Intellectual Capital for Communities
in the Knowledge Economy

Intellectual Capital for Communities in the Knowledge Economy
Nations, Regions, Cities and Emerging Communities

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World Conference on Intellectual Capital for Communities
- Fourth Edition -

Service Innovation Models and Inter-firm Networks

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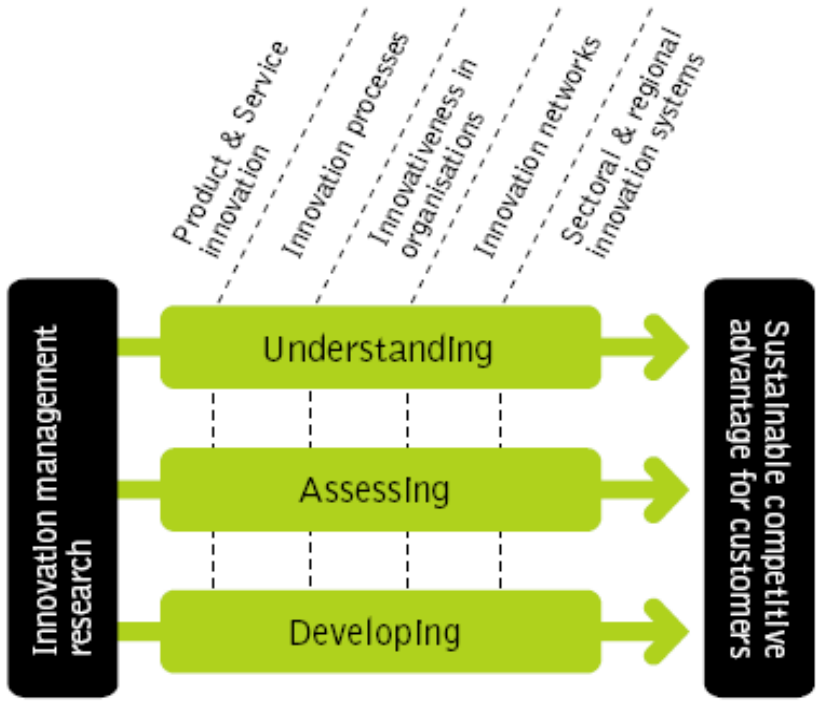
Topics of the presentation

- Innovation Management Institute at HUT
  - Overview of innovation research at Helsinki University of Technology's Innovation Management Institute (IMI)
  - Notable service innovation related activities in IMI
- Services and the economy
  - Servicification of the economy
  - Servicification of industries
- Nature of services and service innovation
  - Typical characteristics of services vs. goods
  - Challenges related to the management of service innovation
  - Service innovation models
- Inter-firm networks in Knowledge Intensive Business Services (KIBS)

Innovation research at IMI

- **Innovation Management Institute (IMI) is a research group employing approx. 15 researchers. It is a part of BIT research Centre at Helsinki University of Technology**
- **IMI focuses on studying and developing innovation activities in the Finnish organizations. It has also been involved in research into regional and national innovation systems.**
- **The projects are funded by TEKES (funding agency for technology and innovation) and the participating companies**



Innovation research at IMI

- **At spring 2008, 12 firms participate in the research in two publicly funded research projects**
- **IMI provides an research organization for M.Sc. and PhD students to gather data for their thesis, knowledge transfer from University to firms, and consulting services for firms that participate in the research projects**

Research perspectives in the *manufacturing* context

- **Front-end of innovation process (both strategic and operative level)**
- **Upper management control**
- **Sensemaking of the strategy**
- **Customer-orientation in front-end of innovation process**
- **Innovative work communities**

