

# LAPLAND

an Arctic  
and international  
highflier

THE STRATEGIC PRIORITIES FOR INTERNATIONAL  
AND SMART SPECIALISATION 2018 – 2022

**LAPLAND** is by nature an international region. The Arctic environment is an inherent part of all aspects of the locals' everyday life. The people of Lapland have adapted their activities according to the surrounding nature, and as the residents of the Northernmost parts of Finland and the European Union, they want to become leading experts in sustainable development.

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an Arctic  
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**LAPLAND**  
Above Ordinary



REGIONAL COUNCIL  
OF LAPLAND



European Union  
European Regional  
Development Fund

Leverage from  
the EU  
2014–2020

**Image 1:** A unique culture, the well-being of people, high technology, and the beauty of the clean and pristine nature come together in the increasingly international Lapland.



Image: Lapland Material Bank | Antti Pietikäinen

Image: VirtualForest | pLab | LaplandUAS

Image: Lapland Material Bank | Simo Vilhunen

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# FOREWORD – County Governor’s greetings



**MIKA RIIPI**  
COUNTY GOVERNOR  
OF LAPLAND

Lapland is the most international region in Finland – we are in the middle of the Barents Euro-Arctic Region, and we have always lived, done business and worked across borders. The people of Lapland have always adopted an international attitude in their everyday lives.

In the wake of digitalisation, globalisation and the resulting new economy, geography is losing its significance in the development of growth and jobs. At the same time, it is challenging us constantly to perceive the entire world as an operating area and a potential market. To succeed, we need more and more courage, networking skills and co-operation – but these are weighed against almost unlimited possibilities.

In the *Lapland – an Arctic and international highflyer* -strategy, we are outlining regional steps into this changing operating environment. Lapland’s strong growth sectors form the basis, but we also want to highlight Arctic expertise and new potential for growth. Therefore, the foundation for each ounce of success consists of strong networking and co-operation between enterprises as well as developers.

However, the key principle of the strategy is that particularly here in Lapland, international approach must be included to and identified as part

of all our activities. For this reason, we wanted to be open-minded and combined the internationalisation strategy with the update of Lapland’s Smart Specialisation Programme.

I want to thank all our partners who have been involved in the preparation of the strategy, and especially the enterprises for their creative and committed work. Lapland will surely continue to be not only the most international region in Finland, but also the beacon of the entire Arctic!



.....  
**To succeed, we need more and more courage, networking skills and co-operation – but these are weighed against almost unlimited possibilities.**  
.....

# LAPLAND in facts and figures

- Surface area 100,366 km<sup>2</sup>, of which 7,699 km<sup>2</sup> is water
- Population 180,200, population density 1.8 /km<sup>2</sup>
- Employment: approximately 69,000 jobs, of which approx. 50% are in private enterprises
- Number of private enterprises 9,100
- Annual revenue of Lapland €12,000 M, of which 70% comes from private enterprises
- Annual revenue of mining and metal industry approx. € 5,000 M
- Annual revenue of forest bioeconomy approx. € 1,300 M
- World's northernmost bio, mining and metal industry hub
- Europe's only chromium mine and the largest gold mine in Europe
- Tourism is the fastest growing industry with overall demand of approx. € 1,000 M and an average annual growth of 9%, in 2017 as much as 20%

- Agricultural production and reindeer husbandry approx. € 340 M
- Finland's fourth largest export region, 7 % of Finnish export
- Nine national parks in the area
- World's cleanest air and Europe's purest water
- World's largest wild organic harvesting area
- Strong educational structure: University of Lapland, Lapland University of Applied Sciences, Vocational College Lappia, Lapland Education Centre REDU and Sami Education Institute
- Research institutes: Geological Survey of Finland (GTK), Natural Resources Institute Finland (LUKE), Sodankylä Geophysical Observatory (SGO) as the most notable
- National circular and bio-economy centre in Kemi



## LAPLAND HAS THE FASTEST GROWING ECONOMY IN FINLAND

Lapland is a unique Arctic region that wants to be the most innovative and entrepreneur-driven of all the sparsely populated EU regions by the year 2022. The future objectives are set high, but the measures for achieving those goals are tangible and close to the actors.

# SUMMARY OF THE STRATEGY

Lapland is the northernmost part of Finland and of the entire European Union. At the same time, Lapland is geographically the most international region of Finland. The *Lapland – an Arctic and international highflyer* -strategy prioritises smart specialisation actions that support international growth. The implementation of the strategy requires strong expertise of the entire region, as well as innovation activities and a regional ecosystem, which together create a foundation for sustainable growth and international business.

The *Lapland – an Arctic and international highflyer* -strategy also updates the smart specialisation choices introduced in the Lapland's Arctic Specialisation Programme completed in 2013, and fortifies the strategic choices of the Lapland Agreement, namely "Stronger Arctic economy" and "Work and competence reform in a borderless environment."

The Arctic elements are an essential part of the internationally known Lapland brand that is being strengthened further. Indeed, Lapland is the beacon of the Arctic region. The goal is to make Lapland the most innovative and entrepreneur-friendly of all the sparsely populated and circumpolar regions of the EU. Sustainable and profitable

energy solutions create good conditions for economic growth. The digital solutions and new technologies are in a key role in the development of new business and in increasing Arctic expertise.

The industry brings much needed investments to the region, which promotes regional employment and development. The sustainable refining of natural resources and conditions is a cornerstone of Lapland's smart specialisation and internationalisation. The natural resources of Lapland are significant for the entire Finnish export sector. Circular economy is one of the strongest potential fields of expertise in Lapland. This development has created a foundation for new entrepreneurial activities that are based on the management of industrial side-streams.

Lapland is an internationally attractive destination for nature and adventure tourists, and it is among the top destinations in Europe. Lapland utilises the Arctic environment in tourism in a sustainable manner, and is committed to the development of sustainable and ethical tourism.

In addition, Lapland invests in identifying and supporting new emerging industries. One example of this is the promotion of socially sustainable economy models, where emphasis is on transparency and societal gain, in addition to financial profit.

The development of regional co-operation models and the forming of cluster networks have already provided significant results. The economic development of Lapland is built on supporting the regional actor's capacity to develop international business. Internationalisation must be built on a strong ecosystem, regional co-operation, which identifies and recognises different measures and needs, depending on the actor.

The implementation of the *Lapland – an Arctic and international highflyer* -strategy is based on good co-operation between regional stakeholders. To this end, the strategy reinforces the conditions for operating in an international field, in Lapland as well as beyond.

The road maps of the strategic priorities (pp. 41–43) depict the implementation for achieving the established objectives. As part of the implementation of the Lapland Agreement, Lapland utilises financial synergies and works with the local actors to choose the most useful EU funding opportunities that will contribute to increasingly internationalising smart specialisation.

# STRATEGIIJA OANEHAČČAT

Lappi lea Suoma ja oppa Eurohpa uniona davimus guovlu. Seammás Lappi lea eatnandieđalaččat Suoma álbmogiidgaskasaččamus eatnangoddi. *Lappi – Árktalaš ja álbmogiidgaskasaš menestuvvi* -strategiija prioritere daid jierpmálaš spesiálašuvvama doaimmaid, mat dorjot álbmogiidgaskasaš šaddama. Strategiija ollašuhhtin dárbbša oppa eatnangotti nana máhtu, innovašuvnadoaimma ja guovllulaš ekosystema, mat ovttas duddjojit vuođu gierdavaš šaddamii ja álbmogiidgaskasaš gávpedoibmii.

*Lappi – Árktalaš ja álbmogiidgaskasaš menestuvvi* -strategiija dárkkánuhtta maidái jagis 2013 válbmanan Lappi árktalaš spesiálašuvvama prográmma jierpmálaš spesiálašuvvama válljemiid ja nanne ođasmahttojuvvon Lappi-soahpamuša strategalaš válljemiid “Árktalaš dálloallo gievru” sihke “Bargu ja máhttu ođasmuvvet rájehis birrasis”.

Árktalašvuohta lea mávssolaš oassi álbmogiidgaskasaččat dovddus Lappi-brándas, mii ain nannejuvvo. Lappi lea fal árktalaš guovllu njunuš. Ulbmilin lea dahkat Lappis EU hárvvit ásaiduvvon ja sirkumpoláralaš guovlluid innovatiivalaččamus ja fitnodatustitlaččamus guovlu. Gierdavaš ja gánnáhahtti energiijačovdosat čuoččádahttet eavttuid

ekonomalaš šaddamii. Digitálalaš ja ođđa teknologiija čovdosat leat hui dehálaččat, go galgá ovddidit ođđa gávpedoaimma ja loktet árktalaš máhtu.

Industriija mielddisbuktá váillahuvvon investeremiid eatnangodái, mii ovddida guovllu barggolašvuođa ja gárggiideami. Luondduriggodagaid ja luonddudili gierdavaš ovddosdikšun lea čiehkageađgin, vai Lappi sáhtta spesialiseret jierpmálaččat ja šaddat ain eambo álbmogiidgaskašin. Lappi luondduriggodagaid mearkkašupmi Suoma doalvumas lea fuopmášahtti. Birradoallu lea okta nannoseamos potentiálalaš dáidosurggiin Lappis. Dat lea duddjon vuođu ođđa fitnodatdoibmii, mii vuođđuduvvá industriija doaresrávnnjiid hálldašeapmái.

Lappi lea álbmogiidgaskasaččat geasuheaddji luondu- ja vásáhusturismačuozáhat, mii gullo Eurohpa turismačuozahagaid njunnošii. Lappi ávkástallá gierdavaččat árktalaš dili turismas ja lea čatnasan gierdavaš ja ovddasvástádušlaš turisma ovdáneapmái.

Dasa lassin Lappis deattuhit, ahte galgá dovdat ja doarjut ođđa loktaneaddji surggiid. Ovdamearkan dás lea earet eará sosiálalaččat gierdavaš dálloallo málliid ovdáneapmi. Guovdu lea rabasvuohta ja viggan ovttagoddálaš ávkki maŋŋái, ii dušše ekonomalaš ávkki maŋŋái.

Guovllulaš ovttasbargumálliid ovddideapmi ja fierbmáiduvvan klusteriidda lea juo dássáži mielddisbuktán nana boađusa. Lappi ekonomalaš ovdáneami vuođđun lea doarjut guovllu doibmejeddjiid kapasitehta ovddidit álbmogiidgaskasaš gávpedoaimma. Jos hálida šaddat álbmogiidgaskasaččan, galgá leat nana ekosystema, eatnangoddálaš ovttasbargu, mii dovda ja dovddasta sierra vugiid ja dárbbuid dahkkis fuolakeahtta.

*Lappi – Árktalaš ja álbmogiidgaskasaš menestuvvi* – strategiija čađaheami vuođđuduvvá árktalaš doibmejeddjiid buorre ovttasbargui. Dán áššis strategiija nanne eavttuid áhtat álbmogiidgaskasaš doaibmagiättis sihke Lappis ja Lappi olggobealde.

Strategalaš prioritehtaid geaidnukárttain (s. 41-43) leat govviduvvon doaimmat, maiguin sáhtta joksat áshuvvon ulbmiliid. Oassin Lappi-soahpamuša ollašuhhtimis Lappis ávkástallet synergiijaiguin ruhtadeamis, ja ovttas guovllulaš doibmejeddjiiguin válljejuvvojit midjiide ávkálaččamus EU-ruhtadanvejolašvuođat doarjun dihtii jierpmálaš spesialiserema, mii šaddá ain eambo álbmogiidgaskasaččan.

# 1. LAPLAND – an Arctic and international actor

## 1.1. At the core of the Arctic operating environment

Lapland is the northernmost part of Finland and of the entire European Union. The Arctic environment is a natural part of all aspects of Laplanders' everyday life. The people of Lapland have adapted their activities to the surrounding nature, and as the residents of the Northernmost parts of the European Union, they want to become leading experts in sustainable development.

Lapland is geographically the most international region in Finland, as it shares border with Sweden, Norway and Russia for a total of approximately 1,700 kilometres. Laplanders have traditionally been very active in the Barents Euro-Arctic Region. The EU cross-border programmes have strengthened co-operation with both the West and the East. Increasing the visibility of Lapland in various European forums has made the region an Arctic leader in the development of sustainable business, and the actors from Lapland have become highly desirable business partners.

