

Value networks and Innovation

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Topics in Open Innovation Series
Haas Business School – UC Berkeley
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Background – Programmatic study on business & innovation networks

HSE Business networks group – 2000-2010

- ❑ Portfolio of 12 externally funded projects – academia,
business & technology
- ❑ ValueNet a 4-university consortium
- ❑ > 20 doctoral theses & PhDs
- ❑ > 60 intl journal articles
- ❑ <http://www.hse.fi/valuenet/> (ValueNet Group)
- ❑ <http://www.hse.fi/bn/> (Business Networks research domain)

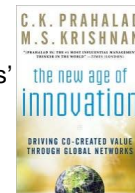
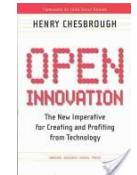
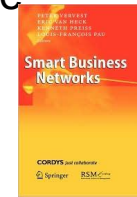


Background – Shift towards collaborative value creation

- Shift from dyadic relationships (customers/suppliers/competitors) → *business ecosystems (value networks)*
- Shift from closed/internal innovation towards → *open innovation modes & innovation networks*
- Competition between alliances, partnerships & networks

Arguments:

- Business Emergence is network-based
- Emergence of network organizations – networks vs. 'value nets'
- Key issue - management in and of networks & nets



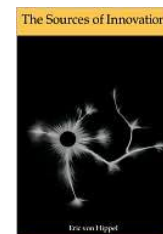
Positioning in "Topics in Open Innovation"

Joel Wells – Perspectives on innovation

- User Innovation – von Hippel (1988, 2005)
- 'Cumulative innovation' – Scotchmer (2004)
 - Radical, systemic innovation
- Open Innovation
 - In-bound, out-bound, collaborative

Kris Moller

- Networked value/innovation systems
 - Collaborative & Co-creation & Systemic
 - Network perspective on value-creation



Outline

- Ecosystems, networks and nets – related but different
- What is your 'value game'
- Value-creating system(s) – value nets
- Types of business nets – innovation perspective
- Management in business nets
- Future outlook

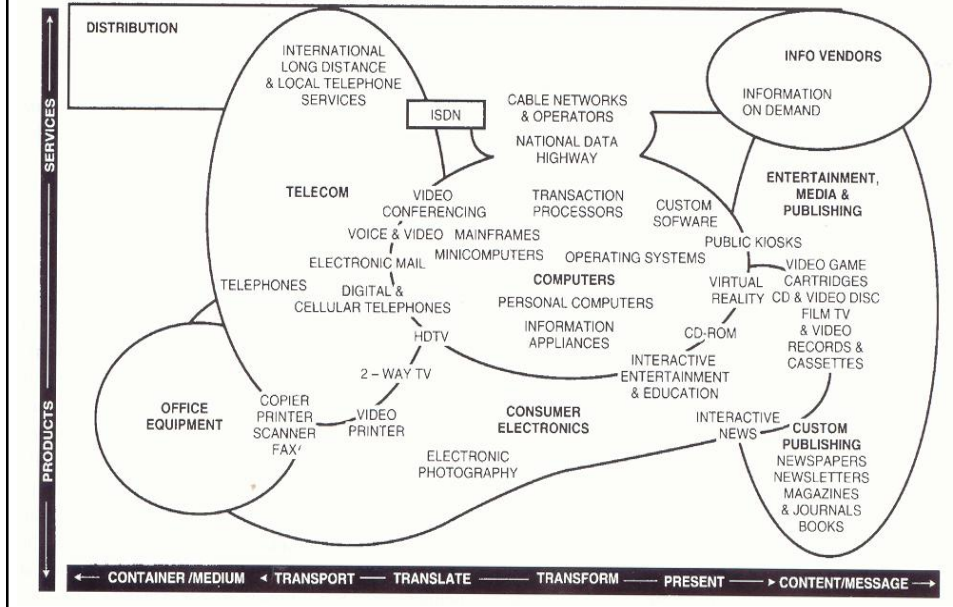


Value System Layers & Views

Do we 'see' & understand value systems?

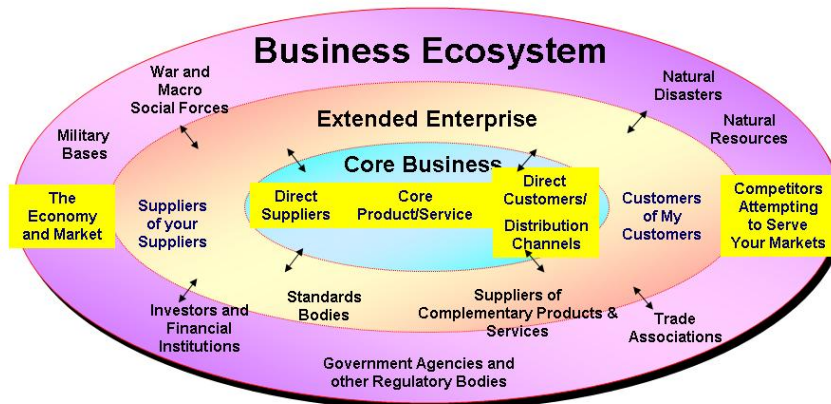
- Business fields / industries
- Ecosystems / networks
- Companies

Example: ICT macro network (Economist)



J.F Moore HBR (1993)

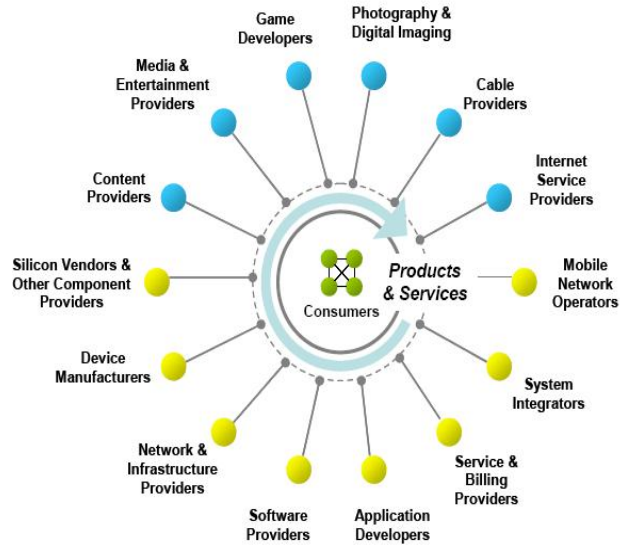
External Business Ecosystems Overview



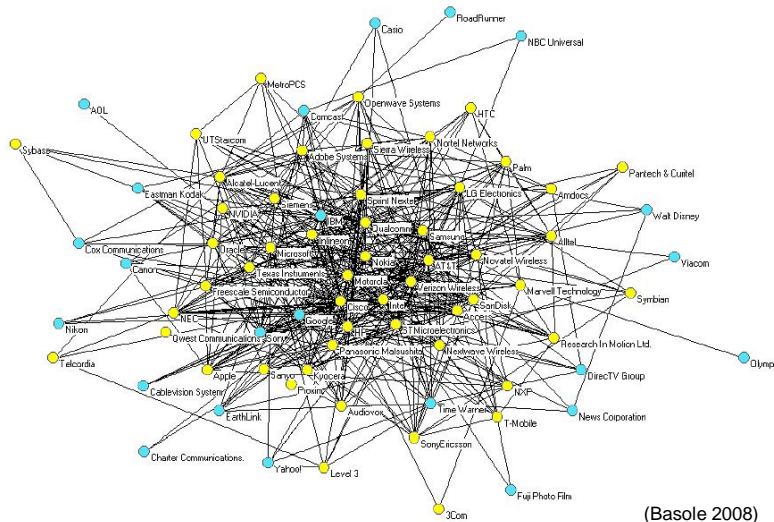
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Mobile Ecosystem (Basole 2008)

