

Ekosysteemien harha ja yrittäjämäinen innovaatiojärjestelmä

Osa V - Mistä puhun kun puhun aluekehityksestä

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Ecosystem

- A metaphor to describe the complex network of interactions and interdependencies among various components.
- Consists of various organisations, institutions, individuals, and resources that interact with each other to promote and support innovation.



Universities
Research institutes
Start-ups
Established companies
Investors
Government agencies
Other organisations

Innovation ecosystem

- Emphasises more market mechanisms than institutionally oriented innovation system literature
- Initiated in business studies
 - Earlier from economics, regional studies, economic geography, etc.
 - Organic metaphors replace mechanical ones

- Ecosystem members share the fate of the entire system (Moore, 1993)
- Access to global innovation ecosystems highlighted



Photos: Pixabay

Rinkinen (2016): “ecosystems are first and foremost global”.

The role of a region [originally] is not visible in the literature concerning ecosystems.

The national level perspective is the main way in which ecosystem discussion is connected to the geographical context.

It is generally difficult to define the ecosystem boundaries, whether they are geographical or not.”

Local and regional development scholars and policy makers have woken up



Photo by Pascal Debrunner on Unsplash

Innovation ecosystem

‘Network of interconnected organizations, **connected to a focal firm or a platform**, that incorporates both production and use side participants and created as appropriates new value through innovation.’

(Autio & Thomas 2014)

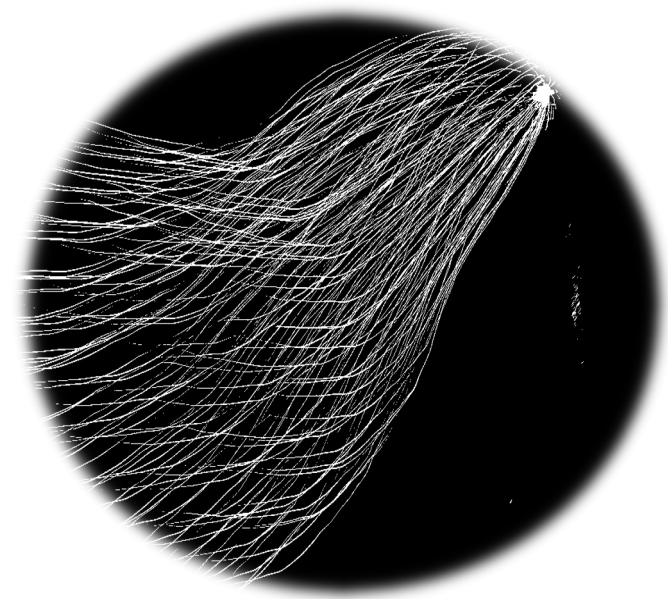
Platform policy approach

(Asheim, Boschma & Cooke, 2011; Ailisto et al 2016)

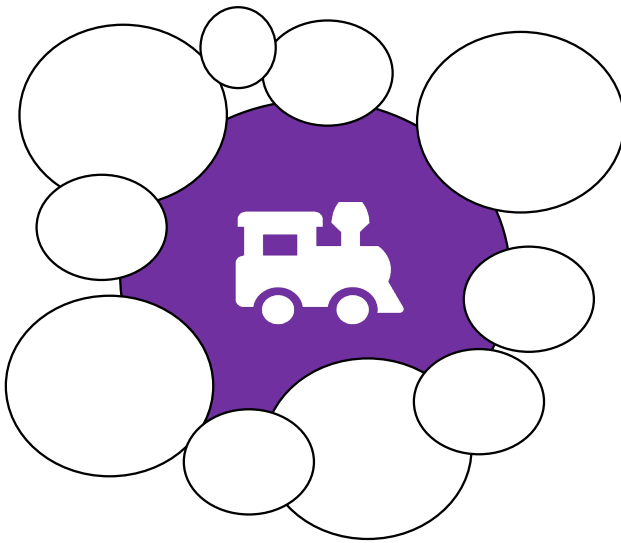
- Focuses on making connections between different but related activities
 - Represents a strategy based on related variety for **diversification**
 - Related variety is defined on the basis of shared and complementary knowledge bases and competences
- Meeting points for different needs
 - Network effects
 - Multi-way interaction

Change in thinking? Growth engines (2020s)