The Arctic areas are among the world's cleanest and ecologically best preserved regions, but they

are also facing many rapid changes. Due to global interest in the natural resources of the area and the effects of climate change, the Arctic nations are faced with a whole new situation. Lapland does not want to just sit by and watch the development of the Arctic region. In fact, Lapland can promote its interests by being an active international player.

Sustainable utilisation of natural resources and conditions and the increasing of value added are important themes for the future of Lapland. The industrial beacons of Lapland are the mining and metal industries, utilisation of forests, and tourism based on natural conditions. Led by these leading industries, the region has developed into a vibrant business field producing industrial services, natural products, food products and support services.

The education and research institutes in Lapland have traditionally participated actively in international collaboration through various mobility and research programmes and different collaboration networks. The Arctic industry of refining natural resources has brought global

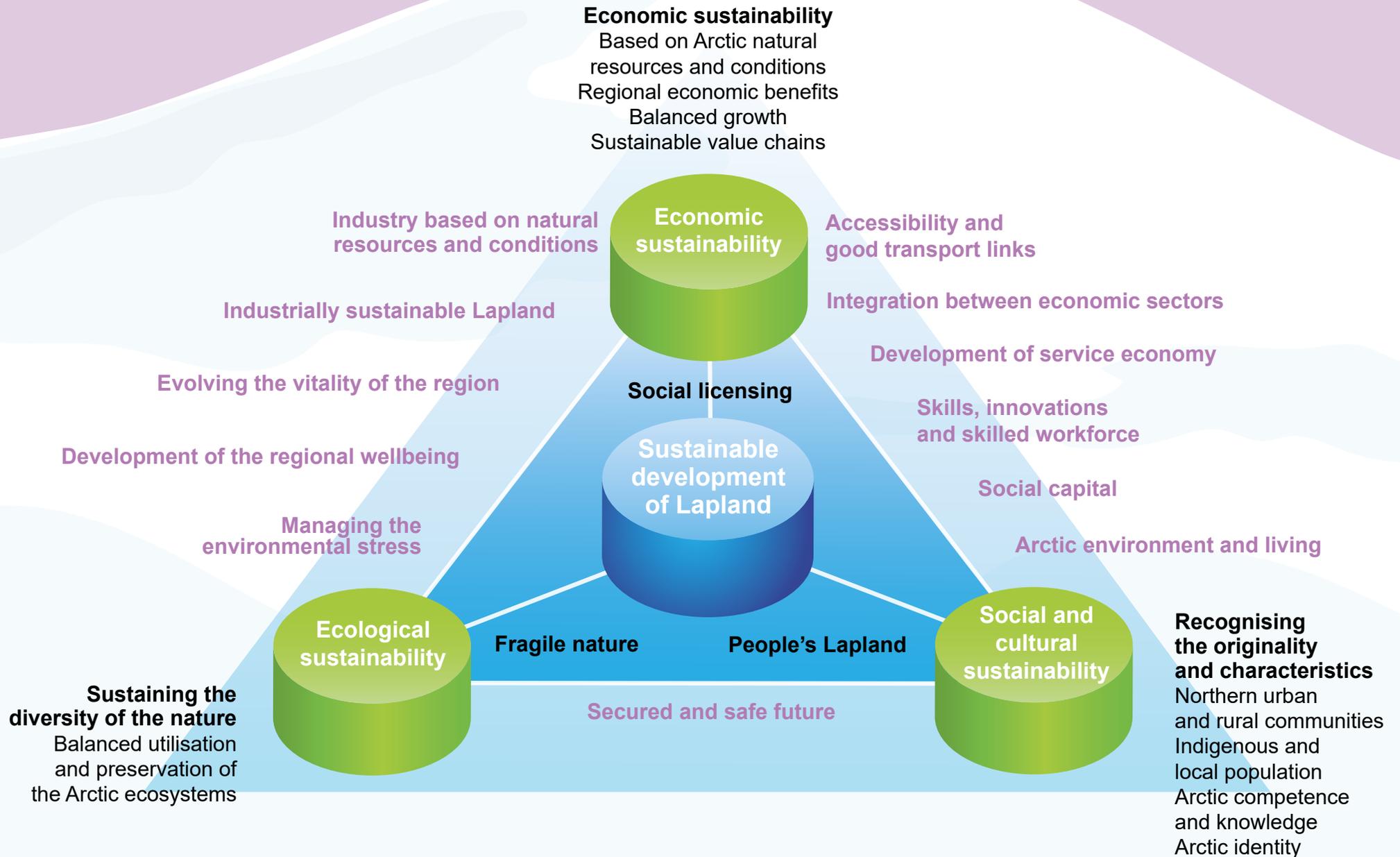
enterprises to Lapland. In addition, the increase of tourism has created a new kind of "on site" internationalisation in Lapland.

The economic growth of Lapland is based on the region taking its place as the most advanced Arctic operating environment. In practice, this lays a foundation for internationalisation, now and in the future. It is understood in Lapland that internationalisation is based on strong regional co-operation – an ecosystem. It is built on boldly opening windows for a new kind of cross-sectoral collaboration, which promotes the creation of an internationally strong future for Lapland.

The *Lapland – an Arctic and international high-flyer* -strategy combines the different measures and goals aimed at developing the region into an even stronger ecosystem that is a recognised player in international co-operation.



**Image 3:**  
Sustainable regional development in Lapland



## AT THE HEART OF THE ARCTIC OPERATING ENVIRONMENT

*Lapland's Arctic Smartness cluster collaboration, headed by the Regional Council of Lapland, has increased awareness of the expertise and specialists in Lapland, and created new opportunities for introducing the developed products and services to the market.*

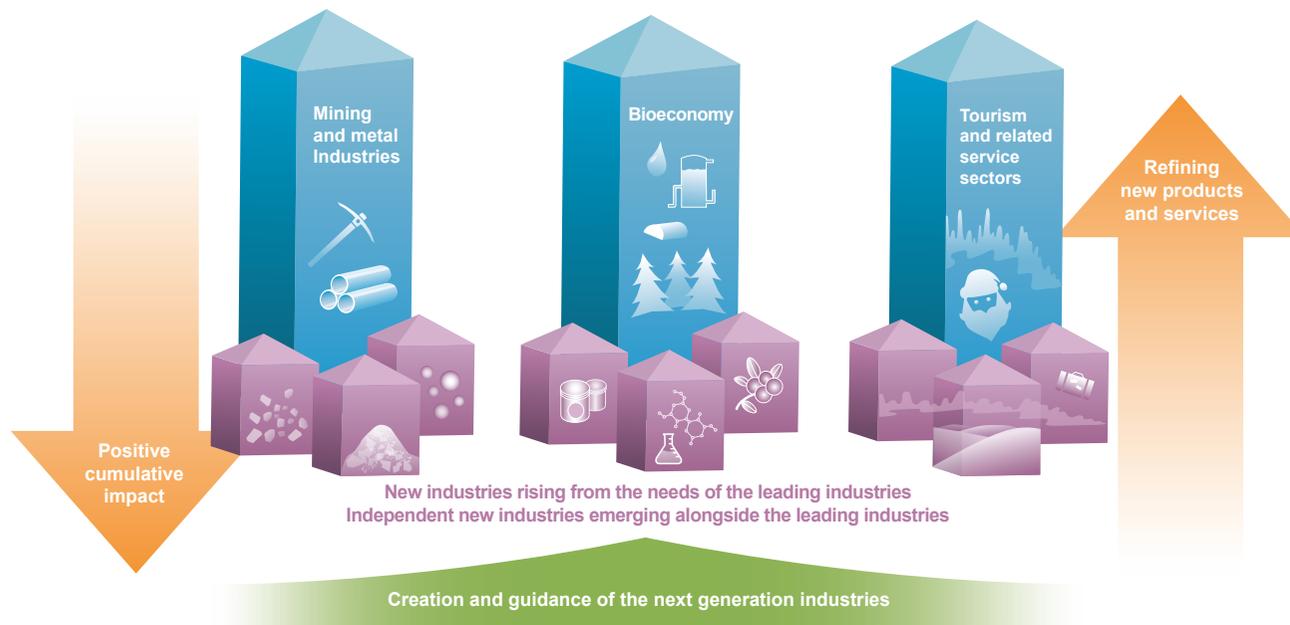
The collaboration between enterprises, educational and research institutions, public sector, and financiers is a key element in the cluster work. The clusters of Lapland have seen significant development in the past few years. New goals have been set in Lapland that strongly emphasise the emerging industries in the area and the needs of business life. This steadily advancing locomotive is being steered by new and innovative industries. In addition, growth has been seen in the traditional mining and tourism industries.

The Arctic Smartness collaboration guides the clusters and implements smart specialisation in Lapland. Excellent cluster work has brought more resources and success to all stakeholders. The actors working at the business interface, namely Digipolis, Rovaniemi Development and ProAgria Lapland, create service concepts. The University of Lapland and Lapland University of Applied Sciences provide innovation platforms and learning environments as meeting points for business, education and research.

The Geological Survey of Finland (GTK) and the Natural Resources Institute Finland (LUKE) have obtained a stronger role in the region. Together, the Arctic Smartness stakeholders have increased the international visibility of Lapland. Co-operation has been strengthened especially by the numerous H2020, Interreg Europe and other funding schemes and partnerships in the S3 networks.

Read more about the Arctic Smartness collaboration:

**ARCTICSMARTNESS.EU**



**Image 4:** The backbone of Lapland's economy and new emerging industries.

Balancing the elements of sustainable development poses significant challenges for the Arctic regions in particular. In addition to challenges, global changes also bring great opportunities. As the northernmost region of the European Union, Lapland is at the heart of these global changes and possibilities. In Lapland, the foundation for growth consists of sustainable development aimed at finding a balance in the versatile utilisation of natural resources.

The goal is to ensure that the current and future generations can draw benefits from the natural resources as a versatile asset.

Maintaining the balance of sustainable development is a key factor in the survival of Lapland. The cornerstones of social development, such as economic, ecological, social and cultural sustainability, must be identified and evaluated separately for each situation.

## 1.2 Smart choices help to meet future challenges

**F**inland is currently in the middle of drafting a regional government reform, in which Lapland is also closely involved. We have entered the second half of the ongoing EU programming period, and the planning of the next period is in full swing. There is a lot of pressure on the upcoming funding period to reduce cohesion policy funding and to allocate funds to inter-regional and direct funding programmes. While the administrative structures are changing, we must also carry out regional development work and secure a steady growth environment for Lapland's economy.

In the past few years, Lapland has been the fastest growing economic area in Finland, which is primarily due to the strong growth witnessed in the region's industrial spearheads. This growth has enabled the emergence of a multidisciplinary SME sector alongside the industrial leaders. International business is characteristic of the SME sector in Lapland.

Rapid changes in the global economy, along with requirements for expertise, present challenges for the enterprises of Lapland. Consequently, partnerships with regional research, development and training organisations will in the future

**The strategic choices for smart specialisation were updated as part of priority setting for the Lapland – an Arctic and international highflyer -strategy, which is based on:**

- **Lapland Agreement 2018–2021, highlighting the regional interests**
- **Choices of Lapland's Arctic Specialisation Programme**
- **Development of the European Commission's smart specialisation towards value-chain based collaboration between regions and clusters**
- **Updated action plan for Finland's Arctic strategy, incorporating national choices**
- **Consulting the European Commission's Arctic Policy and the Arctic Stakeholder Forum, which together create a future setting for the northern EU territories**

become increasingly important for the development of industrial competitiveness. The industrial capacity to grow is based on skilled work force and the utilisation of digitality in the development of products and services. Operating at the interfaces contributes also to the finding of new innovations.

In addition to long distances, the shrinking and aging population presents challenges for the development of Lapland's economic structure. 80 % of enterprises in Lapland are microenter-

prises, the majority of which are not necessarily looking for growth for their business. However, a new business culture is simultaneously developing in Lapland, creating a foundation for a new kind of high-growth entrepreneurship. The development of industrial service enterprises and the increase of tourism have affected the development of other industrial fields and created a positive impact on the regional economy of Lapland.

