

S3 Västerbotten Roadmap for Smart Economic Transformation



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Photo: Patrick Trägårdh

1. Introduction – The Västerbotten Roadmap for Smart Specialisation

1.1 Smart specialisation and Partnerships of Regional Innovation

The European Commission has established the innovation concept of smart specialisation, denoted S3 (smart specialisation strategies). Smart specialisation refers to a regional policy designed to contribute to smart, sustainable, and inclusive growth throughout Europe. This shall happen through a regional mobilisation behind the most promising areas for innovation, entrepreneurship and growth taking into account regional levels of expertise and resources relative to the rest of the world and the current trends.

The aim of smart specialisation is for regional policies to contribute to smart, sustainable, and inclusive growth throughout Europe. Smart Specialisation deals not only with the linear development of existing strong industries, but it also intersects value chains in order to promote innovation and innovation diffusion to achieve a greater surplus value. Regional Smart specialisation is about focusing on competitive strengths and realistic growth potentials supported by a critical mass of entrepreneurial resources and regional innovation ecosystems. Smart specialisation strategy is an enabling condition¹ to access European Structural and Investment Funds in the EU Programme period 2021-2027. Engaging stakeholders is an essential part of the smart specialisation strategy and implementation process.

There are several enabling conditions, instruments, and initiatives available for the regions, complementary to smart specialisation, to further develop their innovative actions. The Partnerships for Regional Innovation (PRI) is a place-based innovation policy which builds on positive experiences with smart specialisation strategies. PRI accelerates transformative outcomes by introducing local missions. According to the PRI Playbook (2022), new transformational innovation policies must address two important prerequisites: First, the local and regional stakeholders, including citizens, enterprises, knowledge institutions, and local authorities, must be meaningfully involved. Second, policy must strive for transformative system level innovation in enabling and accelerating the necessary transformation. PRI adopts a challenge-oriented approach, working backwards from goals to develop widely backed agendas².

Regional Innovation Valleys were launched in 2023 to advance European innovation ecosystems and better connect innovation players across Europe, including in regions lagging behind; address pressing societal challenges; and foster stronger cohesion. *The Square: Putting place-based innovation policy for sustainability at the centre of policy making* is yet another initiative to outline new pathways for innovation and industrial policy in the EU³.

For key concepts of smart specialisation and innovation, see Glossary in Annex 1

1.2 Smart Specialisation and Västerbotten

In Västerbotten, Region Västerbotten is responsible for coordinating the smart specialisation strategy and implementation process. This shall be done in concert with European and national innovation strategy processes, as well as at the regional level, with other Västerbotten strategy processes.

The S3 Västerbotten Roadmap, presented in this document, shows how Västerbotten gathers the regional resources, connects them with relevant partners and resources – across the Baltic Sea macro-region and in the wider EU territory. Västerbotten aims to achieve sustainable and smart transformation process through innovation promotion and diffusion, and by utilising digitalisation. The S3 Västerbotten Roadmap builds up collaborative effort through local, demand-led smart specialisation missions.

The purpose of the S3 Västerbotten Roadmap document is threefold:

1. to provide a guide for regional actors to build and strengthen partnerships in and beyond the region, focusing on smart economic transformation,
2. to identify and fully utilize the potential for smart economic transformation and innovation diffusion through collaboration and funding initiatives at the regional, national and EU level,
3. to showcase the opportunities for collaboration with actors and stakeholders in Västerbotten across and beyond the region.

1. For an overview of enabling conditions and how they are met in Västerbotten, see Annex 2.

2. Partnerships for Regional Innovation (PRI) Playbook, 2022.

3. Schwaag et al, 2023.

The process of formulating the smart specialisation strategy for Region Västerbotten in 2021-2023 has included a review of smart specialisation literature, dialogue with stakeholders in Västerbotten on the content of the smart specialisation strategy and its implementation (including two interview rounds in Västerbotten 2021 and 2023), benchmarking with other regional smart specialisation strategies in Sweden and in the Nordics, and preparation of the "S3 Västerbotten - Roadmap for Smart Economic Transformation" document.

The S3 Västerbotten Roadmap is based on the general guidelines of preparing a regional smart specialisation strategy, provided by the EU Smart specialisation platform⁴ and includes three characterising features for Västerbotten. Firstly, the S3 Västerbotten Roadmap is much about the role and the ways of utilising smart specialisation as a tool in the economic transformation of Västerbotten. Secondly, local transformative S3 missions, following the local mission concept of the PRI Playbook, act as important instruments of practical implementation of the S3 Västerbotten Roadmap. Finally, the Roadmap concept includes the possibility, by evaluation and monitoring mechanisms, to assist in revision and fine tuning of the S3 Västerbotten strategy over time. The exact prioritisation of the areas of smart specialisation in Västerbotten is not included in the S3 Västerbotten Roadmap, however, as the specialisations are being formulated as part of the implementation of the S3 Västerbotten Roadmap.

The structure of this "S3 Västerbotten - Roadmap for Smart Economic Transformation" document is as follows. First, the guidelines for preparing a smart specialisation strategy are being introduced, as well as the concept of local S3 missions. The regional SWOT analysis is presented here as well, from the viewpoint of smart specialisation. The chapter "Smart Specialisation Strategy and Roadmap for Västerbotten" presents goals, overall structure, and process of the S3 strategy and the way to become a local S3 mission for Västerbotten. The chapter "Implementation" presents the timeline for the S3 Västerbotten strategy process as well as the roles of key actors in implementing the S3 strategy. Finally, the chapter "Evaluation and Monitoring" provides guidelines for the strategy evaluation and monitoring.

