



Innovation –

expanding definitions, measures and measurement

Presentation for
Rendez Steering Group
March 14, 2007

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Content

- Outline of the research
- Expanding definitions of innovation
- Views to innovation measures for innovation
- Measurement systems and approaches for innovation and innovativeness



- Hermeneutic research approach, combination of
 - Case study research (Eisenhardt 1989, Yin 1994, Gummertsson 1993)
 - Action research (Bryman 1995, Stake 1995, Lewin 1951)
 - Constructive research (Neilimo et al 1980, Kasanen et al 1991, Lukka 2000)
- Longitudinal case study – Nokia Corporation, 2004 – 2007
- Research methods have included
 - Focus group interviews
 - Individual interviews
 - Surveys
 - Company workshops
 - Observation
 - Collection and analysis of company materials and data.



Research problem:

- *How to enhance innovation capability of an international company with performance measurement system that is supporting innovation, innovativeness and renewal in different organizational levels?*

The main research question:

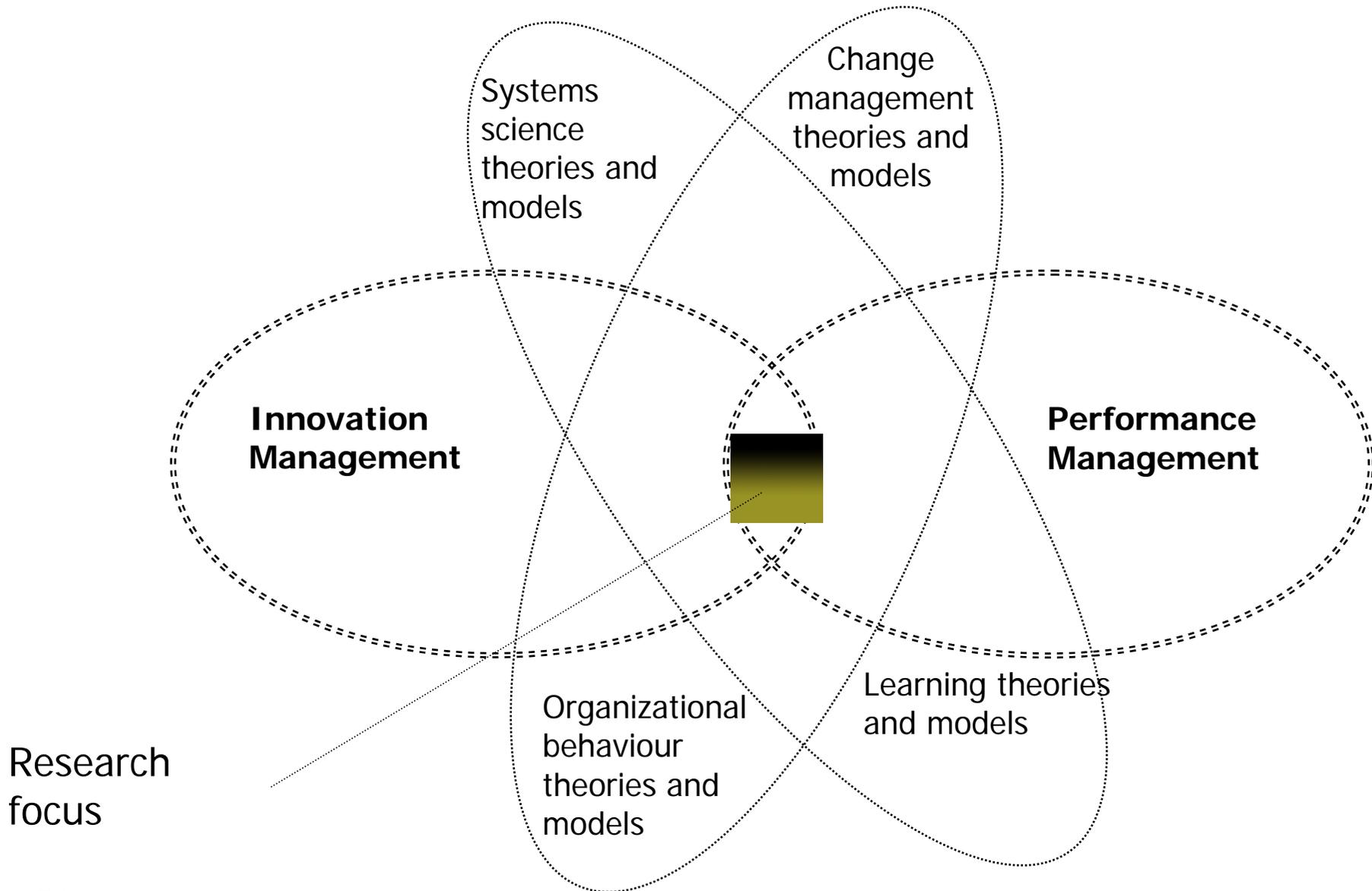
- *What kind of innovation measurement system would support the renewal of a firm?*