The strategic approach and investments have facilitated the introduction of new development efforts that are significant to the regional economy. Lapland's developing special strengths include smart Arctic expertise, sustainable utilisation of natural resources, and a community-led approach to networking. Co-operation across Arctic borders and joint utilisation of the Northern resources improve competitiveness in the global market. Networking and branding Lapland as a leading expert in the European Union have helped the regional stakeholders to benefit from international funding.

The *Lapland – an Arctic and international highflyer* -strategy prioritises the smart specialisation procedures that support international growth. The implementation of the strategy requires strong expertise of the entire region, as well as innovation activities and a regional ecosystem, which together create a foundation for sustainable growth and international business.

The preparation of the strategy was integrated into the preparation of the regional government reform and to the Arctic Smartness collaboration. In addition to these, a sparring group was established for the strategy, including representatives

of the Regional Council of Lapland, ELY Centre and regional stakeholders. During the drafting of the strategy, the priority choices were discussed in several working groups and stakeholder interviews and introduced in seminars and in connection with other presentations.

As the work progressed, referral debates were conducted with different stakeholders concerning the arguments for the strategic choices and the necessary specifications. In addition, consultations were sought actively from the Smart specialisation forum and the specialists in the European Commission's Directorate General for regional and urban policy. Based on the measures described above, the *Lapland – an Arctic and international highflyer* -strategy was created to support the strategic choices of the *Lapland Agreement* 2018–2021. The recommended measures for the implementation of the strategy were integrated into the *Lapland Agreement* action plan.

## CLOSE CO-OPERATION AMONG REGIONAL ACTORS HAS MADE SAFETY A COMPETITIVE ASSET FOR TOURISM IN LAPLAND

The Arctic Safety cluster, headed by the Lapland University of Applied Sciences, ensures the smooth operating of business activities in Lapland. Lapland's location, sparse population, natural conditions and increasing numbers of travellers require risk management expertise, Arctic expertise, and network competence. The Arctic Safety cluster is the leading expert in EU level collaboration.

“For a programme service company, safety is just as important as quality or customer service. It must be a built-in component of the service. Safety is a part of our values, and therefore it must be visible in all our activities”, says Rami Korhonen, COO of Lapland Safaris.

## INTERACTIVE SURFACES THROUGH EUROPEAN CO-OPERATION

The H2020 DecoChrom project, coordinated by the University of Lapland, is aimed at developing a new type of smart technology based on printed electrochromics, which allows the embedding of displays into different surfaces.

“Technology that is embedded into surfaces reduces stimuli and light pollution. It is what we call calm computing”, says Researcher Ashley Colley from the University of Lapland.

The project has received €6.7 million in Horizon 2020 funding from the European Commission, and it is implemented in co-operation with 15 European enterprises and research institutions.

## 2. LAPLAND – an Arctic and international highflyer

In the future, the significance of international networking and funding will be emphasised in all development activities. Although Lapland is international by nature, internationalisation as a goal must be advanced further to create more economic value for the industry. Development work also promotes the establishment of a strong and united regional ecosystem. Internationality must be based on strong regional co-operation, and it shall secure Lapland's status as an Arctic expert in the global operating environment.

The *Lapland – an Arctic and international highflyer* -strategy specifies the choices incorporated in Lapland's Arctic Specialisation Programme that was completed in 2013, and stresses the key issues of the *Lapland Agreement: Stronger Arctic economy and Work and competence reform* in a borderless environment.

The region is willing to learn from successful internationalisation procedures and share the benefits with the local stakeholders. At the same time, Lapland wants to discover new opportunities. Other goals include promoting stronger regional collaboration and being open to bold innovations in regional development. Building a common positive image of Lapland is an important

### **The aim of the Lapland – an Arctic and international highflyer -strategy is to reinforce choices that:**

- **help companies in the development of international business**
- **promote the internationalisation of Lappish working life**
- **strengthen implementation of the smart specialisation**
- **support the Lapland Agreement's choices on strengthening the sustainable Arctic economy and extending the knowledge base**
- **help to strengthen the role of internationalisation in regional development and the coordination of internationalisation procedures**
- **guide the mobilisation and coordination of funding**

part of international co-operation, which must be invested in by all parties. With these choices, Lapland is driven forward as a smartly specialised international region.

Effectiveness of the practical implementation of the strategy is evaluated as a part of the

Lapland Agreement, which considers also the emergence of new jobs, improvements in the availability of labour force, increase in company revenues, and diversification of the business structure.

## 2.1. Vision – Lapland is the Arctic beacon of Europe

The promotion of internationalisation and smart specialisation of Lapland is based on strong regional co-operation. At the same time, Lapland must be secured a strong position as an Arctic expert in the global operating environment. According to the vision of the *Lapland – an Arctic and international highflyer* -strategy:

*In 2030, Lapland is an Arctic leader that utilises the natural resources and conditions in a sustainable manner. As the most Arctic area of Finland, Lapland commercialises its expertise and exploits the Arctic business opportunities. Lapland is an active Arctic innovator, a development pioneer, and an important international hub of Arctic transportation and information. Lapland is the link between the Arctic and the European Union. Lapland offers a unique and attractive living environment.*

**Lapland is the beacon of the Arctic region.** This vision supports the goals and strategic choices of the *Lapland Agreement 2018–2021*. The objectives of the *Lapland Agreement* are defined as follows:

*In 2021, Lapland will be Arctic, open and smart. We will build sustainable success in the world's cleanest region. #ForTheLoveOfLapland*

Internationality will be increasingly highlighted as the core of regional development in Lapland. The Arctic elements are an essential part of the internationally known Lapland brand that will be strengthened further. The goal is to make Lapland the most innovative and entrepreneur-friendly of all the sparsely populated and circumpolar regions of the EU. The co-ex-

istence of different living environments and industries brings economic stability to Lapland and the whole of Finland. Internationalisation is based on a strong regional identity and willingness to participate in regional development. Indeed, Lapland wants to preserve its regional originality.



Image 5: Vision for sustainable regional development.

## 2.2. Strategic priorities and implementation

In Lapland, the future business investments will, in one way or another, be based on the sustainable utilisation of natural resources and conditions, and on increasing the value added. A strong SME sector is emerging in Lapland alongside the industrial sector, and it supports the large-scale industry by building sustainable local solutions in circular economy, for example. In simple terms, the large-scale industry forms the backbone of Lapland's economy, which is then levelled out by the development of the SME sector.

Lapland is also witnessing the emergence of completely new industries, the potential of which has been completely ignored until now. The significance of these industries is increasing, particularly in the sparsely populated areas. In the future, they will provide new opportunities and boost the regional and local economies.

Tourism as an industry is growing rapidly in Finland, as well as in the entire Arctic region. The available experiences and the safe environment are adding to the attractiveness of the area. In addition to the seeking of extreme adventures, current travel trends also demonstrate interest in experiencing silence and the pursuit of well-being.

As the tourism flows are increasing, it is essential to develop sustainable and environmentally-friendly tourism.

Sustainable and profitable energy solutions create good conditions for economic growth. The digital solutions incorporating new technologies are in a key role in the development of new business and in increasing Arctic expertise.

The industry brings much needed investments to the region, which promotes the regional employment and development. In contrast, the industrial field must make decisions that ensure the co-existence of the different sectors. In Lapland, coordination challenges related to issues such as land use are always present. Consequently, the foundation for regional development work consists of acknowledging the needs of interest groups and of compromising.

The development of regional co-operation models and the forming of cluster networks have provided significant results. There is a desire to continue this work complementing it with good governance, which has also proven to be an important factor in the successful development work in Lapland.

## COSMETICS FROM ARCTIC NATURE

***At present, there is a strong global health trend which is also reflected in the cosmetics industry. Natural products have long been used in the beauty industry, but due to technological developments, improvements in quality systems, and health trends, new applications have been opened up for natural plants as cosmetic ingredients.***

The EU is the global leader in the export and use of cosmetics. The cosmetics industry is one of the fastest growing industries in the world, and therefore it is also an important industrial development field at the EU level.

Cosmetics based on natural ingredients form an important sector in this growth. Lapland's natural materials form an inexhaustible source for innovations. There is potential in Finland –and in Lapland – to introduce a new leading national industry to the niche market by combining national expertise in the chemical and technological industries with the refining of new products.

A few pioneering companies in Lapland have worked systematically to promote this field, but only a fraction of Lapland's natural raw materials are currently being utilised.

There is true potential in the field of natural cosmetics, and with bold decisions, Lapland has a chance to be at the cutting edge of development. Networking with the leading EU-level areas and participating in European cluster work can bring added value to Lapland and trigger the development of Lapland's own industrial value chains.

The following strategic priorities have been chosen as the focal points in the internationalisation of Lapland and smart specialisation in 2018–2021<sup>1</sup>:



Image 6: Mutual dependence and interaction between the priorities.

1 Based on the Lapland Agreement and Lapland’s Arctic Specialisation Programme.

- 1 Advanced Arctic business – foundation for the growth**  
Lapland’s economy is well on the rise and investments in business competence, strong industries and bold new innovations create good conditions for economic growth and successful business.
- 2 Arctic expertise, renewal and innovations strengthening the growth and international business activities**  
The obtaining of versatile industrial growth requires skilled labour force and a strong education, research and innovation infrastructure. Working life evolves and becomes more international, and the Lappish expertise is reinforced also through foreign experts.
- 3 Regional ecosystem as the base for internationalisation**  
With their actions, the public administration and regional developers create conditions for success. Thanks to a strong region, versatile utilisation of the stakeholders’ expertise, and a clear distribution of tasks, Lapland is a strong area and a recognised actor in international co-operation.

## 2.3. Priority 1: Advanced Arctic business – foundation for the growth

Lapland is still growing naturally. The sustainable refining of natural resources and conditions is a cornerstone of Lapland's smart specialisation and internationalisation. Lapland's natural resources have a significant role in Finnish export. Lapland possesses natural resources and conditions that are globally interesting. The EU industrial policy emphasises the further increasing of self-sufficiency. Consequently, increasing the value added locally is the foundation for advancements in the Arctic industry.

For growth, the developing Arctic business needs strong value chains that serve as a basis for high-quality manufacturing and service production. Therefore, the region must actively seek links to global cross-border value chains that provide a good growth forum for Lappish enterprises.

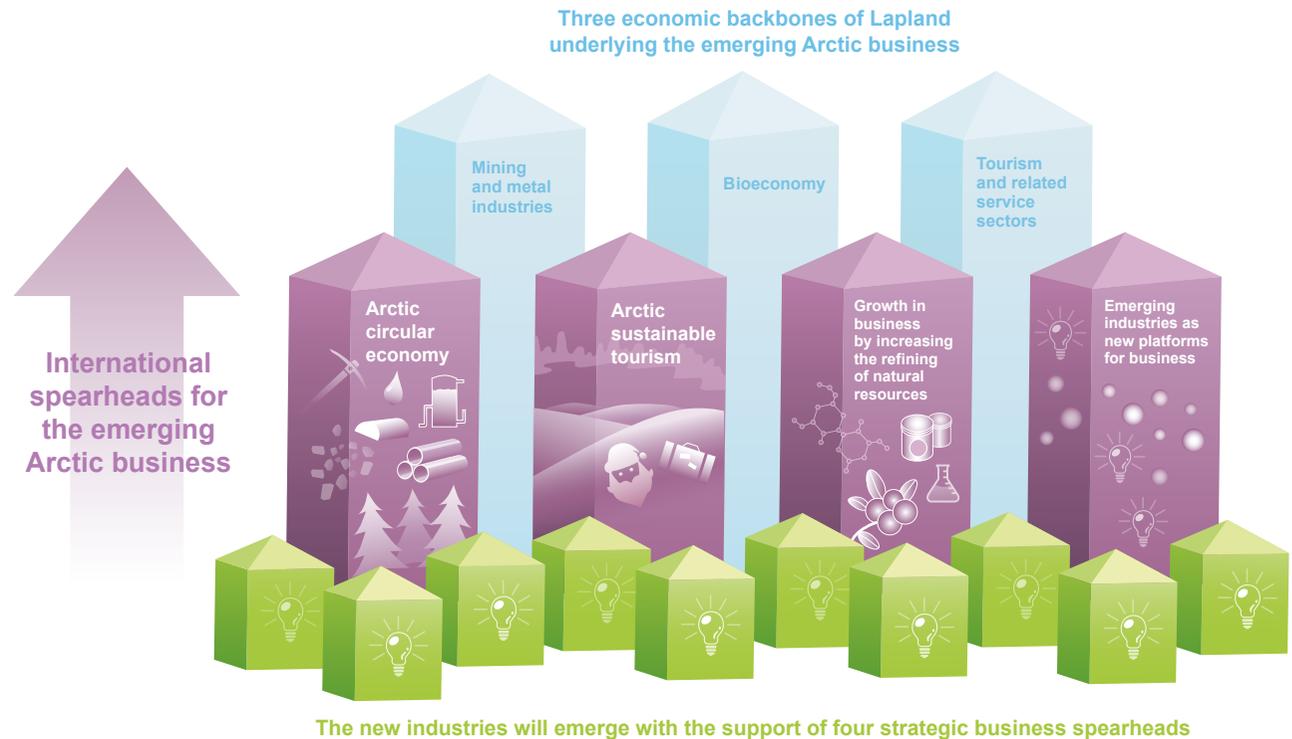


Image 7: Emerging Arctic industries.

