

# ARCTIC Smartness

## RIS3 in Lapland - University of Lapland's role in the designing, implementing and monitoring

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Smart specialisation (RIS3): European  
workshop on Universities as Regional Lead  
Institutions, Graz 13.11.2018



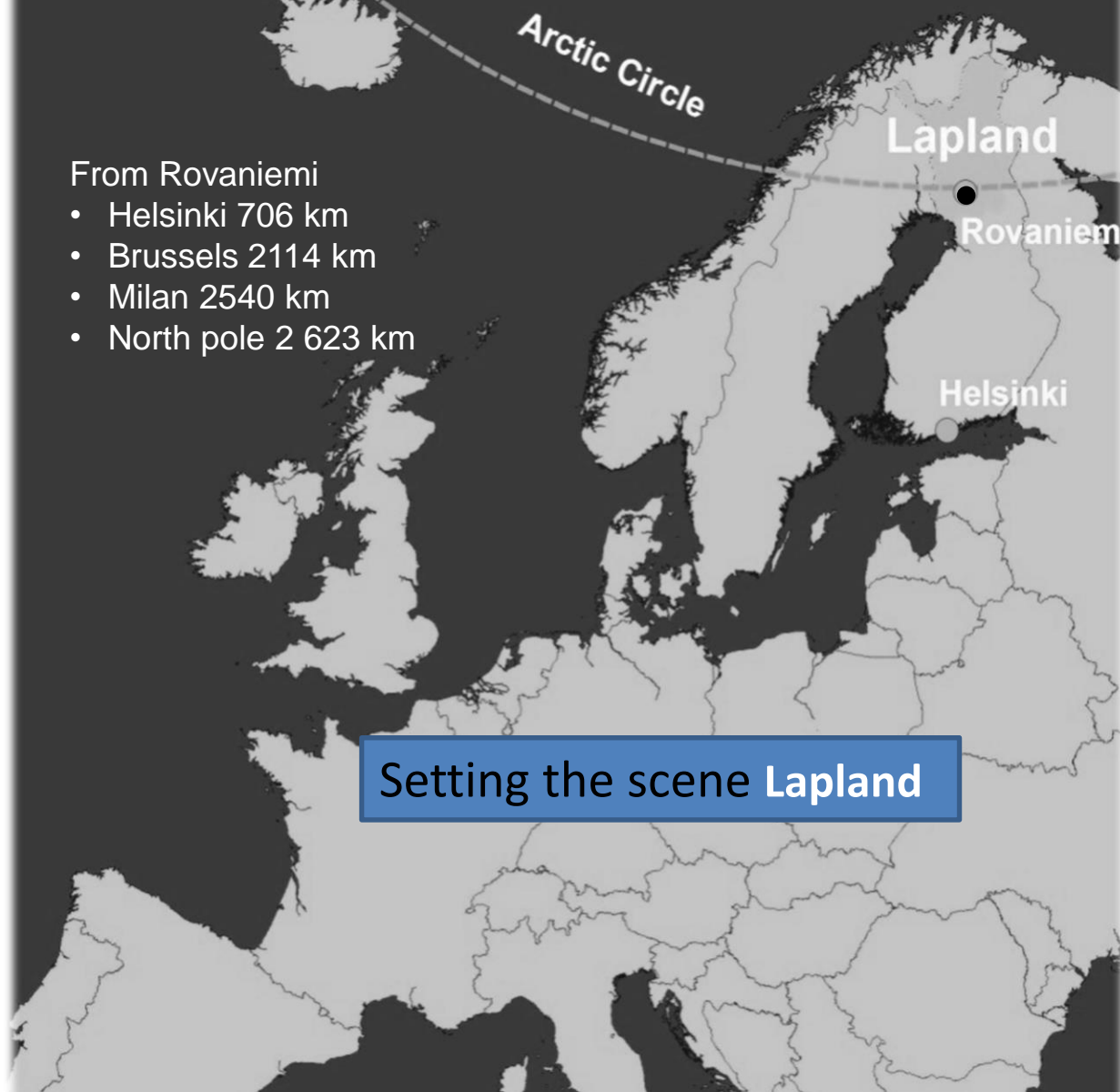
# Universities in their regional innovation ecosystems: designing, implementing and monitoring RIS3

- ∞ Setting the Scene
- ∞ Challenges
- ∞ Designing
- ∞ Implementing
- ∞ Monitoring
- ∞ Benefits
- ∞ Future, effectiveness post 2020

From Rovaniemi

- Helsinki 706 km
- Brussels 2114 km
- Milan 2540 km
- North pole 2 623 km

Setting the scene **Lapland**



# Lapland`s key Numbers

(based on Lapland`s business trends in 2017)



179 220

Population

Lapin väkiluku  
(2017 vuoden lopussa)



82 090

Number of  
Workforce

Työvoiman määrä  
(2016 vuoden lopussa)



68 100

Number of  
Workplaces

Työpaikat  
(2015 vuoden lopussa)



6 350 milj.