Research perspectives in the *service* context

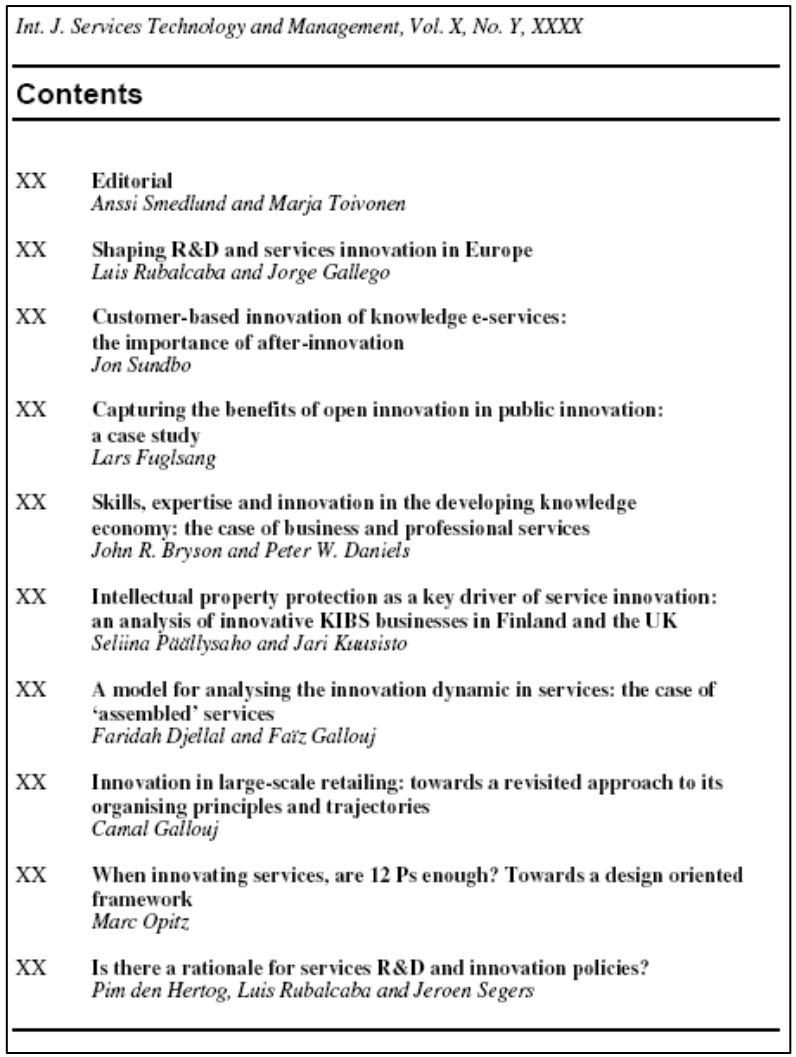
- **Individual innovations:**
  - **The nature and the dimensions of service innovation**
  - **The nature of innovation processes, productization**
- **Innovativeness at firm-level**
  - **Managing innovative behaviors of employees**
  - **Storytelling, sense-making**
- **Innovation networks**

Notable service innovation -related activities at IMI

- UC Berkeley – Tekes Innovation in Services conference, 2007
  - Anssi Smedlund participated in organizing of the conference
  - The conference brought together Finnish and US researchers and practitioners to discuss research and practice related to service innovation
  - Papers and presentations can be downloaded from http://www.tekes.fi/berkeleyserviceinnovation/
- International Journal of Services Technology and Management (IJSTM) special issue on Service Innovation
  - Guest edited by Anssi Smedlund and Marja Toivonen during 2006-2007
  - Gathers together views on service innovation from the most prominent European scholars
  - Forthcoming 2008

Forthcoming IJSTM special issue

- **The motivation for the special issue is that service innovation is a new research topic and there is a need for clarifying concepts**
- **9 of the 30 submissions were selected to be published**
- **Special issue introduces general theoretical frameworks and more specific empirical examples from industries of Knowledge Intensive Business Services, retail, e-services and healthcare.**