**Leading spearheads for international business and foundation for smart specialisation in Lapland can be divided into four strategic themes:**

- 1 Arctic circular economy
- 2 Arctic sustainable tourism
- 3 Growth in business by increasing the refining of natural resources
- 4 Emerging industries as new platforms for business

### 2.3.1. Arctic circular economy

Lapland has systematically aimed at building practices and co-operation models to increase the utilisation of industrial and societal side-streams. Regional co-operation and an open, network-oriented approach have brought actors together to identify the development needs and potential of circular economy. During the work, a systematic model of the process has been created. At the same time, different tools have been developed to promote the utilisation of industrial and societal side-streams, the industrial symbiosis, and the circular economy in a business-oriented manner in the context of an extensive collaboration network<sup>2</sup>.

Circular economy is one of the strongest fields of potential expertise in Lapland. This development has created a foundation for new entrepreneurship activities based on the management of industrial side-streams. Managing the non-industrial side-streams in areas with long distances presents its own challenges. The systematic development of efficient solutions and practices has made Lapland a nationally and internationally respected expert. To strengthen Lapland's position as an international actor, measures that

support this development will be needed in the future, as well. The goal is to incorporate comprehensive management of the circular economy into all business activities.

The goal of the circular economy column is to strengthen Lapland's status as a sustainable and resource-efficient utiliser of natural resources. In Lapland, the circular economy is profiled around developing the business opportunities of industrial enterprises in the forestry, metal, mining and energy sectors and of their service actors. In Sitra's road map, circular economy is categorised through five interconnected focus areas: a sustainable food system, forest-based loops, technical loops, transport and logistics, and joint actions. Synergies between these areas are also taken into account. The models and practices of circular economy are also a key factor in the implementation of sustainable energy solutions. By utilising the digital solutions and new technology, energy solutions can be used to bring about a more economic cost structure for the industry.

## THE ARCTIC INDUSTRY AND CIRCULAR ECONOMY CLUSTER INTO A GLOBAL ACTOR

*In 2017, Sitra led the drafting of the world's first national circular economy road map and action plan for Finland, aimed at uniting the society in a desire to promote the circular economy and at determining the most effective methods for this purpose. Sitra selected the industrial circular economy innovation platform led by Kemi Digipolis as one of the roadmap's key projects. The next step was the project establishing a competence and training centre for industrial symbiosis in Kemi-Tornio.*

The infographics concerning the process and potential of circular economy were created as a joint initiative of the Arctic Business Concept (ABC) and ATS2 projects. In simplified terms, the whole project is based on the idea that the world needs pioneering solutions quickly to resolve the current situation where the growth of economy and prosperity is based on wasteful use of natural resources. By developing the best solutions for a carbon-neutral circular economy, Finland can become one of the first nations to create sustainable well-being and success in a new way in the next 5–10 years.

The aim of the project is to describe the operating model for industrial symbioses at the operational level, draft guidelines for the initialisation of industrial symbioses, and organise open workshops introducing the implementation of the operating models, identifying the necessary legal amendments and encouraging participants to promote the industrial symbioses.

<sup>2</sup> [www.teollinenkiertotalous.fi/en/home.html.fi](http://www.teollinenkiertotalous.fi/en/home.html.fi)

## An example of circular economy-based thinking by utilising industrial side-streams

Processing of slag  
Case: Tapojärvi Oy

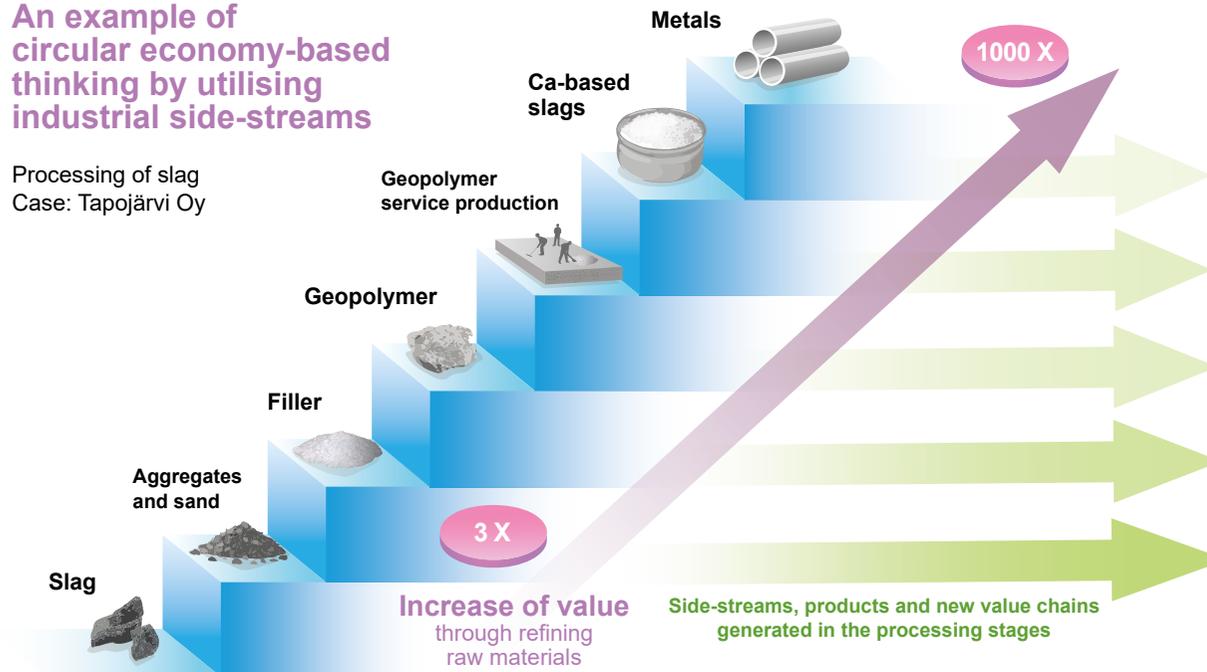


Image 8: Circular economy visualised.

## Proposals for the development entities for an Arctic circular economy:

- Adopting a stronger position as a major national and global actor in the implementation of Sitra's circular economy scheme – circular economy generates expertise, industrial success and export for Lapland.
- Regional collaboration models and competence development in comprehensive management and administration of a circular economy – the circular economy is incorporated into the emerging Arctic industries.
- Strengthening Nordic and Arctic co-operation – Lapland is the leading Arctic expert in circular economy.
- Allocating resources to growth and international business through EU networking and projects. In addition, growth services and the Team Finland network services are used to support the growth and internationalisation of enterprises.

## CIRCULAR ECONOMY MEANS MAKING CHOICES IN ALL AREAS OF LIFE

*Finland generates the largest amount of municipal waste per person in the EU. This is approximately 20 times as much as Malta, where the amount of waste generated per person is the lowest in the EU. Lapland must also invest in launching a comprehensive zero waste ideology in all areas of life. Even the smallest everyday decisions put together have a significant effect and create direct financial savings. First and foremost, these tiniest of solutions can be used to create together a foundation for the emergence of new business models, influence the creation of new jobs, and generate positive effects for the regional economy.<sup>3</sup>*



*Circular economy means acknowledging the little things. Enterprises must carefully determine the superfluous side-streams generated in their production, and consider how these side-streams could be utilised. At Arctic Warriors, the leftover mash from berries and herbs is re-purposed as supplement for horses. There are side-streams in almost all companies, but many stumble because they tend to exaggerate the matter. All side-streams of a company do not have to be utilised straight away, just fix one thing at a time with a #consideritdone attitude.”*

– ILKKA KAUPPINEN, ARCTIC WARRIORS

<sup>3</sup> Publication of the Ministry of Economic Affairs and Employment: Growth and employment from sustainable solutions (2017)

## 2.3.2 Arctic sustainable tourism

Lapland's goal for Arctic sustainable tourism is to be among the top European travel destinations and to be a globally recognised destination for sustainable and ethical tourism. The foundation for the development of tourism consists of year-round sustainable nature tourism, management of Arctic conditions, experiences, well-being and safety. Innovative travel concepts are being developed all the time.

Tourism in Lapland has increased to record-high numbers in the recent years. Although tourism is a strong industry, it still faces new challenges. The rapid global growth puts pressure on safeguarding sustainable development. The year-round nature of tourism, challenges of public transportation, and improvement of the service infrastructure are important issues that must be resolved to create sustainable growth. The service structures of tourism, such as the customer's purchase path, service sales and marketing, have changed at an enormous speed due to the influence of digitality. The availability of skilled workers is an acute problem that can slow down the development of the entire sector.

Lapland's tourism has much to offer for other industries. Long-term tourism marketing has created a strong international brand for Lapland, which also benefits enterprises in other fields.

Tourist centres and regions provide an excellent forum for example for the promotion of a low-carbon ideology through circular or bio-economy collaboration.

In Lapland, the development of tourism has been based on a systematic and strategic approach in which the different parties are included in the process. The latest example of this is the project that was launched in the spring of 2018 with the aim of building an Arctic tourism ecosystem in Lapland. The Lapland tourism strategy outlines the long-term vision and goals for the development of sustainable and ethical Arctic tourism. The strategy is implemented jointly with an extensive stakeholder network.

**Lapland is a pioneer in Arctic nature and experience tourism.** Lappish tourism can be perceived as a test laboratory for all Arctic tourism, as new challenges are first faced in Lapland. Arising to the challenges requires resources, but, in contrast, resolving them facilitates the sustainable development of tourism in other Arctic areas, as well. Bold development entities consisting of tourism products and services support the growth objectives set for tourism, as well as sustainable development. International investments are also laying a foundation for the growth of tourism.