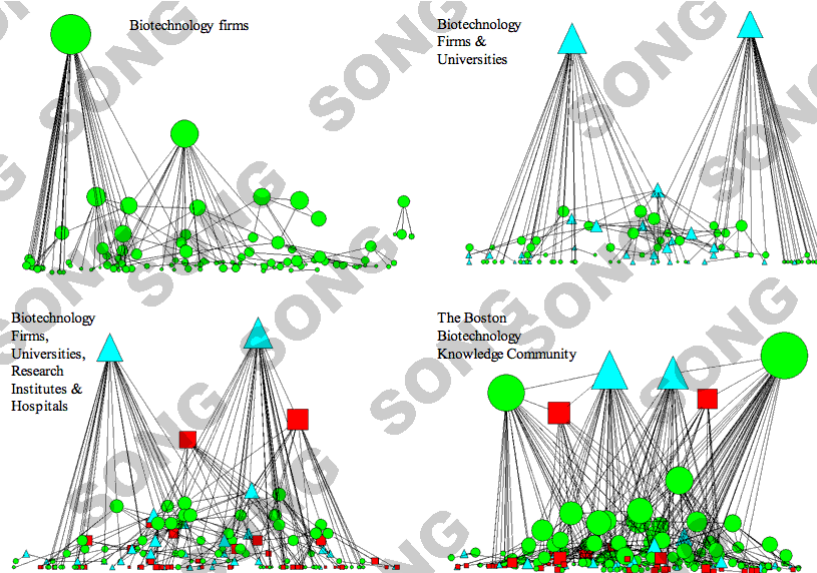


Mobile Ecosystem Network



(Basole 2008)

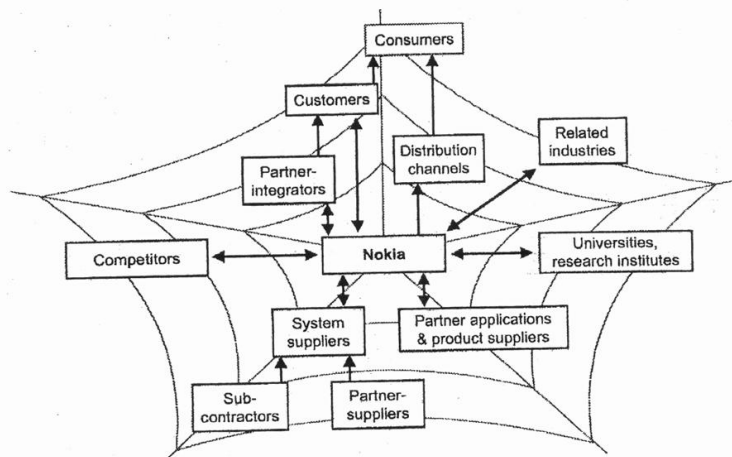
Regionality of ecosystems & innovation

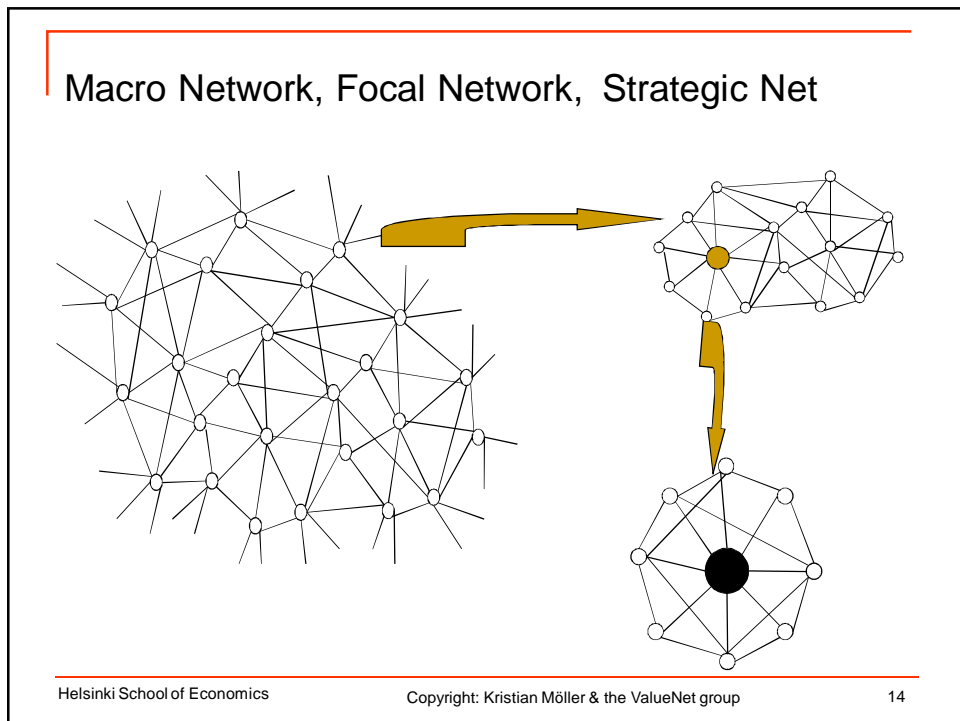
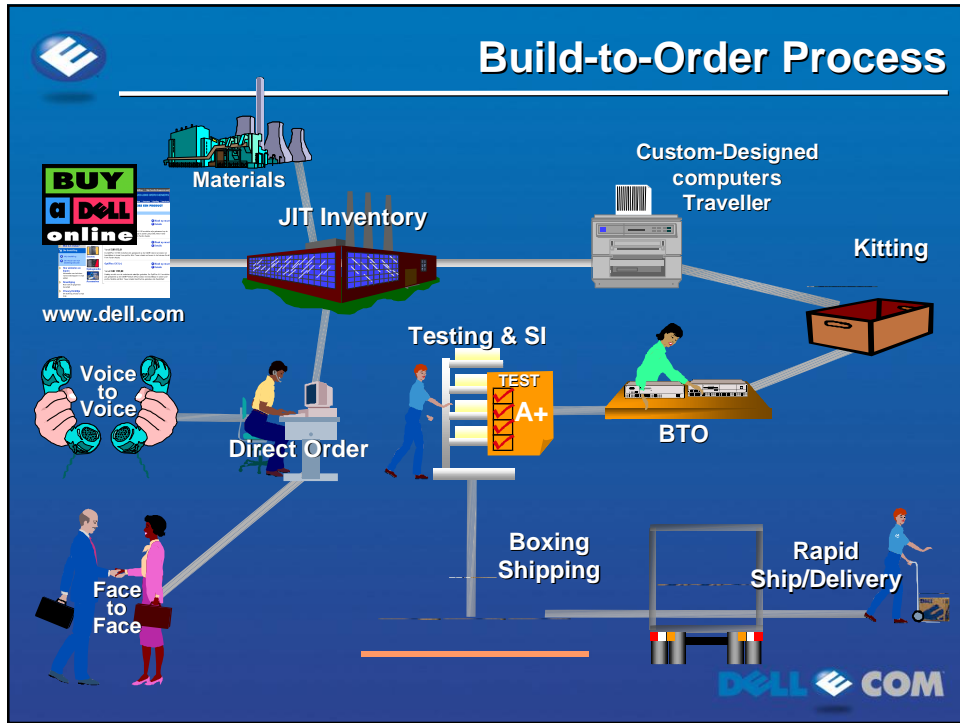