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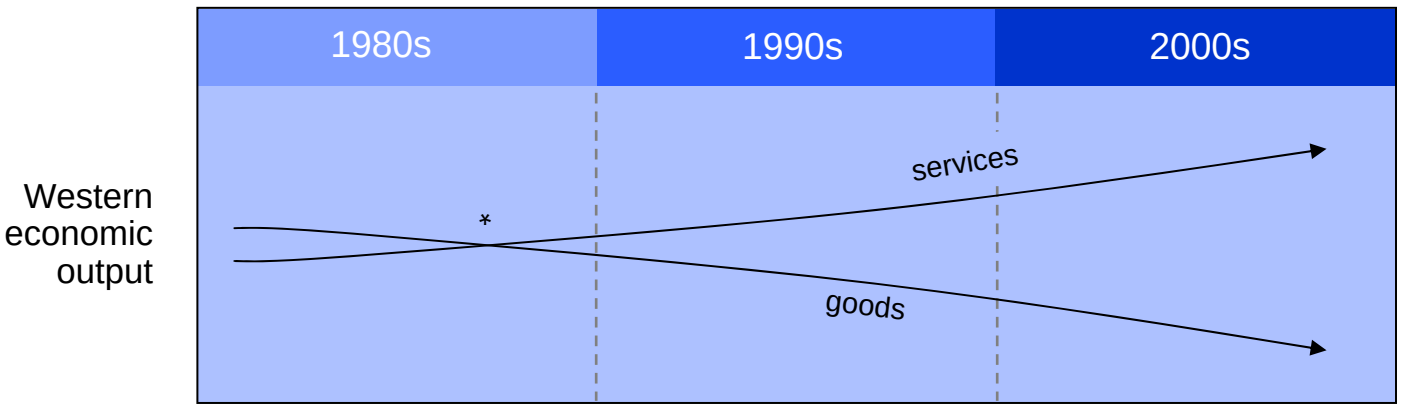
Servicification of the economies

- **The importance of service sector is emphasized in developed countries**
- **Since 1987, services have been representing more than half of US GDP**
- **At the moment, from the top 10 nations by labor force size:**
  - ***US, Brazil, Russia, Japan and Germany* have over 50% of their labor force employed in service sector**
  - ***China, India, Indonesia, Nigeria and Bangladesh* have not yet reached the 50% threshold (Source: Spohrer 2006)**



- Note: 1987 was the tipping point in the United States. The tipping point in Finland occurred earlier, in 1978.

(Peer Insight Tekes report, 2007)

Servicification of industries

- **Servicification does not only mean growing value creation in B-to-C services, but also in B-to-B industrial and knowledge intensive services**
- **Growing importance of after sales services in industrial products: Share of service business in the distribution of lifespan revenues of the product can be up to 21 times of the initial cost of the product (Wise & Baumgartner, 1999)**
- **Deloitte: Global Benchmark Study on Services and Parts Management, 2006**
  - **→ In industrial companies, the profitability of the service business can be up to 75% more profitable than the profitability of the core business**
- **Finnish industrial companies invest and grow their service business intensively. ie:**
  - **Wärtsilä: Services are 41% of revenues (2007), 60% of personnel work in service business**
  - **Cargotec: Services are 25 % of revenues. 32 % growth during 2007**

Typical characteristics of services

- **IHIP –metaphor is widely used to distinguish services from goods. Compared to goods, services are:**
  - **Intangible**
  - **Heterogeneous**
  - **Inseparable**
  - **Perishable**

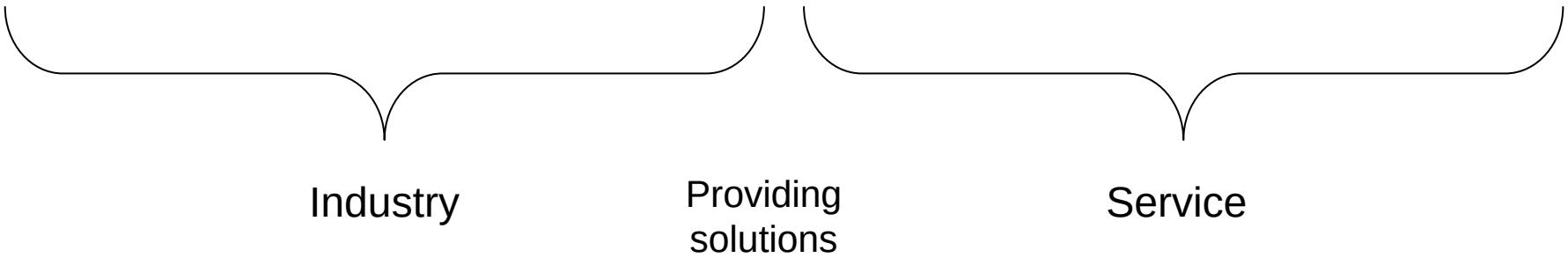
Goods	Services
Tangible	Intangible
Homogenous	Heterogeneous
Production and distribution separated from consumption	Production, distribution, and consumption simultaneous
Nonperishable, can be kept in stock	Perishable, cannot be kept in stock
A thing	An activity or process
Core value produced in a factory	Core value produced in buyer-seller interactions
Customers do not (normally) participate in production	Customers participate in production
Transfer of ownership	No transfer of ownership