## SERVICE PACKAGES AS A CHARACTERISTIC OF LAPPISH TOURISM



*Lappish tourism is characterised by high-quality products and service packages, as well as attractive activities. Lapland is an interesting destination for many different customer segments from all over the world. To succeed in the harsh global competition, entrepreneurs must boldly develop new tourism products and services.*

*In tourism, increasing value added means specialisation, diversification of the product, and investments in service. A good example of this is the development of luxury travel products in Lapland. Several Lappish companies have received international recognition for the luxury travel products. In addition to unique accommodation and activities, these products also include a comprehensive service package and the protection of privacy. Authentic Arctic luxury is topped off with Lappish food and natural products.*

*One example of these luxury products is the Arctic Tree House hotel, which has stirred great global interest and in 2017 was awarded the title of Best Innovation in Hotel Concept. The package includes a comprehensive 24/7 service concept, where increasing the added value of the tourism product and service has been used to create a private niche market.<sup>6</sup>*

*A new era has dawned also for tourism products that consist of traditional travel forms shaped into events. A good example of these is the Lapland Classic hiking event in the Pallas-Yllästunturi National Park, in which the services available in villages are an essential part of the overall tourism product. Lapland Classic is also a good example of extending the travel season to last all year round, which is one of the major development points in Lappish tourism. In Lapland, tourism is essential for the existence of several livelihoods, and it provides enterprises with opportunities for internationalisation without ever leaving Lapland. The food industry in particular has tremendous potential for growth in the selling of Lappish products to tourists either directly or through restaurants."*

– SATU LUIRO, SENIOR ADVISOR IN TOURISM,  
REGIONAL COUNCIL OF LAPLAND

## Proposals for the development entities for sustainable tourism:

- **I) International co-operation strengthening the development of value chains in tourism**
  - Meeting the system-level challenges (year-round prospects, public transportation, digitality) with international collaboration (Lapland as test laboratory for sustainable Arctic tourism)
  - International networking and value chains strengthening the tourism industry and increase of expertise
  - Improving availability and increasing especially air traffic during low season. Compensating for the dependency on air traffic by developing e.g. cross-border tour products (the Visit Arctic Europe project)
- **II) Building an Arctic tourism ecosystem in Lapland**
  - An Arctic tourism ecosystem in Lapland that promotes closer co-operation between the tourism industry, accompanying industries, and research, education and development organisations, with the aim of ensuring the future growth and development of tourism as the Lappish “export item”
- **III ) Bold development entities consisting of tourism products and services to support the growth objectives set for tourism, as well as sustainable development**
  - Creating a comprehensive service concept that takes the customers’ individual needs into account
  - Bringing industries together in productisation
- **IV) International investments laying a foundation for the growth of tourism**
  - Coordination and conceptualisation of investment drafts into projects

## VISIT ARCTIC EUROPE – POWER OF CROSS-BORDER CO-OPERATION IN TOURISM MARKETING

*The goal of this network project, coordinated by the Finnish Lapland Tourist Board (LME), was developing the northern areas of Finland, Sweden and Norway into a united, high-quality Arctic tourism area that is a globally competitive and well-known destination.*

*The three-year project has focused on tourism marketing, strengthening the networks of regional travel operators, and collaborating with international tour operators. The importance of co-operation must be grasped in international tourism marketing. Tourism operators are not involved in the project to compete with each other, but to work together in developing Arctic Europe as a travel destination.*



*The best part of this project is its entrepreneur-oriented nature; we have done what the entrepreneurs of the region want and need. All actors have had a chance to get to know their colleagues from different countries and to compare their operating models. In tourism marketing, working together is more profitable than working alone.”*

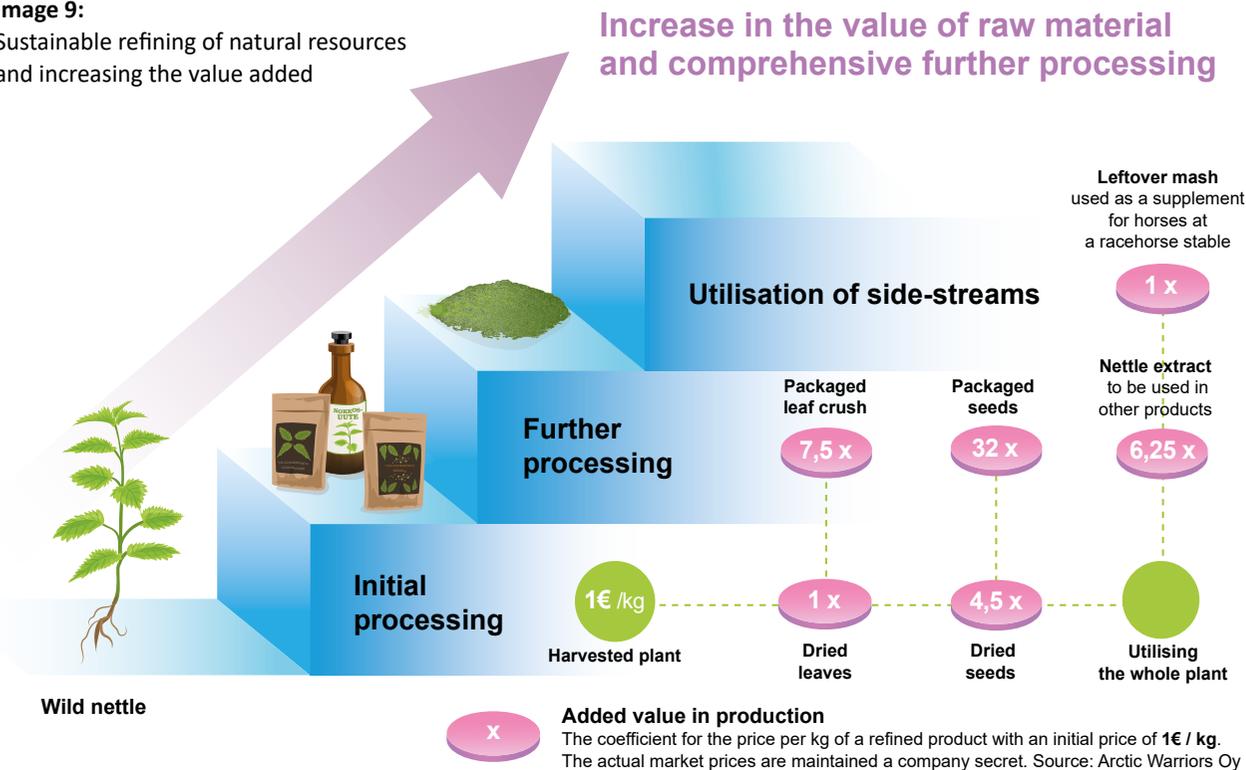
– NINA FORSELL, OPERATIONAL MANAGER  
AT THE FINNISH LAPLAND TOURIST BOARD

### 2.3.3 Growth in business by increasing the refining of natural resources

In Lapland, the use and further local refining of natural resources is still modest in relation to the potential. However, investments have been made in the past few years in increasing the value added. To generate new growth, the operating conditions must be improved and resources allocated systematically to the development work. The aim

of the *Lapland – an Arctic and international high-flyer* -strategy is to increase value added at the regional level. If successful, this endeavour will create new jobs and products with an international market and a massive impact on the local economy.

**Image 9:**  
Sustainable refining of natural resources and increasing the value added



## KOLARI DRAWS GROWTH FROM NATURE

*With assistance from the European Regional Development Fund, there is a new and innovative business concept being developed in Fell Lapland, known as Grown for you by the light summer nights and the midnight sun (Valoisten kesäöiden ja keskiyönauringon kasvattamaa Sinulle). What is this project all about? Kolari's Development Manager Johanna Koivumaa provides more details:*



*Growth in the Lappish tourism has also created a demand for Lappish foods and different natural products manufactured from natural ingredients. There is an increasing demand for superfood and local foods grown in clean nature, as well as for wellness products. International customers who visit us then spread the message of pure Lappish food to their home countries, and the growing global wellness trend creates a demand for export. However, local food and natural products are currently being manufactured only in small amounts at a time, and it is challenging just to meet the local demand. Export is halted by the fact that we only have small-scale artisan production. Customers in the domestic market and in the international market in particular expect the quality to be complemented by increasing quantities and security of supply.*

*In this project, we bring together the producers of local food and natural products from Fell Lapland, as well as those interested in this operation and the local buyers. The goal is to establish a natural product and local food facility with a test kitchen, aimed at industrial production, and now we want to determine the conditions under which this could be achieved in Fell Lapland and especially in Kolari. The objective is to incorporate sustainable production and business practices and to create production chains that generate new jobs for the area."*

The sustainable refining of natural resources and increasing the added value form one of the major focus areas in strengthening the competitiveness of Lapland's regional economy. Increasing the value added of renewable natural resources is an economic activity that generates comprehensive benefits for Lapland's forest and field reserves. At the same time, it creates entirely new business opportunities and promotes equal growth in the whole of Lapland. Lapland aims at increasing

refining-related small and medium-sized entrepreneurship in the bioeconomy sector, especially in the spearhead industries.

In the future, the structure of forestry income will change, and investing in new products with a high added value offers opportunities also in Lapland. The biorefineries currently under development create a foundation for the development of the SME industry.

### **In addition to increasing the refining of natural resources, investments must be made in the following development entities:**

- **Building local and regional value chains and strengthening the operating conditions for initial production**
- **Developing product, service and production innovations that utilise Lapland's forest and field reserves into commercial products**

- **Developing the business environment and network-based operating models to support industrial growth**
- **Increasing expertise and value added by national and international networking**

## **WOOD BUILDING CAN CREATE A NEW FUTURE**

*Wood is an ecological material that is in compliance with the principles of sustainable development. It is a renewable natural resource, and the harmful environmental effects and energy consumption caused by timber production are minimal when compared to tile, concrete and steel, for example. The benefits of wood and timber construction have been especially highlighted lately, and they have been recognised outside Finland, as well:*

- Wood building combats climate change
- Wood has been proven to have a calming effect that promotes concentration, e.g. in schools
- Wood has a positive impact on e.g. indoor air quality, humidity, comfort and acoustics
- Constructed examples show that new wooden schools have managed to break free from indoor air problems
- Wood has a positive impact on the well-being of people

In the past few years, wood building has been developed in Lapland in many sectors. A competence centre for Arctic wood building is under construction in Kemi, and the centre will focus especially on the use of CLT material in construction. The municipality of Sodankylä has made investments in promoting Arctic wood building, and Rovaniemi is planning an ecocampus. In addition, several other municipalities are investing in the use of wood in construction, and tourism has been the industrial pioneer in the versatile use of wood.

Lapland has long traditions in wood building, education in the field, and pioneering enterprises. These factors combined with systematic investments lay a good foundation for making wood building a growing export industry.

## 2.3.4 Emerging industries as new platforms for business

The constant change of entrepreneurship and enterprises is a natural part of social development. The development of technology creates new needs, and also enables entirely new product and service concepts. The new-generation Lappish enterprises are characterised by a high degree of specialisation, which serves the production value chains by generating diverse products and services. In practice, companies are constantly operating at interfaces, where the integration of services and technologies is continuously generating new products.

To maintain the competitiveness of Lapland and the Lappish industry, we must keep up with the challenges presented by the market. On the other hand, Lapland must be capable of grasping new opportunities. Companies must anticipate and react quickly, as the new opportunities are arising at an increasing tempo. The rapid transformation forces companies to adapt, but, at the same time, it opens doors for new business models and enterprises.

Simultaneously, there is more and more appreciation for traditional handmade products and unique services that respect the natural values or may even be extremely minimalistic, and these can be produced effectively by utilising digital solutions.

In the past few years, the ‘social economy’<sup>4</sup>, or the idea of a socially sustainable economy highlighting societal principles in business, has emerged increasingly in the European Union.

The operating principles of a socially sustainable economy include transparency and the pursuit of societal gain in addition to economic benefits. A socially sustainable economy seeks particularly business models that incorporate the operating principles of ordinary enterprises, but target employment efforts at persons in difficult situations.

The identifying of new emerging industries requires a process that contains mutually agreed practices for foreseeing opportunities. In contrast, actors are also required to take risks and have the courage to try out different business activities. Lapland is a strong actor in the European networks that are developing new kind of business. However, this co-operation must be better harnessed to benefit the whole of Lapland and to promote industrial growth. In order to evolve, the new emerging industries also need new workers and a new generation.

## POTENTIAL EMERGING INDUSTRIES OF THE FUTURE

***The new business models and constantly developing services and products lay also a foundation for new industries, or existing industries that are renewed, to become new and developing fields, so-called emerging industries.***

These may be industries that have been operational for years, but are now gaining a whole new value due to the industrial transition, or they may involve service needs that have until now been completely unidentified, but which create a basis for the growth of a new business concept.

If successful, these new industries take the enterprises straight to the cutting edge of development. At the moment, there are two distinct industries under development in Lapland, both of which could become major players in the future.

In Lapland, the sports industry is a good example of emerging industries. Lapland possesses strong expertise in exercising and sports, represented in the educational and research organisations as well as in the business sector (tourism and wellness industry). Expertise in sports and education export present a significant opportunity for Lapland.