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Nokia's Network Environment – A Focal Firm Perspective (ego-centric) (Ali-Yrkkö, 2001)

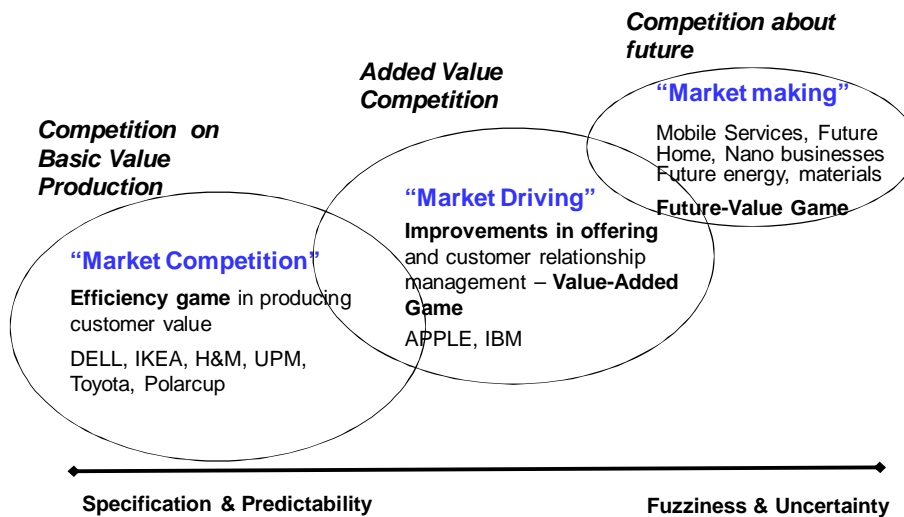
Figure 4.1 Nokia's network environment





Value 'Games' – Competitive Arenas

Competitive Arenas & Business innovation – What's your value game?



”Its all in the Value-System”

How to analyze & understand
business & innovation
networks?

Value-system description

■ Value-system →

- A system **actors** carrying out the **value activities** required for producing the offer (product, service, system) for end-customers (Parolini 1999)
- **Actors** do this with the **resources & capabilities** they control and/or coordinate.
- **Customers/users** are essential actors in **value cocreation**
- Earlier work: Porter, Norman & Ramirez (HBR 1994), Håkansson & Snehota 1995; recent Vargo & Lusch (JM 2004)

■ Dilemma → ”As many value-systems as networks/ ecosystems?”

■ Value-system continuum (Möller, Rajala & Svahn, 2005)

- We argue: Level of determination of the value-system is a critical contingency characteristic for organization & management
- Determination → Level of specification & 'knowness'

Traditional Book Publishing – Value-Network

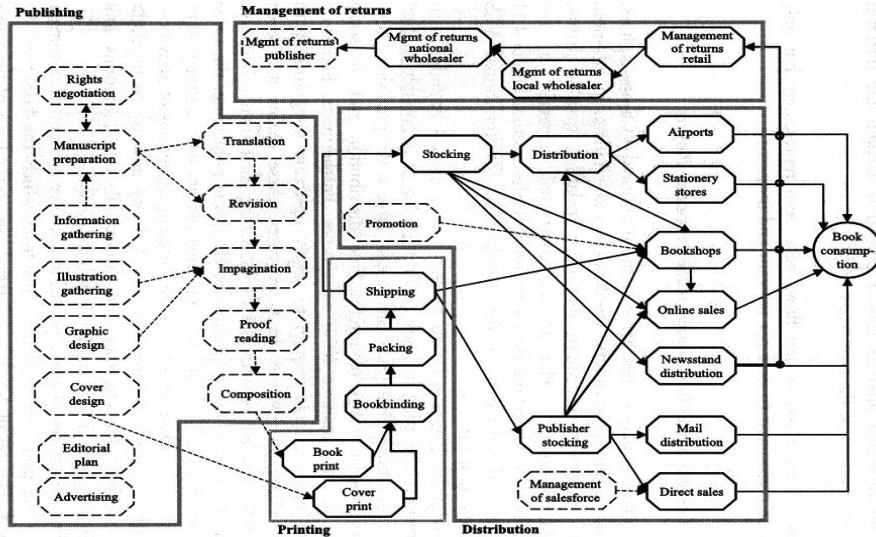
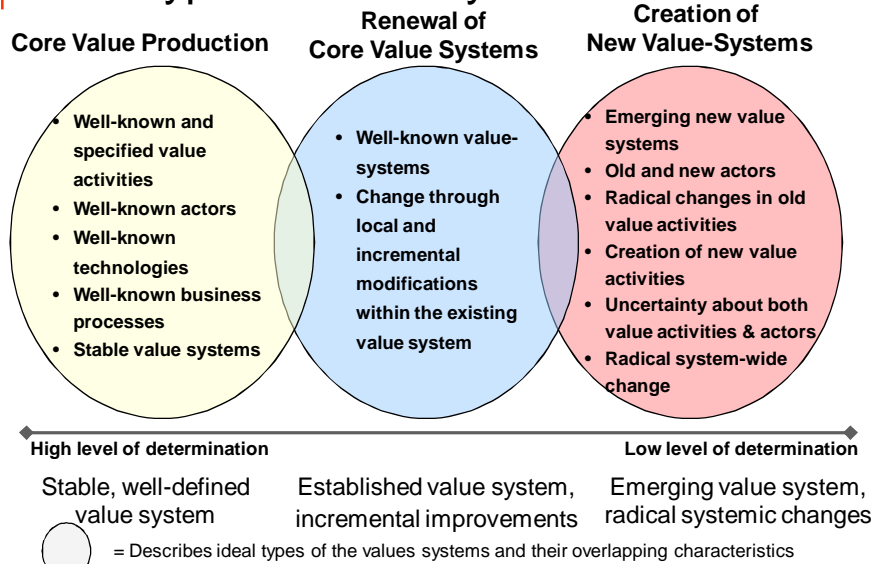