4. <https://s3platform.jrc.ec.europa.eu>

Västerbotten

The Västerbotten region in Northern Scandinavia, spans 55,432 square kilometres, making Västerbotten the second largest Swedish region, see map in Figure 1. It has a total population of around 276,000. The largest cities are Umeå and Skellefteå. Key industry sectors in Västerbotten include high-tech processing industries, forestry, energy and cleantech, food, life science, ICT, and service industries. Currently, Västerbotten experiences rapid economic transformation as one of the leading regions in Europe's green transition, as access to natural assets such as forests, minerals and water has enabled the production of fossil-free electricity, and forestry and land-based products.

The Regional innovation strategy (RIS) 2022–2030 for Västerbotten lists areas of strength. These areas are important for strengthening the region's innovation capacity, and they also are a point of departure for identifying areas for smart specialisation. The key areas of strength high-

lighted in the RIS strategy include: forest bioeconomy, mining and mineral industry, sustainable energy systems, manufacturing, hospitality industry, food production, cultural and creative sector, life science knowledge area, and digitalisation.

Västerbotten is characterised by a diverse array of living environments, from the mountains to the coast, and large intraregional differences. This means that the challenges within the region are also different e.g., with growing cities in the coastline, and peripheral inland areas with demography challenges. Moreover, in parallel with the development of industrial and technology strength areas on utilisation of natural resources, the areas of strength that are derived from the region's rich cultural and knowledge-based resources have also developed and grown. Hospitality, life science and digitalisation are good examples of such areas.

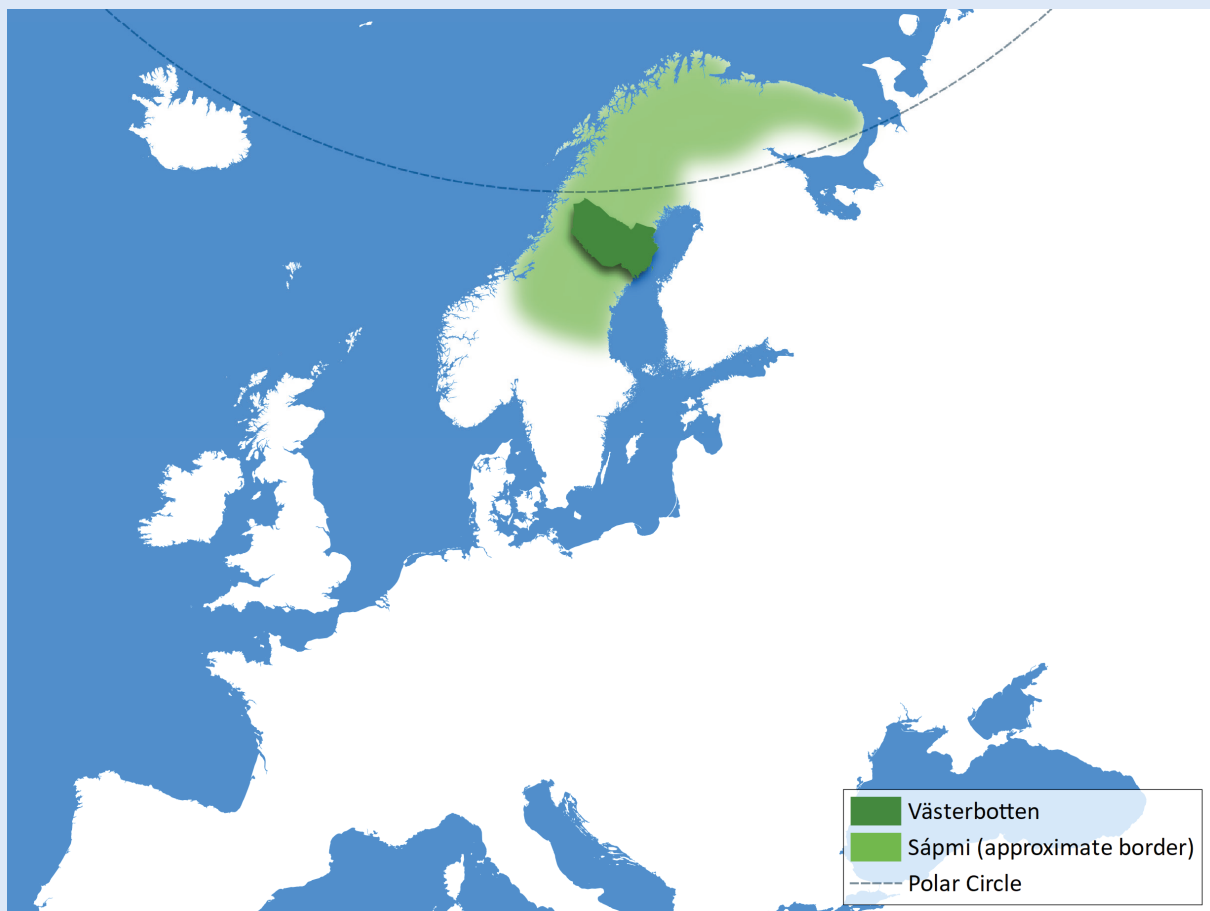


Figure 1: Västerbotten, A Region in Norrland, Sápmi, Sweden, Northern Scandinavia, the Baltic Sea Region, Europe, the Arctic, and the World



2. Preparation of a Regional Smart Specialisation Strategy

2.1 Guidelines for Designing an S3

The Smart Specialisation Platform, a coordinating body of the EU smart specialisation activities, has provided the regions with guidelines in order to design a strategy for smart specialisation⁵. The following list summarizes the major points of the guidance:

- Smart specialisation is a place-based approach, meaning that it builds on the assets and resources available to regions and on their specific socio-economic challenges in order to identify unique opportunities for development and growth.
- Smart specialisation strategy means to make choices for investment – to support only a limited number of well-identified priorities for knowledge-based investments and/or clusters.
- Setting priorities should be an inclusive process of stakeholders' involvement centred on "entrepreneurial discovery process (EDP)": an interactive process in which market forces and the private sector are discovering and producing information about new activities, and the government assesses the outcomes and empowers those actors most capable of realizing this potential.
- The strategy should embrace a broad view of innovation, supporting technological as well as practice-based and social innovation – according to unique socio-economic conditions in the region.
- A good smart specialisation strategy should include a sound monitoring and evaluation system and a revision mechanism for updating the strategic choices.

