run mainframe COBOL applications?

Source: Business Technographics® November 2005 North American And European Enterprise Software And Services Survey

The role of Service Science

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system view

create incentives

plan / measure risk

increase knowledge

What would service scientists actually do?

- Service scientist own the body of knowledge around service system problem solving
- Service scientists identify a service system that needs improvement
- Service scientists identify the stakeholders, their concerns and perceived opportunities
- Service scientists envision augmentations (additional new service systems) or reconfigurations (of old service systems components) that best address all problems and opportunities
  - Identify year-over-year improvement trajectories
  - Identify incentives to change (ROI, leadership, laws)

Some conclusions

- Service Innovation is an emerging issue in eGovernment
  - Some additional / different challenges to eBusiness
- Service Science seems to be the appropriate approach
  - Interdisciplinary, holistic
- While being multidisciplinary by definition, there are nevertheless also IT challenges
  - Modelling and planning tools
  - Flexible, distributed, trusted architectures
  - Reconfigurable, regulation-compliant systems

AIFB

Thank you!

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Semantic Web Services Projects

SmartWeb *Mediating mobile, intelligent access to Web services, such as weather, route information etc.*

DIP Data, Information, and Process Integration with Semantic Web Services
Reasoning infrastructure for Semantic Web services

SESAM *Semantic matching of energy products and legal contracts in P2P electricity markets*

IME Graduate school of information management and market engineering

- *Ontology-based policies for buyer preferences and seller pricing*
- *Mapping between different ontology and rule formalisms and their visual modelling via meta-modeling*

Billing the Grid *Accounting and pricing resource usage in Grid environments based on negotiation and policies*

FIT *Fostering self-adaptive e-government service Improvement using semantic Technologies*

