



East and North Finland's High Impact Action:

Cross-regional Voucher System to Stimulate Digitisation and
Circular Economy in the Tree, Wood and Timber Value Chain

In-depth assessment

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In Brief

Industrial transition in East and North Finland

The East and North Finland (ENF) region is Finland's largest, covering almost 70% of the country's total territory. ENF is one of Finland's five NUTS 2 regions and is home to 1.3 million inhabitants, accounting for 23% of Finland's population. ENF is in the top 10% of the OECD's most sparsely populated regions – with 8.5 people per km². It accounts for approximately 20% of Finland's GDP, which is proportional to its share of the national population. Industry is the region's largest sector, generating 35% of the total economic turnover. Micro-enterprises make up 96% of all ENF companies, 95.5% of which employ less than five people. However, due to their limited resources and lack of access to financing, microenterprises often face significant challenges in developing their innovation capabilities without external support.

The region currently faces a number of industrial transition challenges. First, there is a need to ensure a sustainable transition that benefits the environment and boosts the region's innovation potential. Applying technological solutions to environmental challenges, energy issues and the sustainable use of natural resources is a key challenge for the region. Second there is a need to promote sustainable resource management at a regional level. Adopting measures that further support the region's industrial circular economy would be valuable in order to use natural resources in a sustainable and resource-efficient manner. Third, there is a need to improve digitalisation, innovative technologies, and production processes. At the national level, only 8% of Finland's SMEs employ digital solutions, while in ENF the figure is as low as 2-3%.

Governance and management of the HIA

Several elements underscored the bespoke governance and management approach of the HIA. In particular, the funding approach of the initiative was not aligned with Finnish national legislation, as Regional Councils are not permitted to finance business development under Finnish law. However, the HIA's voucher system presented an opportunity to experiment with a new funding model as the pilot programmes were directly funded by the European Commission's grant and did not rely on national funding or EU funding mechanisms that channelled through Finland's government.

In addition, Regional Councils seized the stakeholder engagement opportunity provided by the HIA to bring together all seven HIA project beneficiaries through joint meetings to help them interact and present their interim findings. This engagement was important for the Regional Councils to identify the challenges and opportunities encountered by participating businesses, and to build their own collaboration capacity. Both of these elements could be useful for future projects.

Results of the HIA and contribution to addressing industrial transition challenges

The HIA supported ENF's industrial transition on a number of fronts. First, it managed to 'reduce' the long physical distances between ENF sub-regions by strengthening the linkages among governments and enterprises and expanding stakeholder networks. Second, it focused on promoting projects with a higher level of technology readiness. In this way, the HIA implementation helped businesses to experiment and develop products that could be commercialised. Third, it helped project beneficiaries to experiment with new and digital solutions to advance the circular economy in the tree, wood and timber value chain.

Fourth, it helped to raise awareness about the green industrial transition, by promoting the adoption of circular economy practices and emphasising how the industrial sector can implement them as part of an industrial transition process. Fifth and finally, the HIA contributed to improving an understanding of certain regional development challenges facing ENF, such as a workforce deficit in strategic industries. The worker shortage is partly caused by the inability of employees to up-skill and insufficient investment in business R&D, which is especially apparent in industrial SMEs.

While the HIA was deemed a success by stakeholders, there were several unforeseen obstacles, notably relating to: (i) overcoming physical distance in collaboration, (ii), implementing the HIA within existing administrative boundaries, (iii) following up with SME beneficiaries after the HIA, and (iv), aligning and co-ordinating funding mechanisms among national and regional funding strategies.

Scalability of the HIA and lessons learned

The HIA constituted an experimental initiative in a number of ways. First, beneficiaries were required to form a consortium of at least one enterprise and one R&D organisation from different ENF sub-regions. This helped companies to extend their partner network, which could in turn lead to future cross-regional collaborations. Second, the initiative's funding model differed from Finnish national legislation, which does not allow Regional Councils to finance business development, with funding provided through a European Commission grant. This more direct funding model was welcome by beneficiaries and Regional Councils as it meant that less time was spent on administrative processes.

In terms of the continuity and scalability of the HIA, it was a one-off opportunity, as the funding model that was tested is not mentioned in national government legislation on regional development. As a result, ENF cannot continue to fund these types of projects itself. While Regional Councils are still not permitted to finance companies, the ELY Centres can now provide direct funding to SMEs presenting higher technology readiness level projects, which they did not do before, at least not with this explicit focus. This was considered a positive outcome of the HIA.