- The main objective is to generate billion-euro export businesses in Finland
 - Collaboration between companies of different sizes, research organizations and public actors to achieve a common concrete business goal.
 - Launching a new operator, a **platform company** to achieve a business goal
 - The construction of the platform company's business and through it generating extensive networking effects



The Growth Engine programme



Leading companies

- **NESTE:** Sustainable and globally scalable solutions for the R&D of raw materials that reduce the use of crude oil.
https://www.businessfinland.fi/4a9cd1/globalassets/finnish-customers/01-funding/06-ecosystems/neste_veturi_tiekartta.pdf
- **ABB:** Platforms for the optimal generation and consumption of electricity in a carbon-neutral society.
<https://www.businessfinland.fi/492bb4/globalassets/finnish-customers/01-funding/06-ecosystems/abb-green-electrification-2035-veturi-roadmap.pdf>
- **FORTUM & METSÄ GROUP:** New fibre-based products for consumer markets to reduce the carbon footprint.
https://www.businessfinland.fi/49a764/globalassets/finnish-customers/01-funding/06-ecosystems/expandfibre_ecosystem-roadmap_may-2023.pdf
- **KONE:** Mobility solutions for urban environments in line with the principles of sustainable development.
<https://www.businessfinland.fi/49073c/globalassets/finnish-customers/01-funding/06-ecosystems/kone-the-flow-of-urban-life-veturi-roadmap.pdf>
- **NOKIA 5G:** Making Finland a pioneer in 5G networks and industrial 5G (ended).
<https://www.businessfinland.fi/suomalaisille-asiakkaille/palvelut/rahoitus/veturiyrittysten-ja-ekosysteemien-rahoitus>
- **SANDVIK:** Globally competitive electric and digital solutions for heavy machinery.
<https://www.businessfinland.fi/492bb4/globalassets/finnish-customers/01-funding/06-ecosystems/sandvik-veturi-roadmap.pdf>
- **TIETOEVRY:** Trust-based digital services.
https://www.businessfinland.fi/494766/globalassets/finnish-customers/01-funding/06-ecosystems/20220221_tietoevry_veturi_public_roadmap.pdf
- **KONECRANES:** Zero4 material flow.
<https://www.businessfinland.fi/499c0b/globalassets/finnish-customers/01-funding/06-ecosystems/konecranes-zero4.pdf>