Lapland is developing robotics especially as a testing environment for traffic; one example is the intelligent road Aurora project which involves the municipalities of Muonio, Kolari and Enontekiö. Ongoing projects include robot cars and platoon technology for logistics, and, to a more modest degree, drone testing. As a whole, these test activities form substantial growth potential, combining technical expertise with creative utilisation of Lapland’s special conditions in the development of cold and winter technologies and vehicle testing.

<sup>4</sup> [https://ec.europa.eu/growth/sectors/social-economy\\_en](https://ec.europa.eu/growth/sectors/social-economy_en)

## The development entities that support the identification of new emerging industries are divided into the following goals:

- **I) EU-level networking supports bold choices and trials in the industrial transition**
- Increasing competence and finding the best practices
- Improved utilisation of the EU corporate financing models
- 
- **II) Regional operating model as part of EU-level co-operation identifies and supports the new emerging industries.**
- Anticipation, co-operation, support and sparring entity
- Support system for the establishment of enterprises and cooperatives in the new industries
- 
- Part of the innovation and development environments
- 
- Regional development of corporate financing models
- 
- **III) Lapland's operating model for a socially sustainable economy ensures versatile growth and is integrated into EU-level collaboration**
- 

## SOCIALLY SUSTAINABLE ECONOMY IN LAPLAND

Lapland is involved in the European Commission's pilot project European Social Economy Regions 2018, in which 30 European regions seek out the best practices for the development of a socially sustainable economy. According to the Commission's assessment, 10 per cent of European businesses currently fall within the framework of socially sustainable economy. The aim is to increase this number in the upcoming years. Lapland is among the European pioneers in the development of a new kind of social and societal entrepreneurship.

In Lapland, a socially sustainable economy is already being enforced by, among others, the Leader operation, foundations that produce services for the promotion of welfare and employment, village associations, and the Lappish community-led operating culture. A socially sustainable economy digs into the basic questions of Lapland's future: by utilising the existing resources, how can we ensure the conditions for well-being in the area, how can we provide employment for persons in a difficult situation, and how can we stop capital from trickling outside the region?

One distinct way of promoting a socially sustainable economy is taking social sustainability into account in all public procurements. For example, the municipalities of Kittilä and Sodankylä have started reforming their own procurement strategies from the perspective of regional economy and sustainable development. This way, the public procurement sector can in its own activities promote a low-carbon economy, development of local production, and the vitality of areas by enabling the local enterprises to participate in public tendering.

"A change in operating culture always takes time and requires commitment from municipalities. We must start somewhere, and we hope that this development of procurement will be joined in by all municipalities and the region, as well as other public procurement actors and projects," says Katja Kaunismaa, Project Manager in the municipality of Kittilä.



## 2.4. Priority 2: Arctic expertise, renewal and innovations strengthening the growth and international business activities

The economic development of Lapland is built on supporting the regional actors' capacity to develop international business. In addition, the initial idea is to create a positive environment for innovations and support commercialisation. Lappish enterprises and research, education and development organisations have unexploited Arctic ideas that can be commercialised, but need special support for this purpose.

Lapland has a versatile education and research network that can provide laboratories and testing and development environments. There are also private testing environments for cold conditions. Lapland must continue to invest in the use of Arctic expertise and innovation environments.

By utilising the potential of knowledge platforms, it is possible to create a Lappish operating model in which educational institutions, research institutes, and other actors are integrated in a new way into the development of the regional industry. By creating knowledge platform networks and introducing the international TRL practices<sup>5</sup> as part of the co-operation, we can generate good business models.

<sup>5</sup> Technology Readiness Level – A system for assessing and developing the maturity level of technology. Utilised in international financing instruments. <https://ec.europa.eu/research/participants/portal/desktop/en/support/faqs/faq-2890.html>

The availability of skilled workers in the Arctic region is a critical success factor that impacts all sectors. The key issues are sustaining diverse education opportunities and measures aimed at creating new need-based education and conversion courses. Moreover, it is extremely important to support the recruitment processes of enterprises. By incorporating the reform of education into the knowledge platforms, we are also creating a foundation for industry-based education.

Due to the increasing internationalisation of industry, strengthening the competence of enterprises and organisations is all the more important. Foreign employees increase the competence and multiculturalism of companies and organisations.

Up-to-date RDI activities and education are key features in Lapland, as the region is turned into an innovative and entrepreneur-minded area. The interaction between education providers and RDI actors in the regional business sector must be systematically developed further. These actors are also at the core of international networking.

## DEVELOPMENT ENVIRONMENTS AT THE CORE OF LAPPISH RDI ACTIVITIES

Lapland has traditionally valued the significance that development environments and the experts working there have for the research, development and innovation work (RDI) in the region, which is why large investments have been made in them. Development environments are physical and virtual environments created for learning and innovation, including laboratories, studios, workshops and simulation environments, where products, services and expertise can be developed further.

Since 2015, RDI co-operation has been systematically developed in Lapland through the work of the Arctic Development Environments cluster. The scattered RDI environments and expert services have been forged into a united actor that serves the regional industry and enables industrial development, corporate investments in product development, and internationalisation. The cluster co-operation involves 50 modern development environments that provide RDI services and employ a total of 750 experts.

### THE GOAL IS:

- To serve as meeting venues for education, RDI operations and industrial sectors
- To generate experts to meet the special needs of the enterprises
- To improve the growth and competitiveness of companies
- To serve as a growth environment for new companies
- To identify key competences and manage the focus areas of expertise
- To develop common service models
- To strengthen the co-operation of Arctic Smartness clusters operating in Lapland
- To increase global financing and expertise

More information:  
**ARCTICSMARTNESS.EU**

# Regional actors and knowledge platforms developing innovative international business

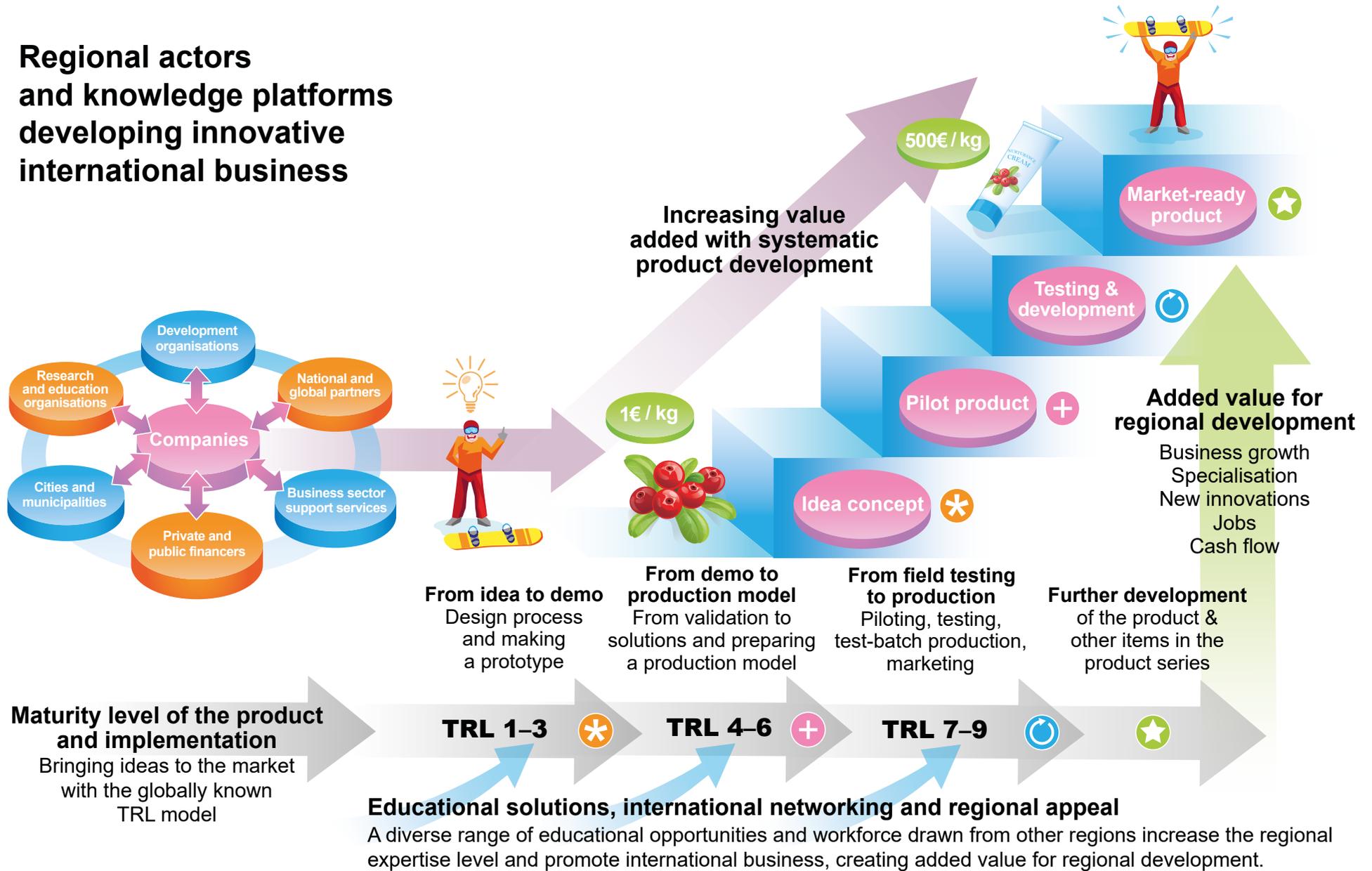


Image 11: Education and RDI supporting the increase of value added – TRL in practice.

**Strategic development entities are based on globally connected construction of an innovation system that strengthens and supports the industrial policy objectives of Lapland:**

- **Regional model for innovation activities. Operations can be run either as an institution or through networking. The activities must have tailored operating principles and separately allocated resources. Expertise and RDI operations constitute the other part of the innovation activities in the region. Operations must be steered to support the development of Arctic business.**
- **An internationally strong and attractive Lapland of experts, where joint investments are made in increasing the appeal of the region. Seamless co-operation of the regional employment institutes, educational organisations and industrial actors lays the foundation for increasing the knowledge base and creating new jobs.**
- **Global networking supports the Arctic expertise and innovation environments in transforming into a strong regional and national actor. International financing promotes the enabling and commercialising of education and RDI activities.**

## **TALENT MARKETING TO RESOLVE THE AVAILABILITY OF WORKFORCE**

*House of Lapland's Talent Boost programme implements talent marketing with the aim of increasing the appeal of Lapland in attracting new skilled workforce. Lapland has excellent growth prospects especially in tourism, bio-economy and the mining industry, which creates a constantly increasing demand for skilled labour. As a result, Lapland needs experts also from outside the region and from the international labour market.*

One instrument of the *Talent Boost* programme is to execute a targeted marketing campaign, aimed at attracting foreign workers for the upcoming tourism season in Lapland.

The campaign is carried out in collaboration with the TE Services of Lapland. The goal of the campaign is to get international experts interested in Lapland as a place to work and live, and to get them to participate in the *Work in Lapland* recruitment event and to apply for the open seasonal employment posts.

The *Talent Boost* programme brings enterprises and public stakeholders together with the aim of making Lapland an increasingly attractive destination for skilled workers. The goal is to reinforce the perception of Lapland as the region of the brave, where dreams can be turned into a reality.

The companies and employers participating in the programme benefit from the joint marketing targeted at skilled workforce, as it enables the industrial and local opportunities and available jobs to reach those who are interested in them.



## 2.5. Priority 3: Regional ecosystem as the base for internationalisation

**R**egional co-operation models and efficient and smart use of resources form the foundation for sustainable development. Lapland must have a strong regional ecosystem as the base for co-operation. A distinct distribution of tasks in regional development work lays the ground for Arctic industrial growth and development of expertise. The responsibilities related to education, research, development and innovation activities are distributed among different actors. Innovation activities are managed in collaboration with municipalities and cities. As the regional government reform is planned and implemented, the roles of the different actors will be specified further.

Industrial success is the central goal of the regional growth services, Team Finland services and corporate financing provided by the structural and agricultural funds. By coordinating regional services with municipal growth services and other business services, it is possible to create service chains that benefit the whole of Lapland.