(Grönroos, 2000)

The roles of services and goods in an offering – different combinations

Pure material good	Good + integrated (support) services	Hybrid product	Core service + integrated goods / support services	Pure service

→ **Whole offering**



Source: Kotler 2003

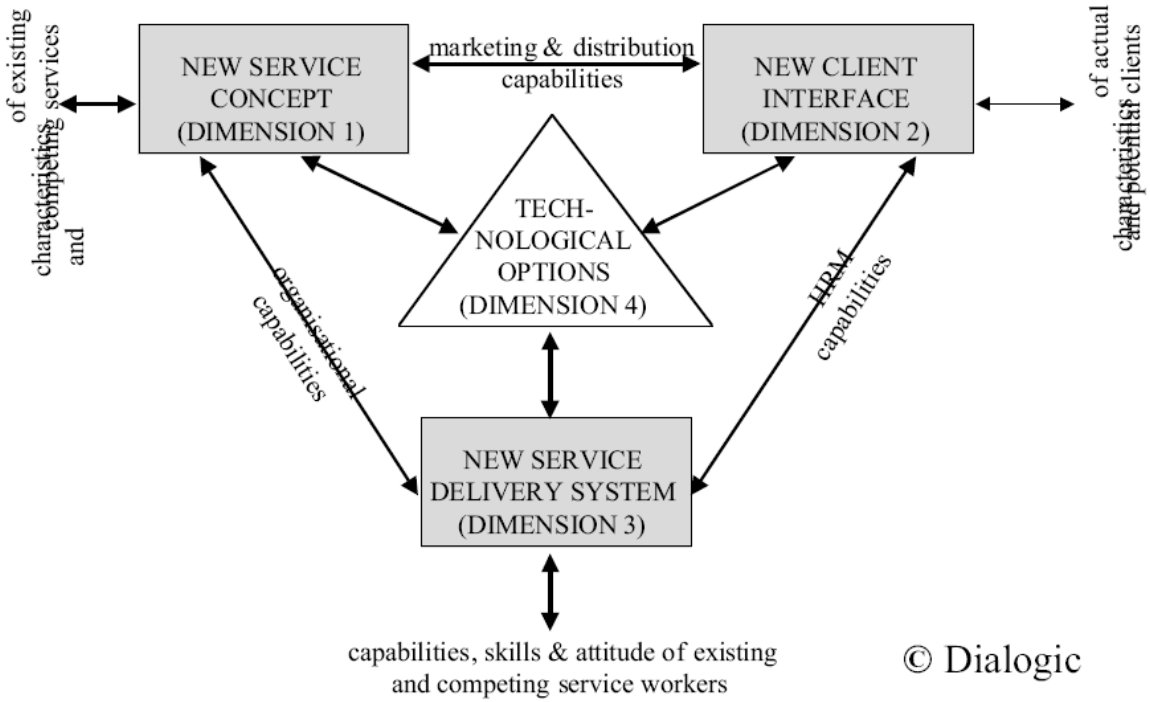
Challenges related to the innovation in services

- Close contact to the client
  - A new service is created on the delivery with the client
  - Usually, it is impossible to even start creating a new service without a client input
- Knowledge intensiveness and intangible nature of a service
  - Knowledge is used as a resource, and as an outcome in the innovation activities
- Compared to product innovation, innovation process in services is not well manageable and not always intentional
  - There are not so clear steps (ie. ideation, screening, development commercialization) in service innovations than in product innovation
  - Service innovation activities have more dimensions that have to be taken into account than product characteristics (ie. human factors, organization structures, concepts, interfaces…)

→ ***Service innovation models are systemic by nature***

Examples of service innovation models

- **Den Hertog (2000)**
  - **B-to-C value creation perspective**
  - **Good for making sense of the services that are delivered by individuals to other individuals**
  - **Service is consisted of four dimensions: 1) service concept dimension, 2) client interface, 3) service delivery system and 4) technological characteristics**



Examples of service innovation models (cont.)