GDP/ capital

Bruttokansantuote, milj. euroa  
(2015)



161

Age dependency  
ratio

Taloudellinen huoltosuhde  
(2016 vuoden lopussa)



13 200 milj.

Turnover

Liikevaihto, milj. euroa  
(2017 ennakkoarvio)



4 040 milj.

Export turnover  
of Industry

Teollisuuden vientiliikevaihto, milj.  
euroa (2017 ennakkoarvio)



62 940

Number of personnel  
(labour-years, companies  
and communities)

Yritysten ja yhteisöjen  
henkilöstömäärä, htv  
(2017 ennakkoarvio)



12 235

Number of  
establishment

Yritysten toimipaikkojen lukumäärä  
(2016)



38 580

Number of personnel  
(man-year, companies)

Yritysten henkilöstön lukumäärä, htv  
(2016)



## Setting the scene Lapland

- The northernmost region of European Union
- Total area 100 369 km<sup>2</sup>
- Only chrome mine and largest gold mine of EU
- 5th strongest export region in Finland -Value of industrial export 3.7 billion €
- Value of the tourism 1 billion €
- Versatile research and development structure: two universities and sectoral research institutions
- Strong vocational education
- Productive forestry about 50% of land area,
- World cleanest air and European purest water and world's largest organic harvesting area (99%)

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YMPÄRISTÖT**

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## Challenges for Lapland

How to make the  
Lappish SME's more  
internationally  
competitive and  
innovative.

### Demographics

Ageing population and decreasing  
amount of inhabitants (-20 000 from  
1988),

Population increase (Birth based)  
stopped 2009, sustainability or growth  
maintained by migration (work based  
and Immigration of Refugees)

### Challenges

### Critical mass

Loss of young people due to  
migration; skills and brain  
drain vs low attractiveness  
and low priority in  
Government investments

