

The Nordic Thematic Group for Innovative and Resilient Regions 2017–2020

Final Report

Jukka Teräs, Anna Berlina,
Mari Wøien Meijer

NORDREGIO REPORT 2021:3



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*Report prepared for the Nordic Thematic Group for Innovative and Resilient Regions 2017–2020,
under the Nordic Council of Ministers.*

The Nordic Thematic Group for Innovative and Resilient Regions 2017–2020 - final report

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Nordregio

P.O. Box 1658

SE-111 86 Stockholm, Sweden

nordregio@nordregio.org

www.nordregio.org

www.norden.org

Analyses and text: Jukka Teräs, Anna Berlina & Mari Wøien Meijer

Layout: Marija Zelenkauskė & Vaida Ražaitytė

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Nordregio

is a leading Nordic and European research centre for regional development and planning, established by the Nordic Council of Ministers in 1997. We conduct solution-oriented and applied research, addressing current issues from both a research perspective and the viewpoint of policymakers and practitioners. Operating at the international, national, regional and local levels, Nordregio's research covers a wide geographic scope, with an emphasis on the Nordic and Baltic Sea Regions, Europe and the Arctic.

The Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland, and Åland. *Nordic co-operation* has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe. *Nordic co-operation* seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

The Nordic Council of Ministers

is a forum of co-operation between the Nordic governments. The Nordic Council of Ministers implements Nordic co-operation. The prime ministers have the overall responsibility. Its activities are co-ordinated by the Nordic ministers for co-operation, the Nordic Committee for co-operation and portfolio ministers. Founded in 1971.

The Nordic Council

is a forum for co-operation between the Nordic parliaments and governments. The Council consists of 87 parliamentarians from the Nordic countries. The Nordic Council takes policy initiatives and monitors Nordic co-operation. Founded in 1952.

Stockholm, Sweden, 2021

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Foreword

The Nordic thematic group for innovative and resilient regions 2017–2020 (TG2) was established by the Nordic Council of Ministers and is a part of the Nordic Co-operation Programme for Regional Development and Planning 2017–2020. Three Nordic thematic groups were established for the four-year period: Innovative and resilient regions, Sustainable rural development, and Sustainable cities and urban development. The thematic groups have been organised under the Nordic Council of Ministers' Committee of Civil Servants for Regional Affairs, and Nordregio has acted as the secretariat for the thematic groups.

This report summarises the work and results of the Nordic thematic group for innovative and resilient regions (TG2) in 2017–2020. The thematic group has not only produced high-quality research on innovative and resilient regions in the Nordic countries but also contributed to public policy with the latest knowledge on the creation and development of innovative and resilient regions across the Nordic countries, with focus on smart specialisation, digitalisation, regional resilience, and skills policies. TG2 has also contributed to research on innovative and resilient regions in the Nordic cross-border context.

The members of the TG2 thematic group comprised representatives from Nordic ministries, na-

tional and regional authorities and stakeholders, and cross-border co-operation committees. The thematic group organised 2–3 meetings annually to discuss specific issues on the relevant themes. A lot of emphasis was put on the dissemination activities because the thematic group fostered the exchange of knowledge and experience between regional policy stakeholders in the Nordic countries and autonomous territories. TG2 did not limit co-operation to the Nordic countries and regions: the Nordic perspectives and latest knowledge on innovative and resilient regions were shared e.g. with the EU.

As the term of the Nordic thematic group for innovative and resilient regions 2017–2020 is coming to an end, we would like to take the opportunity to thank the members of the thematic group for their expertise, engagement with the projects, and dissemination of the results. We would also like to thank Nordregio for co-ordinating and disseminating the work. Finally, the thematic group is grateful to all our partners and other stakeholders in the Nordic regions and internationally who have provided invaluable help and input to our work. As with all our outputs, we encourage you, as a reader, to contact us if you have ideas and feedback to share.

Birgitte Wohl Sem

(vice-chair: 2017–2018; chair: 2019–2020)

Ministry of Local Government and Modernisation,
Norway

Mikko Huuskonen

(chair: 2017–2018; vice-chair: 2019–2020)

Ministry of Economic Affairs and Employment,
Finland



The Nordic thematic group for innovative and resilient regions has been extremely good at identifying relevant topics. Digitalisation, skills matching, and smart specialisation are all key elements of regional resilience, which, right in the middle of a pandemic, has become more actual than ever.

Kjell Nilsson, Director of Nordregio

1. The Nordic thematic group for innovative and resilient regions

The Nordic thematic group for innovative and resilient regions 2017–2020 (TG2) was established by the Nordic Council of Ministers as part of the Nordic Co-operation Programme for Regional Development and Planning 2017–2020. At the beginning of the four-year programme, the TG2 group identified three priority areas for the work of the thematic group: regional economic and social resilience, smart specialisation, and skills policies.

The thematic group set an aim at the beginning of the programme period to contribute to Nordic regional development by providing evidence-based research and the latest knowledge on innovative and resilient regions across the Nordic countries, by sharing best practices between the countries and regions, and by developing policy recommendations for regional and national authorities. The TG2 research has been a participatory process with members of the thematic group contributing by providing their expertise, ideas, comments, and feedback throughout the whole process.

The TG2 work has built upon the work done by the previous Nordic working group on green growth—innovation and entrepreneurship (2013–2016). The TG2 work contributes to achieving the vision of the Nordic Region to become the most sustainable and integrated region in the world by 2030 through promoting green growth based on knowledge, innovation, mobility and digital integration, and social sustainability (Nordic Council of Ministers 2019). Through supporting the transformation towards sustainable and resilient societies, the work of the TG2 also contributes to achieving the Global Goals and the 2030 Agenda for Sustainable Development.

Among the main outputs of the thematic group are the four major in-depth studies on digitalisation, smart specialisation, regional resilience, and skills policies in the Nordic regions. In addition, cross-border studies have been produced on the major research themes of the TG2 (see figure 1).

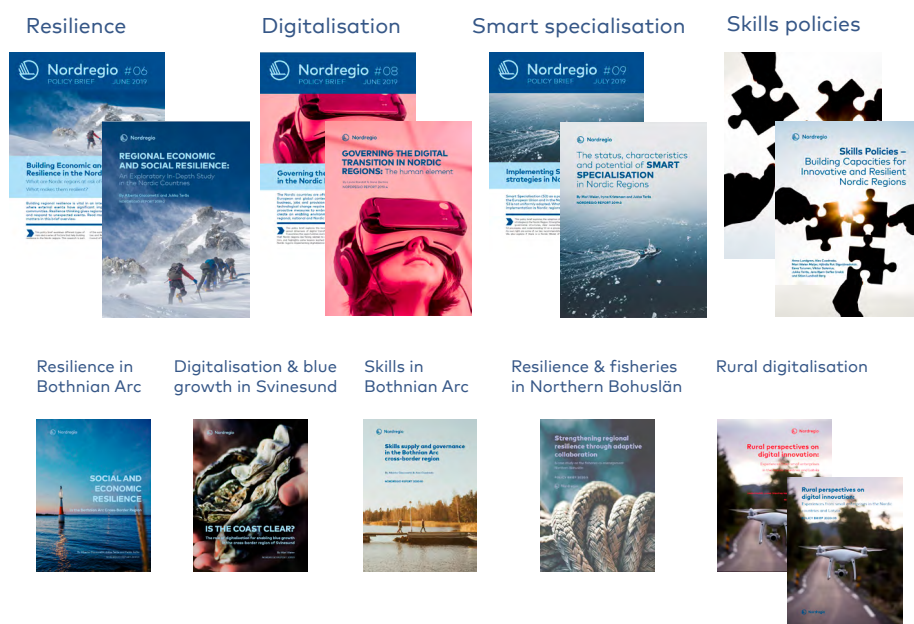


Figure 1. Major research outputs of the TG2 by the beginning of December 2020. Four more publications will be published by the end of January 2021: the Synergy report, the Roadshow report, the Final report, and the policy brief on the effects of Covid-19 on cross-border regions.