2.2 Local S3 Missions

The European Commission and the European Committee of the Regions has launched the Partnerships for Regional Innovation (PRI) approach. The PRI includes the introduction of local missions⁶ to coordinate innovative actions and initiatives. These local missions could take the form of CHallenge-Oriented Innovation paRtnerships (CHOIRs)⁷. CHOIRs are multi-stakeholder partnerships linked to specific territorial challenges. The following list highlights the key features of the local missions:

- A local transformation mission is a collaborative structured process which gathers regional actors to produce smart economic transformation through innovation and innovation diffusion.
- Sustainability and digitalisation are essential elements of transformation missions.
- The goal-driven approach of a local mission will be performed as an open discovery process, which seeks to include a wider group of participant while being challenge/opportunity-focused.
- Each local mission will be owned by regional stakeholders - designed to achieve solutions for a sustainable transition across the region.

Regarding the key added value for actors with an interest to develop and implement a local mission, it could be stated that this approach provides a solid procedure to systemically create and develop a mission - with an emphasis on an inclusive approach and strong partnerships of actors.

5. <https://s3platform.jrc.ec.europa.eu/what-we-do>

6. Local missions, contrary to the EU global missions, originating from the local/regional innovation environment.

7. See Partnerships for Regional Innovation (PRI) Playbook, 2022.



Photo: Jennifer Rohrbacher, Norrlandsoperan

3. Smart Specialisation: Potential and Bottlenecks in Västerbotten

3.1 Regional SWOT from the S3 Viewpoint

Västerbotten is an innovative and dynamic region with natural assets such as forests, minerals, and water. Strong companies and important knowledge and skills have been built up and have contributed to Västerbotten's present status. In European and Swedish indices, Västerbotten, as part of Upper Norrland, currently ranks as a strong innovator, with competitive public innovation environments in the form of, primarily, universities and university hospitals, and with a well-developed innovation support system. Upper Norrland is also ranked among highest of all European regions in the EU's index for social progress. At the same time, maintaining the county's good position and creating long-term sustainability provide major challenges.

The SWOT analysis (see Figure 2) summarizes the current situation and the future opportunities and threats that Västerbotten encounters, from the viewpoint of smart specialisation.

The industrial green transition that is currently taking place in North Sweden has already brought flagship companies such as e.g., Northvolt to Västerbotten, with significant future potential. Further acceleration of industrial green transition, including industrial circular economy, could be natural next steps.

Major challenges include being a vast sparsely populated region with long distances between settlements and to markets, lack of competent labour force to meet the needs of the industrial green transition. Västerbotten has relatively low diversification of industries and business services, as well as relatively low private sector R&D expenditure. There is an increasing mismatch in the R&D and innovation activities between the coastal and inland areas and inland area in Västerbotten.

Strengths

Natural resources: forests, minerals, energy sources, Arctic nature

Relatively high level of education

Low unemployment

Areas of technological and industrial strength: Process industry, forestry, energy & cleantech, life science, information, and communication tech, service industries

Forerunner region in industrial green transition with flagship companies.

Advanced innovation promotion environment e.g., competitive universities and university hospital

High public sector R&D expenditure

Topping the EU regional index for social development

Weaknesses

Lack of competent labour to meet the needs of (growing) industries

Low diversification of industries and services

Not enough KIBS (knowledge intensive business services) companies

Relatively low share of patents, trademarks

Relatively low private sector R&D expenditure

Unbalanced territorial regional development with growing coastal areas and more sparsely populated inland areas

Opportunities

Further acceleration of industrial green transition in Västerbotten with industrial circular economy and just transition activities

Successful invitation of national & international talent to Västerbotten

Attracting international actors to locate green industry activities in Västerbotten

Successful branding of Sustainable Västerbotten
International strengthening of the regional innovation ecosystem by interaction with relevant EU regions

Threats

Vast sparsely populated with long distances between communities and to markets

Potential conflicts in co-existence of economic activities and industries, land use issues

Disappointments in attracting & keeping competent labour force

Potential challenges in sufficient renewable energy supply for fast-growing industries

Challenges in transferring knowledge from the public sector R&D to private companies

Increased mismatch of innovation promotion & entrepreneurship, coastal area vs inland

Innovation focuses too much on few companies & actors in Västerbotten ("the usual suspects")

Failure to create local value of natural resources

Figure 2: SWOT analysis Västerbotten for the S3 Roadmap

3.2 Feedback from the S3 Interviews in Västerbotten

Based on the information and feedback received during the interview rounds (a total of 17 interviews, representing various stakeholder groups of Västerbotten R&D and innovation activities), the following issues are being highlighted.

Economic transformation is well received by the respondents as one of the key points of departure for the Västerbotten smart specialisation strategy process. Most respondents highlight the exceptionally rapid and significant industrial green transition currently taking place and transforming the society in Västerbotten. Successful smart specialisation requires specific attention to guaranteeing qualified labour force, as well as parallel processes to develop the energy and transport infrastructure to enable economic transformation.