SAKE *Semantic-enabled Agile Knowledge-based e-government*

SAP *Cooperation projects in the context of SOA*

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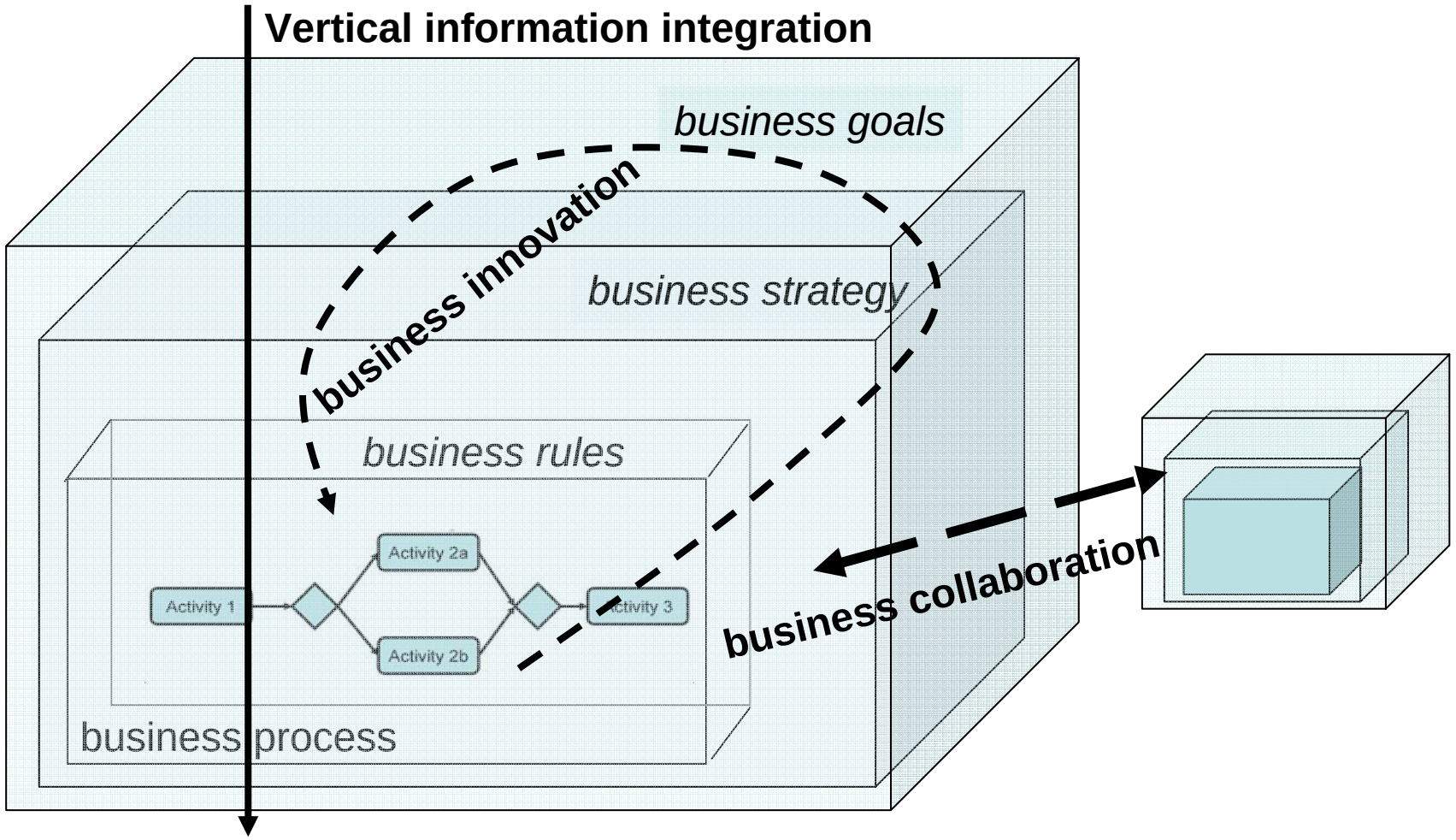
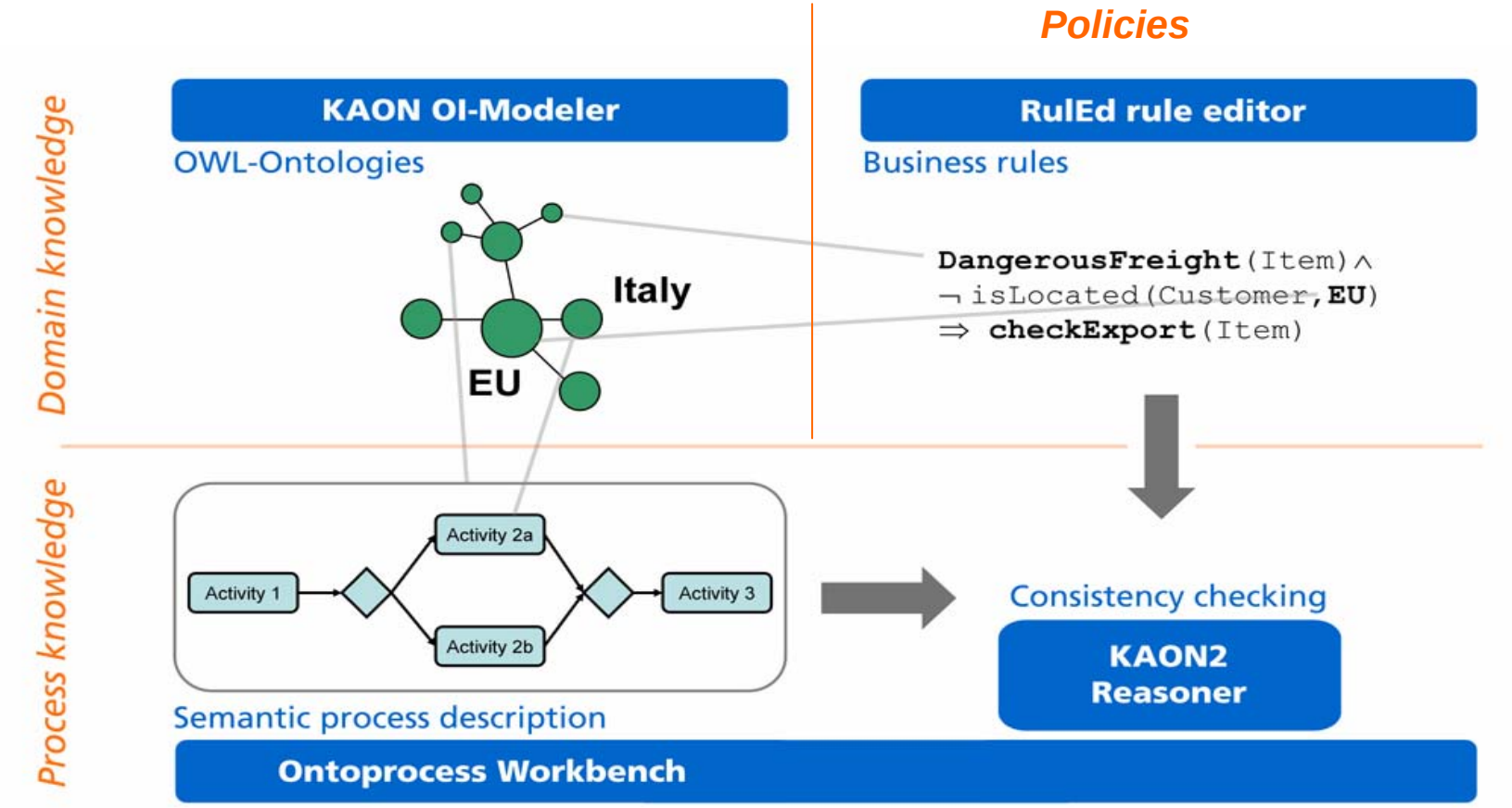
Big picture: Contextualized Business