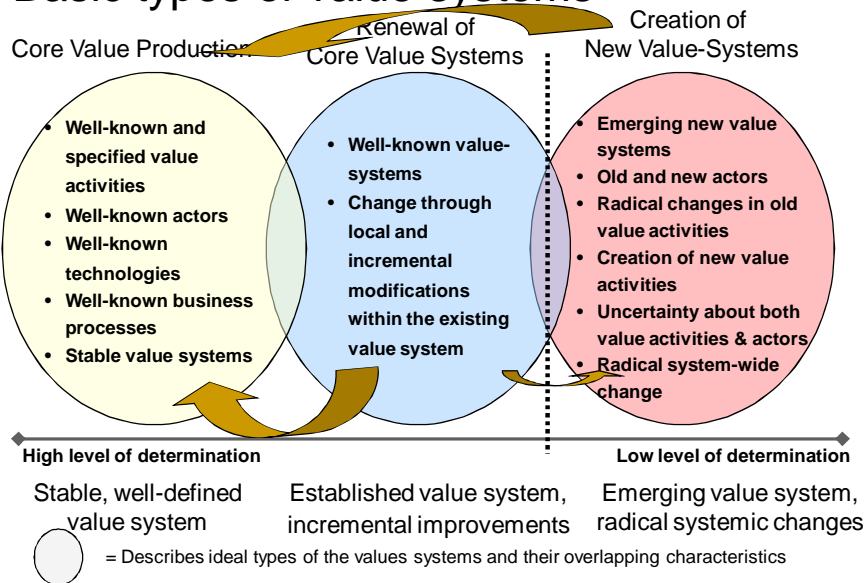
Figure 4.10 Traditional book publishing VCS

Parolini (1999)

Basic types of value systems



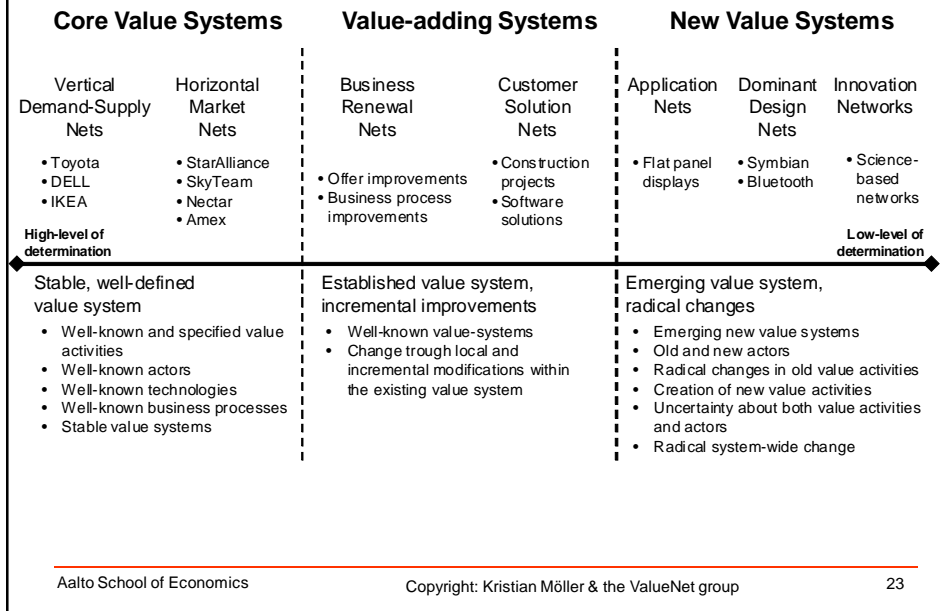
Basic types of value systems



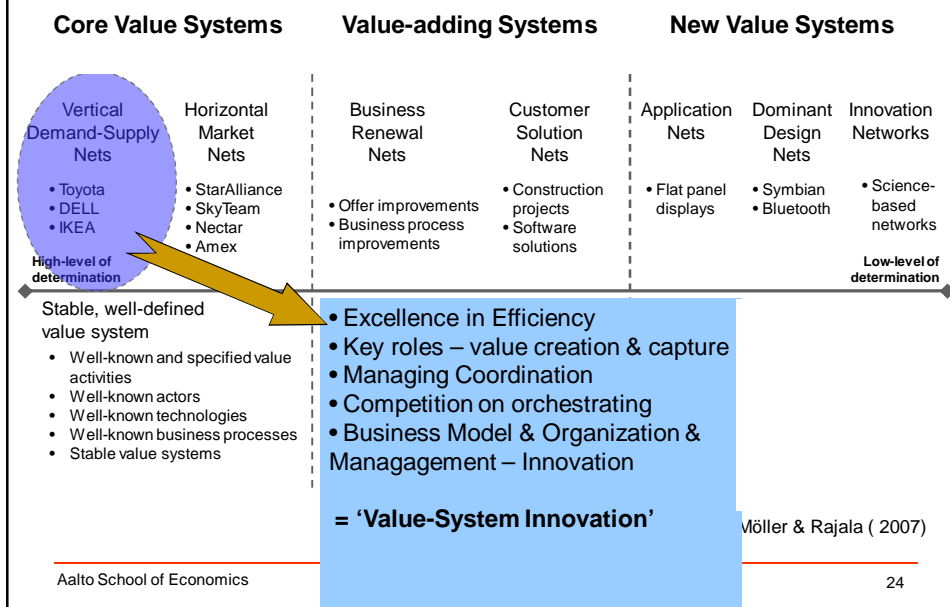
Value System Types – network & innovation view

How to manage & influence value-systems?

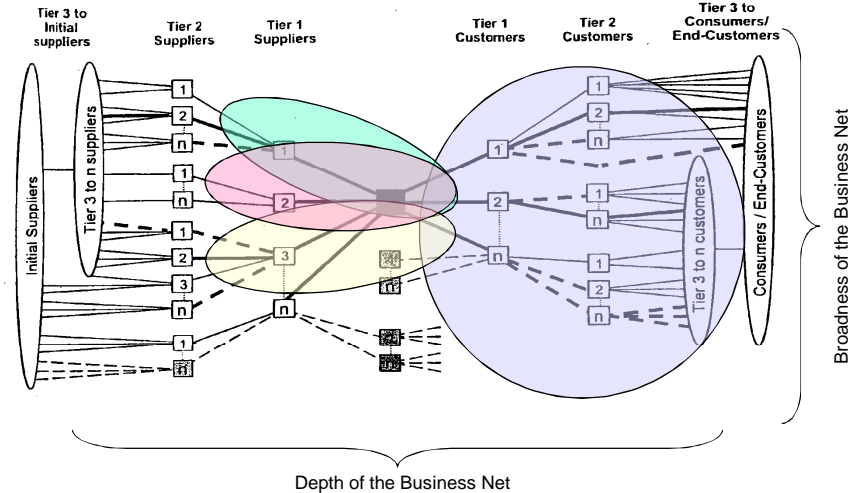
Basic Value-systems & networks Möller & Rajala (2007)