In addition, long-term collaboration among ENF's seven sub-regions will continue in the project "Smart Specialisation in East and North Finland 2022–2027" (ELMO II). The project aims to support the development of clusters in the ENF sub-regions to better understand the business community throughout ENF and to strengthen co-operation, especially within the ENF's S3 2019-2023 framework. The project will produce an evaluation of the implementation and realisation of the East and North Finland in Industrial Transition Smart Specialisation Strategy 2019-2023.

The HIA also generated a number of valuable policy lessons, including the following:

- Greater innovation can be achieved through funding and integration.
- Public support to businesses aiming for higher TRLs can make a difference.
- Building social capital to advance industrial transition should be encouraged.
- Regional government bodies can be effective enablers of innovation.
- Short-term funding may be more appropriate than long-term funding to diffuse innovation.

Introduction

This case study provides an in-depth assessment of the High Impact Action (HIA) carried out by the region East and North Finland (ENF). The overarching objective of the HIA was to broaden the innovation base as a driver for industrial transition and strengthen the value chain in the forestry sector (e.g. tree, wood and timber). The particular emphasis was on developing new innovative products and methods related to

the circular economy and digitisation. The HIA designed by East and North Finland adopted a new funding mechanism that enabled Regional Councils to promote innovative business activities more effectively. The HIA granted financial vouchers to seven collaborative cross-regional projects made up of one or more companies and research and development (R&D) organisations operating in the ENF region. The HIA promoted cross-regional collaboration, highlighting it as an effective tool for exploring new opportunities within the green and industrial transition for sustainable growth, a priority of the renewed S3.

The purpose of the case study is to explore how new approaches to governance and policy can support industrial transition, including through a process of experimentation as applied through the HIA. The case study offers an assessment of the benefits and challenges of testing a new funding model to support innovation. Experimental governance can be defined as an iterative process of goal setting, exploring alternative approaches, and learning and monitoring (Wolfe, 2018^[1]; Morgan, 2018^[2]). This case study shows that adopting such an approach is not without preconditions and challenges but can help advance industrial transition if its lessons are well integrated into future regional innovation and smart specialisation strategies. The case study may serve as inspiration for practitioners and policy makers from other regions in industrial transition that are trying to advance their transitions, for example those that did not participate in the industrial transition pilot.

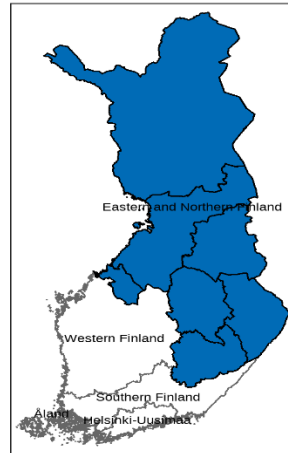
This case study consists of five sections. The first section describes the challenges involved in the industrial transition in East and North Finland. The second section analyses the High Impact Action, including its objectives, activities, governance mechanisms and contribution to the industrial transition challenges. The third section elaborates on the experimental nature of the HIA. The fourth section provides a series of policy lessons from the HIA to advance industrial transition. The last section concludes the case study.

Industrial transition and regional development challenges in East and North Finland

The ENF region is Finland's largest, covering almost 70% of the country's total territory. ENF is one of Finland's five NUTS 2 regions and has 1.3 million inhabitants, which account for 23% of Finland's population. ENF is in the 10% most sparsely populated OECD regions – with 8.5 people per km²¹ (OECD, 2022^[3]). It is divided into seven NUTS 3 regions that are referred to as ENF sub-regions (Figure 1). The seven regions have been working closely together in support of the implementation of the HIA, as outlined below.

¹ Calculation accounts only for inhabited areas.

Figure 1. Map of East and North Finland



Source: OECD illustration

The region accounts for approximately 20% of Finland's GDP, which is proportional to its national population share. Industry is the region's largest sector, generating 35% of the total economic turnover. Wood processing, which is the focus of the region's HIA, makes up 25% of its industry. Furthermore, the region is endowed with more than 40 education and research institutes (ENF, ELMO, 2022^[4]). The region ranks third among Finnish regions in the share of the population that are employed in knowledge-intensive industries – 3 percentage points higher than the OECD average. Finally, ENF is a region with a strong SME base. Micro-enterprises make up 96% of all ENF companies, 95.5% of which employ less than five people. Considering the overwhelming share of microenterprises in ENF's enterprise ecosystem, it is crucial that they be supported to enhance their innovation capabilities. Due to their small size, limited resources, and lack of access to financing, microenterprises often face significant challenges in developing their innovation capabilities without external support (OECD, 2022^[3]).