- **Gallouj & Weinstein (1997)**
  - **Microeconomics point of view**
  - **The final service innovation is always incremental change in competences or technical characteristics of the service**
  - **General framework of service characteristics. Applied to practice in retail industry.**

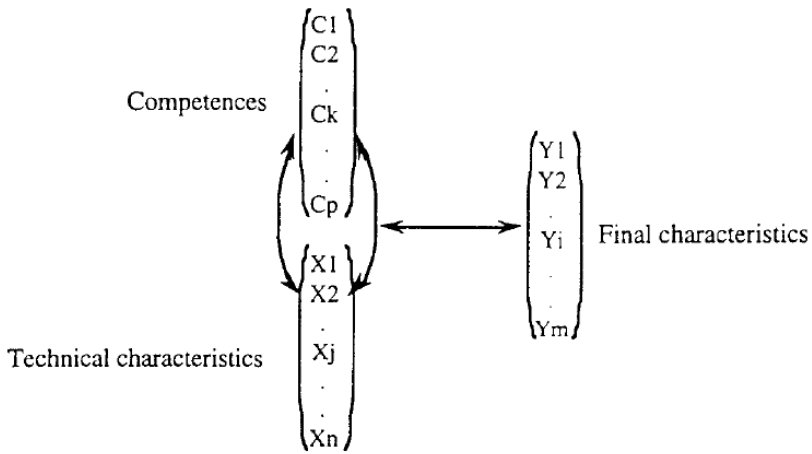
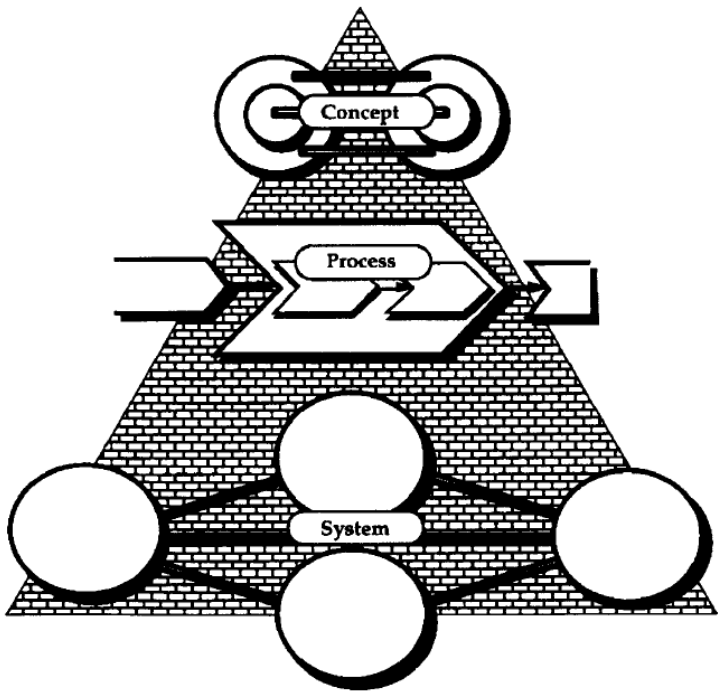


Fig. 2. A representation of a product or service as a system of characteristics and competences: Source: based on Saviotti and Metcalfe (1984).