Vertical Demand-Supply Nets



DELL / IKEA - value system innovation



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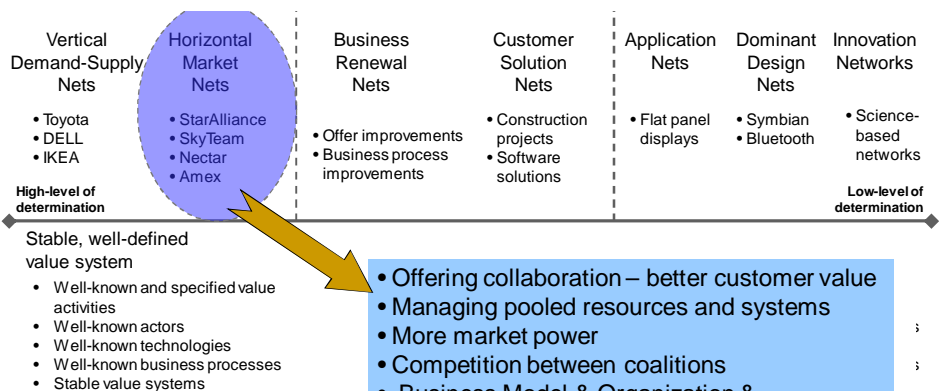
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Horizontal Market Nets

Core Value Systems

Value-adding Systems

New Value Systems



- Offering collaboration – better customer value
- Managing pooled resources and systems
- More market power
- Competition between coalitions
- Business Model & Organization & Management – Innovation

Möller & Rajala (2007)

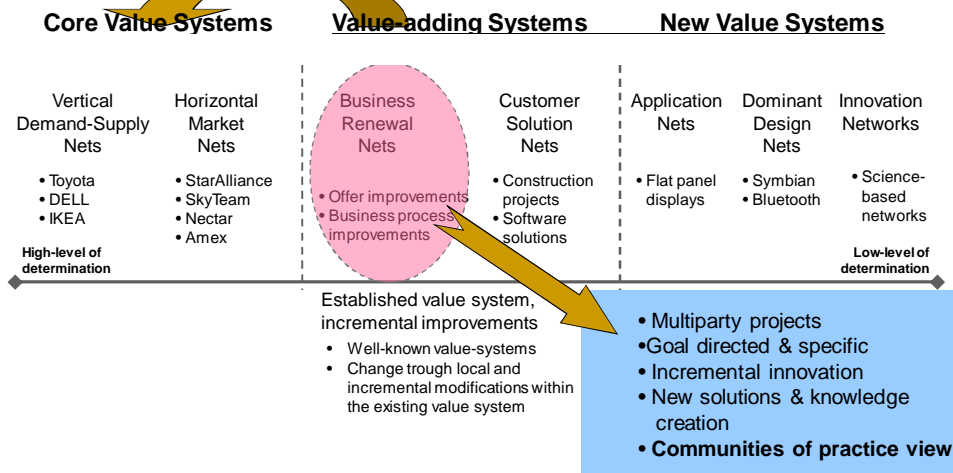
= 'Value-System Innovation'

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Star Alliance / One World / Business Model Innovation

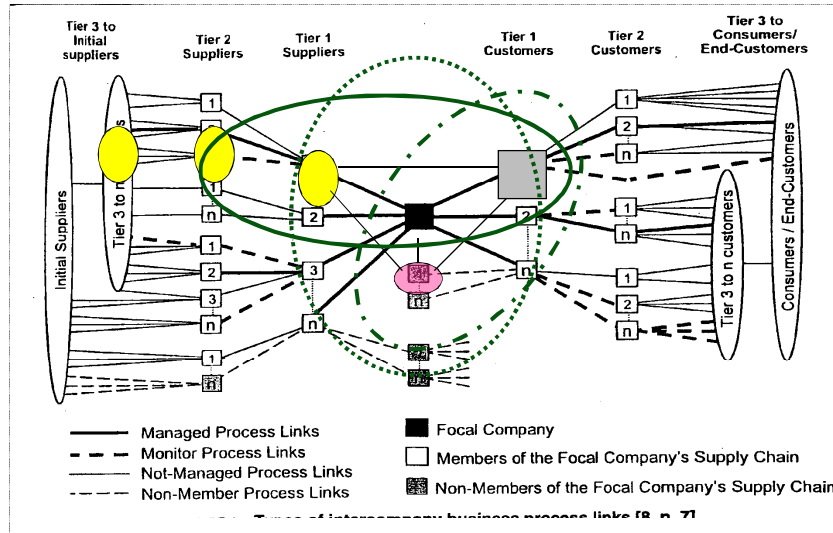


Business Renewal Nets



Möller & Rajala (2007)

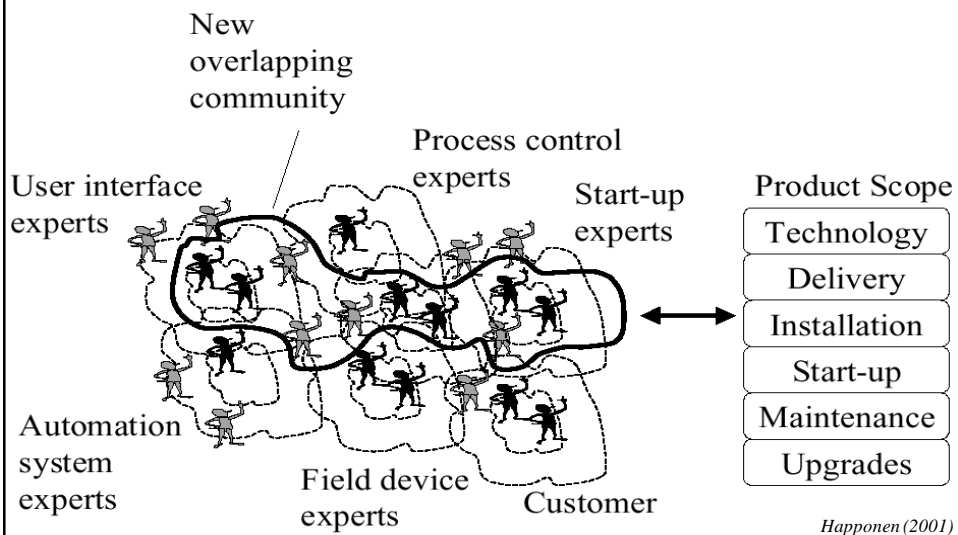
Renewall nets as projects



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Lambert & Cooper (2000, 75)
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Product development project as a NET of overlapping communities of practice - Metso Automation



Happonen (2001)

Business Renewal Nets

- Multiparty projects
- New solutions & knowledge creation
- Incremental innovation
- Communities of practice view