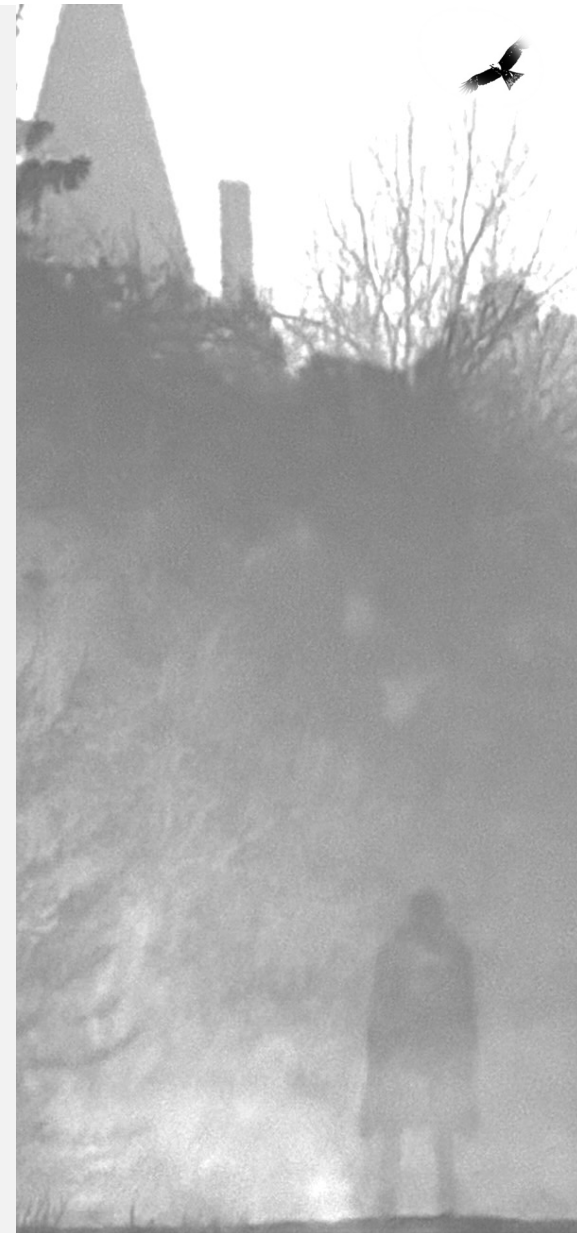


Challenger companies

- **BITTIUM:** Seamless and secure connectivity.
https://www.businessfinland.fi/4904f7/globalassets/finnish-customers/01-funding/06-ecosystems/bittium_seamless-and-secure-connectivity-2024.pdf
- **PONSSE & EPEC:** Unlocking sustainability in off-road and commercial vehicles.
https://www.businessfinland.fi/49bbe4/globalassets/finnish-customers/01-funding/06-ecosystems/ponsse_epec_forward27_roadmap.pdf
- **DANFOSS:** Fossil-free future.
https://www.businessfinland.fi/49c1e1/globalassets/finnish-customers/01-funding/06-ecosystems/danfoss_fossil-free-future_roadmap_2023.pdf
- **MIRKA:** Shaping the green transition.
https://www.businessfinland.fi/494803/globalassets/finnish-customers/01-funding/06-ecosystems/mirka_shape-02-2024.pdf
- **KEMPOWER:** Heavy electric traffic ecosystem.
<https://kempower.com/news/heavy-electric-traffic-ecosystem-program-boosted-by-10-million-euros/>
- **VALIO:** Food 2.0
<https://www.businessfinland.fi/491a86/globalassets/finnish-customers/01-funding/06-ecosystems/food-2.0-roadmap.pdf>

Connected to EU RRF

- **BOREALIS POLYMERS:** Sustainable plastic industry.
<https://www.businessfinland.fi/49542b/globalassets/finnish-customers/01-funding/06-ecosystems/borealis-spirit-veturi-roadmap-20220318.pdf>
- **MEYER TURKU:** Climate-neutral cruise ship and shipyard.
<https://www.businessfinland.fi/494cb5/globalassets/finnish-customers/01-funding/06-ecosystems/meyer-turku-2022-03-18-necoleap-veturi-roadmap.pdf>
- **VALMET:** Circular economy technology.
<https://www.businessfinland.fi/4a5208/globalassets/finnish-customers/01-funding/06-ecosystems/beyond-circularity-roadmap-valmet-september-2023.pdf>
- **NOKIA EDGE:** Energy-efficient edge-computing.
https://www.businessfinland.fi/494a77/globalassets/finnish-customers/01-funding/06-ecosystems/nokia-veturi_competitive-edge_roadmap_2601_2022.pdf
- **WÄRTSILÄ:** Zero-emission marine.
<https://www.businessfinland.fi/494cf9/globalassets/finnish-customers/01-funding/06-ecosystems/wartsila-zem-leading-company-ecosystem-roadmap.pdf>



At best innovation policy creates interpretive spaces

- Sheltered spaces for collective search, experimentation and interpretation
 - where fears of the risk of private appropriation of information do not disrupt the open-ended futures-oriented conversations (Lester & Piore 2004)
 - where collective sense-making is possible (learning new vocabulary, thinking, partners, etc.)
 - where one is not only learning to innovate or detecting system failures but is enabled to seek futures with relevant partners (and to find relevant partners)

<i>System level</i>	Type of system	Entrepreneurial regional innovation system (ERIS)	Institutional regional innovation system (IRIS)
	Image of the market	Ambiguous, potential collaborative space	Uncertain, risky competitive space
	Type of innovation process	Action-oriented: based on experimental learning	Planning-oriented: based on the need for overview, control and risk minimizing
	Strategies	Emergent	Planned
	Time perspective	Emergence; fuzzy vision combined with step-by-step action	Present and future; more clear vision combined with long-term planning
	Organizational structure	Organic (loosely coupled); to a large extent based on trust	Mechanistic; to a large extent based on contractual ties
	Critical resources	Entrepreneurial skills Venture capital	Management skills Institutional capital
	Decision logic	Effectuation: Taking action based on available/accessible resources	Causation: Planning for and controlling the future
	Cooperation	Ad hoc-based, intermittent and often termed short-termed	Planned and long-termed
<i>Actor level</i>	Critical performers	Actors: Individuals who form teams of complementary competences	Agents: Representatives of different sectors of society

Figure 2. Contrasting entrepreneurial and institutional regional innovation systems

(Cooke & Ieyesdorf, 2006; Ylinenpää, 2009)



Kiitos!