Prioritized areas of strength: The current industrial green transition in North Sweden, focusing on sustainable utilisation of natural resources, is seen as a natural continuation of the Västerbotten tradition of "providing natural resources to the world". Twin transition, with green transition and digitalisation, is being highlighted as important work concept for Västerbotten. Universities, R&D institutions, and supporting regional innovation ecosystem with e.g. incubators and accelerators are frequently mentioned by respondents as cornerstones of Västerbotten innovation work, as well as high level of regional cooperation and trust among the key actors of innovation. Regarding specific areas of prioritisation in Västerbotten S3, many respondents emphasize the importance of inclusive approach, e.g., listening to companies, and including companies to actively join the S3 activities. Moreover, the respondents encourage Västerbotten not only to focus on traditional areas of strength but also to identify and tackle the challenges of Västerbotten innovation promotion.

The smart specialisation process with focus on local smart specialisation (S3) missions would be, according to many respondents, a novel approach to coordinate the smart specialisation process in Västerbotten. It is, however, emphasized that communication in introducing smart specialisation and the new local S3 missions plays a crucial role: the concepts related to smart specialisation need to be clearly opened up and explained among the innovation practitioners in Västerbotten. Both top-down and bottom-up approaches are being encouraged by the respondents in implementing the smart specialisation process.

Cooperation with actors outside Västerbotten is seen as one of the important features of the Västerbotten S3 Roadmap that also complements the EIS Regional Innovation Strategy (RIS). Besides EU cooperation, an increased Nordic collaboration is welcomed.

The summary of the S3 interviews in Västerbotten is presented in a separate background report.



Photo: Johan Gunséus

4. Smart Specialisation Strategy and Roadmap for Västerbotten

4.1 Why Smart Specialisation Roadmap and S3 Missions for Västerbotten?

The S3 Roadmap for Västerbotten has been prepared by Region Västerbotten for the following reasons. Firstly, the S3 Roadmap responds to the need to promote international and EU partnerships and networks for increased innovative action in Västerbotten. The smart specialisation concept has rapidly diffused across Europe, as an increasing number of regions have adopted it and designed strategies departing from their own preconditions. Secondly, the S3 Roadmap process has perfect timing from the viewpoint of Västerbotten as EU and its regions turn into the implementation of the Programme period 2021-2027, and as Västerbotten leads the industrial green transition in North Europe. Thirdly, the S3 Roadmap is an illustrative way to describe the smart, sustainable, and inclusive development of Västerbotten in the coming years, as a complementary element of the regional innovation strategy (RIS Västerbotten) and regional development strategy (RDS Västerbotten).

The Smart Specialisation Roadmap for Västerbotten aims to establish local smart transformation missions. These S3 Västerbotten missions serve as important instruments in putting together collective efforts, following the Open Discovery Process ODP (see 2.2). *The challenge-oriented innovation partnerships (CHOIRs)* take on challenges and opportunities as they have been identified in the Regional Development Strategy for Västerbotten. Within these partnerships, each stakeholder contributes in the joint open discovery process. The combination of shared understanding of objectives and autonomy improves the chances that the envisaged objectives of the S3 Västerbotten missions will be met. The establishment and development of these local smart transformation missions in Västerbotten will be based on active dialogue across the stakeholders relevant to innovation promotion in Västerbotten. The experience and good practice from the international PRI initiative will be utilised in setting up the local smart transformation missions in Västerbotten.

The S3 Västerbotten missions will contribute to moving up value chains, adding value to existing activities, and improve competitiveness on international markets, while reorienting the economy towards human well-being, aligning social and environmental objectives, and harnessing knowledge to avoid negative environmental impacts by creating new innovative solutions.

4.2 The Goal and Logic of S3 Västerbotten Roadmap

The goal of the S3 Västerbotten Roadmap is to establish local missions of smart economic regional transformation, in international multi-actor collaboration, which contribute to the achievement of the goals for sustainable regional development.

Figure 3 illustrates the logic of establishing and developing local missions of smart economic transformation in Västerbotten. The S3 Västerbotten Roadmap connects the knowledge base and regional areas of strength with the goals in the regional development strategy through the process of establishing S3 Västerbotten Missions.