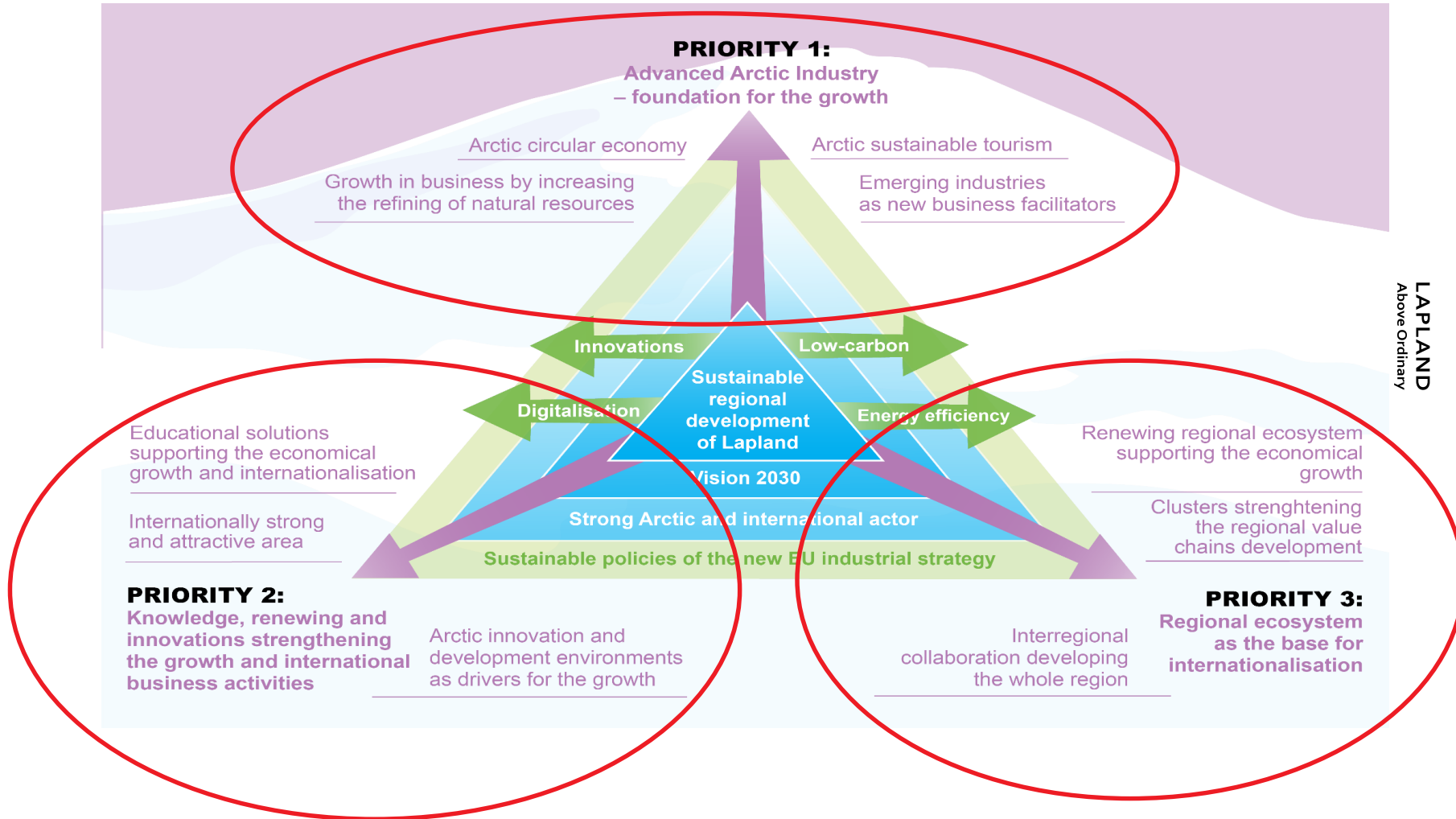
Distances,  
climate

- Story of S3 in Lapland begun 2012 - Arctic Specialisation Programme 2013
- University of Lapland and Lapland UAS acted as
  - key stakeholders in the planning process and as an active project partners and
  - contributors in the first two implementation projects of the Lapland S3 strategy
    - where Arctic Smartness and Cluster were created (First footing and empowering of key actors (ERDF 2014) and consolidating Arctic Smartness Portfolio (ERDF 2015-16)
- In addition ongoing simultaneous sister-strategy-process (ERDF 2013-2015); preparation of the Innovation programme 2014-2020; Fostering Innovation through education and research: Supporting the regional development for Lapland University Consortium (University of Lapland, and Lapland UAS)<sup>2</sup>

- Strengths and priorities in current Lapland S3
  - Lapland: EU's gateway to the Arctic
  - Vast deposit of **natural resources**, pristine and fragile Arctic nature and **Sustainable utilisation of natural resources** and conditions are the key factors to maintain the sustainable growth
  - Strong RDI actors – merging and mobilising for the benefit of the region
  - Smart growth - cross cutting strategic approach for strengthening quadruple helix
  - Lapland is in charge of its own development (empowering governance)
    - Strategic step by step approach – Arctic Smartness 2014
- Updated priorities for Lapland RIS3 project 2018-2021 were published on Nov 6, 2018 as part of new Internationalisation programme for Lapland. Work was and is carried out by Regional Council of Lapland as a ERDF project, **where University of Lapland is in the steering group and one of the key contributors to the content and development.**

