

Strategy for Industrial Transformation in North-Middle Sweden





The document in front of you is a lay summary of the industrial transformation strategy developed by Region Dalarna, Region Gävleborg and Region Värmland through the EU Regions in Industrial Transition Pilot and Smart Industri i Norra Mellansverige 2.0 projects.

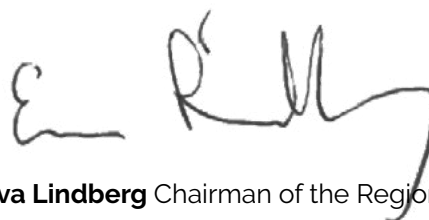
To develop this strategy, dedicated people from regions, clusters, science parks and companies have been openly collaborating on strengthening the role of basic industry in the transition to a fossil-free society. We have found it very beneficial to work together on this. The strategy is an important compass when it comes to incorporating the results of the project and stepping up the collaboration that has begun.

Värmland, Dalarna and Gävleborg are part of an EU partnership called North-Middle Sweden. Our mission is to ensure that EU funds allocated to the region are used in the best way possible. The aim is to increase the region's competitiveness, entrepreneurship and employment. We are three strong industrial regions that together form a whole that is much greater than the sum of its parts. This is the context in which the strategy has emerged, with the focus being on creating dynamics and collaboration between industrial companies, higher education institutions and public actors. And it is in this context that the collaboration lives on, as the strategy is to be realised.

In North-Middle Sweden, collaboration has resulted in a flourishing forest bioeconomy, world-leading industries and a huge amount of expertise. We are a world-class industrial region and when we speak with one voice, we can make a noise loud enough to bring our strengths to the attention of the world and attract the innovations and skills of tomorrow. Based on our rich tradition and solid knowledge, a new generation is emerging, together with industrial transformation that is more than just talk. Together we will ensure this through this strategy.

Collaboration on industrial transformation offers many opportunities when it comes to jobs and competitiveness. We pave the way for innovation and investment, bring in new business models and set common goals for a resource-efficient economy. We want to enable people in North-Middle Sweden to create an innovative, sustainable economy and to move more seamlessly across both borders and industries in the region. We all benefit from this.

What started as a collaboration on industrial transformation with the European Commission has led us to this strategy, featuring concrete steps that will take us forward in this development. We call it the Strategy for Industrial Transformation. Now we want to pass the baton on to those of you reading this. We want to encourage you to share stories, experiences, ideas and good examples, so that North-Middle Sweden and industry that is vital to society can meet the future in a sustainable, enduring and viable way, with the best interests of society, people, the environment and the world in mind.



Eva Lindberg Chairman of the Regional Executive Committee

Importance of industry

Industry is of great importance for growth and development in North-Middle Sweden's three counties: Dalarna, Gävleborg and Värmland. The region has a strong industrial sector, which is an important part of society and which currently employs more than 50,000 employees at more than 2,500 workplaces. This corresponds to more than ten per cent of total jobs in the region. Only welfare (healthcare, education and social care) employs more people.

The industrial sector in North-Middle Sweden consists of a number of traditionally strong industries that are still central to the economy – the steel industry, forest-based industry, manufacturing of metal products and service -based industries such as technology development, digitalisation, maintenance, transport, environment, security, and much more.

The report “The importance for society of basic industry” published in 2019, which is based on 21 major industrial companies in the steel, paper and pulp industries in the region, estimates that these companies contribute at least SEK 7.9 billion in tax revenues to society every year. This corresponds to 20% of total municipal income tax receipts in North-Middle Sweden. Furthermore, these are only the figures that can be found in statistics. This does not include all the companies that supply industry, such as IT consultants and transport and logistics companies.

Special steel for the world

In North-Middle Sweden, more than 10,000 people work in the steel and metal industries. The region is home to multinational and world-leading companies in areas such as stainless steel. The steel products are mostly special steel and are a strong driver of exports, with 85% of production exported all over the world. Thanks to these large export companies, there is also a wide range of small and medium-sized enterprises that manufacture processed products and supply services.

Future forest-based industry on a large scale

Forest-based industry and bioeconomy are historically strong industry sectors in North-Middle Sweden thanks to production of pulp and wood products, as well as development of associated, world-leading technology. This industry still employs 12,000 people in the region.



The forest has special potential in the transition to a sustainable society as a result of the possibility of replacing fossil products with renewable and bio-based products.