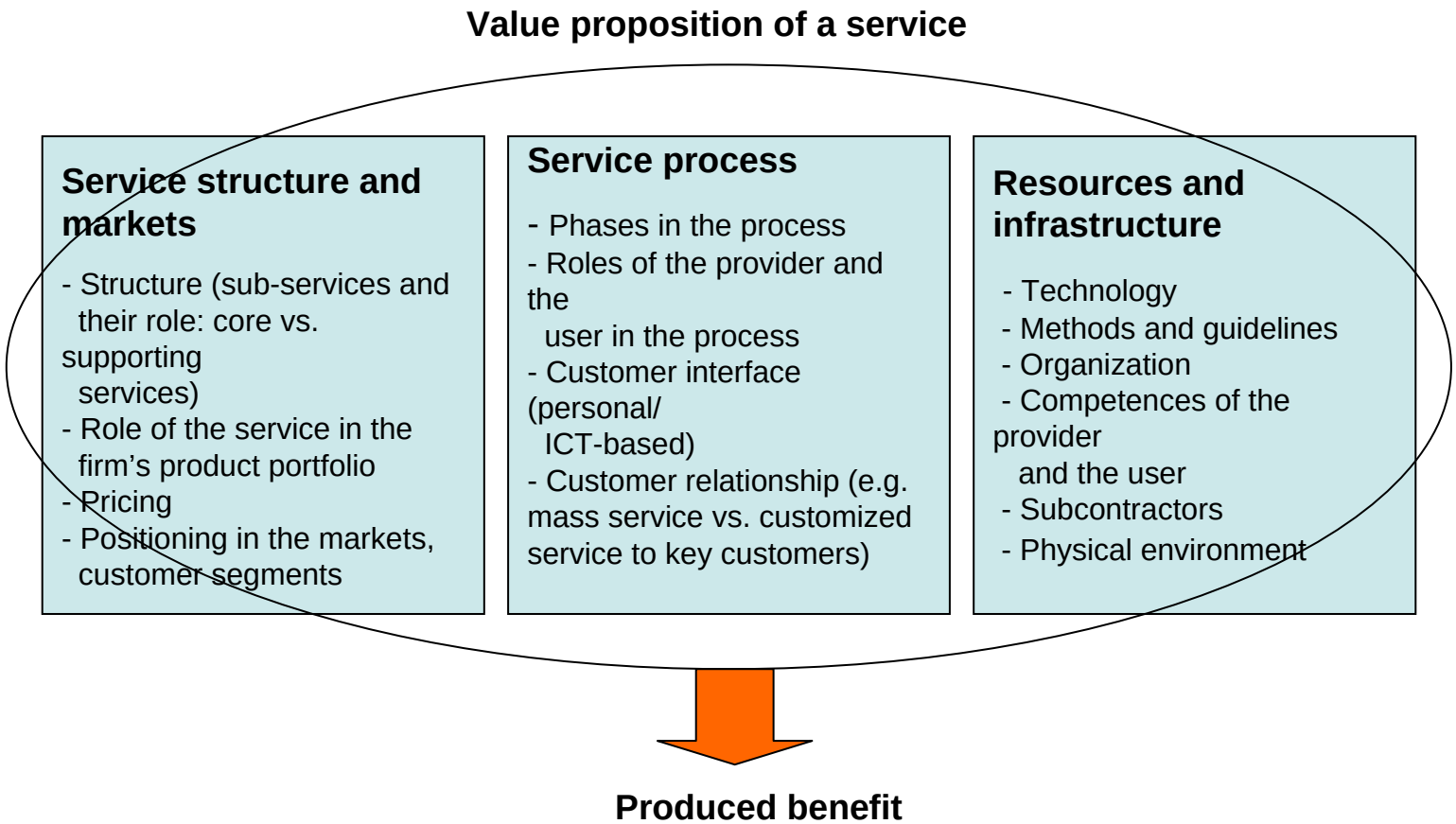
Examples of service innovation models (cont.)

- **Edvardsson (1996)**
  - **Theoretical roots in quality management**
  - **Service is a combination of service concept, customer perceived outcome and a customer-unique process supported by service system**
  - **Applied in services marketing and consulting**