Industrial transition challenges in East and North Finland

The region of East and North Finland (ENF) is composed of seven sub-regions and is home to abundant natural resources and expertise in key industrial sectors, such as forestry. Achieving industrial modernisation is a primary aim of ENF to ensure future growth within its borders. The region currently faces the following industrial transition challenges (ENF, ELMO, 2022^[4]):

- **Ensuring a sustainable transition that benefits the environment and boosts the region's innovation potential.** Applying technological solutions to environmental challenges, energy issues and the sustainable use of natural resources is a key challenge for the region. While there is expertise in environmental businesses, this is not matched by market orientation, and hinders the ability of the region to fully realise its industrial transition potential.
- **Promoting sustainable resource management in the ENF region.** Enhancing the circularity of industrial side-streams, i.e., industrial activities that transform inputs or raw materials into outputs and products, has created a new, rapidly growing business sector in ENF. The systematic development of efficient solutions and practises to make these industrial side-streams (and the materials used for them) more circular has turned several ENF sub-regions into nationally and even internationally respected experts. Adopting measures that further support the industrial circular economy would be valuable in order to use natural resources in a sustainable and resource-efficient manner in the ENF region. Some progress in this regard has been made possible through ERDF financing, as demonstrated by the collaborative efforts between the Circular Economy

Centre in Lapland and its partners from North Karelia. Together, they are actively developing an innovative sustainability tool to drive environmental responsibility and resource optimisation.

- **Improving digitalisation, innovative technologies, and production processes.** At the national level, only 8% of Finland's SMEs employ digital solutions, and in ENF the figure is as low as 2-3%. Innovative technologies and production processes can be used to boost the existing production and use of raw materials, thus increasing profitability.

These challenges have also been identified as industrial transition priorities in the ENF smart specialisation strategy.

East and North Finland's High Impact Action

The overarching objective of ENF's High Impact Action (HIA) was to broaden the innovation base and strengthen the value chain in the forestry sector (e.g. trees, wood and timber). It specifically focused on developing new innovative products and methods related to the circular economy and digitisation in the forestry sector.

Each of the seven HIA-supported innovation projects was required to promote new or improved digitisation and circular economy solutions in the forestry sector in order to help re-invigorate existing value chains and/or to create new ones. Moreover, there was a strong emphasis on end-user driven actions and the development of close-to-market innovative products that go beyond fundamental research and help bring a product to market (e.g. post-technology readiness level 5²). The seven HIA-funded projects aimed to improve the automation and digitisation of the industrial value chain by i) engaging lower-level industries in development activities; ii) testing a cross-regional collaborative approach to policy delivery; and iii) experimenting with a new funding model that allowed Regional Councils to directly fund SMEs and R&D organisations (East and North Finland, 2020^[5]).

Governance and management of the HIA

The HIA's key stakeholders were the ENF's seven Regional Councils and the representatives of the seven funded pilot projects. The co-ordination of the HIA pilots was organised at the ENF sub-regional level, based on a joint agreement among the Regional Councils. The Regional Council of Lapland was responsible for practical arrangements and implementation, such as handling application procedures, organising events and interim reports, through to the final reporting to the European Commission. However, all seven ENF sub-regions were involved in following up on the pilot implementation (OECD, 2022^[6]).

The funding approach of the initiative was not aligned with Finnish national legislation, as Regional Councils are not permitted to finance business development under Finnish law. However, the HIA's voucher system presented an opportunity to experiment with a new funding model as the pilot programmes were directly funded by the European Commission's grant and did not rely on national funding or EU funding mechanisms that channelled through Finland's government. Regional Councils asked for additional responsibilities related to the financing of companies because they consider themselves better informed about the strengths and weaknesses of regional businesses and, thus, can promote innovative business activities more effectively (OECD, 2022^[7]). The Regional Councils in ENF sub-regions established clear objectives at the outset of the projects, which facilitated the HIA's monitoring and evaluation process (OECD, 2022^[7]). Moreover, ENF created a Task Force within ELMO that consisted of

² Technology readiness levels (TRLs) are a method for estimating the maturity of a product's technologies. They cover levels from TLR 1 (very low readiness level) to TLR 9 (very high readiness level). TRL 5 refers to the development of a prototype version in which the technology is validated in a relevant environment.

two representatives from each ENF sub-region. The task force handled issues relating to HIA implementation (Box 1), and its members continue to meet regularly to discuss common priorities to be reflected in the next Smart Specialisation Strategy.