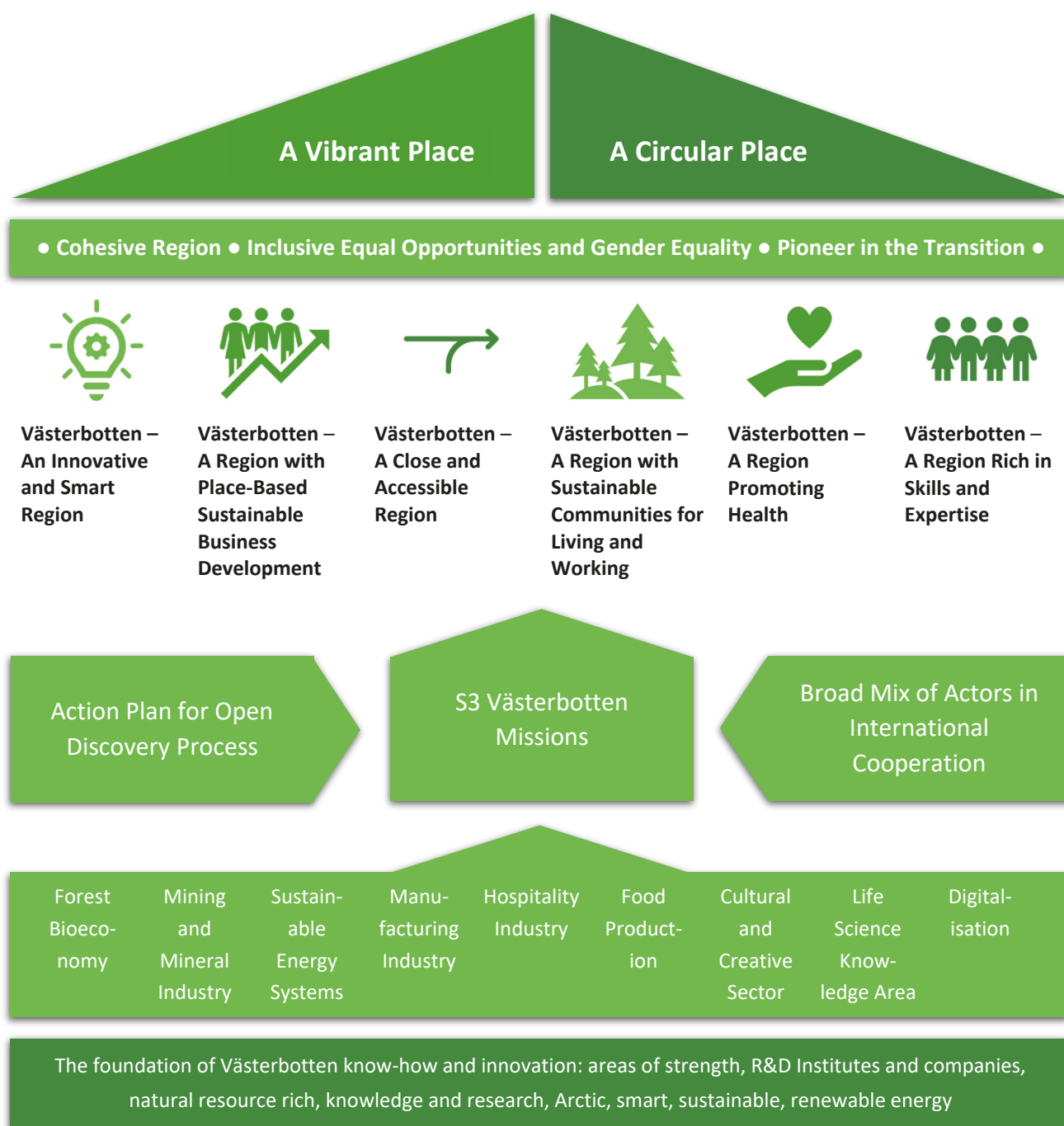


Figure 3: Overview of the S3 Västerbotten Missions in the Västerbotten regional policy context

The bottom bar in the figure describes the Foundation of Västerbotten know-how and innovation: natural resources, knowledge generation (R&D, education), and knowledge exploitation (companies). The Strength Areas bar right above the Foundation bar describes the key areas of strength in Västerbotten which are identified in the Regional Innovation Strategy: Forest & Bioeconomy, Mining and mineral industry, Sustainable energy systems, Manufacturing industry, Hospitality industry, Food production, Cultural and Creative sector, Life science, and Digitalisation.

The middle section of the figure includes the process of establishing and developing of the S3 Västerbotten Missions. Based on the Foundation and Strength areas, the S3 mission process includes six major steps (to be explained in more detail in section 4.5) and applies an ODP, Open Discovery Process, to identify and engage the key actors to contribute to the mission. Notably, the ODP process connects with relevant actors outside Västerbotten, especially across borders, to join in the S3 Västerbotten Missions.

The implementation of the S3 Västerbotten Missions contributes to the overall aim for sustainable regional development in Västerbotten, in alignment with the goals in the regional development strategy, RDS Västerbotten 2020-2030. This is detailed in the upper part of Figure 3. The overarching sustainability goals of Västerbotten as *A Vibrant Place* and *A Circular Place*, aligned with the global Sustainable Development Goals (SDGs), see Figure 4.

The three focus areas of *Cohesive Region*, *Inclusive Equal Opportunities* and *Gender Equality* and *Pioneer in the Transition* infuse the implementation. The pathway to the overarching sustainability goals is described by the six priorities for Västerbotten: *Innovative and smart region*, *Region with place-based sustainable business development*, *Close and accessible region*, *Region with sustainable communities for living and working*, *Region promoting health*, and *Region rich in skills and expertise*.



Figure 4: Overview of the Global Sustainable Development Goals

4.3 S3 Västerbotten Roadmap Complementing Existing Strategies and Platforms

The S3 Västerbotten Roadmap complements the existing regional strategies in Västerbotten, especially the Västerbotten Regional Innovation Strategy (RIS) 2022-2030, and the Västerbotten Regional Development Strategy (RDS) 2020-2030. In addition, the S3 Västerbotten Roadmap links the innovation policy and initiatives in Västerbotten to relevant regional smart specialisation actors and initiatives in Sweden and internationally. Moreover, the S3 Västerbotten Roadmap interacts with the EU Smart specialisation Platform, and the recently launched PRI (Partnerships for regional Innovation) initiative by the EU. Figure 5 illustrates the interaction and linkages of the S3 Västerbotten Roadmap to relevant strategies and initiatives.

The European Arctic regions in Finland, Sweden, and Norway, with their regional smart specialisation programmes and initiatives, provide Västerbotten with a highly relevant benchmarking possibility. The EU Joint Research Centre analysis on Smart Specialisation processes in the European Arctic, with a specific emphasis on sustainability, provides Västerbotten with a highly relevant comparison and benchmarking information, to be taken into account in the regional smart specialisation work in Västerbotten⁸. Moreover, interregional initiatives, such as [S3 Thematic Platforms and Partnerships](#), and national platforms such as [Industrial Alliances](#) and [Important Projects of Common European Interest](#) – IPCEIs – provide Västerbotten with possibilities of interaction and linkages to several international, large-scale initiatives, platforms and partnerships.