The sub-questions:

- *Can knowledge from the different fields of theory relevant to innovation management be integrated into one generic model for innovation measurement system?*
- *What are the main elements that are required for an innovation measurement system?*
- *What levels of performance measurement should be conducted?*

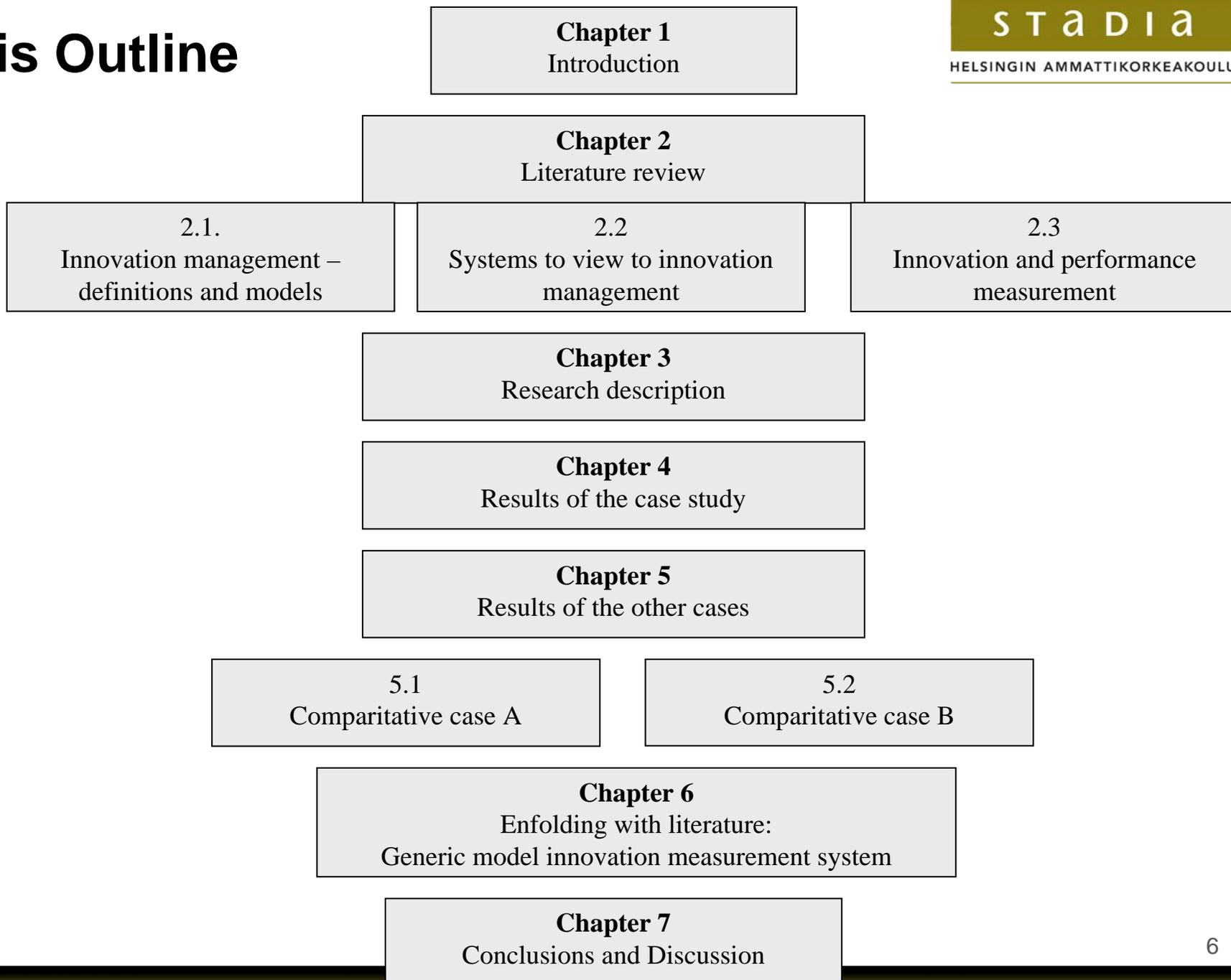


Theoretical Foundations





Thesis Outline





defined economic innovation in 1934

- 1) **The introduction of a new good**—that is one with which consumers are not yet familiar—or of a new quality of a good.
- 2) **The introduction of a new method of production**, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.
- 3) **The opening of a new market**, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.
- 4) **The conquest of a new source of supply of raw materials** or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created.
- 5) **The carrying out of the new organization** of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.