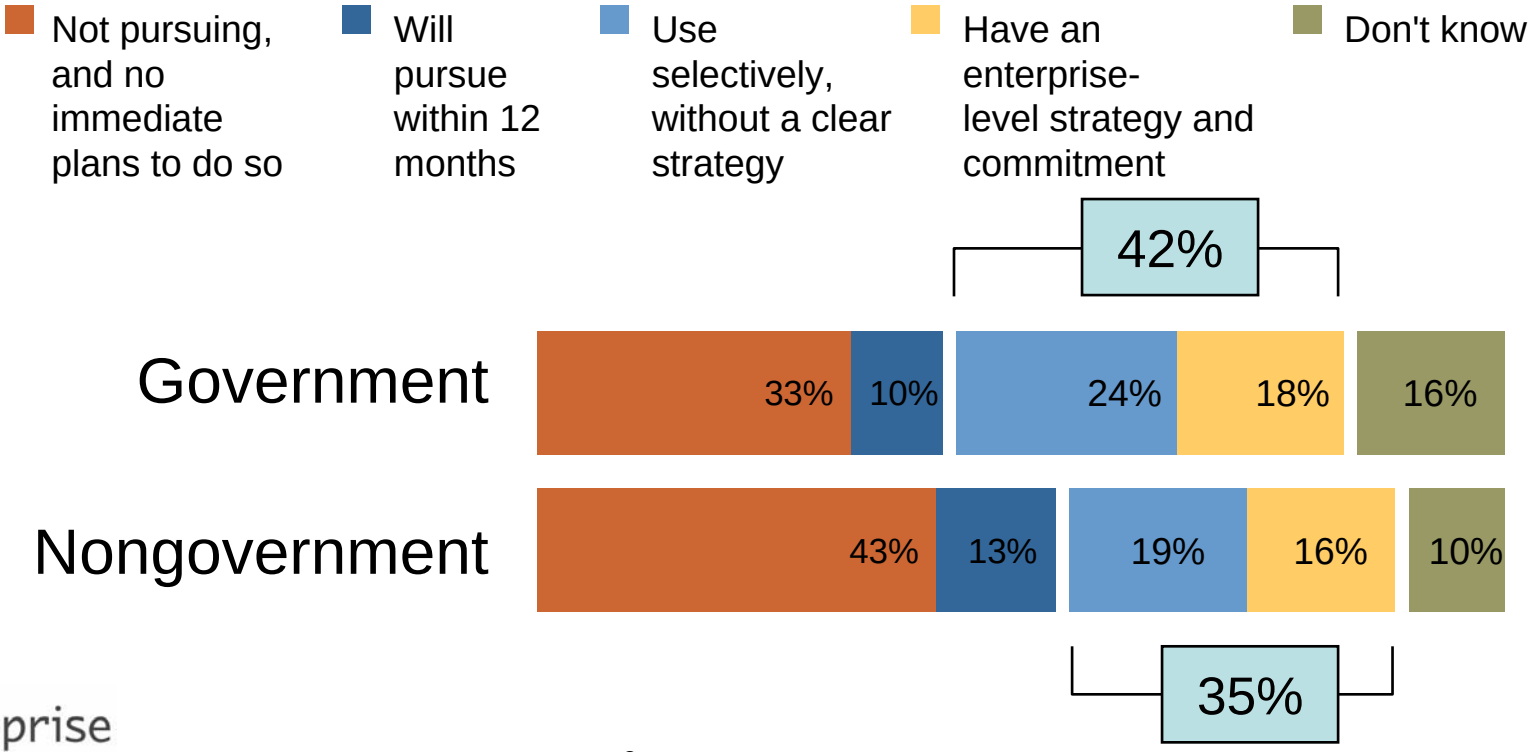


SemBPM Prototype



A long trip: Service-orientation in eGovernment

- Which of the following best describes your firm's approach to or status of service-oriented architecture



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