1.1 TG2 - Who are we?

The Nordic thematic group for innovative and resilient regions 2017–2020 comprised representatives from relevant ministries, national authorities, regional authorities, and cross-border co-operation committees. Nordregio acted as the secretariat for the thematic group and comprised representatives of the research and communications staff.

TG2 members—countries and autonomous territories

Birgitte Wohl Sem (vice-chair: 2017–2018; chair: 2019–2020)

Ministry of Local Government and Modernisation, Norway

Mikko Huuskonen (chair: 2017–2018; vice-chair: 2019–2020)

Ministry of Economic Affairs and Employment, Finland

Örjan Hag

Ministry of Enterprise and Innovation, Sweden

Jón Óskar Pétursson (2017–2018)

Ministry of Industries and Innovation, Iceland

Sigríður Valgeirsdóttir (2018–2019)

Ministry of Industries and Innovation, Iceland

Sunna Þórðardóttir (2019–2020)

Ministry of Industries and Innovation, Iceland

Gert Elstrøm Kristoffersen

Danish Business Authority, Denmark

Jouko Kinnunen

Statistics and Research Åland, Åland

Eigil Carner Nielsen (2017–2019)

The Ministry of Finance and Internal Revenue, Greenland

Per Lyster Pedersen (2019–2020)

Government of Greenland

TG2 members—Regional representatives

Jerker Johnson

The Regional Council of Ostrobothnia, Finland

Hanne Østerdal

Nordland County Council, Norway

Anders Olsson

Region of Värmland, Sweden

Lena Schenk (2017–2019)

Municipality of Bornholm Region, Denmark

Søren Møller Christensen (2020)

Municipality of Bornholm Region, Denmark

Hólmfríður Sveinsdóttir (2017–2018)

Protis, Iceland

Elín Gróa Karlsdóttir (2018–2020)

Innovation Center Iceland, Iceland

TG2 members—Representatives from the cross-border committees

Heikki Aalto

Bothnian Arc, Sweden and Finland

Elsie Hellström

Committee of Svinesund, Norway and Sweden

Nordregio team

Researchers

Jukka Teräs, Mari Wøien Meijer, Alberto Giacometti, Alex Cuadrado, Anna Berlina, Anna Lundgren, Linda Randall, Hjördis Rut Sigurjonsdóttir, Eeva Turunen, Ágúst Bogason, Iryna Kristensen (2017–2018), Ingrid H G Johnsen (2017), Nelli Mikola (2017).

Communications

Michael Funch, Vaida Ražaitytė

2. Major projects

2.1 Digitalisation

Digitalisation was selected by the TG2 in 2017 as one of the major research themes because digitalisation is significantly changing the nature of business, jobs, and provision of public services, which offers both opportunities and challenges for building Nordic innovative and resilient regions.

What did we study and how?

The Nordic digitalisation project by TG2 explored digitalisation in Nordic regions by studying how local and regional authorities are implementing national and regional digital strategies. By looking at five regional Nordic case studies (see Map 1), the project explored how the Nordic regions were dealing with the challenges and opportunities related to digitalisation and aimed to identify the strongest potential for knowledge sharing and collaboration at the different levels.

What did we find out?

When it comes to the focus of digitalisation agendas at different levels of government, all Nordic countries are in the process of implementing national strategies related to digitalisation. Overall, these policies have fairly similar goals, with a focus on digital public services, supporting growth and innovation in business, and ensuring digital security. Despite the relevance of national steering and support for digitalisation, the TG2 study revealed the importance of digitalisation being embedded at a local level.

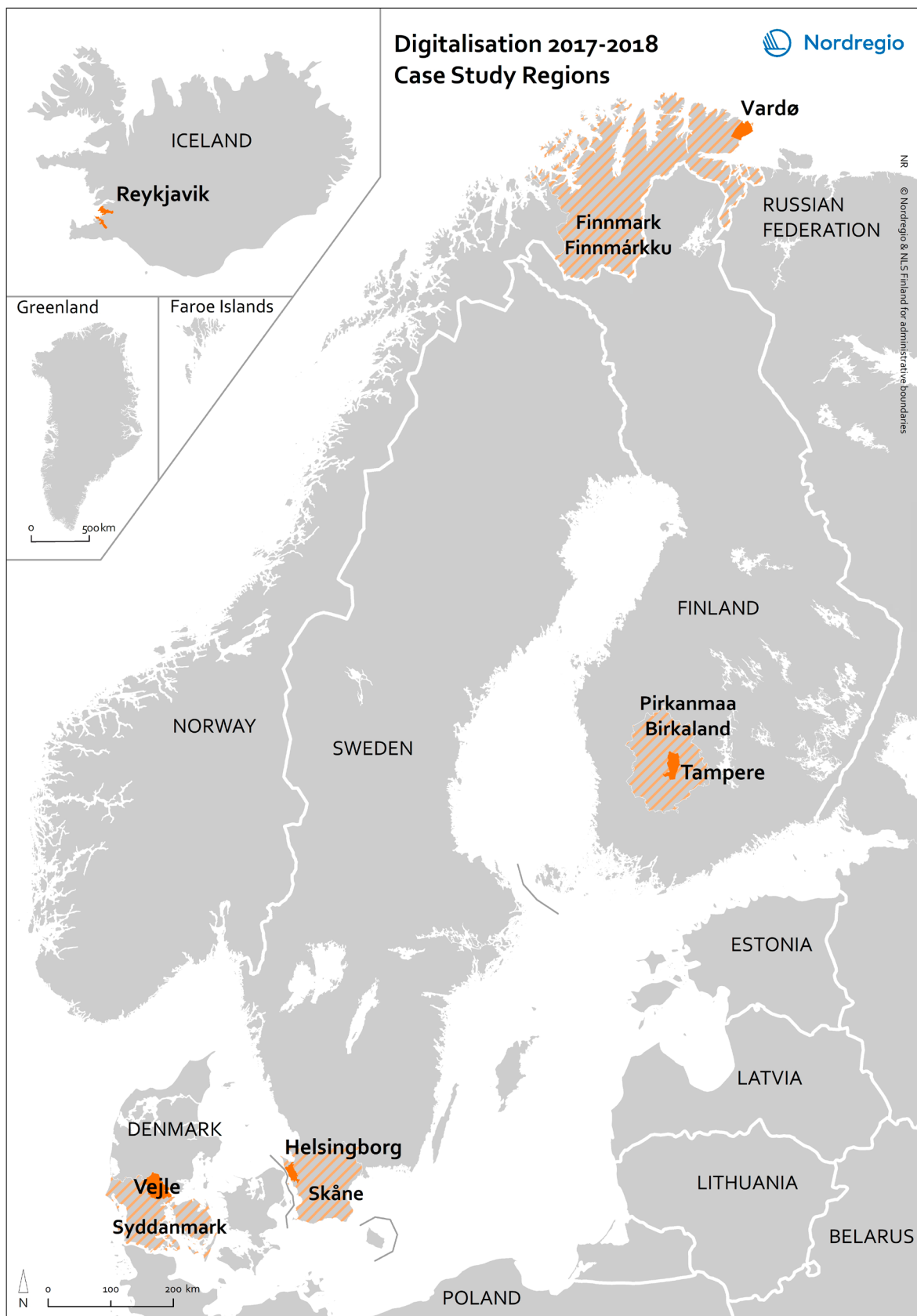
At the local and regional levels, digital technologies are primarily seen as tools to fulfil existing responsibilities and realise local and regional goals. Specific priorities vary, based on the issues that are most pressing in the individual region or municipality. E-health (health tech and telemedicine), developing local business and start-up culture, and ensuring equal access to digital infrastructure are among the key issues being addressed at the regional level. At the local level, the digitalisation initiatives have mainly focused on increasing quality of life for residents and solving local challenges