Customer Solution Nets

Core Value Systems

Vertical
Demand-Supply
Nets

- Toyota
- DELL
- IKEA

High-level of
determination

Horizontal
Market
Nets

- StarAlliance
- SkyTeam
- Nectar
- Amex

Value-adding Systems

Business
Renewal
Nets

- Offer improvements
- Business process improvements

Customer
Solution
Nets

- Construction projects
- Software solutions

New Value Systems

Application
Nets

- Flat panel displays

Dominant
Design
Nets

- Symbian
- Bluetooth

Innovation
Networks

- Science-based networks

Low-level of
determination

Established value system, incremental improvements

- Well-known value-systems
- Change through local and incremental modifications within the existing value system

In the fields where each customer demands a customized solution

- Construction industry
 - Major housing developments & special building project, etc.
- Software / service solutions
 - Banking & financial systems
- Net(work) of collaborative actors
 - Hub-driven
 - Project based-business
 - Combination & collaboration

Möller & Rajala (2007)

Customer Solution Nets

In the fields where each customer / customer segment demands a customized solution/offering

- Construction industry
 - Major housing developments & special building project
 - Major plants, etc
- Software / service solutions
 - Banking & financial systems
- Arts & Entertainment & Cultural production

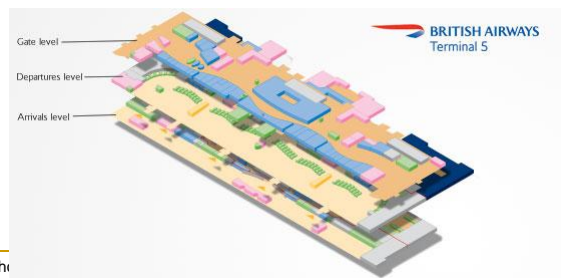
Shipbuilding



- Shipbuilding as a combination of market sourcing, outsourcing & strategic partnerships
- Special vessels as design innovation & production projects
- Project net mobilization & coordination



'Mega Construction' – LHR Terminal 5



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Terminal 5 – project system & stakeholders

- Research – from archeology to systems theory
- Building projects
 - Lanscaping
 - Terminal & facilities
- Transportation projects
- Logistics projects
- Financing projects
- Customer services
 - Business customers
 - Flying customers
- Platforms involved

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Emerging new value systems

– new technology & business emergence

“Competition about Future”

Innovation Networks

Core Value Systems

Vertical Demand-Supply Nets

- Toyota
- DELL
- IKEA

High-level of determination

Horizontal Market Nets

- StarAlliance
- SkyTeam
- Nectar
- Amex

Value-adding Systems

Business Renewal Nets

- Offer improvements
- Business process improvements

Customer Solution Nets

- Construction projects
- Software solutions

New Value Systems

Application Nets

- Flat panel displays

Dominant Design Nets

- Symbian
- Bluetooth

Innovation Networks

- Science-based networks

Low-level of determination

Science & research networks:

- Social & professional networks and social capital
- Importance of tacit knowledge
- Competition on sense making and new knowledge creation
- Scientific forums & knowledge centers – “hot spots”
- Innovations are locally produced