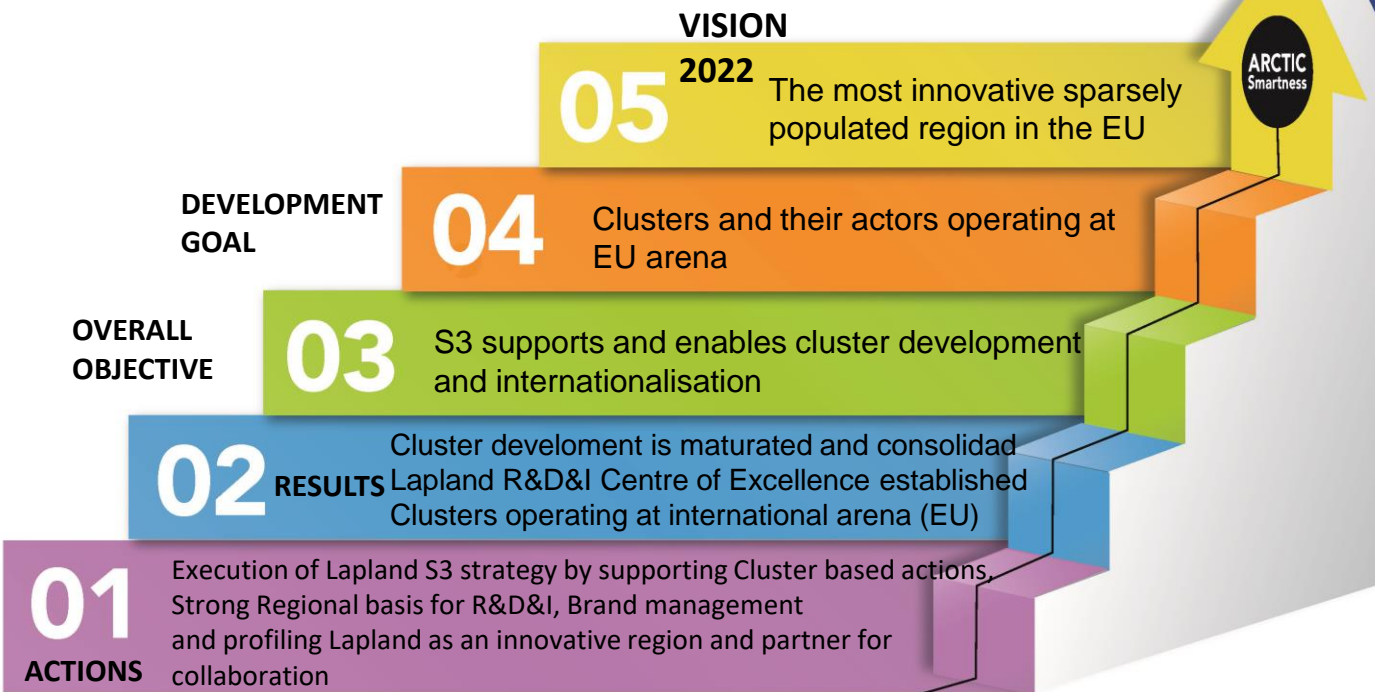


# S3 Priorities 2018-2021



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## ARCTIC SMARTNESS EXCELLENCE - VISION 2022



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## Evaluating the TRL

### DEVELOPMENT ENVIRONMENTS' TRL EVALUATION

Name and organization of the developmet environment:

Address:

Responsible person (name, title and contact):

#### TECHNOLOGY

Description of the thematic field of sciences

Available facilities and other services

Technological solutions, equipment and tools (software, services, testing, methods etc.)

Other support services (network, subcontractors, partners, other development environments)

Quality systems, standards and accreditation