DIGITALISATION. *In this project, digitalisation was defined as the transformation of all sectors of our economy, government, and society, based on the large-scale adoption of existing and emerging digital technologies.*

through, for example, digitising government services and the use of digital tools to increase the quality of education and encourage public participation.

As to approaches to digitalisation in Nordic regions, perhaps the most consistent finding across the regional case studies was the idea that digitalisation is not only a technical process but to a large extent a human process, with the people component largely being a process of change management. As such, digitalisation in the public sector requires a long-term commitment, strong political and institutional support, and a change of culture and mindset in the long run. Digitalisation is embedded in the work of all departments and tran-



Map 1. Digitalisation case study areas.

“ I think we're talking about the new generation of smart cities that are smart in mindset [...] I think we need to be smarter in the way we do things, not in the different solutions; how to involve others to do things better together.

Helsingborg, Sweden

scends all policy areas. Hence, digitalisation calls for the engagement of key people from all levels of the organisation in the process.

Positive environmental outcomes occurring as a result of digital initiatives were emphasised in the regional case studies. In many cases, the underlying assumption was that smart solutions were green solutions by their nature and that the city itself acts as a 'living lab' for testing new ideas and solutions.

Some elements considered as important success factors for working with digitalisation in a public sector context were the existence of a specific internal team to support digitalisation work, including a trusted and visionary leader, finding achievable goals and possessing a 'just-do-it' approach, creating a shared sense of pride in achievements, taking a customer-centred approach, and avoiding strategy documents, targets, and action plans that are too detailed or long term in their approach.

The current and future labour market impacts of digitalisation were seen as both challenges and opportunities. Specific themes that were discussed across multiple cases included embracing job change by shifting mindsets from a culture of fear to enthusiasm about how different work roles could be improved by removing the more menial elements, attracting a younger and more dynamic workforce to the public sector, and exploring new ways of thinking about education and training (e.g. shifting to competency-based learning and a greater focus on developing transferable skills).

Digitalisation is clearly an issue with broad political support, and it presents substantial long-term

opportunities. When it comes to the strongest potential for knowledge sharing and collaboration, this research found that regions could play a stronger co-ordinating role in identifying collaboration opportunities and encouraging the development of joint standardised solutions.

Learn more:

[Governing the digital transition in Nordic Regions: The human element \(2018–2019\) – a project report](#)

[Governing the Digital Transition in the Nordic Regions \(2019\) – a policy brief](#)

2.1.1 Digitalisation in rural areas

Besides the Nordic digitalisation project, TG2 co-produced a study on rural digitalisation in the Nordic countries and Latvia in co-operation with the Nordic Council of Ministers. The project investigated how to facilitate uptake of digital technologies and innovations by SMEs in rural and sparsely populated areas. It explored the urban–rural digital divide from the perspective of both digital infrastructure and digital competence, highlighted the key challenges and opportunities for SMEs in three key rural sectors, and provided an overview of support structures in the different countries and advice for policymakers.

Learn more:

[Rural perspectives on digital innovation: Experiences from small enterprises in the Nordic countries and Latvia \(2019–2020\) – a project report](#)

[Rural perspectives on digital innovation \(2020\) – a policy brief](#)

2.2 Smart specialisation

TG2 decided to include smart specialisation as a major research theme because smart specialisation has rapidly become a mainstream innovation policy concept in Europe and the Nordic countries, including e.g. the non-EU country of Norway. Smart Specialisation (referred to as S3) aims to help regions unlock their specific assets and competencies based on the unique economic structure and knowledge base available in the region.

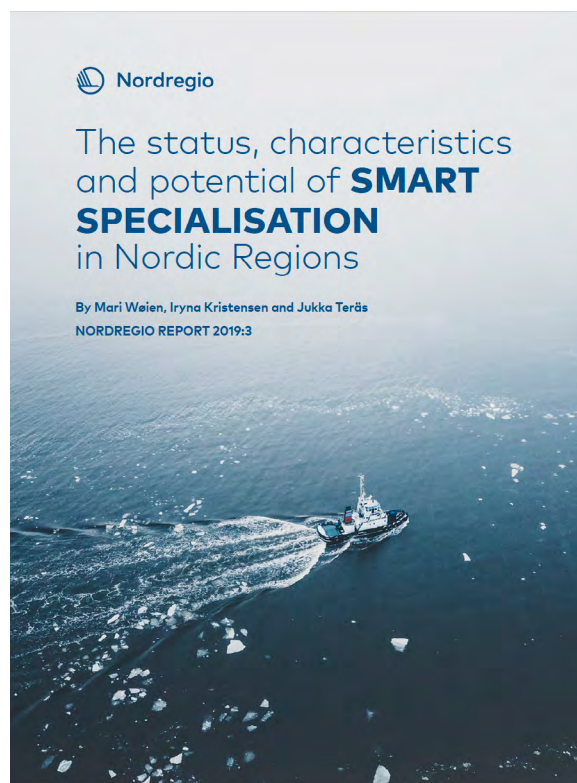
The process of developing S3 relies on a bottom-up mobilisation and engagement of multiple regional actors, both public and private. Together, they select areas that have the most promising potential for development based on the local context and institutions. S3 is grounded in the entrepreneurial discovery processes (EDP) (see figure 2).

What did we study and how?

The overall objective of the TG2 project was to create an understanding of how the different Nordic regions adopt the smart specialisation policy concept and to analyse the added value of its implementation in the Nordic context. The project was based on the empirical findings from six Nordic regions (see Map 2).

What did we find out?

In the Nordic Region, evidence shows that S3 implementation takes on different shapes and forms. Smart specialisation strategies may be developed at both the national and the regional levels, although the strategies are predominantly anchored in a synergy between the regional and the EU levels. This dynamic is particularly evident in Sweden and Finland, where there is no overarching national S3 strategy, but where extensive regional S3 strategies have been devised. Denmark has developed a policy framework that consists of several national strategies related to innovation, but without a full utilisation of the smart specialisation concept. Although Norway is not a member of the EU, many regions in Norway are increasingly considering smart specialisation as a potential approach to regional growth and innovation, and a national handbook (Veileder) on smart specialisation at the regional level was published in 2018. Smart specialisation has not been formally adopted as a concept in Iceland, the Faroe Islands, and Greenland yet.



SMART SPECIALISATION. A bottom-up policy approach for regional innovation and development. It helps in directing knowledge investments into pre-identified key regional strengths. This is to generate spillover effects that may support regional growth. RIS3 refers to research and innovation strategies for smart specialisation.

