Harri Malinen, University of Lapland

Lapland Innovation Eco-system update

ERRIN Policy WG: Organising a regional innovation ecosystem | 4 October

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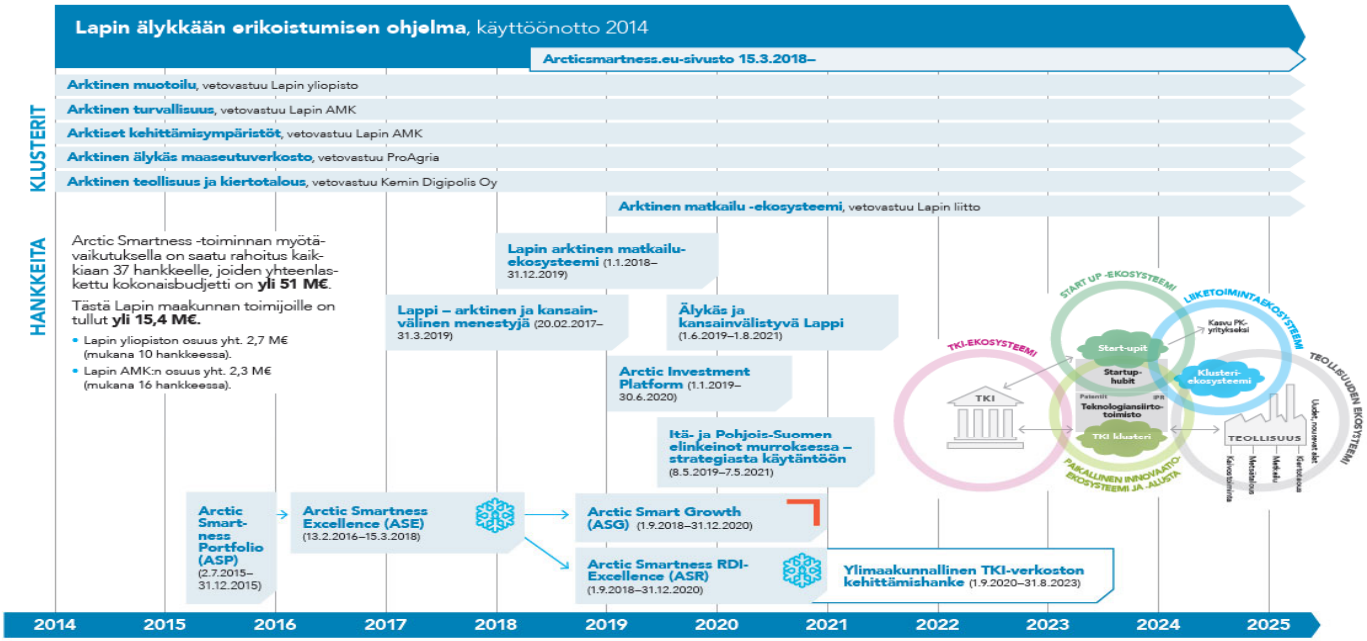
The pathway