Box 1. The HIA implementation process

The HIA's call for applications attracted 13 eligible project proposals that were evaluated by a panel consisting of five experts and the secretariat that consisted of ENF Regional Councils and Centres for Economic Development, Transport and the Environment (ELY Centres). The panel members from the ENF Regional Councils were nominated by the ENF regional governors, while members from the ELY Centres, which are deconcentrated bodies of the central government, are responsible for promoting regional competitiveness, well-being, sustainable development and curbing climate change. The members were nominated by their directors.

In order to select the seven HIA pilot projects, the evaluation panel used a scoring system based on criteria related to the HIA priorities, the innovative nature of the idea, the expected impact of the project, and its implementation. Moreover, only collaborative projects carried out by a consortium of at least one company and one R&D organisation from different ENF sub-regions were eligible. The results of the call process were published in the Final Report of the HIA: seven projects met the selection requirements and were funded.

Following the selection process, the HIA provided financial vouchers of EUR 40 000-45 000 to each of the seven collaborative cross-regional projects made up of one or more companies and research and development (R&D) organisations operating in ENF. Each voucher covered up to 80% of the total project costs, while a minimum of 20% had to be financed by private capital. In order to receive the financial voucher, project partners had to be in different ENF sub-regions.

Source: (OECD, 2022^[6])

The governance structure worked well for all Regional Councils thanks to dedicated staff being assigned to specific tasks. The clear division of responsibilities among the seven Regional Councils on tasks such as proposal evaluations, funding management and progress in meeting co-ordination facilitated the smooth implementation of the HIA. Additionally, from the beneficiary point of view, the structured nature of the HIA's governance helped them quickly contact the relevant people when they needed support (OECD, 2022^[7]).

Stakeholder engagement and interaction

Regional Councils seized the opportunity provided by the HIA to bring together all seven HIA project beneficiaries through joint meetings to help them interact and present their interim findings. This engagement was important for the Regional Councils to identify the challenges and the opportunities encountered by participating businesses, as well as build their own collaboration capacity, which could be useful for future projects. The joint meetings were also useful for developing a community of shared practices in matters related to the region's industrial transition such as improving digitalisation, innovative technologies, and production processes. Furthermore, it allowed stakeholders to gain new contacts and identify synergies or complementarities that would benefit SME beneficiaries in the long term (OECD, 2022^[7]).

The seven HIA project beneficiaries presented their activities and initial results at a mid-term meeting, which was an opportunity to initiate discussions with other pilot project participants and ENF representatives. Towards the end of the project period in June 2020, a final meeting was held in which the seven HIA project beneficiaries presented their results and experiences. A final report, which was a project

requirement to ensure the final payment of the voucher, was produced after the final meeting in September 2020. For the voucher payment, it was essential for pilots to have implemented the activities and reached the levels of development that were described in their applications. All pilots had reached their goals (East and North Finland, 2020^[5]).

Industrial transition challenges that were addressed by the HIA

The short and long-term results of the initiative met the expectations of the stakeholders and showed that promoting innovation and cross-regional collaboration can have a strong impact on ENF's industrial transition process. The HIA contributed to overcoming the following challenge, thereby contributing to the region's progress in its industrial transition:

Fostering cross-regional collaboration to create a basis for the development of new industrial value chains

The initiative managed to 'reduce' the long physical distances between ENF sub-regions by strengthening the linkages among governments and enterprises and expanding stakeholder networks. It allowed enterprises and R&D organisations to look beyond their immediate area for project partners, which built cross-regional synergies and institutional social capital. The initiative also promoted cross-regional collaboration, showcasing it as an effective tool in exploring new opportunities within ENF's green and industrial transition for sustainable growth, a priority of its renewed S3. The cross-regional collaboration provided a basis for new partnerships that may lead to new industrial value chains in the long-term (OECD, 2022^[7]). The development of such value chains could attract new businesses and investments, creating a ripple effect that can positively impact the entire region. One example of such a value chain – albeit more related to the implementation of the ENF S3 than the HIA specifically – is the value chain on water management.