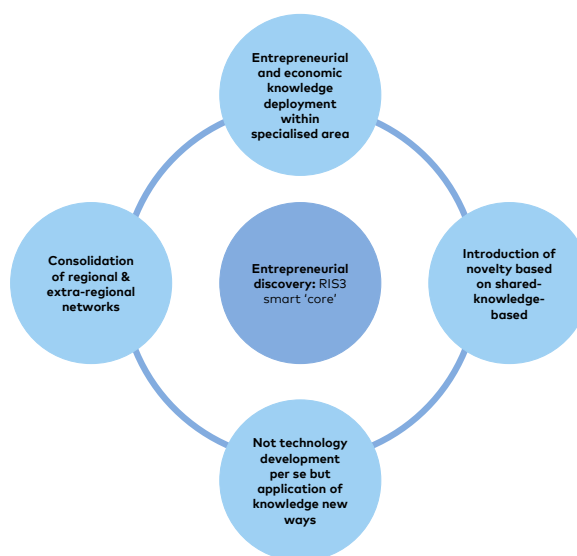
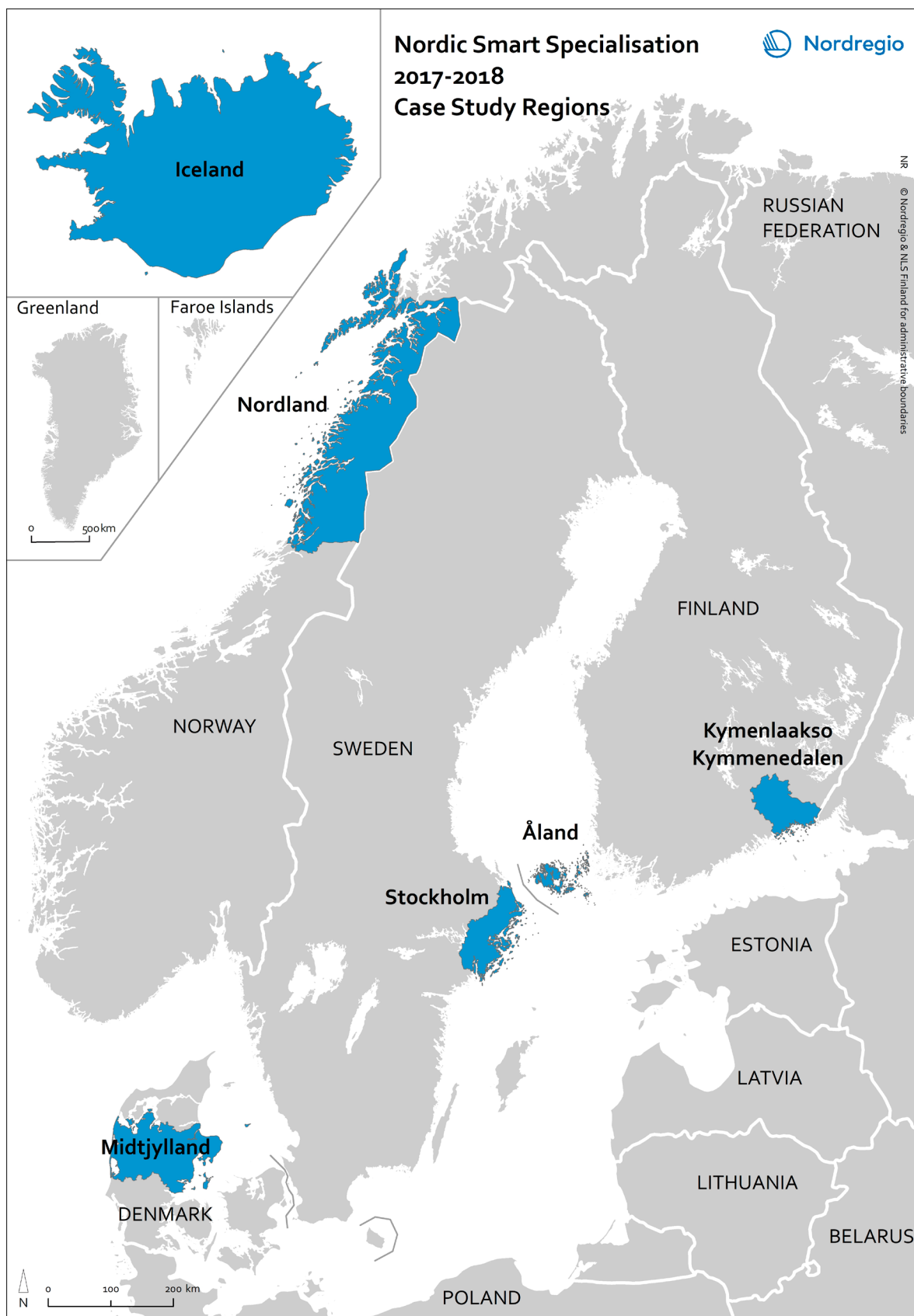


Figure 2. Entrepreneurial discovery process (EDP).
Source: Dubois, Kristensen & Teräs, 2017



Map 2. Nordic S3 case study areas.

“ The concept is facilitating decision-making and creating more focused actions. The domains are bringing more careful consideration for the strategical work and decision-making.

Kymenlaakso, Finland

Some common aspects were identified in the TG2 case study areas that may act as enablers for S3 strategies, such as relatively strong economy, high levels of trust among different regional actors, and natural-resource dependency. The cases studied also indicate that different geography (e.g. size) and typologies of the regions matter when it comes to success or inability to apply the S3 concept. For instance, remote regions with strong industrial sectors and great reliance on natural resources such as Nordland and Åland seem to use S3 more actively to increase their competitive advantage. These regions have benefitted from S3 by developing a more targeted regional innovation policy. By comparison, the metropolitan areas, such as Stockholm, are displaying some lack of enthusiasm for the concept, owing to their already high levels of innovative performance and the high number of advanced companies present in the region. However, some of the regions studied are de facto working much in line with the S3 concept, despite not having formally adopted its methods and processes.

When examining the operationalisation of smart specialisation, it is evident that a strong political mandate and a clear policy commitment from the national and regional level are crucial for S3 to become an applied strategic policy tool for regional growth. Moreover, to mobilise, anchor, and operationalise smart specialisation, there needs to be strong regional ownership of the process at a strategic level as well as at the operational level. It requires a strong engagement and co-operation of business, regional, and academic actors across pre-identified areas of regional strength for ensuring the endurance of the concept and its manifestation at the ground level.

The rapid adoption of the S3 concept in many Nordic regions may point to a highly compatible Nordic innovation environment, pointing to the value of discerning de facto S3. As to the role of S3 in fostering a green transition, the study showed that a green transition may create an additional sense of urgency for change and nudge the development of the strategy and operationalisation of S3.

Learn more:

[The status, characteristics and potential of smart specialisation in Nordic regions \(2018-2019\) – a project report](#)

[Implementing Smart Specialisation strategies in Nordic regions \(2019\) – a policy brief](#)

2.3 Regional resilience

TG2 decided to include resilience as a major study theme because regional resilience has become a hot topic for policymaking in the light of growing concern over natural disasters and the fresh memory of the 2008–2010 financial crisis, and might become even more relevant in the aftermath of the Covid-19 pandemic. Resilience thinking provides an analytical framework helping to anticipate and respond to shocks and stressors, thereby helping to address some of the complex challenges that societies are facing today.