FIGURE 7
MODEL OF THE PREREQUISITES OF THE SERVICE

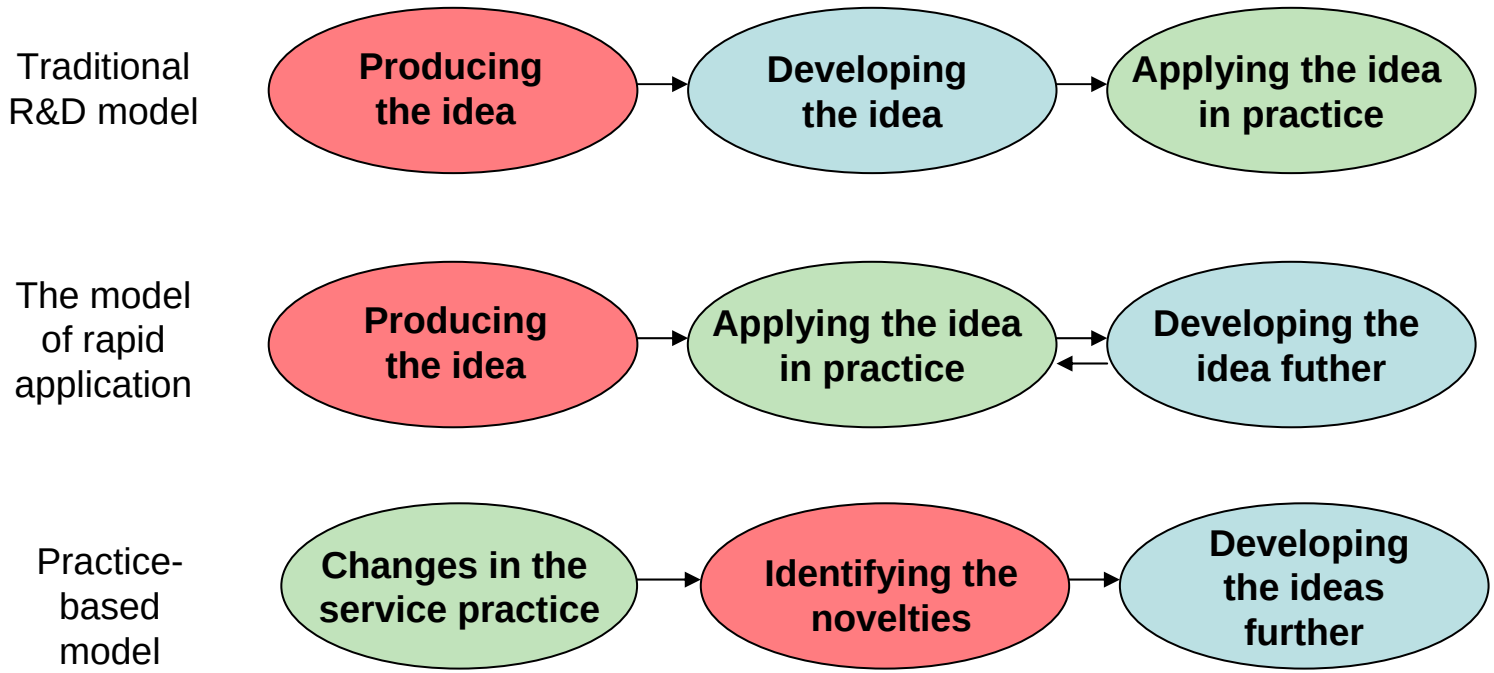


General, systemic service innovation model based on Edvardsson's model (Toivonen et al. 2007)



Different types of processes leading to service innovation

- **From the service innovation cases at IMI, it became clear that the innovation process did not always follow the traditional R&D model. The model of rapid application was the most prominent among the cases (n=9) (Toivonen et. al. 2007)**



Inter-firm networks in Knowledge Intensive Business Services

- In the case studies conducted at IMI during 2005-2007, total of nine service innovation cases were studied in KIBS from the point of view of inter-firm network relationship
- According to the cases, it can be said that KIBS firms use very few external network relationships to produce services to the client. However, in the ideation and development of new services, the role of inter-firm network relationships are essential