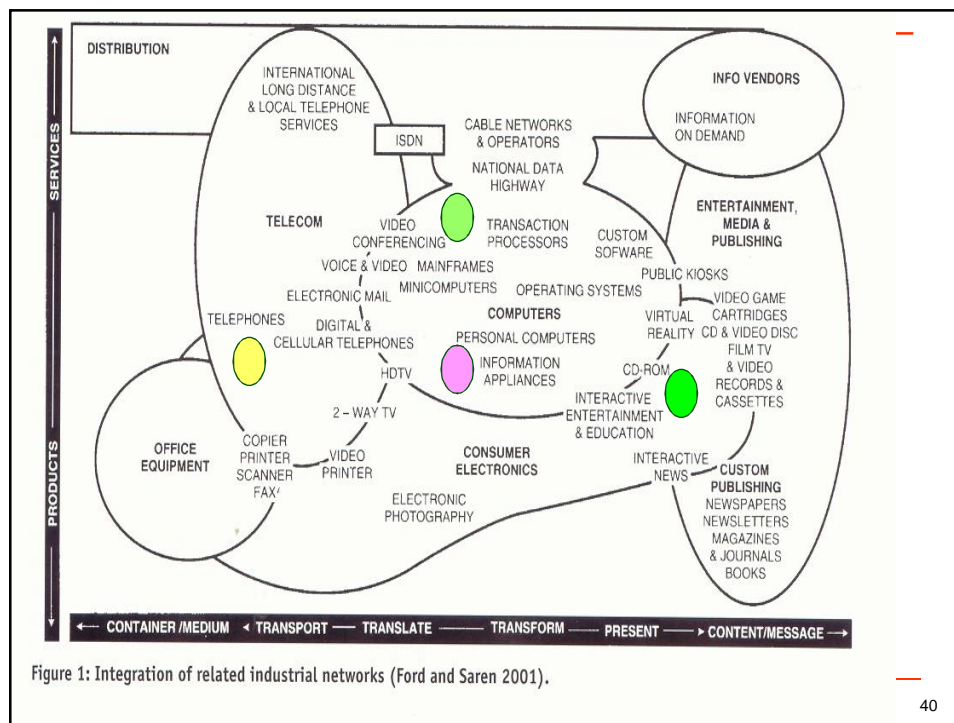
Emerging value system, radical changes

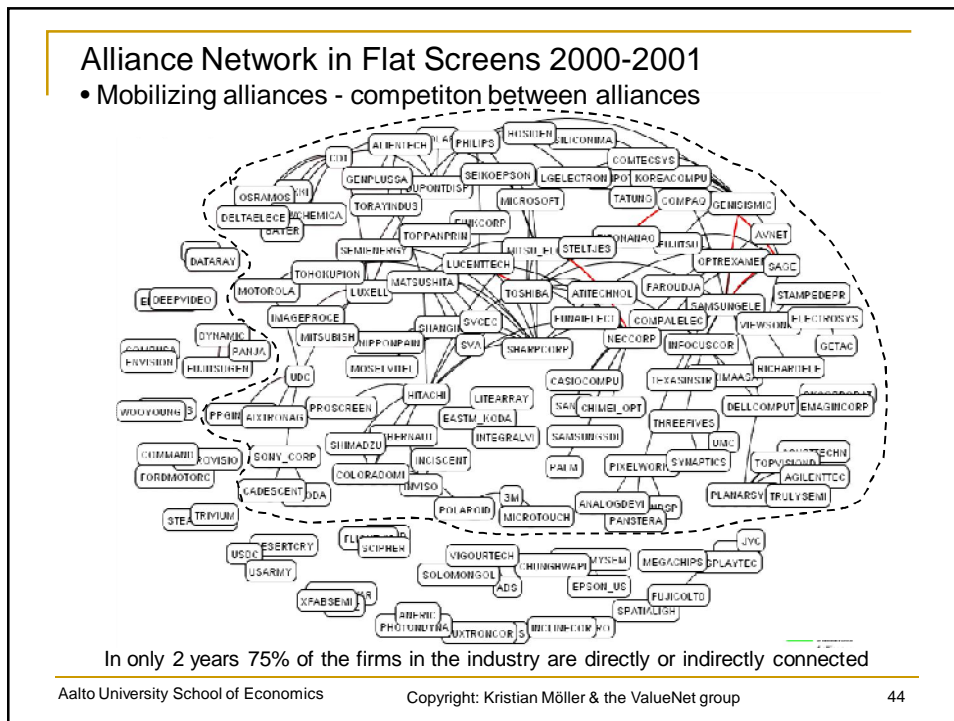
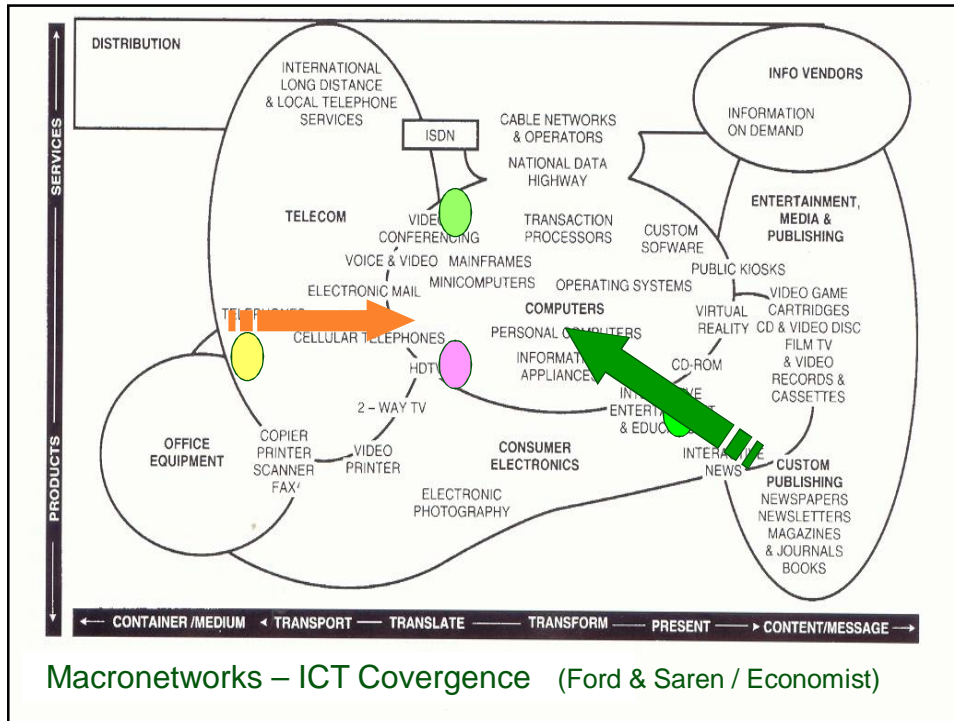
- Emerging new value systems
- Old and new actors
- Radical changes in old value activities
- Creation of new value activities
- Uncertainty about both value activities and actors
- Radical system-wide change

Möller & Rajala (2007)

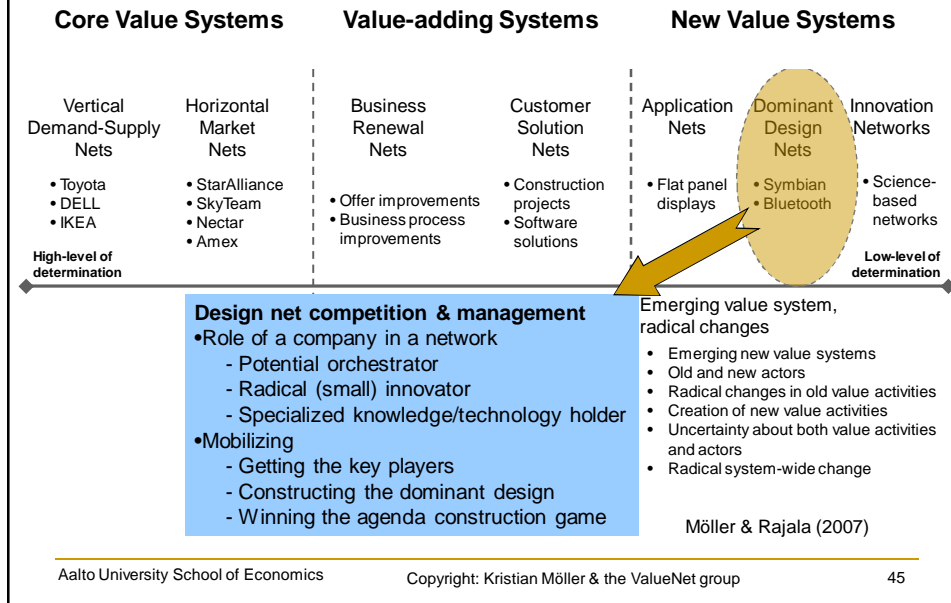
Key capabilities

- Sense making
 - Visioning
 - Direction / agenda construction
-
- Network position
 - Portfolio of relationships
 - Learning / absorptive capacity
 - Learning culture





Dominant Design Nets



Example Dominant Design Nets

- WAP coalition
- Bluetooth coalition
- Symbian "coalition"
- Flat Screens technology
 - LCD vs Plasma
- HD DVD coalitions
 - Sony Group (Blu-ray) vs Toshiba Group (Dd DVD)



Bluetooth Consortium

In **1998**, **Ericsson**, **IBM**, **Intel**, and **Nokia**, formed a consortium and adopted the code name Bluetooth for their proposed open specification.

In December 1999, **3Com**, **Lucent Technologies**, **Microsoft**, and **Motorola** joined the initial founders as the promoter group. Since that time, **Lucent Technologies** transferred their membership to their spinoff **Agere Systems**, and **3Com** has left the promoter group.

Most recently, Nintendo has installed Bluetooth on its new video game controller, the **Wii Remote**, to communicate with the **Wii** console.

The new Sony **PlayStation 3** uses Bluetooth 2.0 technology for its wireless functions.