North-Middle Sweden has a rich supply of forest, but also access to cutting-edge expertise in areas such as paper and pulp, packaging materials, bioplastics, biofuel, industrial wood construction and new, innovative forest-based products.

Metal processing creates opportunities

More than 20,000 people in North-Middle Sweden work in metal products, machinery and equipment manufacturing. This industry sector, too, features a strong combination of world-leading large companies and innovative small and medium-sized businesses. The industry supplies products such as system solutions for power transmission, sensors, optics and tools for industrial processes. The region has the potential to take advantage of these technologies in the region's manufacturing industry and to use other enabling technologies in the transformation.

Resilient value chains

Energy transition, digitalisation, automation, integration of manufacturing and services and global value chains create new conditions and place new demands on industries. A smooth transformation is crucial to maintain growth and competitiveness.

North-Middle Sweden has great opportunities to utilise digitalisation in the industrial transformation. The region is in a strong position when it comes to research, with both universities and colleges, as well as research institutions that specialise in digital solutions and services, and several companies that work with service innovation.

The industrial ecosystem in North-Middle Sweden offers great potential. A one per cent increase in the proportion of indirect jobs translates into an SEK 32 million increase in municipal and regional tax receipts. If we lose our industrial jobs and the indirect employment they create, the social economy will quickly be adversely affected.

Why have a strategy for industrial transformation?

One of the greatest challenges of our time is to build a society completely independent of fossil energy sources. A challenge that extends far beyond the region's and Sweden's borders. Industry and its value chain use large amounts of energy and are therefore in a crucial position when it comes to solving the climate problem. Business, industry and trade and the labour market will change as a result of a low-carbon economy, with certain activities changing and others being replaced by new ones.

An important part of the transformation is energy efficiency. The Energy Commission's proposal is that Sweden's energy use is to be 50 % more efficient by 2030 compared with 2005. The Government believes that transition to a circular and bio-based economy is of great importance in order to achieve the climate goals, while at the same time boosting competitiveness, promoting business development and creating new jobs. In a circular economy, smart product design

and service thinking are interwoven with the reuse of materials and products, and waste is managed as a resource. Industrial transformation is an important step on the road to a circular economy. North-Middle Sweden is also a major exporter of materials and resource-efficient technology, and cutting-edge solutions developed here continue to provide climate benefits long after they have left the factory.

In North-Middle Sweden, there are major opportunities to utilise industry's high energy use and "leading use" of renewable energy sources, such as hydropower, wind power and biomass. There are opportunities to conduct focused knowledge development and measures concerning biobased materials, biofuels, solar energy and smart grids. Energy system integration involving different energy carriers such as electricity and hydrogen will also have a major impact on the transformation.

It is not possible to opt out of the industrial transformation. However, it is possible to choose how the transformation should be managed. Companies are responsible for dealing with the challenges and exploiting the opportunities that the transformation entails. However, with shared priorities, the regions can boost the companies' opportunities.

This strategy is the result of North-Middle Sweden's participation in a pilot initiative on industrial transition led by the European Commission. With the help of analyses by the OECD, expert support and by exchanging experiences with similar regions in Europe, North-Middle Sweden has come up with six prioritised action areas. These are translated into a common strategy that will help us achieve a sustainable and competitive industrial transformation.

The purpose of this strategy is:

A strong, sustainable and innovative industry in North-Middle Sweden that takes advantage of the opportunities offered by industrial transition.





Challenges and how to manage them

More focused work is needed to promote sustainable, enduring and viable development in small and medium-sized enterprises in North-Middle Sweden. Based on the industry sector's challenges and need for transformation, we see six prioritised action areas.



1. Increase innovation capacity in small and medium-sized enterprises

It is easy to forget the important role that small and medium-sized businesses play in the region's ecosystem. In North-Middle Sweden, 95% of companies employ fewer than 250 people. As many as 85 per cent of companies have fewer than 50 employees. These companies constitute an essential supply system for the larger companies, but the innovation capacity of the smaller companies is lower than what can be considered desirable.

STEPS TO MOVE US FORWARD

- Create platforms for knowledge sharing and stronger interaction between business, researchers and civil society.
- Use industry's own need for transformation as a driving force for innovation.
- Support the emergence of new business models and new technologies for the circular economy.
- Work to ensure that several small and medium-sized enterprises take advantage of the opportunities offered by digitalisation.
- Support small and medium-sized enterprises' ability to change with resources for strategic development.