References (customers, rewards, success stories)

Customer feedback (posive things)

#### Human resources and know-how

name, job, education/degree, experience, special skills

#### READINESS

Availability of the service (internal organization, opening hours, activities during holidays)

Accessibility of the service (location, remote connections, customer use, the mobility of experts etc)

Services (chances to meet customer needs)

Response time

Reliability of delivery (schedules, risk management, inspection practices)

Knowledge of development programs and financial systems

#### LEVEL

**Conclusion** (description of the outcome, interface and linkage to the case):

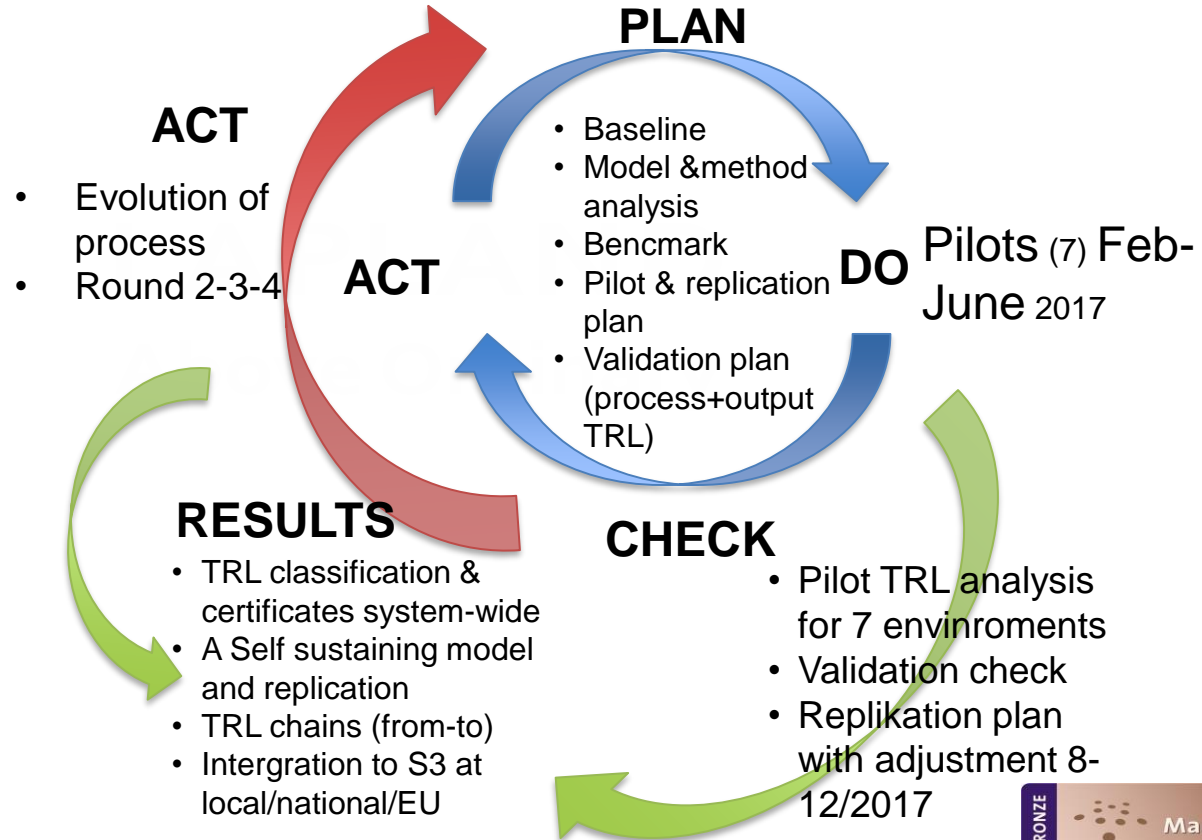
Evaluation scale 1-9 (general and case specific estimate)