Bringing innovative product prototypes closer to the market

The HIA focused on promoting projects with a higher level of technology readiness. In this way, the HIA implementation helped businesses to experiment with and develop products that could be commercialised. While most businesses did not succeed in bringing a product to the market in the short timeframe during which the voucher system was in place, they did succeed in building the foundations to pursue future commercial activities. For future action, the Regional Councils and the national government need to follow up on successful ideas and support them in their push to move from the testing phase to the development of the commercial product. Creating market-ready products is often a challenge for businesses. As such, local and central governments play an important role supporting a product's transition from the development stage to the commercialisation stage (OECD, 2022^[7]). The successful commercialisation of products resulting from the HIA's efforts would have a significant impact on industrial transition in ENF. By bringing innovation to market, the regions could attract new businesses and investment, create job opportunities and boost economic growth. Additionally, successful product commercialisation could lead to the creation of new value chains, strengthen existing industries and diversify the region's economy.

Improving digitalisation, innovative technologies, and production processes to advance industrial transition

The tree, wood and timber value chain is a large industry in East and North Finland, providing employment opportunities and contributing to the economy of the region. However, like many industries, it faces challenges related to industrial transition. These challenges include adapting to changes in market demands, reducing environmental impacts, and increasing competitiveness (OECD, 2022^[7]). One way to address these challenges is by improving digitalisation, innovative technologies, and production

processes. Digitalisation refers to the use of digital technologies to transform traditional business operations and processes. Some HIA project beneficiaries experimented with new and digital solutions to advance the circular economy in the tree, wood and timber value chain. Innovative technologies refer to new and emerging technologies that can improve the performance and sustainability of the industry. The HIA also selected projects that generated knowledge in new technologies for industrial production methods, such as using thermally processed waste to produce a nutrient-rich fertiliser (East and North Finland, 2020^[5]).

Ensuring a sustainable industrial transition in ENF

To ensure a sustainable industrial transition in East and North Finland, it is important to raise awareness about the green industrial transition. This can be done by promoting the adoption of circular economy practices and emphasising how the industry sector can implement them as part of an industrial transition process. Key areas that can be further developed across the ENF's industrial sector and that follow the green transition principles are: (1) more efficient harvesting in the forestry sector; (2) waste management; and (3) high-value wood products, not only for the furniture and interior decoration industry, but also, for example, for the automotive and building industry.

Improving the understanding of regional development challenges

Lastly, the HIA also contributed to developing an improved understanding of some regional development challenges in ENF. First, the region suffers from a workforce deficit in strategic industries, partly caused by the inability of employees to up-skill. Second, there is insufficient investment in business R&D, especially among industrial SMEs. Large enterprises seem to be more successful in applying for national funding given their more developed R&D departments. However, 96% of all ENF companies are micro-enterprises, 95.5% of which employ less than five people. Considering the share of SMEs in the ENF enterprise ecosystem, they need dedicated support to improve their capabilities in developing R&D activities. Corresponding measures to support innovation in industrial SMEs are foreseen in the upcoming S3 for the period 2024-2027 (currently under preparation), such as the development of joint cluster activities, which lays the foundation for stable collaboration and competitive growth (OECD, 2022^[7]).

The HIA's experimental nature, the challenges encountered and its scalability

The HIA developed by ENF was experimental in several ways. First, the setup and focus of the innovation voucher system was new to the region and aimed to overcome industrial transition challenges that had been identified through the S3. Second, the HIA tested a new model of stakeholder collaboration, which, while not without its challenges, still managed to stimulate a learning process among the SME beneficiaries, the participating research institutes and the seven Regional Councils. Third, the HIA also generated policy insights for future action on industrial transition.

The novelty of the HIA compared to previous policy approaches

Compared to previous regional initiatives, the HIA introduced two novel aspects:

1. **Beneficiaries were required to form a consortium of at least one enterprise and one R&D organisation from different ENF sub-regions.** The aim was to increase the cross-regional knowledge-base and to encourage co-operation within ENF. It also sought to build a base for future development activities that could strengthen the region's innovation environments. Although some of the partnerships existed before the initiative, the majority were new collaborations between beneficiary companies and chosen service providers initiated through this HIA (OECD, 2022^[7]).

This helped the participating companies and RDI organisations extend their partner network, which in turn could lead to future cross-regional collaborations.