The entrepreneurial governance model, based on network-like collaboration and interaction, cuts through the ecosystem and supports bold choices and the courage to take a chance, and enables a culture of experimentation. The economic growth of the new region is supported by strengthening the idea of a regional ecosystem, for which there is a good foundation in Lapland

due to the cross-cutting cluster activities and extensive development work.

A good governance model promotes co-operation and boldness to break free from traditional operating methods. The new region is like a team leader, working with different stakeholders to make Lapland a strong actor, nationally as well as globally.

In this ever-changing economic situation, own expertise is not enough to sustain growth and competitiveness; instead, we need multidisciplinary co-operation, such as global value chains, networks and clusters. A strong ecosystem is also the driving force of internationalisation, which means very different things for different actors. Internationalisation must be based on strong regional co-operation that “identifies and recognises” different measures and needs.

In the future, the significance of regions in the development of collaboration in the EU and Arctic areas will be increasingly emphasised. We must emphasise active participation in the co-operation forums of the Barents Euro-Arctic Region, in North Calotte co-operation, and in the NSPA network<sup>6</sup>. Furthermore, collaboration with China is becoming increasingly important in all industrial sectors. Lapland must also be open to broader international co-operation.

<sup>6</sup> Barents Euro-Arctic Council, Barents Regional Council, [www.barentscooperation.org](http://www.barentscooperation.org) | North Calotte Council, [www.pohjoiskalotinneuvosto.fi](http://www.pohjoiskalotinneuvosto.fi) | The Northern Sparsely Populated Areas (NSPA) network, <http://www.nspa-network.eu>

## ARCTIC SMART RURAL CLUSTER WORK

*In Lapland, the rural cluster meets the challenges presented by the transformation of the rural areas. In the future, rural Lapland will be a smartly specialised, vibrant area that aims high with products manufactured from top-quality ingredients and related services.*

The Rural Cluster highlights the potential of rural Lapland, as well as the negative impacts of capital outflows generated in energy and food procurement, for example. The capital outflows are combated by creating and developing business operations in the fields of food refining and decentralised energy production. The goal is to transform the abundant natural resources of Lapland into capital that benefits the regional economy in a sustainable manner, and to support the Lappish entrepreneurs and entrepreneurs-to-be.

One Lappish innovation is the Food House concept, developed jointly in the cluster by municipalities, developers and entrepreneurs. A food house brings local food producing companies under the same roof, which reduces production and distribution chains, costs and emissions. Already, there are operational physical food houses in Lapland in Rovaniemi and Kemijärvi. In addition, food houses are being planned elsewhere, including Sodankylä.

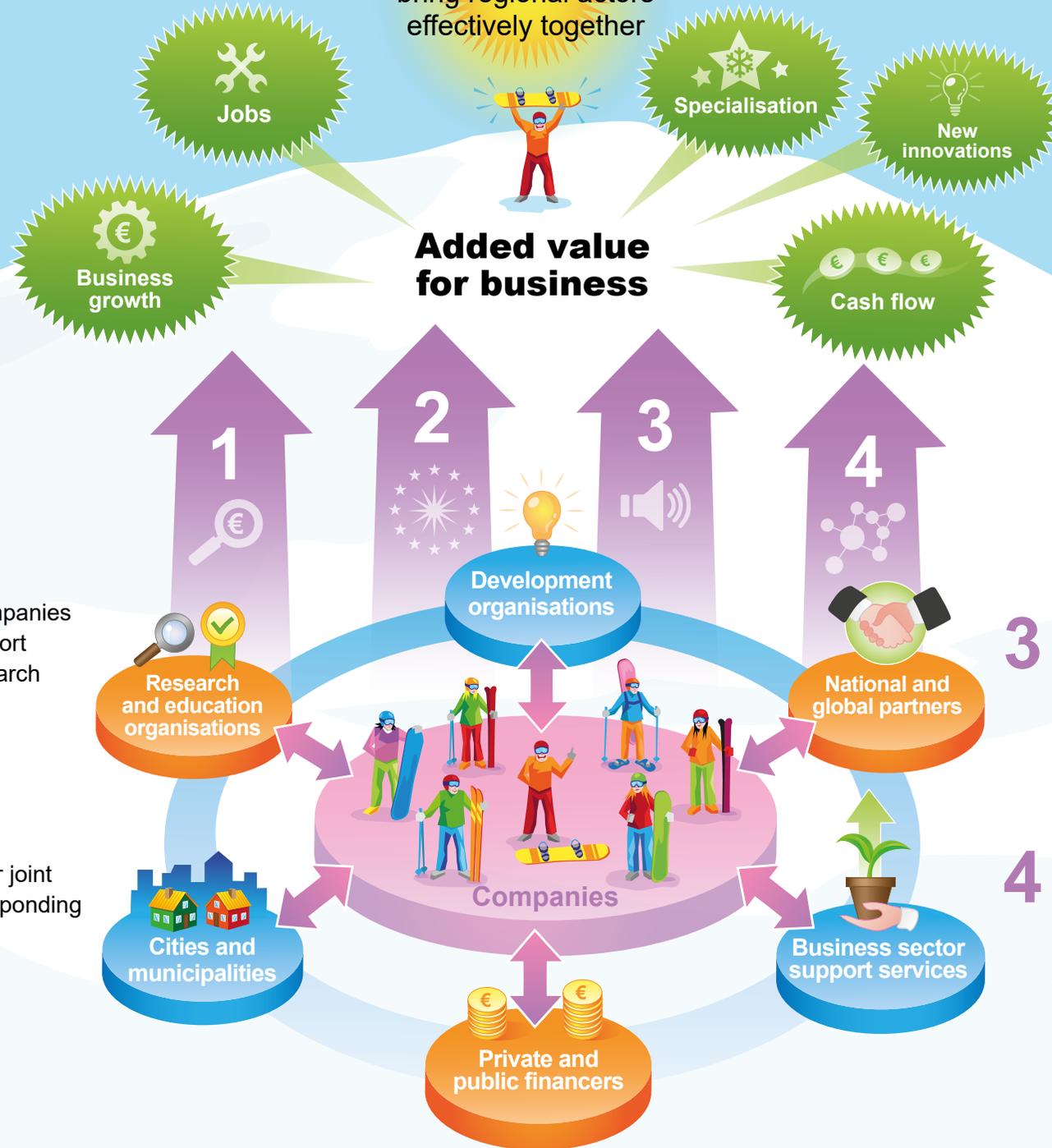
The Rural Cluster joins together many different actors to work towards a common goal, and finds from an extensive network the right specialists to confront the rural challenges. The operation is transparent. Currently the cluster involves, among others, regional developers, entrepreneurs, financiers, researchers, educational representatives, the public sector, students, and ordinary consumers. The cluster consists of three sectors: development of entrepreneurship, development of knowledge, and regional development.

**CONSIDER IT DONE – TOGETHER**  
**#FORTHELOVEOFLAPLAND**

**Image 13:**  
Clustering adds value to the Lappish industry.

# Cluster organisations

bring regional actors effectively together



**1** The cluster supports companies in utilising business support services, promoting research and acquiring financing.

**2** The cluster can provide assistance in applying for joint EU project funding or responding to large calls for tender.

**3** The cluster can help companies and other local actors with e.g. branding, marketing and promoting their interests.

**4** Companies can find new collaboration models, international contacts and markets through the cluster.

**The best skiing tips**  
– Gaining the expertise of interregional cooperation networks

**Up to the top in good company**  
– Utilising the thematic partnerships of Smart Specialisation in finding interregional financing models

**Jump in to a gondola lift!**  
– Through clusters regional industries and SMEs benefit from the grants and development activities

**Lifting up with the leverage**  
– About 80% of the European funding focuses on clusters

**Climbing up the slope with snowshoes**  
– Mapping and utilising the alternative financing and operating models

**Balance is maintained by leaning forward**  
– Ongoing projects indicate that the activities will continue even when the funding ends

**Regional innovations**  
– Discovering and experimenting new skiing routes and techniques with an open mind

**Staying as bold and responsible player on international skiing slopes**

**The role of clusters and organisations in the successful route selections**

**Regional success stories**  
– Successful skiers inspire the new entrants to try, create a base for the emerging businesses and discover new funding opportunities

**RESOURCES**

**Regional ecosystem as the base for internationalisation**

**ACTIVE ACTORS**

**GUIDING AND SUPPORTING ACTIVITIES**

**All together under the same roof**  
– Lappish regional players building interregional cooperation together, and new governance of Lapland taking role as a team leader for internationalisation

**Technique okay!**  
– Commonly agreed working models and practices take things forward in a controlled manner

**Evaluation**  
– First aid, diagnosis and treatment right away if needed!

**Coach's responsibility**  
– A good management model encourages towards interfacing and active international cooperation

**Coaching the new regional players to become downhill skiers at international level**

**Don't forget the past!**  
– Learning from the undesired route choices and improving the technique



# 3. LAPLAND – an Arctic and international highflyer

## – Implementation of the strategy

### 3.1. International smart specialisation

The implementation of the *Lapland – an Arctic and international highflyer* -strategy is based on good co-operation between the regional actors. International activities are increasing and becoming more versatile. The strategy reinforces the roles of different actors, while bearing in mind that internationalisation means different things for enterprises, educational institutions, municipalities and regional development organisations.

Discovering synergies through co-operation is essential for the future of Lapland. Meanwhile it is also useful to try to determine how the different forms of internationalisation can be genuinely integrated into supporting the different actors. Furthermore, we are looking for more systematic ways of developing the mobility of educational institutions in co-operation with enterprises, with the purpose of creating added value for industrial development.

In this strategy, emphasis is placed on activities that improve the preconditions for operating in the international field, both in Lapland and beyond. The implementation of this strategy reinforce Lapland's role as an Arctic influencer, and as an innovative and entrepreneur-oriented area. The essence of the strategy consists of developing

activities that create the best possible operating preconditions for Arctic industry to grow and evolve. In order to develop, the business sector needs skilled labour and support for the development of products and services. The regional ecosystem with its clusters and services improves the operating preconditions by strengthening the co-operation between regional actors and by participating in international co-operation forums.

The aim of the *Lapland – an Arctic and international highflyer* -strategy is to reinforce the priorities of Lapland's Arctic Specialisation Programme. Smart specialisation is perceived as an activity that is becoming increasingly global as forecasted, and which integrates the regional tasks into broader EU collaboration.

Lapland is looking towards the future of internationalisation and smart specialisation with an open mind. By utilising the experiences and successes and drafting a clear financial road map, Lapland can achieve the goals and priorities set for the internationalising smart specialisation. The key to the implementation of the strategy is maximising the effectiveness of EU funding. At the same time, the leverage of the development efforts is directed at the growth and internationalisation of the regional economy.