Bluetooth Applications



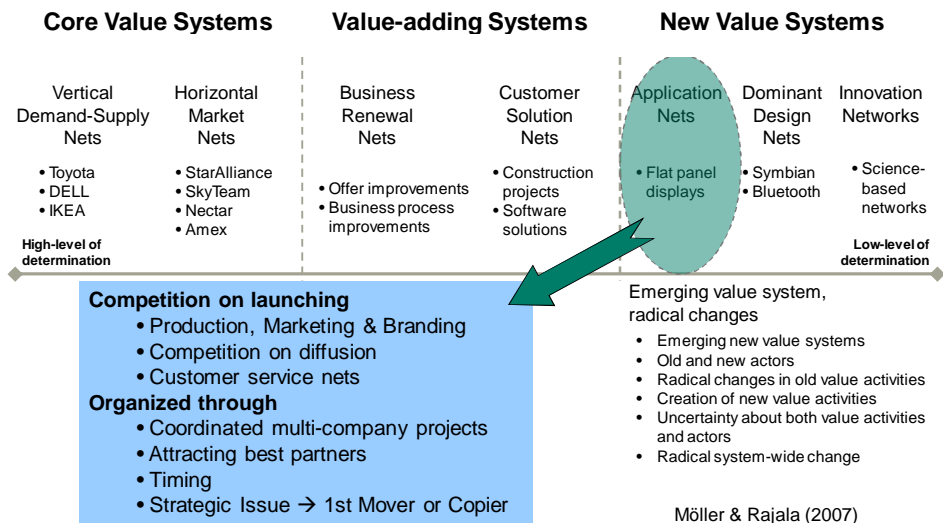
Bluetooth Consortium = Dominant Design Net

- **Competitors**
- **Collaborators**
- **Establishing a dominant design**
- **Creation of future business opportunity potential**
- **"Market-base construction"**

BUT

- **Competing on applications**

Application Nets



Möller & Rajala (2007)

Synthesis & Future outlook

Value Logics & Innovation

Core Value Systems Value-adding Systems New Value Systems

<p>Vertical Demand-Supply Nets</p> <ul style="list-style-type: none"> • Toyota • DELL • IKEA <p>High-level of determination</p>	<p>Horizontal Market Nets</p> <ul style="list-style-type: none"> • StarAlliance • SkyTeam • Nectar • Amex 	<p>Business Renewal Nets</p> <ul style="list-style-type: none"> • Offer improvements • Business process improvements 	<p>Customer Solution Nets</p> <ul style="list-style-type: none"> • Construction projects • Software solutions 	<p>Application Nets</p> <ul style="list-style-type: none"> • Flat panel displays 	<p>Dominant Design Nets</p> <ul style="list-style-type: none"> • Symbian • Bluetooth 	<p>Innovation Networks</p> <ul style="list-style-type: none"> • Science-based networks <p>Low-level of determination</p>
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Value system innovation:

- Major reconfigurations
- New business models
- Net organisations

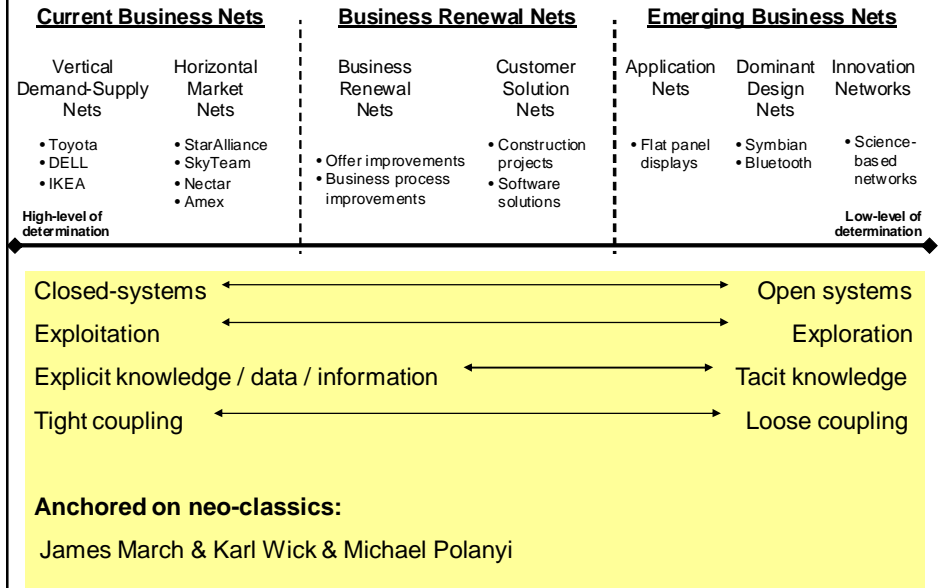
Incremental innovation

- Business processes
- Coordination systems
- Offering innovation
- Business models
- Net organisations

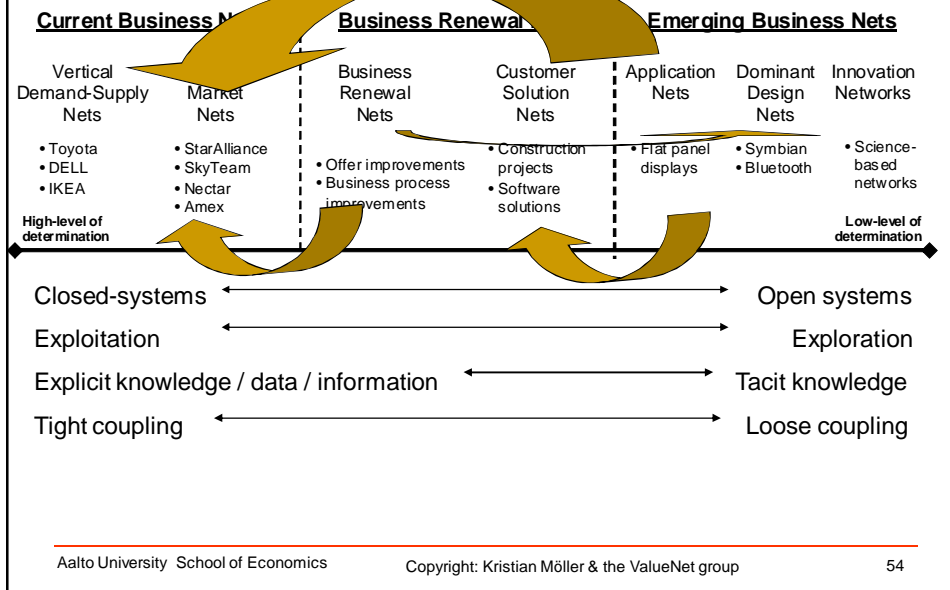
Radical innovation

- Science & technology
- Discontinuous
- New technologies
- New business concepts & fields
- Transformation of old

Value Logics & Management



Value Logics & Change



Conscious competition on future

- Regional level – ex EU
- National level – ex FIN, Singapore, Taiwan
- Large corporations
 - Ecosystem / Value system dominance
 - Influencing science

Emergence vs Orchestration

- Both & And

Innovation & Renewal Strategies

- Competition over Dominance →
Large players try to coordinate whole value-systems
- Competition over continuous renewal →
"Toyota model"
- Competition over Customer solutions →
IBM
- Competition over early business transformation →
Toyota –Prius-hybrid technology
- Competition over "Future" → Large players try to tap early into local knowledge "hot spots", & adopt emerging applications to their production & distribution nets

Competition of network understanding

- How different nets & networks are interlinked
- What forces influence net & network dynamics

Comments wellcome!

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Thank You & Good Innovating & Networking

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Selected publications Kris Moller & the ValueNet Group

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