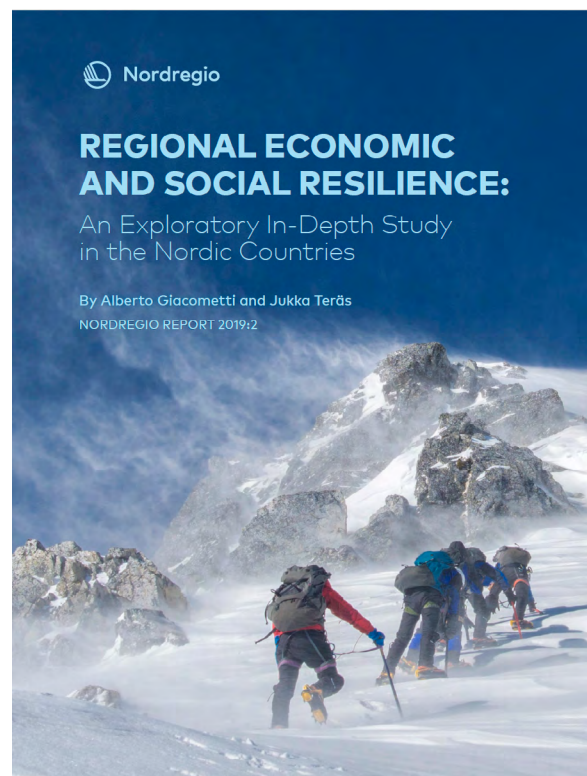
The difference between a risk and a shock is that risk implies the probability of shocks occurring, while shock implies the event itself. Shocks can have negative or positive impacts on the region. Stressors refer to long-term trends and factors that erode regions and their actors.

What did we study and how?

'What are Nordic regions at risk of?' and 'what are the drivers of regional resilience?' were among the key questions addressed in the project by looking at five case study regions across the Nordic countries (see Map 3). The study attempted to provide an analytical framework of economic and social resilience against which the Nordic cases were analysed.

What did we find out?

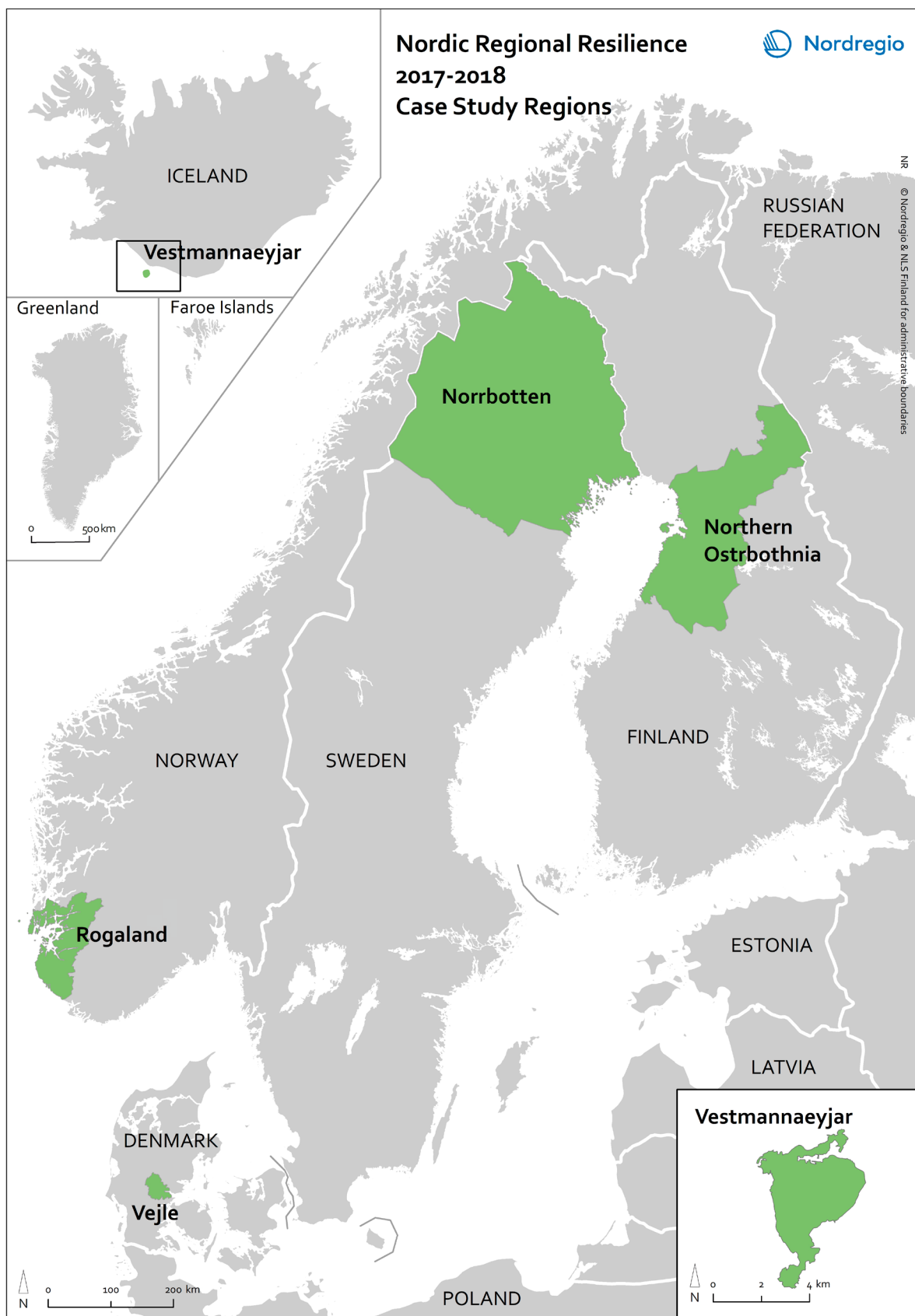
A variety of risk types were identified in the case study regions such as technology-driven risks, financial, environment-related, and those resulting from sudden changes in demand or geopolitical shifts. For instance, high dependence on commodity exports, such as oil, fish, mineral, metal, and forest resources, is considered a risk due to high fluctuation of commodity prices in the global exchange market. Technological risks are associated with the emergence of new technologies that may result in the rise and fall of firms globally. Sometimes, risks for the regions are associated with accumulated stress and 'slow burn'. Stressors such as demographic changes, deficiencies in the labour market, poor accessibility, etc., affect the regions' competitiveness and make them more vulnerable to shocks and disturbances. In the long run, it can lead to a 'slow burn': a gradual deterioration of the region.



REGIONAL RESILIENCE. *Regional (economic and social) resilience determines how capable the regional economies are to cope with change (negative or positive shocks or stress) and continue to develop. Anticipating and reacting to risks, shocks, and long-term stress depends on a region's adaptive capacity and ability to respond and redirect its development path.*

Among the key factors relevant for building regional resilience are solid and efficient institutions, building a financial buffer, and spreading the risk through a diversity of economic activities and markets. Moreover, continuous monitoring of industries' performance and challenges, skills supply and demand, and global trends is beneficial for generating awareness of the risks.

Regional capacity to respond to shocks, however, builds on the capacity to change by reshaping existing institutions, re-organising work and partnerships, re-evaluating strategies, and redirecting resources. Therefore, such factors as trust among regional actors, adaptability and flexibility, breaking silo thinking, and even stimulating disruption are essential for coping with threatening developments.



Map 3. Regional resilience case study areas.

“ When the Covid-19 crisis hit us, the report was helpful in getting to understand mechanisms in a severe crisis like this. The report was a support for us in the regional development department.