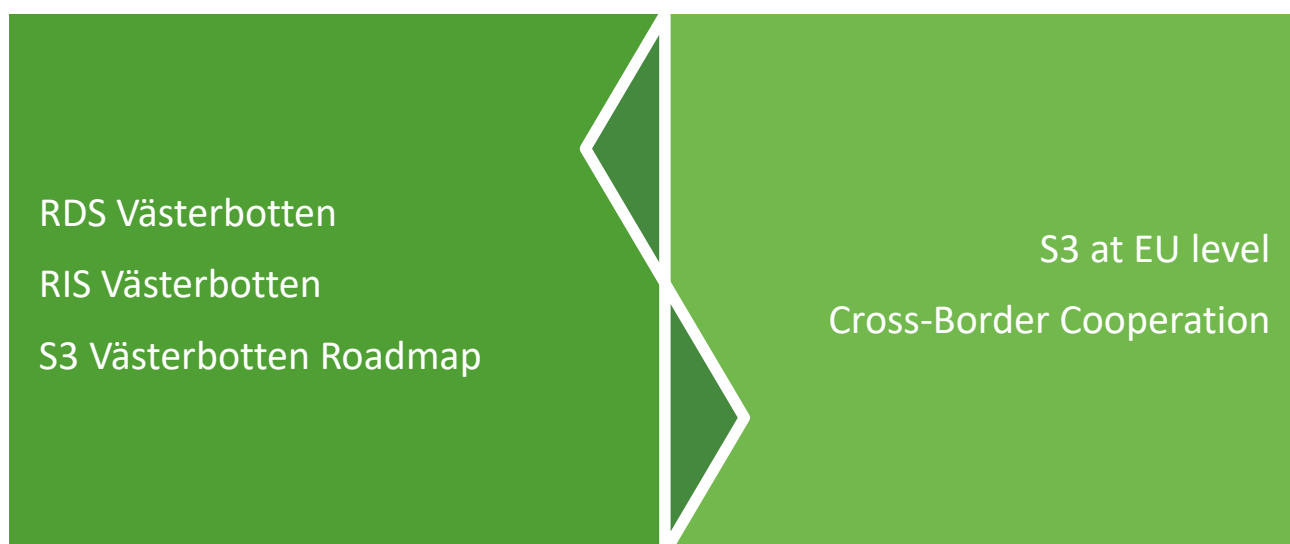


Figure 5: Interaction and linkages between S3 Västerbotten Roadmap and other relevant strategies and platforms

8. Teräs J. et al. 2023

4.4 S3 Västerbotten Missions: A Six Step Process

An S3 Västerbotten Mission has a clear objective in locating and realizing potential for the smart economic transformation. This will make Västerbotten a forerunner in achieving the transition to a sustainable society, through innovation and innovation diffusion (including digitalisation). The transformation potential can be found in all sectors of society, private and public. The transformation potential has a base in the Västerbotten areas of strength and takes aim to achieve the goals for sustainable development in Västerbotten. The S3 Västerbotten Missions involve actors in quadruple helix collaboration across national borders.

The six steps to become an S3 Västerbotten Mission are shown in Figure 6. The first step is about idea generation and a first description of the transformation potential. In this step, it is advised to reach out to Region Västerbotten if they are not involved already. The second step is to build or extend to quadruple helix collaboration across international borders. Involving all sectors in the transformation is vital, including citizen engagement. The third step gathers actors in a common process to identify place-based transformation potential to achieve sustainability goals to match with EU financing opportunities and set a clear objective. The fourth step involves developing an Action Plan for achieving the common objective, with targeted actions as well as yearly monitoring and evaluation for learning and revision. The fifth step involves receiving accreditation from Region Västerbotten to become an S3 Västerbotten Mission. By receiving accreditation, it will make it easier to participate in and achieve funding in EU initiatives for smart specialisation and PRI. The sixth and last step is to implement the Action Plan.