2. **The initiative's funding model differed from Finnish national legislation, which does not allow Regional Councils to finance enterprise development.** Funding for businesses (regardless of whether EU or state funds are involved) is restricted to state organisations at a national or regional state administration level. The HIA's voucher system offered the possibility of testing a new funding model, as pilots were funded directly from the European Commission's grant without depending on Finnish national funding or EU funding mechanisms channelled through the Finnish government. This more direct funding model was welcomed by beneficiaries and Regional Councils as less time was spent on administrative processes.

Challenges encountered and experimental solutions to make the HIA successful

While the HIA was deemed a success by stakeholders, there were several unforeseen obstacles, notably related to: (i) overcoming physical distance in collaboration, (ii), implementing the HIA within existing administrative boundaries, (iii) following up with SME beneficiaries after the HIA, and (iv), aligning and co-ordinating funding mechanisms among national and regional funding strategies.

Administrative procedures were new and created unforeseen requirements

The establishment of administrative and implementation procedures to support the funding model being tested through the HIA led to unforeseen requirements and experienced some delays (East and North Finland, 2020^[5]). Additionally, the development of entirely new application and evaluation forms, which were essential for basic administrative needs, proved to be more time-consuming than initially anticipated. As a result, there was a slight delay in the decision-making process regarding funding and pre-financing of the pilots. However, the Regional Councils provided their support to ensure that the pilots could efficiently and promptly commence their activities.

Lack of time for follow-up support for SME beneficiaries

One aspect that the beneficiaries have raised as a challenge is the lack of follow-up support for the commercialisation of their products (OECD, 2022^[7]). The HIA implementation period was shorter than 12 months due to delays linked to administrative procedures in the first few months of the initiative. Therefore, many beneficiaries did not have the opportunity or means to move from the testing phase to the commercial application of their prototypes. However, they did have the chance to apply for alternative sources of financing.

Aligning and co-ordinating funding mechanisms among national and regional funding strategies

Lastly, an important governance challenge was the need for stronger alignment and co-ordination mechanisms among national and regional funding strategies and operations (OECD, 2022^[7]). Finland provides funding for SME innovation through the regional ELY Centres based on the Finnish national R&D Strategy. At the same time, every sub-region develops a regional S3, which also sets out funding priorities, some of which are implemented by the Regional Councils. Significantly, however, Regional Councils are unable to fund businesses. The national R&D strategy and regional S3 strategies must be aligned and support each other to promote a place-based approach of industrial transitions.

The HIA's continuity and scalability

The Regional Councils, the enterprises and the R&D organisations had a positive experience of this funding mechanism. However, it was a one-off opportunity as the funding model tested is not in the national government's legislation supporting regions or regional development. As a result, ENF cannot continue to fund these types of projects itself. Yet, the ELY Centres can finance higher Technology Readiness Level (TRL) projects. This was considered a positive outcome of the HIA, although some companies were confused about how to apply for regional funding after the HIA ended.

Amending national funding legislation strategies is a time-consuming procedure; however, the successful implementation of the initiative paved the way for some modification. While Regional Councils are still not allowed to finance companies, the ELY Centres are now allowed to provide direct funding to SMEs that were created expressly to focus on technology readiness or those that have recently shifted the focus of their business to this aim. This was considered a positive outcome of the HIA