**General TRL estimate:** laboratory is working in TRL scale: x - x

**Case specific TRL estimate:** x

<http://trl.plab.fi/development-environments>

Lapland wide Testing and Laboratories networks' TRL assessment methodology and outputs and use in the R&D&I outputs to S3 implementation



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BRONZE



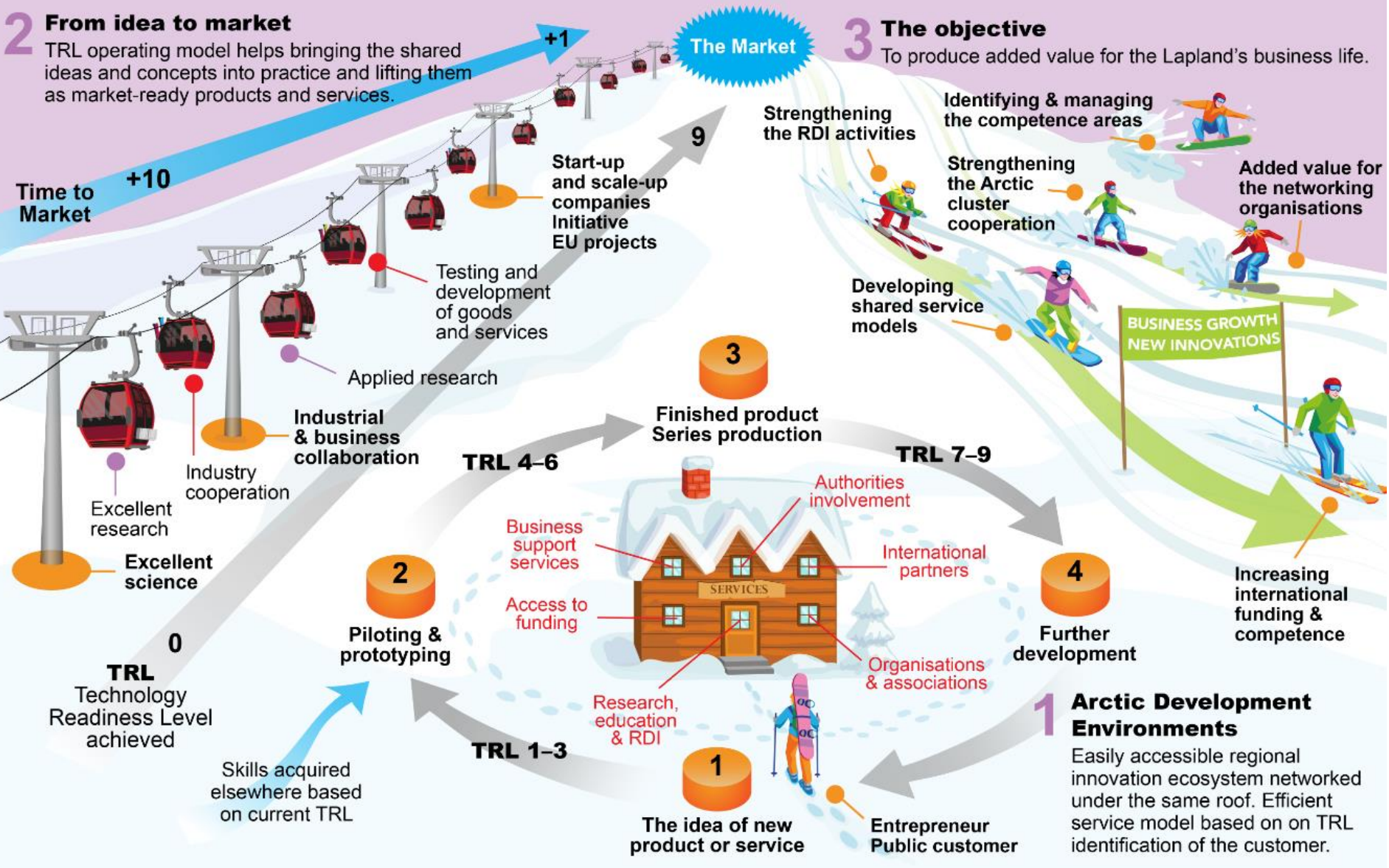
Cluster  
Management  
Excellence

STRIVING FOR CLUSTER EXCELLENCE



## 2 From idea to market

TRL operating model helps bringing the shared ideas and concepts into practice and lifting them as market-ready products and services.



## Monitoring S3 Lapland

- Ongoing monitoring of project funding in Lapland based on Regional Strategy and Smart Specialisation Strategy (Regional Council of Lapland, **Regional Steering Committee**)
- Monitoring data is utilised on a review process of received proposals (Regional Council of Lapland, Centre for Economic Development, Transport and Environment, Business Finland)
  - Task Force of Regional Secretariat
- National level programme evaluation (Ministry of Economic Affairs and Employment), implementation in the regions



## Monitoring example Lapland' s RIS3, Arctic Smartness

Beyond monetary and numeric assessment we have used a Developing evaluation method to support project management to highlight the factors which enhance long term impacts, in particular **learning, development of know-how and interaction, as well as strengthening the operational capacity and collaboration model.**

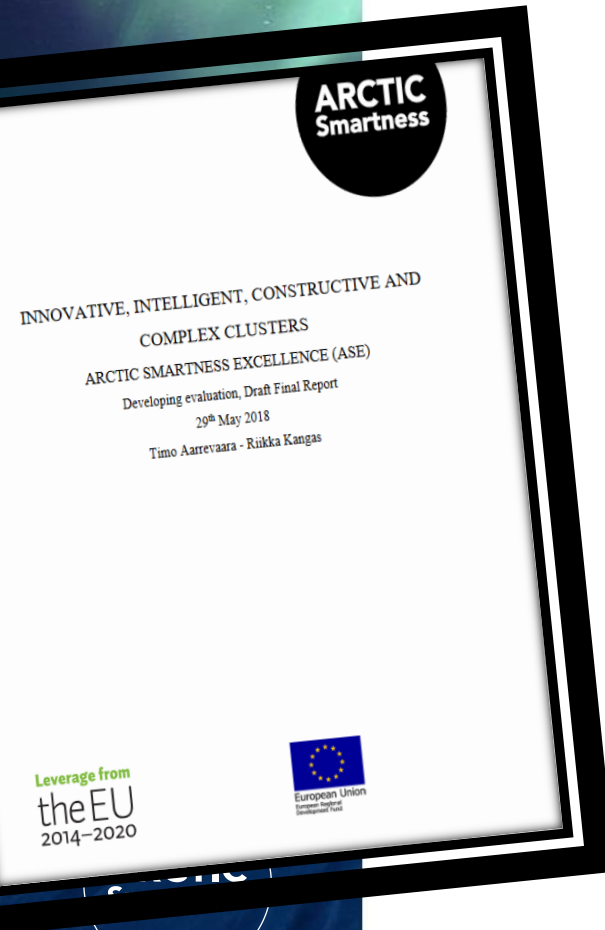
Criteria emphasise learning, trust and accountability as well as the desired change and project outcome. The Arctic area is emphasised in the Lapland's smart specialisation program and in the choices made in the program.

Evaluation in executed against four criteria:

- external effectiveness,
- reflexivity,
- Interaction, and
- the region's and actors' ability to regenerate.