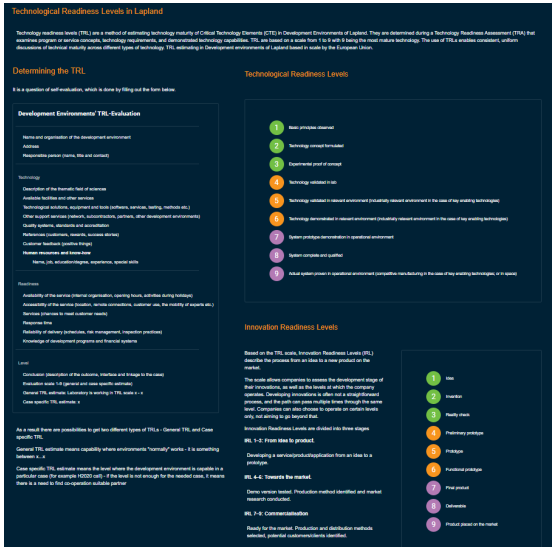


VAIKUTTAVUUTTA JA NÄKYVYYTTÄ

- **Lappi ja sen älykkään erikoistumisen klusterit on mainittu esimerkkinä useissa EU:n aluekehitystä ja älykästä erikoistumista käsittelevissä julkaisuissa,** esim.
  - Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions – Strengthening Innovation in Europe's Regions: Strategies for resilient, inclusive and sustainable growth (s. 3).
  - Energy Platform Good Practices
  - Implementing Smart Specialisation Strategies – A Handbook (s. 43–44).
  - Lappi esimerkkialueena hyvästä älykkään erikoistumisen toteutuksen hallinnosta.
- EU-komission ESCA (The European Secretariat for Cluster Analysis) on myöntänyt Arktinen teollisuus ja kiertotalous -klusterille sekä Arktinen älykäs maaseutuverkosto -klusterille hopeiset **Cluster Management Excellence -merkit**. Muut klusterit ovat saaneet pronssiset merkit.
- Lappi sekä sen älykkään erikoistumisen klusterit ovat **mukana EU:n verkostoissa ja kumppanuuksissa,** esim. EU-alueiden älykkään erikoistumisen temaattisissa kumppanuuksissa (teemat Teollisuuden modernisaatio ja Energia).

Arctic Smartness -hankkeissa ovat olleet mukana Lapin liitto, Lapin yliopisto, Lapin ammattikorkeakoulu, Pro-Agria, Kemin Digipolis Oy, Luke ja GTK.

ARCTIC Smartness



Leverage from the EU 2014–2020

European Union

ARCTIC Smartness

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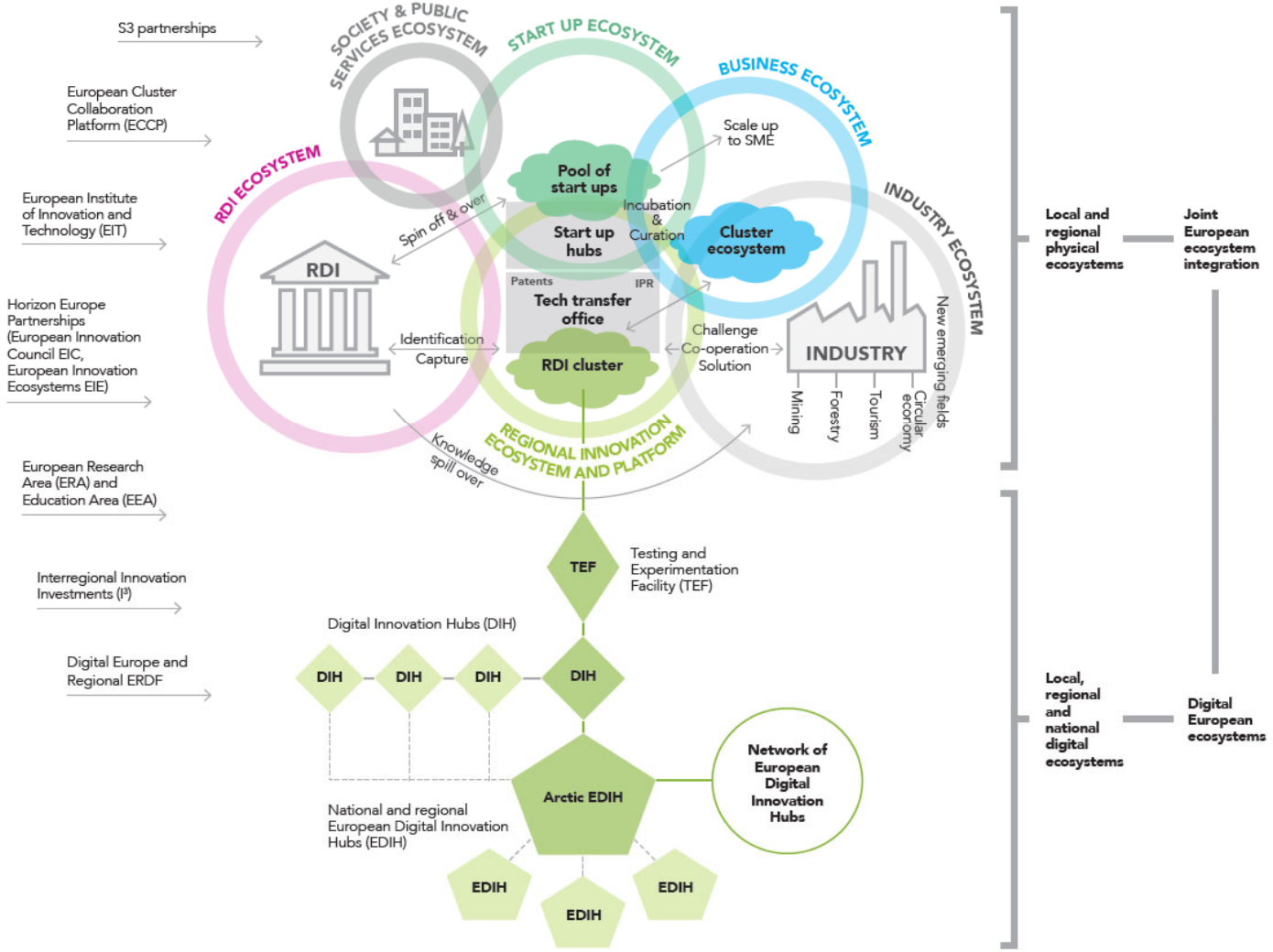
Basic building blocks for Regional Ecosystem in Lapland