TG2 member

Regional and local authorities play a key role in building the foundations for regional resilience by providing a regulatory framework, establishing support institutions, and delivering infrastructure and security. Examples of actions include mobilising regional actors, supporting partnerships and business ideas, enhancing community building, trust, citizen participation, and empowerment, as well as engaging the financial institutions, private investors, and educational institutions.

As recently demonstrated by the Covid-19 pandemic, the element of surprise is present in all shocks, at least in terms of timing, intensity, and the context in which they occur. This makes it difficult to develop reliable prognoses and resilience analyses. It is, however, useful to gain awareness of the region's risk landscape, e.g. by conducting an in-depth diagnosis of a region's businesses and industries, their relevance in the global market, and future scenarios to identify potential threats, as well as monitoring trends with regard to technology and the labour market.

Learn more:

[Regional Economic and Social Resilience: An Exploratory In-Depth Study in the Nordic Countries \(2018-2019\) – a project report](#)

[Building Economic and Social Resilience in the Nordic Regions \(2019\) – a policy brief](#)

2.4 Skills policies

TG2 decided to include Nordic policies on skills and capacity building as a major research theme because, in knowledge economies, skills have become a cornerstone for economic growth and a pathway to employability. However, the pace of change in the labour market is very high, regarding both new jobs which may require new skill sets and new ways of working. An ageing population, increasing automation, and digitalisation are among the trends that are changing the skills that employers need—also in the Nordic regions.

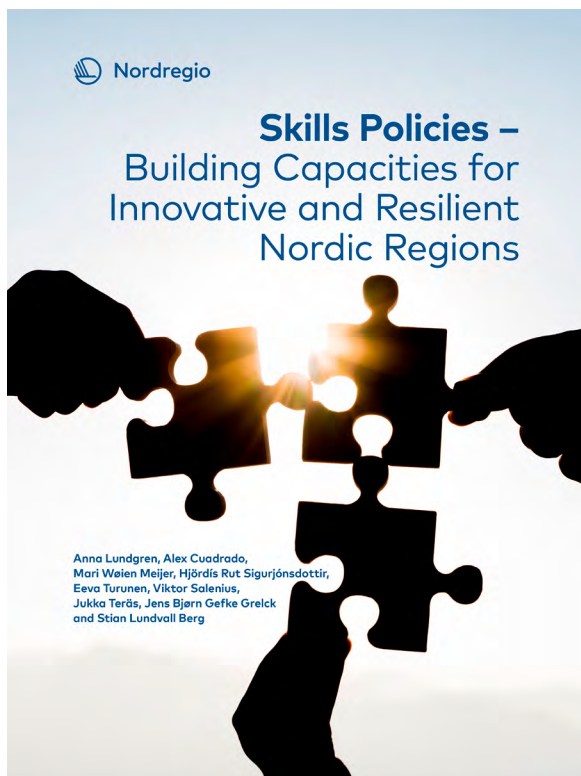
What did we study and how?

This project studied how different Nordic regions work with skills development, namely, skills assessments and anticipation, skills mismatch, and governance. The project looked at the main actors working with skills at the regional level, the enabling and hampering factors to strengthening skills development, and the potential for Nordic learning. The project was based on the empirical material obtained from five regional case studies from the Nordic countries and one self-governing territory (see Map 4).

What did we find out?

As illustrated in the case studies, many actors are involved in the work with skills—that is, skills assessment and anticipation, skills development, and skills governance. Given the cross-sectoral nature of skills intersecting between regional development, education, and labour market policy (see Figure 3), skills is a shared responsibility between many actors at different levels of government.

The institutional context in the regions with regard to skills is to a large extent framed by the government structure and the legislative framework in Nordic countries. In Denmark, for example, the flexicurity model is implemented by the municipalities, which means that the business and industrial sectors are co-organisers of the vocational training at the upper secondary level, whereas in Sweden vocational education and training is to a large extent solely the responsibility of a municipality.



Among the commonalities when it comes to work with skills is that regions emphasise the need to tailor education to the needs of the labour market. The educational providers (especially vocational education and training) and labour market actors in the Nordic countries have been working towards increased collaboration between business, industry, and the educational sector. Examples of such collaboration include Spark in North Karelia, Värmland Industry Council, and Innlandet Vocational College in Norway. Several of the university colleges also include dimensions of life-long learning and flexibility in their set-up—which may be the right response to this kind of fast-changing economy.

The lack of interest in vocational education among students is a common challenge for the regions studied. This is primarily due to the ease of getting a job without having a formal education, or else due to the perception of vocational education as a dead end. However, there are several interesting initiatives where it seems that Nordic regions can learn from one another, such as World-Skills Norway and Copenhagen Skills.

Among the hampering factors for skills development is a lack of common understanding concerning the challenges involved, a lack of knowledge about different roles and responsibilities among

the different actors, and a lack of arenas and instruments for co-ordination and collaboration. All this entails a risk that skills are not treated comprehensively, and results in a patchwork of singular activities with limited effects.

The analysis points to the Nordic regions as holding the potential to create useful tools and arenas for the development of skills. Enhancing collaboration among relevant actors from the three realms of regional development, education, and the labour market is one way forward. At the same time, having clear roles and responsibilities among actors at different levels of government and across sectors working with skills is essential for a successful collaboration.

While all case study regions work with skills assessment and anticipation, the scope of these analyses varies among the regions and different countries use different methodologies and indicators for the analysis. This makes it challenging to have a cross-Nordic analysis.