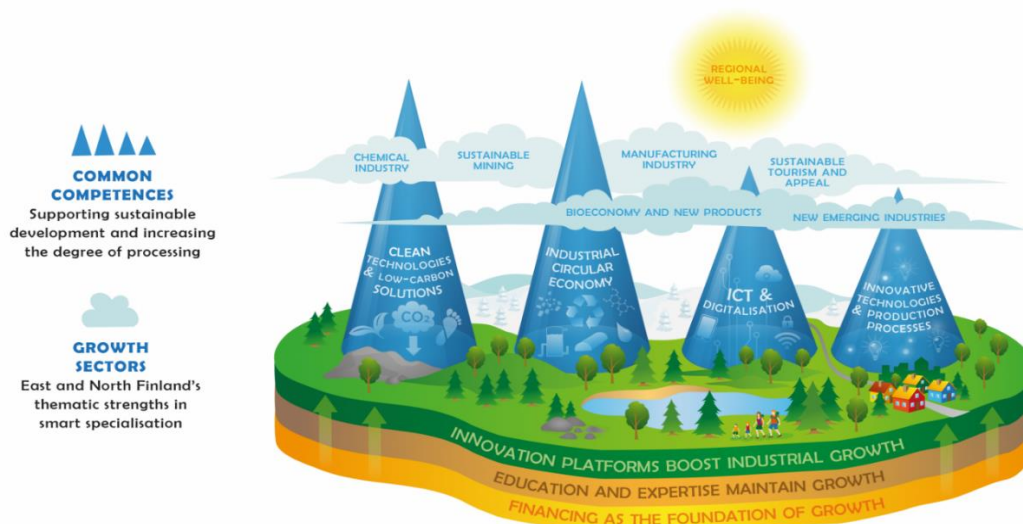
Given the short time period (12 months) of the HIA, most projects did not manage to deliver a market-ready product. However, this was not perceived negatively by HIA participants. On the contrary, enterprises expressed an interest in securing additional funding (either national or European) to scale up their pilot products since the whole HIA experience provided an opportunity to test innovative solutions to advancing digitalisation and the circular economy in the tree, wood, and timber value chain. The HIA served as a roadmap for the successful support of SMEs in their industrial transformation at scale. Moreover, the project proposal evaluation experts highlighted that ENF has great potential for innovation and industrial modernisation evidenced by the high-quality proposals from SMEs in the initial HIA call. ENF gained some successful insights into how they can use knowledge-sharing and innovation activities to feed their S3 and participate in the 2021-2027 Cohesion Policy programming. For example, as a result of the HIA, the region decided to focus smart specialisation projects and related funding more on business innovation and funding for product commercialisation. This was a departure from previous, more research-oriented funding.

Advancing smart specialisation through the HIA

East North Finland's seven sub-regions each have their own smart specialisation strategy (S3). They also have a long history of co-operation. In 2018, the seven regions developed a close model of co-operation, called ELMO in Finnish. The ELMO model produced a joint "East and North Finland in Industrial Transition Smart Specialisation Strategy 2019-2023", which co-exists with each sub-region's S3. This model supported the close co-ordination of S3 project implementation among the seven sub-regions and achieved better results in advancing industrial transition (ENF, ELMO, 2022^[8]). Moreover, the co-ordination promoted new partnerships for regional innovation and increased the visibility of ENF in Finland and beyond (OECD, 2022^[7]). The key competences of each ENF sub-region will also be reflected in the currently revised collaborative S3 for the years 2024-2027.

Figure 2. Key regional competences reflected in the ENF smart specialisation strategy

Cross-cutting competences form a base for the common development priorities in the implementation of the Smart Specialisation Strategy.



Source: (ENF, ELMO, 2022^[4])

Long-term collaboration among ENF's seven sub-regions beyond the HIA continues through the project "Smart Specialisation in East and North Finland 2022–2027" (ELMO II). The project aims to support the development of clusters in the ENF sub-regions to better understand the business community throughout ENF and to strengthen co-operation, especially within the ENF's S3 2019-2023 framework (ENF, ELMO, 2022^[8]).

The project will produce an evaluation of the implementation and realisation of the East and North Finland in Industrial Transition Smart Specialisation Strategy 2019-2023. Using the results of the evaluation and each sub-region's S3, the project will create a joint Smart Specialisation Strategy 2024–2027 for the ENF region.

Policy lessons from the HIA to advance industrial transition

The HIA was a learning process for all stakeholders with important lessons for future industrial transition and smart specialisation policies. The main lessons learned relate to (1) ENF's innovation potential; (2) the importance of assisting businesses that are keen to get involved in projects that go beyond the innovative product experimentation phase; (3) the significance of cross-regional collaboration; and (4) the benefits of a new financing mechanism can advance regional innovation.

- **Greater innovation can be achieved through funding and integration.** To encourage innovation in the ENF region, policy makers could allocate funds to initiatives like the HIA and integrate them into ongoing policy practices. By recognising and supporting high-quality proposals, nurturing ideas with potential, and drawing inspiration from exceptional initiatives, policy makers can foster an environment conducive to innovation and industrial modernisation. The 2021-2027 Cohesion Policy Programme for ENF represents an existing initiative that aligns with Objective 1 (A Smarter Europe) to promote innovation in the ENF region. Policy makers should ensure that it

incorporates measures to foster business innovation to maximise its impact and contribute to the region's overall development.