Arktiset kehittämisympäristöt (ardico.fi)

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https://ardico.fi/portal#/

ARKTISET
KEHITTÄMISYMPÄRISTÖT

DEVELOPMENT ENVIRONMENTS | CLUSTER INFORMATION | INDUSTRY 4.0 | GO-DIGITAL | TOOLS | LOGIN | SUOMEKSI

Leverage from the EU 2014–2020
European Union
European Regional Development Fund

We offer solutions

Through the Arctic Development Environments cluster, the services of Lapland's RDI organizations are available to companies and researchers on a one-stop-shop basis.

The cluster offers companies support at different stages of the product development life cycle and in finding suitable RDI funding.

For funders, the cluster provides foresight-based information about the technologies in the region and a service point to which funders can direct their clients.

With the help of the cluster, RDI organizations to able to respond to customer needs in a more comprehensive and agile way.

Contact us!

See how we do it

[In English | Arctic Research Community (eoppimispalvelut.fi)](https://blogi.eoppimispalvelut.fi/arcticresearchcommunity/in-english/)

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https://blogi.eoppimispalvelut.fi/arcticresearchcommunity/in-english/

Arctic Research Community

Leverage from the EU 2014–2020

Tutkimusyhteistyö Yritysyhteistyö Tausta In English

For research, development, and innovation driven Lapland

Arctic Research Community

Arctic Research Community is a partnership formed by

- University of Lapland
- Lapland University of Applied Sciences
- Geological Survey of Finland (GTK)
- Natural Resources Institute Finland (Luke)

to boost research, development and innovation in Finnish Lapland.

Find the best of Lapland!

Search from development environments

1-3 From idea to demo - planning and prototyping

4-6 From demo to production model - from validation to solutions and model production

7-9 From field testing to production and to market replication

Development environments

TRL?