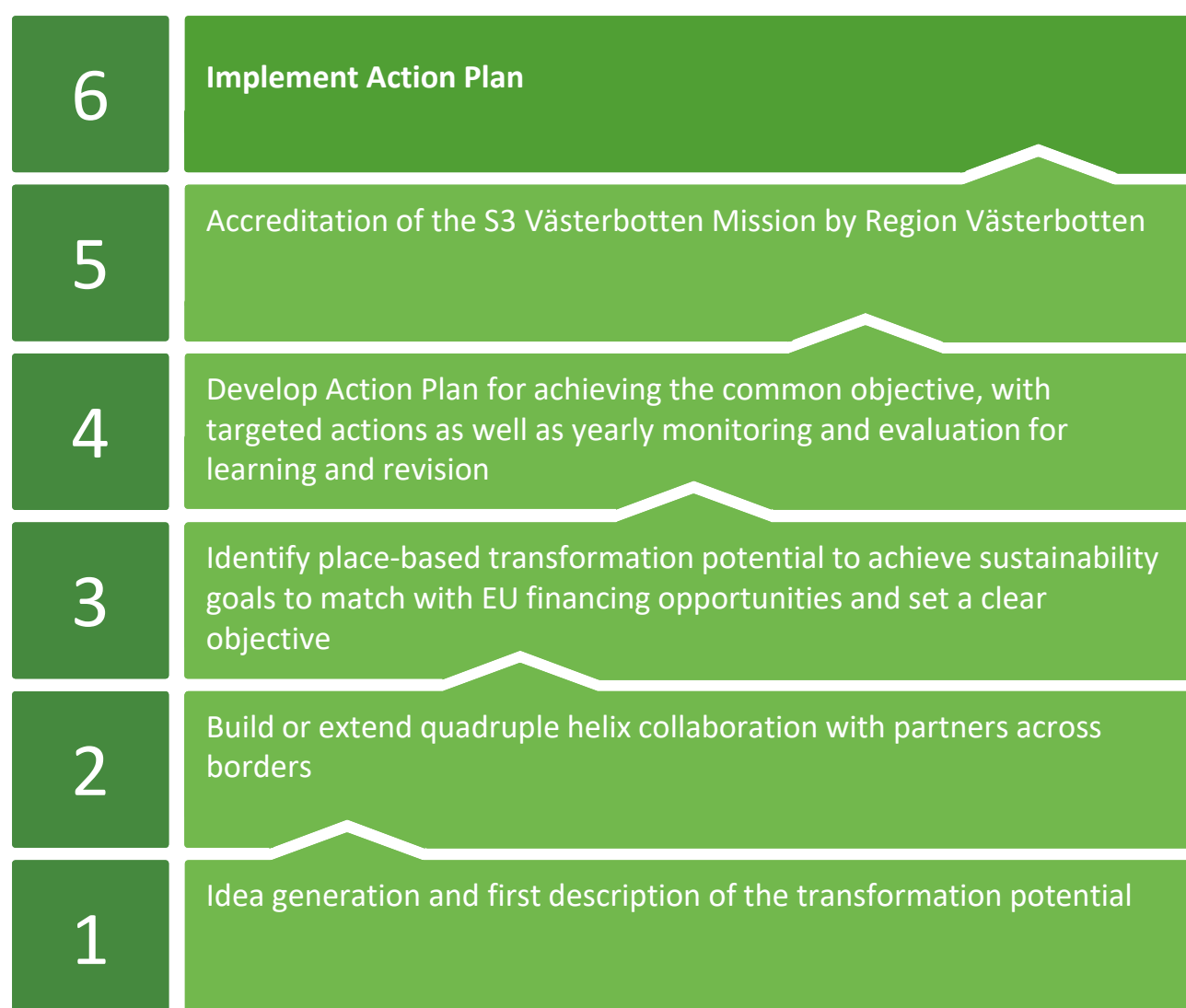


Figure 6: The six steps to become an S3 Västerbotten Mission



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5. Implementation and Roles of the S3 Västerbotten Roadmap

5.1 S3 Roadmap: Timeline for Implementation

The timeline starts with the initiation of the preparation process in 2021, resulting in a completed S3 Roadmap for Västerbotten in May 2023, which is the starting point for implementation. In 2024, annual follow-ups are initiated together with dissemination of results in 2025. The S3 Västerbotten Roadmap will reach a midterm checkpoint in 2027. By the year 2030, there will be a number of S3 Västerbotten Missions completed.

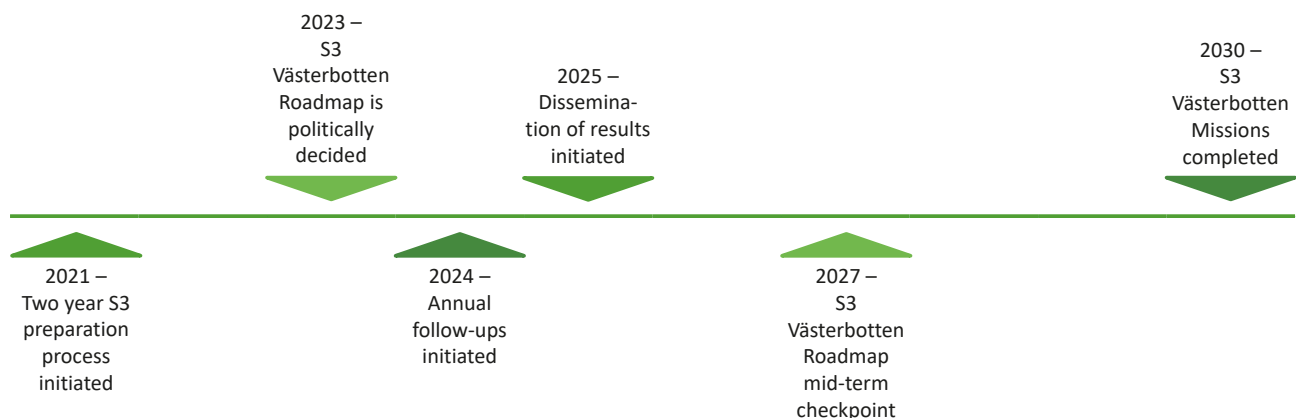


Figure 7: Timeline of the preparation and implementation of the S3 Västerbotten Roadmap

5.2 The Role of Region Västerbotten

Region Västerbotten is the managing authority of the S3 Västerbotten Roadmap and the S3 Västerbotten Missions. As such, Region Västerbotten will act as a facilitator, overseer as well as accreditor. Region Västerbotten facilitates the development of missions, gives accreditation to missions with a complete Action Plan, and engages as a stakeholder, when invited to, in the implementation of the missions. Moreover, Region Västerbotten coordinates the implementation of the Roadmap by reviewing progress, collecting and disseminating results, and updating the S3 Västerbotten Roadmap when needed. Finally, Region Västerbotten facilitates the connection with EU initiatives and collaborators abroad.

5.3 The Role of Regional Stakeholders

Regional stakeholders are offered the opportunity to upgrade their current work and benefit from cross-border cooperation, expertise, and financing opportunities. Regional stakeholders are expected to identify the potential of transformative innovation and innovation diffusion, including digitalisation, together with an Action Plan to achieve that potential. In short, regional stakeholders interested in working as a S3 Västerbotten Mission are expected to formulate the action plan, manage the implementation of the action plan, including reporting the results of monitoring and evaluation.

5.4 Sources of Financing

Västerbotten S3 Roadmap activities can be financed in several diverse ways. The European Regional Development Fund (ERDF) and the European Social Fund (ESF) are examples of sources of financing together with national funding for regional development, municipal and county contributions as well as private co-financing. In addition, there are opportunities to receive co-financing from numerous national, Nordic, and European funds and programmes. A selection of possible financiers, funds and programmes are the regional funds of Region Västerbotten, the ERDF programme for Upper Norrland, Interreg Aurora, Interreg BSR, Vinnova, as well as Horizon, I3 and other EU initiatives.