Evaluation (final report\*) carried 2016-2018 out as project management supportive action by Professor Timo Aarrevaara and PhD Candidate Riikka Kangas

\* <https://arcticsmartness.eu/wp-content/uploads/2018/06/ASE-report-300518.pdf>



## Arctic Smartness Approach- results

Entrepreneurial governance together  
with systematic empowering  
practices generates the best  
breeding ground for the stakeholders'  
commitment

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- The new Lappish R&D based Innovation platform as part of Lapland's Innovation Ecosystem (quadruple helix)
- Real benefit for the SMEs in the region
- Common view and OWNERSHIP about the future development of the Lapland
- Brand of innovative region increased → attractive partner
- Improved and EU level cluster cooperation
- Synergic approaches → over 10M extra funds to Lapland: Arctic Smartness actors are involved in at least 19 International EU funded projects; 9 H2020, 2 EIT-KIC, 6 Interreg Europe, 2 direct funding (tender process)
  - European Cluster Excellence consortium member
- Bottom-up approach needs good leadership and governance

# Benefits Lapland' s RIS3, Arctic Smartness

## Some highlights

- ✓ EU The industrial transition regions pilot action:  
[http://ec.europa.eu/regional\\_policy/sources/docgener/informat/industrial\\_transition/pilot\\_industrial\\_transition\\_en\\_finland.pdf](http://ec.europa.eu/regional_policy/sources/docgener/informat/industrial_transition/pilot_industrial_transition_en_finland.pdf)
- ✓ 2 Entrepreneurial Discovery ACSI Innovation Camp (DG JRC), 2016, 2018
- ✓ All five clusters obtained Bronze *Labels* from the *European Secretariat for Cluster Analysis*, <http://www.cluster-analysis.org/>.
- ✓ In addition September 2017, in collaboration with another Arctic Smartness ERDF project, a Silver Label Peer Review session for two clusters. Arctic Industry and Circular Economy and Arctic Smart Rural network gained Silver labels, first of their kind in Finland.
- ✓ Lapland actors are involved in all three themes; Industrial Modernisation, Agri-Food and S3 Platform for Energy, in a total of 6 partnerships of the Smart Specialisation Platforms by the European Commission. Two partnerships submitted/pending. <http://s3platform.jrc.ec.europa.eu/s3-thematic-platforms>.



LAPLAND  
Above Ordinary



## Visibility & recognition

- [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, Page 3  
[Innovation Camp methodology](#),  
<http://s3platform.jrc.ec.europa.eu/documents/20182/154972/Implementing%2BSmart%2BSpecialisation%2BStrategies%2BA%2BHandbook/2a0c4f81-3d67-4ef7-97e1-dcbad00e1cc9> pp. 43-44.
- [http://s3platform.jrc.ec.europa.eu/documents/20182/96176/S3%26Energy\\_Good\\_Practices\\_cases\\_web.pdf/f3e50973-c116-4623-bac2-66927e9f86b7](http://s3platform.jrc.ec.europa.eu/documents/20182/96176/S3%26Energy_Good_Practices_cases_web.pdf/f3e50973-c116-4623-bac2-66927e9f86b7)
- <http://s3platform.jrc.ec.europa.eu/good-governance>.
- [http://ec.europa.eu/regional\\_policy/en/newsroom/news/2016/06/06-09-2016-arctic-smartness-exploiting-the-region-s-potential](http://ec.europa.eu/regional_policy/en/newsroom/news/2016/06/06-09-2016-arctic-smartness-exploiting-the-region-s-potential).
- <http://media.sitra.fi/2017/02/27175308/Selvityksia117-3.pdf>
- <http://www.norden.org/en/news-and-events/news/25-nordic-bioeconomy-cases-for-sustainable-change>.