- **Public support to businesses aiming for higher TRLs can make a difference.** Businesses in ENF aim for higher TRLs because technologies are more mature and reliable and can provide competitive advantages, improve efficiency, and create new markets. Public support can play an important role in helping businesses achieve higher TRLs. However, achievement can also depend significantly on R&D investment, which can be costly and risky. Through the voucher system, local SMEs received support to develop new or improved products, processes, and services. It also aided in the transition from the prototyping to the development phase.
- **Building social capital to advance industrial transition should be encouraged.** The experience of the ENF region shows that building social capital by facilitating intra-regional collaboration enables the creation of new partnerships, improves knowledge, and offers additional opportunities for innovation. Building social capital across large distances can be a challenge. ENF overcame this by forming consortia that brought together SMEs and R&D organisations from different sub-regions. Such partnerships facilitate the expansion of networks and the sharing of technical and conceptual support. Today's online meeting technology can help ensure ongoing engagement and participation in collaborative efforts once the relationships are established.
- **Regional government bodies can be strong enablers of innovation.** Thanks to the HIA, ENF's Regional Councils were able to play a more proactive role in promoting innovative business development. This represented a shift from the traditional focus of Regional Councils, which had centred on facilitating knowledge exchange and providing educational opportunities. Through the HIA, Regional Councils supported businesses in developing products and helped drive innovation in their respective regions. This capacity was vital not only to unlock the potential of local businesses, but also to foster the growth of new industries in ENF. Building the capacity of Regional Councils to act as innovation enablers was a key factor behind the HIA's success.
- **Short-term funding may be more appropriate than long-term funding to diffuse innovation.** The beneficiaries agreed that flexible and short-term funding is effective when testing new products and that it is often preferable to long-term funding, which tends to be more rigid from a procedural point of view (OECD, 2022^[7]). This is particularly true for small SMEs that often encounter challenges when investing in new products and adapting to the current needs of digitisation and circular economy due to a lack of financial support. Short-term funding is often more prevalent in start-up environments where the priority is to develop and test innovative products quickly.

Conclusion

East and North Finland's HIA was a successful pilot programme. The HIA provided financial vouchers to seven collaborative intra-regional pilot projects among two or more companies, and R&D organisations operating in ENF. The pilot projects improved the automation and digitisation in the industrial value chain, engaged lower-level industries in development activities, tested an intra-regional collaborative approach to policy delivery and experimented with a new funding model that allowed Regional Councils to directly fund SMEs and R&D organisations. As a result of the HIA, ENF gained good insights into how it can use knowledge-sharing and innovation activities to feed sub-regional smart specialisation and support regional development through innovation in the forestry industry. The next round of smart specialisation aims to support the development of clusters in the ENF regions to better understand the needs of the region's business community and to further strengthen cross-regional industry-university co-operation. Despite its success – particularly in raising awareness for supporting close-to-market innovations in SMEs and its potential for promoting innovation diffusion – the HIA in its original form could not be continued due to legislative obstacles. Finland, however, has identified ways to work around this obstacle and time will be needed to breathe new life into the process.

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Annex: The EC-OECD Pilot Action on Regions in Industrial Transition

In 2018, the European Commission/DG REGIO with support from the OECD launched the pilot action *Regions in Industrial Transition* to support ten regions and two countries³ in industrial transition prepare their Smart Specialisation Strategies (S3) and innovation policies for the 2021-2027 period. The pilot action was designed in two phases. The OECD supported the first phase with a series of five thematic workshops held with two cohorts of participants, each including five regions and one country. The findings from these workshops were collated into an OECD synthesis report, [Regions in Industrial Transition: Policies for People and Places](#).

As part of the project, eight of the original regions and the two countries received a EUR 300 000 grant from DG REGIO as well as tailored advisory services to design a High Impact Action that could support their industrial transition strategies.

The OECD is supporting the European Commission with an assessment of each High Impact Action. The aim is to take stock of the potential benefits of different types of High Impact Actions on industrial transition and of the policies that support them. Each assessment considers the actual or expected results of individual High Impact Actions through an understanding of their objectives, activities, governance mechanisms and experimental nature. The in-depth analysis also explores how each pilot region/country expects their individual High Impact Action to contribute to their industrial transition and advance their smart specialisation strategies and governance.

³ The regions are Cantabria (Spain), Centre-Val de Loire (France), East North Finland (Finland), Grand Est (France), Greater Manchester (UK), Hauts-de-France (France), North Middle Sweden (Sweden), Piedmont (Italy), Saxony (Germany) and Wallonia (Belgium). The countries are Lithuania and Slovenia.

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