Development environment	Industries	IRL-rating	Organization	Evaluation
FrostBit - Ohjelmistotekniikan laboratorio	Software development	3	Lapland University of Applied Sciences	MORE
Hyvinvointipysäkki	Health and welfare	1 2 3 4 5 6	Lapland University of Applied Sciences	MORE
Simulaatio- ja virtuaalikeskus ENVI	Health and welfare	6 7 8 9	Lapland University of Applied Sciences	MORE
Hyvinvointipiste Vire	Health and welfare	2 3 4 5 6	Lapland University of Applied Sciences	MORE
Rakennus- ja yhdyskuntatekniikan laboratorio	Technology	1 2 3 4 5 6	Lapland University of Applied Sciences	MORE
ONNI-auto	Health and welfare	5 6 7 8	Lapland University of Applied Sciences	MORE
Materiaalien käytettävyyden tutkimusympäristöt	Technology	1 2 3 4 5 6 7	Lapland University of Applied Sciences	MORE
IoRT -laboratory	Technology	2	Lapland University of Applied Sciences	MORE
SINCO – Service Design Lab	Culture	1 2 3	University of Lapland	MORE
Outokumpu mineral processing pilot plant and laboratories - GTK Mintec	Natural Resources	1 2 3 4 5 6 7 8 9	Geological Survey of Finland	MORE
National drill core archive	Natural Resources	3 4 5 6 7	Geological Survey of Finland	MORE
Geomari – marine geology research vessel	Natural Resources	3 4 5 6 7 8	Geological Survey of Finland	MORE
Research Laboratory	Natural Resources	4 5 6 7 8 9	Geological Survey of Finland	MORE
Geophysical Laboratory	Natural Resources	4 5 6 7 8	Geological Survey of Finland	MORE
Circular Raw Materials Hub	Natural Resources	2 3 4 5 6 7 8	Geological Survey of Finland	MORE
ARCTA – Arctic Art & Design Labs	Culture	1 2 3	University of Lapland	MORE
Luke Agrifood: Barns	Natural Resources	2 3 4 5 6	Natural Resources Institute Finland	MORE
Luke Agrifood: Fields	Natural Resources	2 3 4 5 6	Natural Resources Institute Finland	MORE
Luke Aqua: Fish Farms and Research platform in water	Natural Resources	2 3 4 5 6 7 8	Natural Resources Institute Finland	MORE
Luke Forest: Research Forests and Data	Natural Resources	2 3 4 5 6	Natural Resources Institute Finland	MORE
Luke Agrifood: Greenhouses and simulation platforms	Natural Resources	2 3 4 5 6	Natural Resources Institute Finland	MORE
Lapland UAS Sports Lab	Health and welfare	2 3 4 5 6	Lapland University of Applied Sciences	MORE
Biolab	Natural Resources	1 2 3 4 5	Lapland University of Applied Sciences	MORE
Arcta galleries	Culture	1 2 3 4 5 6 7 8 9	University of Lapland	MORE
BioARTech	Culture	1 2 3 4 5 6	University of Lapland	MORE
MUTElab	Culture	1 2 3 4 5 6	University of Lapland	MORE
Video and sound studio	Culture	1 2 3 4 5 6	University of Lapland	MORE
Wood industry and timber construction	Technology	1 2 3 4 5 6 7 8 9	Lappia Vocational College	MORE

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Innovation Readiness Levels

Based on the TRL scale, Innovation Readiness Levels (IRL) describe the process from an idea to a new product on the market.

The scale allows companies to assess the development stage of their innovations, as well as the levels at which the company operates. Developing innovations is often not a straightforward process, and the path can pass multiple times through the same level. Companies can also choose to operate on certain levels only, not aiming to go beyond that.

Innovation Readiness Levels are divided into three stages

IRL 1–3: From idea to product.

Developing a service/product/application from an idea to a prototype.

IRL 4–6: Towards the market.

Demo version tested. Production method identified and market research conducted.

IRL 7–9: Commercialisation

Ready for the market. Production and distribution methods selected, potential customers/clients identified.

1. Idea
2. Invention
3. Reality check
4. Preliminary prototype
5. Prototype
6. Functional prototype
7. Final product
8. Deliverable
9. Product placed on the market

Future

PRI

- Part of PRI Pilot; Mission based RIS, East-North Finland RIS strategy, Twin Trnsition, sustainable econimies → Innovation driven SME's

RIV

- Expression of Intest East-North Finland; Achieving circularity, Reducing the reliance on fossil fuels, Increasing global food security, Mastering the digital transformation (including cybersecurity), Improving healthcare)

Start UP ecosystem

- established in 2022, a one-person startup support service for both universities, focusing on the development of startup ideas, product/services, and business models, customer-centric testing and idea validation, team building, early-stage funding, networks, etc. Collaboration with regional business developers: to ensure comprehensive support, students/staff members are advised to contact them at the latest when they're about to officially register their business.
- External funding has been applied for projects to create a more comprehensive support system for startup development:
  - Level Up Lapland: Developing a business studies module for the joint game studies program (received ESF+ funding)
  - Structures for Social Entrepreneurship in Lapland: Creating teaching materials on social entrepreneurship, spreading knowledge and practical know-how about this form of entrepreneurship. (ESF+, decision this autumn)
  - Lapland Startup Incubator and Ecosystem: Establishing a startup incubator and building the foundations for a regional startup ecosystem in collaboration with one vocational school and two business development organizations. (JTF, decision late 2023 / early 2024)