5.5 Evaluation and Monitoring

Each Action Plan for missions includes description of monitoring and evaluation. The identified results are to be submitted to Region Västerbotten.

The task in smart specialisation focuses largely on contributing to a conversion process or economic transformation which needs to be stimulated. The efforts need to build on assets available and be innovative so that structures are transformed, and institutional conditions are changed to achieve the goals. To evaluate effectively, the action plans of the missions shall be designed based on a programme logic from activities via outcomes to short/medium and long-term effects.

The evaluation of the S3 Västerbotten Roadmap should be aimed at analysing and evaluating change processes and mechanisms. It should also provide the necessary information to revise the S3 Västerbotten Roadmap where needed. Importantly, learning is an essential part of the evaluation and monitoring process.



Photo: Carl-Johan Utsi

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Photo: Klas Sjöberg

Annex 1 Glossary (Terms and Abbreviations)

Smart specialisation: Refers to a regional policy designed to contribute to smart, sustainable and inclusive growth throughout Europe. This shall happen through a regional mobilisation behind the most promising areas for innovation, entrepreneurship and growth taking into account regional levels of expertise and resources relative to the rest of the world and the current trends.

RIS3: National/Regional Research and Innovation Strategies for Smart Specialisation

S3: Smart Specialisation Strategies

S3 Thematic Platforms and Partnerships: The Thematic Smart Specialisation Platforms are joint initiatives between several Directorate Generals of the European Commission that encourage regions and their innovation actors across the EU to build strategic partnerships, promoting complementarity of regional funding for innovation in specific smart specialisation areas. In particular, the thematic S3 platforms are contributing to building an increasing number of interregional partnerships across the EU. These collaborative networks have the ultimate goal of establishing European ecosystems for transnational and interregional collaboration in regions and countries with similar or complementary S3 priorities.

Partnerships for Regional Innovation (PRI): A strategic framework with a strong systemic transformative ambition, linking the European Green Deal to place-based opportunities and challenges. Conceived in the EU policy context and building upon the positive experiences with Smart Specialisation Strategies (S3), PRI seeks to promote transformative innovation with a sharp focus on sustainability that stems from the increasing urgency to deal with the defining challenges of our time. (PRI Playbook 2022)

Entrepreneurial Discovery Process EDP and Open Discovery Process ODP: The vehicle for engagement and co-creation in S3 was the Entrepreneurial Discovery Process (EDP), which was largely confined - in practice - to the well-organised science and technology community. The vehicle for engagement and co-creation in PRI is the Open Discovery Process (ODP) which seeks to include a wider group of participants. PRI adopts a challenge-oriented approach, working backwards from goals to develop widely backed agendas (PRI Playbook 2022).

EU Missions: EU Missions are a new way to bring concrete solutions to some of our greatest challenges, by putting research and innovation into a new role, combined with new forms of governance and collaboration, as well as by engaging citizens. EU Missions are a novelty of the Horizon Europe research and innovation programme for the years 2021-2027. The 5 EU Missions: Adaptation to the Climate Change, Cancer (Beating Cancer plan), Restore our Ocean and Waters, 100 Climate neutral and smart cities, and a soil deal for Europe.

Local Missions (CHOIRs): local missions to coordinate actions under a coherent directional logic, enabling the exploration of broad-ranging policy mixes for system-level innovation. These local missions could take the form of a proposed configuration outlined in this report: CHallenge-Oriented Innovation paRtnerships (CHOIRs).

EU JRC: The EU Joint Research Centre (JRC) provides independent, evidence-based knowledge and science, supporting EU policies to positively impact society.

Sustainable Development Goals (SDGs): The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs are integrated—they recognize that action in one area will affect outcomes in others, and that development must balance social, economic, and environmental sustainability.

EU Green Deal: The European Green Deal will transform the EU into a modern, resource-efficient and competitive economy, ensuring: no net emissions of greenhouse gases by 2050, economic growth decoupled from resource use, no person and no place left behind.

Twin transition: The digitalisation of research activities is an ongoing process that aims to support the scientific competitiveness of Europe. The digital transition supports the green transition with developments and technologies that contribute to achieving the target of climate neutrality.

ERDF: The European Regional Development Fund (ERDF) aims to strengthen economic, social and territorial cohesion in the European Union by correcting imbalances between its regions. In 2021-2027 it will enable investments in a smarter, greener, more connected and more social Europe that is closer to its citizens.

ESF European Social Fund: The ESF invests in people, with a focus on improving employment and education opportunities across the European Union.

Regional Innovation Valley: The Regional Innovation Valleys aim to foster the potential of deep-tech innovation across EU regions, and to address the innovation divide.

Quadruple helix: The Quadruple Helix Model of innovation recognizes four major actors in the innovation system: science, policy, industry, and society.



Annex 2 EU Enabling Factors Mapping

EU enabling factors for smart specialisation as formulated for the European Regional Development Fund and how they are met in Västerbotten.

Enabling factor	Has it been addressed?	How?
Up-to-date analysis of bottlenecks for innovation, diffusion, including, digitalisation	Yes	Included in the roadmap, updated when the S3 Västerbotten is revised
Existence of a competent regional body responsible for the management of the S3	Yes	Region Västerbotten has the role of managing the S3 Västerbotten Roadmap
Monitoring and evaluation tool to measure performance towards the objectives of the strategy	To be developed	
Effective functioning of the entrepreneurship discovery process	To be evaluated throughout the implementation	Methodology, see the S3 Västerbotten Roadmap
Actions necessary to improve regional research and innovation systems	Yes	Described in the Regional Innovation. Strategy, RIS
Actions to manage industrial transition	Yes	Described in the S3 Västerbotten Roadmap and the Regional Development Strategy Västerbotten 2020-2030
Measures for international collaboration	Yes	Described in the S3 Västerbotten Roadmap