**EU has created a number of measures to support smart specialisation:**

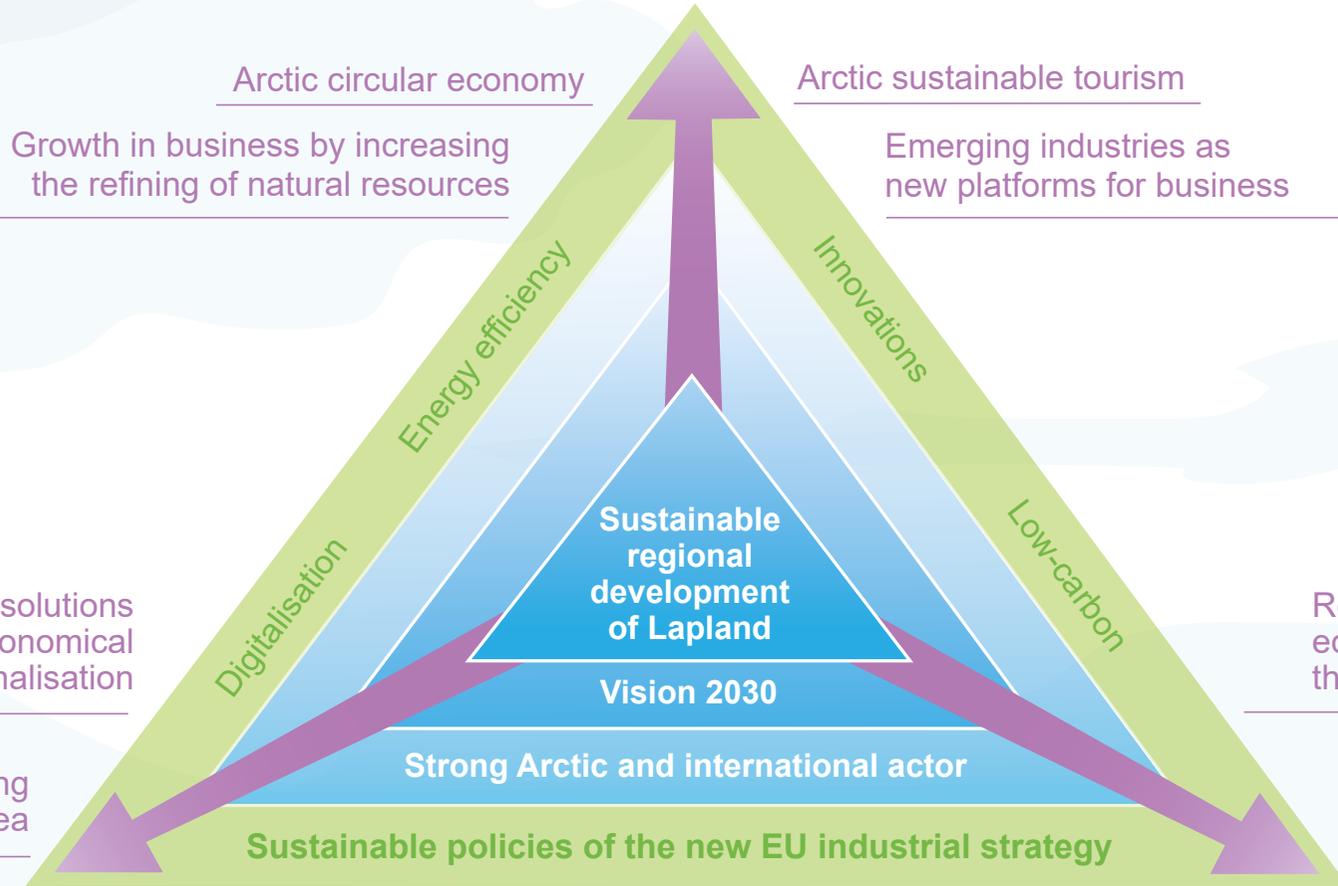
- **Thematic platforms for smart specialisation<sup>7</sup>**
- **strengthening the industrial modernisation;**
- **renewable energy; and strengthening the food industry**
- **Cluster schemes to promote the reinforcement of clustering and the ecosystem ideology<sup>8</sup>**
- **Various pilot searches to support the regional transformation of the industry and other sectors**
- **Joint initiatives of the Commission's**
- **Directorates-General and different institutions**
- **Highlighting good practices and successes**
- **Regular conferences and seminars to share information**

7 <http://s3platform.jrc.ec.europa.eu/s3-thematic-platforms>

8 [https://ec.europa.eu/growth/industry/policy/cluster/excellence\\_en](https://ec.europa.eu/growth/industry/policy/cluster/excellence_en)

**Image 16:** Sustainable regional development guided by the three priorities promoting the internationalisation of Lapland.

**PRIORITY 1:**  
Advanced Arctic business  
– foundation for the growth



**PRIORITY 2:**  
Arctic expertise, renewal and innovations strengthening the growth and international business activities

Arctic innovation and development environments as drivers for the growth

Interregional collaboration developing the whole region

**PRIORITY 3:**  
Regional ecosystem as the base for internationalisation

## 3.2. Road map for the implementation of the strategy

The key element of the *Lapland – an Arctic and international highflyer* -strategy is ensuring the maximisation of financing efficiency and the best possible results in regional development. In Lapland, the primary financing methods consist of the instruments of the European structural and investment funds (ESIF), which are generally aimed at increasing regional well-being and growth. The Lapland Agreement and the related implementation plan create a framework for the use of financing.

Implementation of the *Lapland – an Arctic and international highflyer* -strategy is a part of the *Lapland Agreement* and the implementation plan thereof. In addition to EU financing, we must also identify other financing instruments that contribute to the implementation of internationalising smart specialisation. These include Nordic funding, for example. Although EU instruments are the primary source of funding, co-operation across the EU borders shall not be forgotten. Other Arctic areas and China are also important partners for Lapland. Strategic planning and active participation in the international activities of the EU enable Lapland to receive funding for this co-operation, as well.

The priority road maps describe the measures to be taken to achieve the set objectives.

In Lapland, financing synergy is viewed as a part of the implementation of the Lapland Agreement. In addition, agreements are made with regional actors to apply for EU financing to support the internationalising smart specialisation.

### Smart specialisation increasingly drives EU financing<sup>9</sup>, which makes it important to perceive financing sources as mutually supportive synergistic entities:

- ESIF, other regional and national funding schemes develop the regional structures and capacity
- H2020 strengthens RDI operations as part of European networks
- Erasmus+ increases the knowledge base
- Interreg programmes support cross-border co-operation models and learning from others at the EU level
- Cosme develops structures and practices to improve the operating conditions of SMEs
- EFSI activities promote the realisation of investments
- S3 thematic platforms and cluster programmes strengthen EU-level co-operation and the creation of value chains

## SUCCESSFUL HORIZON 2020 CO-OPERATION

*Partners of the Arctic Industry and Circular Economy Cluster, namely GTK, LUKE and Lapland UAS, have formed successful partnerships under the Horizon 2020 programme (H2020).*

GTK alone received three projects as a result of cluster co-operation in the call for projects of the Horizon 2020 programme in 2017; these projects will be carried out in 2017–2021.

The *Mining and Metallurgy Regions of EU (MIREU)* project establishes a Europe-wide network of areas that have mutual interests in the production of mineral raw materials. The *MIREU* project is coordinated by GTK, and the Lappish partners include the Regional Council of Lapland and the University of Lapland. GTK is also coordinating the *NEXT* project, aimed at developing modern mineral exploration methods. Other Lappish participants include the University of Lapland and several SMEs. Thirdly, GTK is involved in the *H2020* project *Minland*, focusing on land use issues in the mining industry.

In addition, LUKE and the Lapland University of Applied Sciences are representing Lapland in the H2020-funded *ROSEWOOD* project, which focuses on the mobility of raw materials in the forest bioeconomy and on building regional collaboration models.

The strategic approach adopted in the Arctic Smartness cluster work has resulted in a total of 23 million euros received through Lappish partnerships from EU direct funding programmes, and 40–50 % of these funds benefit the Lappish actors directly.

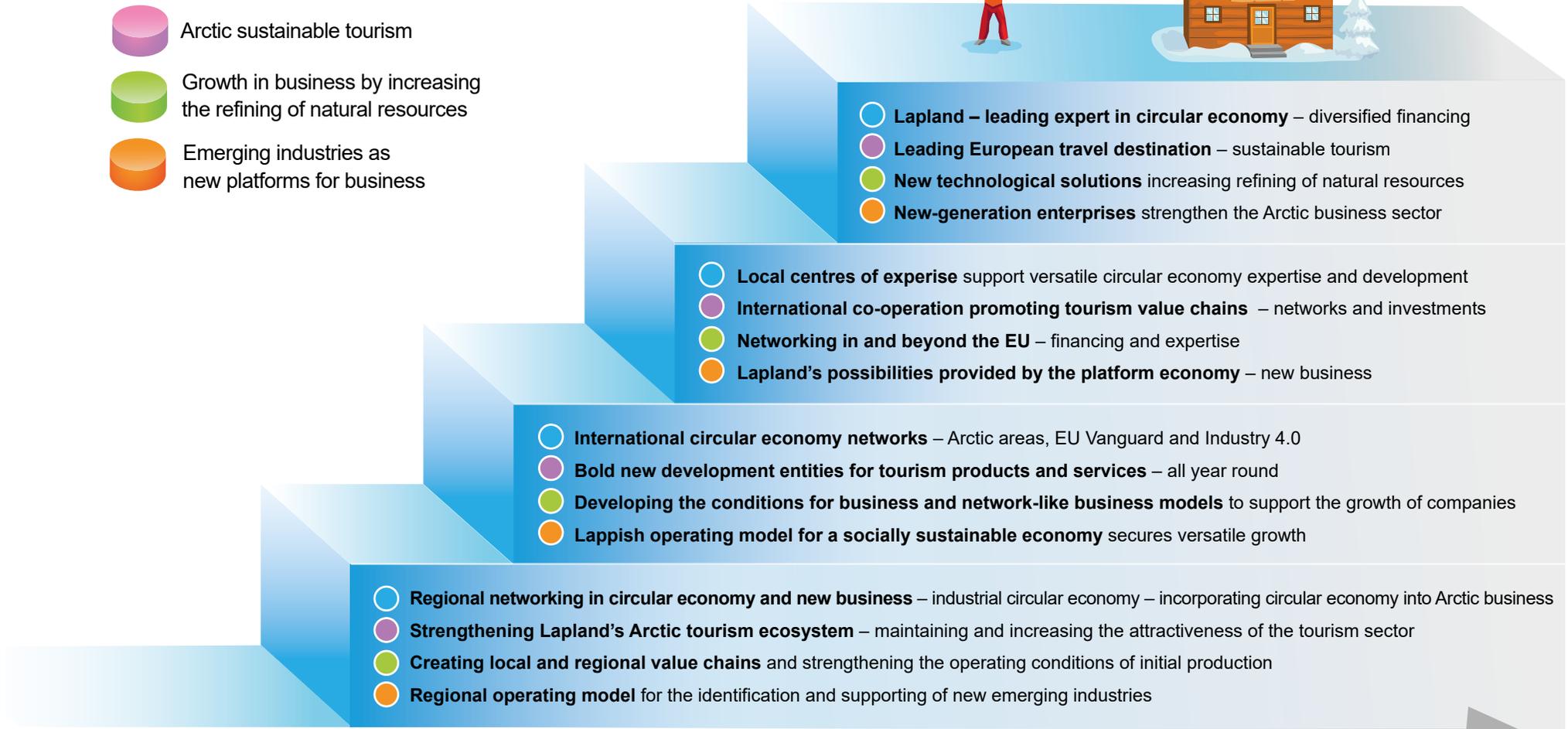
More information:  
**ARCTICSMARTNESS.EU**



<sup>9</sup> [http://europa.eu/rapid/press-release\\_IP-18-4184\\_en.htm](http://europa.eu/rapid/press-release_IP-18-4184_en.htm)

# PRIORITY 1: Advanced Arctic business – foundation for the growth

-  Arctic circular economy
-  Arctic sustainable tourism
-  Growth in business by increasing the refining of natural resources
-  Emerging industries as new platforms for business



**2018**

**Internationalisation as the foundation** for co-operation between regional industries and for the value chains of products and services.

**2022**

## PRIORITY 2:

Arctic expertise, renewal and innovations strengthening the growth and international business activities

 Arctic innovation and development environments as drivers for the growth

 Educational solutions supporting the economical growth and internationalisation

 Internationally strong and attractive area



-  **Smartness RDI Excellence** – the leading Arctic RDI network
-  **Lappish education model** – an advantage also in education export
-  **Welcome to Lapland** – all information from one source

-  **Regional research and education programmes** supporting business
-  **New forms and practices of education** – digitality and new technologies as strengths
-  **Branding educational and RDI activities** – Arctic expert from Lapland

-  **Development of Arctic testing environments and laboratories**
-  **Activating the possibilities of international training programmes and education export**
-  **International networking and financing expertise as strengths** – ERDI supporting Arctic business – ECEI, S3

-  **Identifying Arctic innovations** – operating models and processes – from ideas into competitive business
-  **Co-operation models for regional education respond to the increase of Arctic business** – local knowledge and competence networks
-  **Development support for international business expertise** – specialised industrial services, considering the special characteristics of the region

2018

2022

## PRIORITY 3: Regional ecosystem as the base for internationalisation

-  Renewing regional ecosystem supporting the economical growth
-  Clusters strenghtening the regional value chains development
-  Interregional collaboration developing the whole region