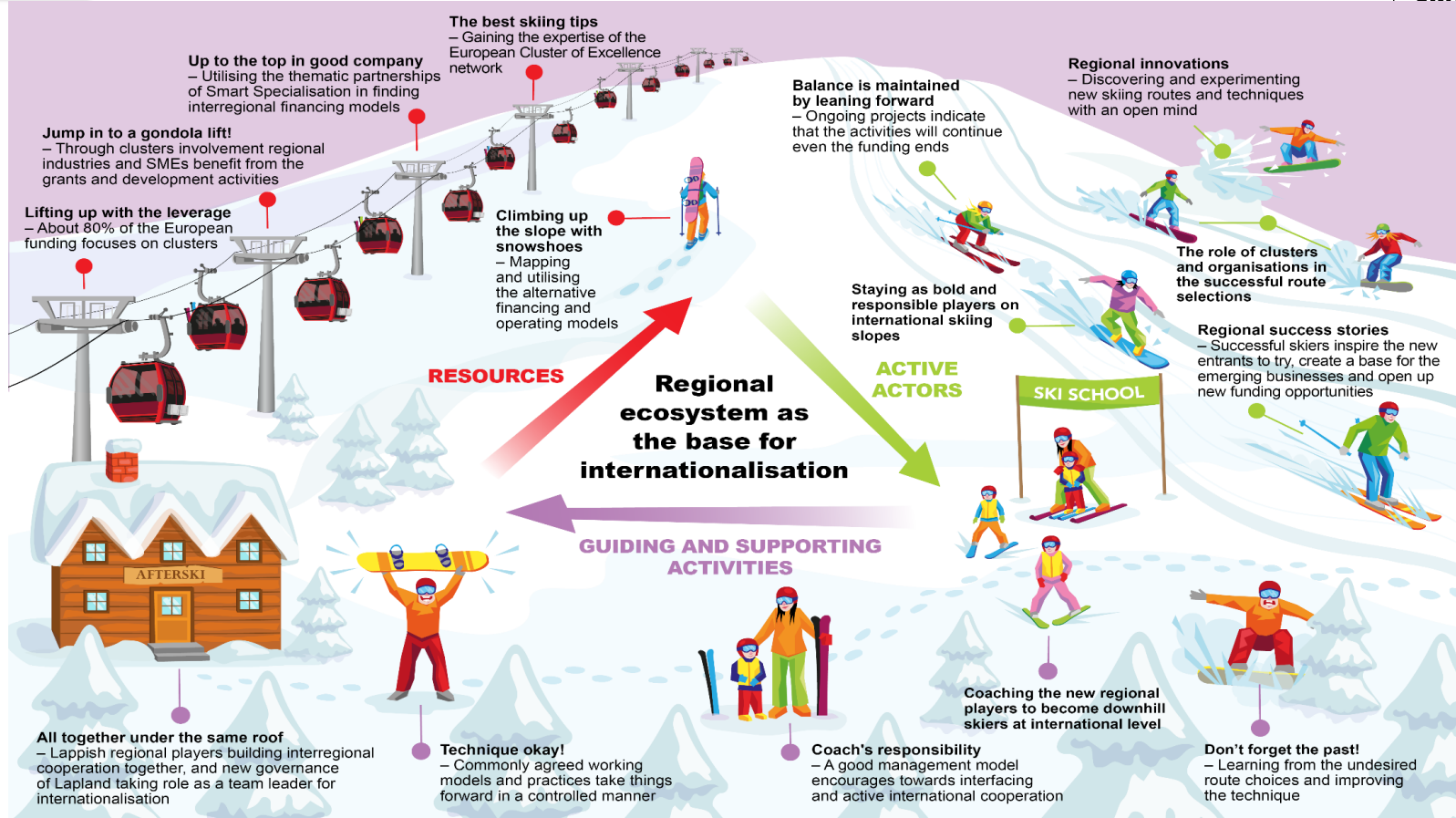


Brussels, 18.7.2017  
COM(2017) 376 final

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

(SWD(2017) 264 final)





## EUA key-messages aiming at maximising the effectiveness of smart specialisation strategies for regional development in the post-2020 period:

1. investing in human talent and skills to ensure enduring innovation
2. enhancing the strategic involvement of universities in regional innovation ecosystems
3. promoting the engagement of all EU regions without compromising excellence
4. strengthening collaboration and multi-level governance to induce innovation at the regional level
5. reinforcing synergies and multi-level governance

Enhanced Strategy for Economic Transformation based on Smart Specialisation 2021-27; Template (draft).

Challenges and enabling condition sections and taking into account programming for the post-2020 period related to the Policy Objectives:

- Enhancing research and innovation capacities and the uptake of advanced technologies
- Reaping the benefits of digitisation for citizens, companies and governments
- Enhancing growth and competitiveness of SMEs
- Developing skills for smart specialisation, industrial transition and entrepreneurship

Initial outlines of specific high-impact Actions to facilitate the region's move towards an Enhanced Strategy for Economic Transformation based on Smart Specialisation.

\* [http://ec.europa.eu/regional\\_policy/en/information/publications/factsheets/2018/pilot-action-regions-in-industrial-transition](http://ec.europa.eu/regional_policy/en/information/publications/factsheets/2018/pilot-action-regions-in-industrial-transition)

See article 2 of [COM\(2018\) 372 final](#): Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the European Regional Development Fund and on the Cohesion Fund



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## More information..

Arctic Smartness

<https://arcticsmartness.eu/>



European Union  
European Regional  
Development Fund



REGIONAL COUNCIL  
OF LAPLAND



LAPIN YLIOPISTO  
UNIVERSITY OF LAPLAND

**LAPIN AMK**  
Lapland University of Applied Sciences



Rovaniemi Development



**DIGIPOLIS**

Leverage from  
**the EU**  
2014-2020



**GTK**

**ARCTIC  
Smartness**