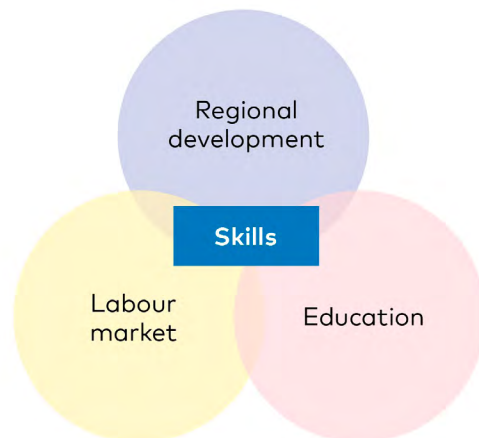
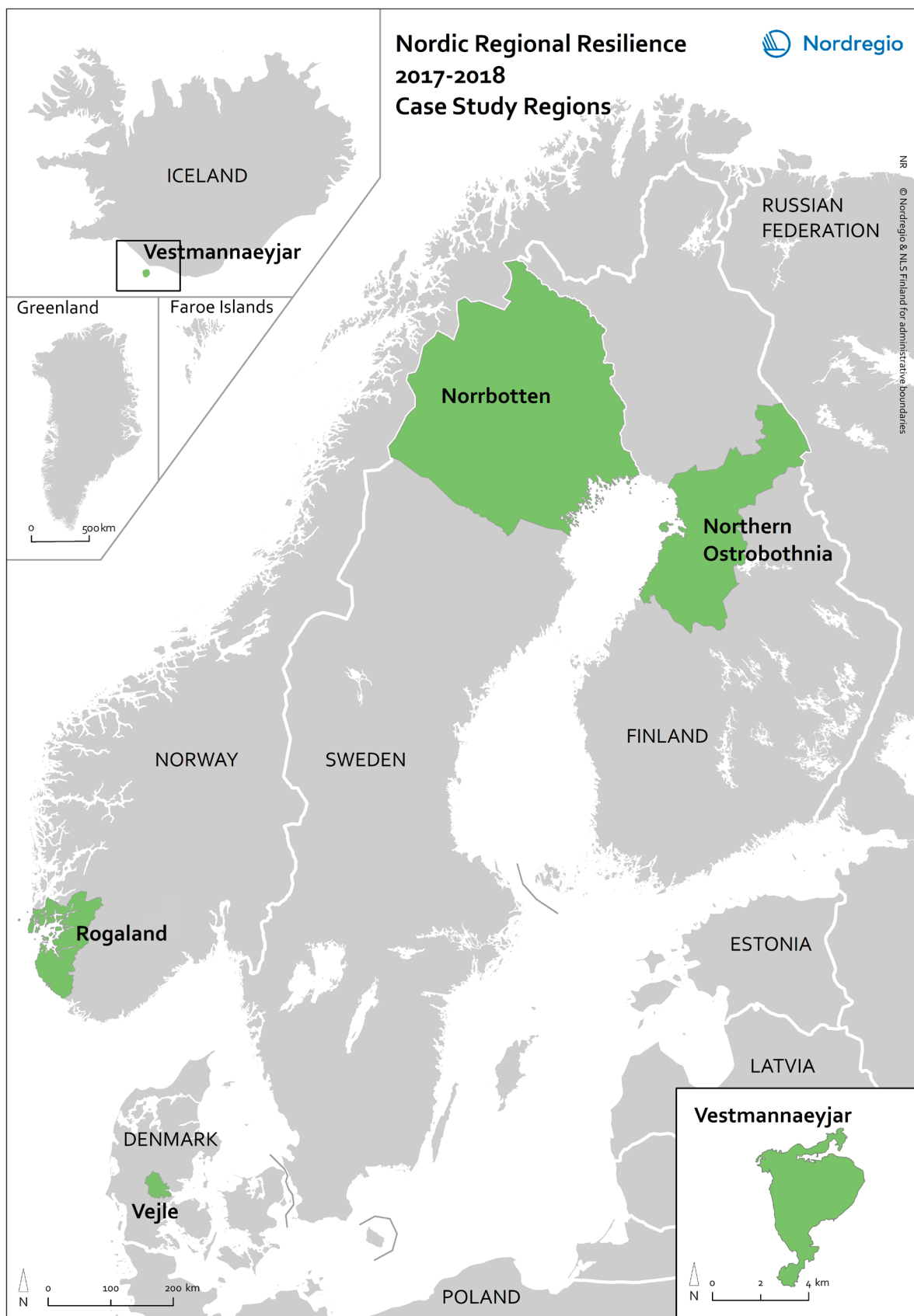


Figure 3 Overlapping areas for skills development

Learn more:

[Skills Policies – Building Capacities for Innovative and Resilient Nordic Regions \(2019–2020\)](#) – a project report

[Matching the missing links –Skills development in Nordic regions \(2020\)](#) – a policy brief



Map 4. Skills policies case study areas.

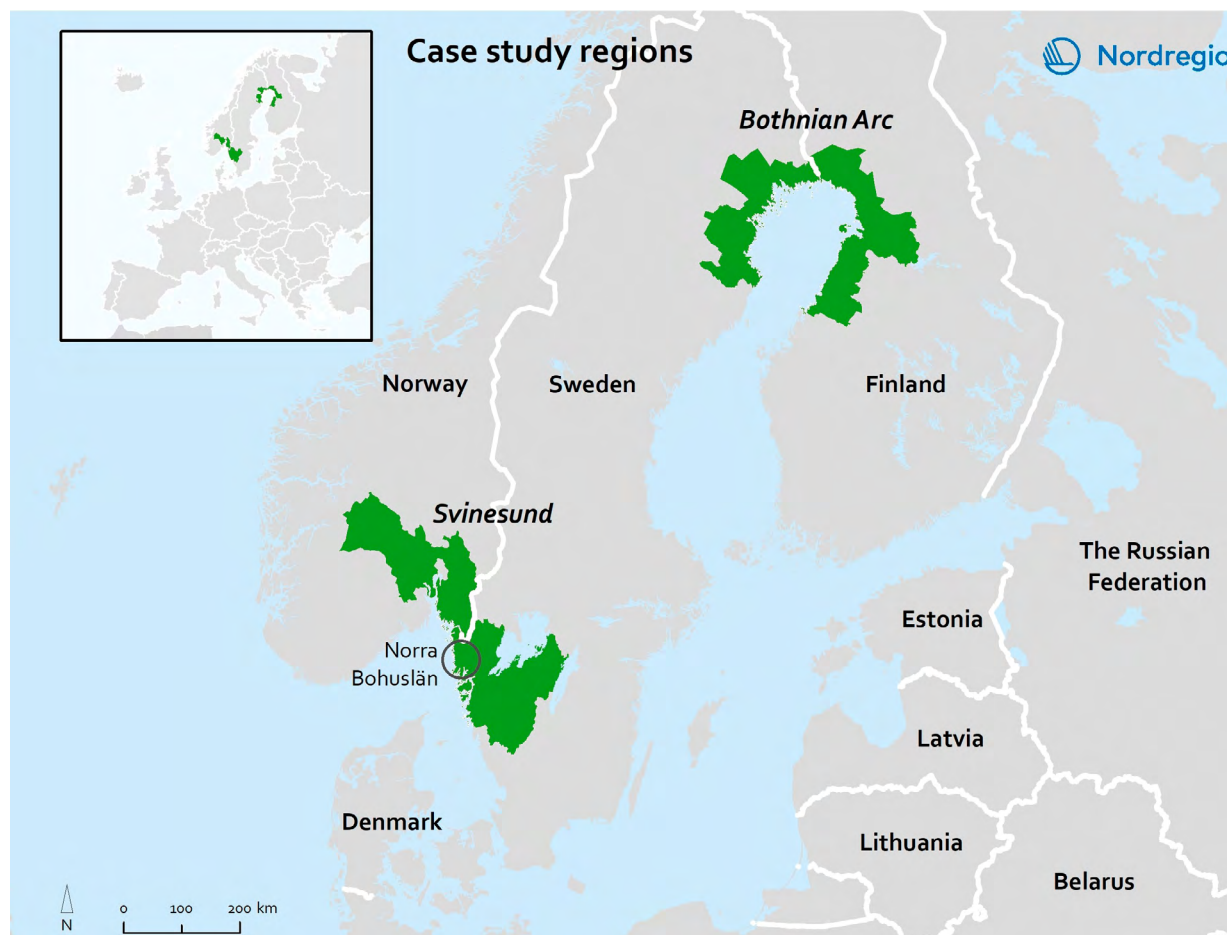
*** Hedmark and Oppland counties merged to form Innlandet County on the 1.1.2020 following a regional reform.**

3. Cross-border studies

Cross-border studies were suggested to be included in the research agenda of TG2 by the members of the participating TG2 cross-border co-operation committees of Bothnian Arc and Svinesund. The selection of the cross-border research themes was largely inspired by the discussions and building on the results of the major projects of TG2. The cross-border studies were found particularly relevant by the regional actors in the cross-border regions due to more specific findings and targeted recommendations derived from the analysis. As a

result of the coronavirus outbreak, the joint study on the impacts of Covid-19 by the cross-border regions of Bothnian Arc and Svinesund was implemented in 2020—largely due to implications of Covid-19 on cross-border activities.