Levels and Categories for Innovation

Transformation (Disruptive innovation)	Cars instead of horses	Internet banking	Pilkington's floating glass	Advertisement business models – e.g. Google
	E-mails instead of letters	Geographic positioning systems (GPS) and location based services	Personal customization – e.g. NikeID	Open source SW development – e.g. Linux
Radical Innovation (Breakthrough innovation)	Hydrogen powered cars	A new kind of mortgage	Gas-filled thermo class	Online sales and distribution– e.g. Dell
	Fax instead of mail	Digital Maps	Fast design & delivery process e.g. Zara	Venture capital companies
Incremental Innovation (Continuous development)	New car model	Different mortgage feature	Differently colored glass	Selling in business parks and mega stores instead of town centers
	Letter templates	New , more precise versions of maps	Improvement of production process	Entertainment and day spas
	Product	Service	Process	Business Model

Source: Applied from vonStamn 2000

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Expanding Innovation Definitions

Innovation is a creation and **exploitation** of **new** ideas”.
(Kanter, 1985)

Innovation means invention **implemented** and taken to market. And beyond innovation lies disruptive innovation, which actually changes social practices – the way we live, work, and learn. (Chesbrough, 2003).

NOVELTY

An innovation is the **implementation** of a **new** or significantly improved product (good or service), or process, a **new** marketing method, or a **new** organizational method in business practices, workplace organization or external relations. (Oslo Manual, OECD, 2005)

IMPLEMENTATION

Technological product and process (TPP) innovations comprise **implemented** technologically **new** products and processes and significant technological improvements in products and processes. A TPP innovation has been implemented if it has been introduced on the market (product innovation) or used within a production process (process innovation).
(Oslo Manual, OECD 1995)

SUCCESS

Innovation types defined: business model, operational and product/services/markets (IBM Global CEO Study, 2006)



Measures for Success – Views to innovation measures

Measurement Intention	Measurement Level	Measurement Perspective	Type of Activity
<i>Strategic assessment</i>	Industry	Market area	Basic research
Justification of existence	Society	<i>Customer</i>	Exploratory research
Resource allocation	<i>Network</i>	Financial, shareholders	Applied research
<i>Diagnosis e.g. identified problem areas</i>	Company	Internal	Product development
Motivation and rewarding	Strategic Business Unit (SBU)	Other stakeholders	<i>Service development</i>
	Process	Growth	Process development
	Program or project	Learning	<i>Business model development</i>
	Team	<i>Redirection e.g. new business models</i>	
	<i>Individual e.g. user experience</i>		



R&D measures

- PRTM Innovation benchmarking

Practitioners views

- Business Week & BCG “The most Innovative Companies”
- IBM – CEO study
- Conference Board – Innovation survey & CEO study

Holistic frameworks

- Oslo Manual (OECD 2005)
- EFQM Innovation Frameworks (efqm 2006)
- Innovation Audit (Tidd et al 1996)



Images of Innovation

Spatial image	- the picture of the individual's location in the space around him.
Temporal image	- an individual's picture of stream of time and his place in time.
Relational image	- the picture of the universe as a system of regularities.
Personal image	- the picture of an individual in the midst of the universe of persons, roles and organizations around him.
Value image	- the ordering of the scale of better and worse of the various parts of the whole image.
Emotional image	- various items in the rest of the image are imbued with feeling or affect
Conscious, unconscious & subconscious image	- an individual is capable being conscious of all parts of the image with the same degree of intensity, ability to perceive varies, a very small part of an image is exposed to our internal view at the same time.
Certain / uncertain, clear / vague images	- every aspect of a image is tinged with some degree of certainty and uncertainty.
Real / unreal image	- an image of the correspondence of the image "itself" with some "outside" reality.
Public / private image	- whether the image is shared by others or is peculiar to the individual.



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Schedule for dissertation

Activity	Time	
Manuscript ready	June 2007	
Prereview process	June – September 2007	
Needed corrections and additions	October 2007	
Printing	November 2007	
Defense	~ December 2007 ~ February 2008	