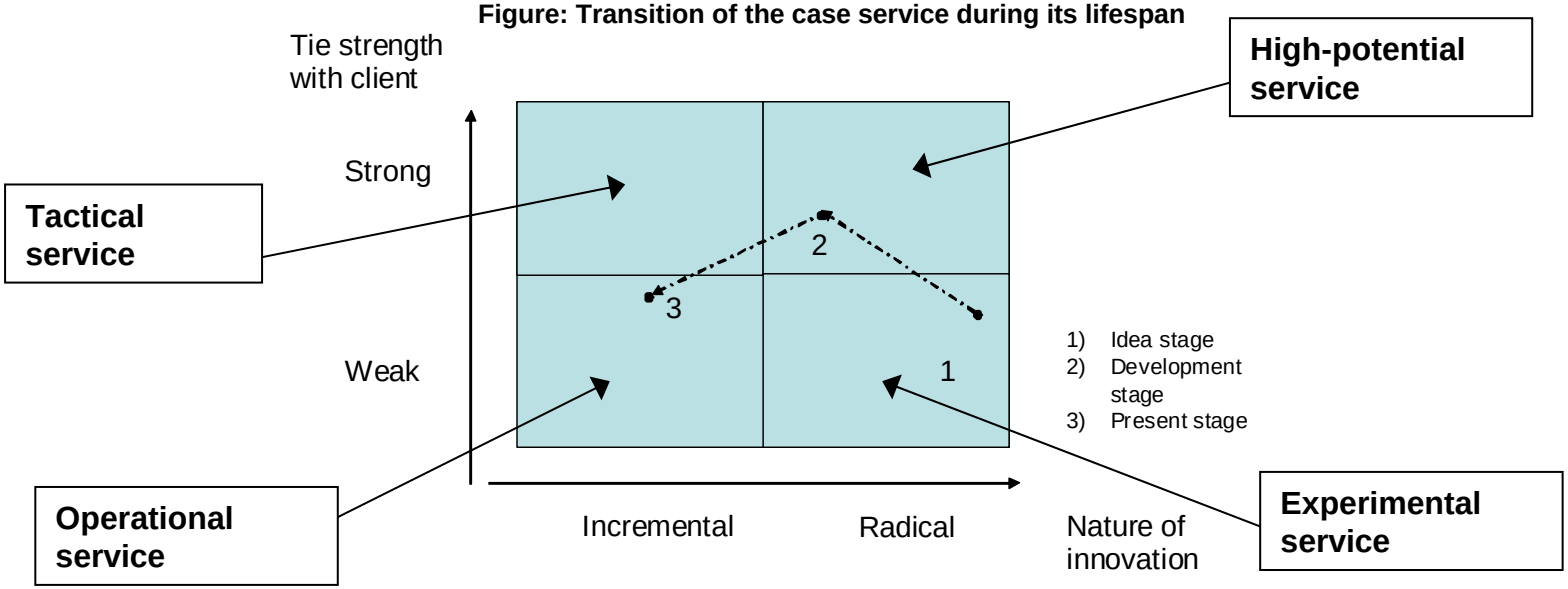
- Even though the innovation process is not linear in services, the network relationships are different in different stages of the lifespan of a service in a longer term (10-15 years)
  - In the early ideation phase, the network relationships are dependent on personal, informal contacts of individual professionals.
  - In the development phase, the network relationships are expanded to reciprocal and inter-firm nature with selected clients and/or suppliers
  - In the production phase of the service, the relationships to suppliers are hierarchical and formal

- General observations from the inter-firm network perspective on KIBS innovation activities:
  1. New service innovations are often created by utilizing knowledge and competence across industry borders
  2. Development of the service is highly dependent on the successful relationship to pilot clients and other early clients
  3. Efficient producing of service happens when the KIBS firm is able to utilize its core competencies

Inter-firm Networks in Knowledge Intensive Business Services

- **During it's lifespan, the service goes through different stages interchangeably. The most crucial stage of the service is when the nature of the innovation is radically new to the market, and the nature of the relationship with the client is very strong. Then, the service is likely to benefit both the service provider and the client in the future. That's why services in this stage are called "high-potential professional services" (Smedlund, 2008)**

Figure: Transition of the case service during its lifespan



Management of innovation in KIBS; supplier, client, and network implications

Stage of the innovation process	*Idea stage*	*Development stage*	*Commercialization stage*
PSF as a supplier	Invest in innovative and entrepreneurial individuals who are rich in ideas for new services.	Invest in highly talented and professionally rigorous senior professionals who have the competence to develop the service.	Invest in well-trained managers to ensure the delivery of the service.
Client	Actively seek out ideas from the existing clients as well as from the market to map potential client needs.	Build strong and reciprocal relationships to one or to a couple of pilot clients.	Build mechanisms to get feedback from the client on the quality and delivery issues of the service.
Networks	Build many, but not very close network relationships with non-redundant sources of knowledge across hierarchical levels. Actively gather ideas from network partners.	Build redundant and reciprocal relationships with fewer, well-picked partners. Actively engage in sharing of complex knowledge.	Build hierarchical supply-demand chains. Enforce the relationships with legal contracts. Restrict communication to issues concerning the delivery of the service and protect your core competence.

(Smedlund, 2008)

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