2. Improve matching of companies' skills requirements with labour supply

Thanks to globalisation, companies have different skills requirements than before. More highly qualified labour is needed. Inadequate links between industrial companies and training coordinators lead to an imbalance between requirements and the supply of labour. This is made more difficult by the fact that the population is getting older and young people often opt out of industrial jobs and move to urban areas.

STEPS TO MOVE US FORWARD

- Develop and test new initiatives to attract and retain more women, young people and people born outside Sweden.
- Develop systems that match the right skills to the right tasks.
- Provide strategic skills training for specialisation in e.g. sustainable production.
- Create opportunities for skills development during working hours to make workplaces attractive.
- Establish more vocational and commissioned training courses in prioritised areas.

3. Increase level of investment in research and innovation

Publicly funded research in North-Middle Sweden is below the EU average. Business investment in research is also low, even though it is diversified. There is a need for resources for development areas with potential that can also attract private investment. Development of innovation management and increased recognition of the opportunities for innovation constitute potential for industrial transformation.

STEPS TO MOVE US FORWARD

- Increase research funding for educational institutions and link them to smart specialisation.
- Develop and strengthen regional capacity for research and innovation.
- Develop long-term research and innovation initiatives.
- Connect test beds, companies and researchers and make it possible to scale up promising technology.
- Develop innovation procurement in all sectors to strengthen local opportunities.

4. Develop industry towards a low-carbon and circular economy

A low-carbon economy can be seen as a major challenge for industry, but also as a major opportunity where the challenges can drive growth and innovation. The solutions can be transformed into new products, business models, services and companies. An important part of the transformation is the use of bio-based, renewable resources and energy efficiency. By reusing products and materials and treating waste as a resource, companies' finances and competitiveness can be improved while reducing our environmental impact.

STEPS TO MOVE US FORWARD

- Develop more focused actions related to smart specialisation, emission-free fuels, renewable electricity and smart grids.
- Initiate more public-private partnerships and build capacity around innovation-driven procurement.
- Establish networks of test beds for the circular bioeconomy and enable learning processes around new products or services.
- Develop production of sustainable buildings.
- Develop industrial production to become low-carbon and circular.



5. Increase the degree of internationalisation in small and medium-sized enterprises

Because the industry in North-Middle Sweden is export-oriented, access to the global market is a necessity. More small and medium-sized companies that are subsuppliers to large companies need to broaden their markets to reduce their vulnerability. This requires expertise and international networks.

STEPS TO MOVE US FORWARD

- Scaling up the existing strategic innovation work in North-Middle Sweden internationally.
- Market competence and test beds at an international level.
- Develop smart specialisation and take advantage of areas of strength across county borders.
- Support clusters and encourage small and medium-sized companies to participate in international networks.
- Use multinational companies with a presence in North-Middle Sweden to develop stronger collaboration links.

6. Improve strategic coordination and governance

Despite the fact that the support system for innovations in North-Middle Sweden is relatively well developed in terms of clusters, science parks and test beds, there is no clear overall strategy to guide the collaboration. Structured work is needed to collect and coordinate various ongoing initiatives in order to be able to move up a gear.

STEPS TO MOVE US FORWARD

- Mapping, gathering and coordinating various ongoing initiatives.
- Obtain supplementary data and analytics and recommendations from external sources that provide legitimacy.
- Establish common structures for engagement in entrepreneurial discovery processes.
- Leverage pilot initiatives and investments in North-Middle Sweden.
- Establish open innovation platforms.

Execution of strategy

The strategy's priorities and initiatives will need to be implemented in broad collaboration between the regions of North-Middle Sweden, the support system for business and innovation, the region's universities and colleges and, of course, the most crucial element, the companies in the region.

In addition to the importance of broad involvement, several of the issues are complex in terms of both authority, capacity and implementation. Defining concrete activities and how the initiatives will ultimately be designed therefore needs to be continued in a larger project that will be coordinated by the regions within the framework of the respective development and smart specialisation strategies and regional development responsibility. The key objective of this strategy is to identify the framework and conditions for implementation.

Would you like to know more about this work and be involved in shaping future action plans? Contact the relevant regional development manager.

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Thank you to everyone who showed great commitment and contributed to the development of the strategy.