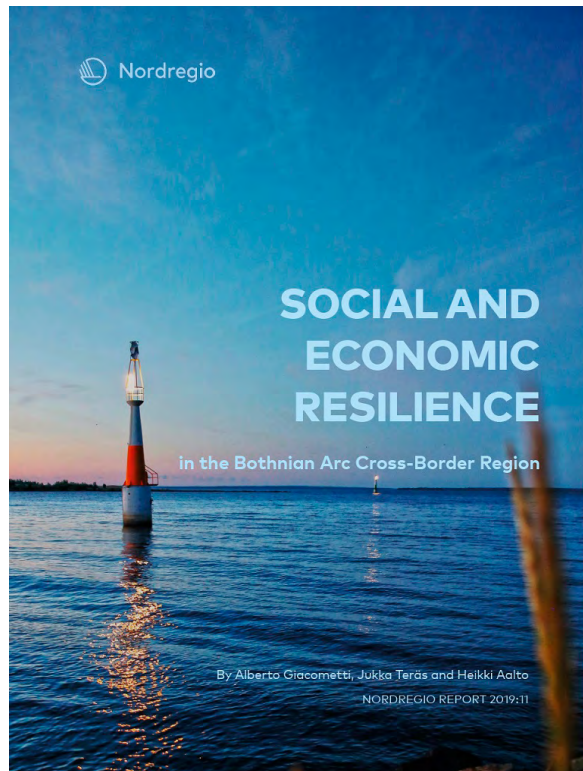
The Bothnian Arc is a cross-border area that extends from the Swedish city of Skellefteå to Kokkola in Finland. Svinesund is a cross-border region that is comprised of Viken Fylkeskommune (Norway) and Västra Götaland (Sweden) (see Map 5).



Map 5: Bothnian Arc and Svinesund cross-border regions.

3.1 Studies connected to the Bothnian Arc area

Social and Economic Resilience



The report on cross-border resilience provides a snapshot of the resilience situation in the Bothnian Arc and is based on desk research, interviews, and a workshop. The project addressed two major questions: what global and local risks and long-term challenges is the Bothnian Arc cross-border area exposed to? How can societies and economies in this area anticipate and respond to challenges to ensure resilient long-term development paths?

Several major risks were identified as well as day-to-day challenges in the Bothnian Arc area. In some cases, risks have a low probability, such as major industrial accidents, but their impact could be enormous. Industrial accidents could threaten the liveability of the area, the natural environment and overall economy of the region. Other types of risks are more recurrent, such as sharp fluctuations in the prices of commodities and raw materials. In contrast, other challenges are more predictable but have a more gradual and long-term effect on the region, such as demographic pressures, low attractiveness, and peripherality.

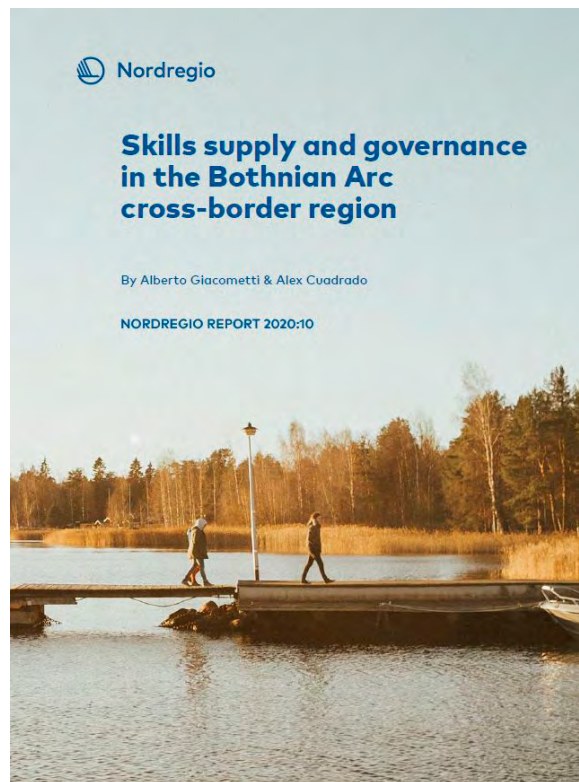
In addition, this study identified several factors driving regional resilience in the Bothnian Arc.

One of the most important factors is the collaborative and hands-on culture that often leads to quick responses to unwanted developments. Collaboration across the Finnish–Swedish border and regions is highly dynamic, which is not only motivated by policy but through the complementarity of the labour markets. This also translates into a rapid and pragmatic approach when taking on-board new opportunities.

Learn more:

[Social and Economic Resilience in the Bothnian Arc Cross-Border Region \(2019\)](#)
– case study report

Skills Supply and Governance



The cross-border study investigated the state of play of skills supply and demand in the Bothnian Arc cross-border region, as well as the cross-border dynamics of skills development and skills mobility. The study was based on empirical evidence collected through interviews with the relevant actors in the cross-border area.

The skills supply in the Bothnian Arc is heavily in-

fluenced by the demographic challenges: population decline, ageing, and urbanisation, while technological and other trends influence the demand for different types of skills. High competition for skilled workers is particularly pronounced in growing industries such as IT but also in public services, such as healthcare and education. A structural transformation of the labour market, where jobs in the region have traditionally been offered in primary or secondary sectors, while today the number of jobs in the tertiary sector is rapidly taking over, is also occurring.

In the Bothnian Arc, different actors collaborate under different constellations to address the development and supply of skills from a general to a more practical level. For instance, local and regional authorities collaborate with chambers of commerce, business organisations, universities, and employment services in predicting market trends and promoting the region, while adult education programmes are developed alongside companies to tailor these to respond to the labour market and individual needs.

Cross-border labour mobility and labour market integration remain an important opportunity for overcoming some of the skills gaps. There is a need, however, to overcome cultural differences and practical barriers that appear with cross-border integration. Employers already put substantial effort into employing people across borders, particularly in the construction industry and in education. This has become particularly relevant in the midst of the Covid-19 pandemic after unco-ordinated responses between countries led to a hard border policy between the two countries.

Learn more:

[Skills supply and governance in the Bothnian Arc cross-border region \(2020\)](#)
– a case study report

3.2 Studies connected to the Svinesund area

The role of digitalisation for enabling blue growth in the cross-border region of Svinesund

The study explored the role of digitalisation as a tool for enabling blue growth in this cross-border



region. It looked at the current framework and opportunities available to support the development of digitalisation strategies in micro- and SMEs in the Svinesund area, and factors that enable or impede digitalisation as a means for blue growth. It is based on in-depth interviews with regional stakeholders and two workshops drawing entrepreneurs, fishermen, and civil servants from both Sweden and Norway.

Projects such as Marine Border Forum Skagerrak (Marint Grenseforum Skagerrak) play a central role in tying regional actors together on both sides of the border and in attempting to create a stronger regional brand to be promoted in global markets. Working together to elevate the mega-regional brand through unique products and services is key for blue growth, helping not only to overcome physical borders but to encourage the development of a stronger cross-border region under the Svinesund 'brand'.

The study identified significant hurdles hampering the potential of digitalisation as an enabler of blue growth. Financial and consultative support functions are often structured in a way that is not inclusive of micro- and small marine businesses, and resource and time constraints may dissuade businesses from prioritising and investing in digitalisation. A more flexible approach, particularly

towards micro- and small businesses, is required in Svinesund to harness the potential of digitalisation as an enabler for blue growth. There needs to be a level playing field for all actors both in the regulatory framework and in access to support functions and infrastructure.

Learn more:

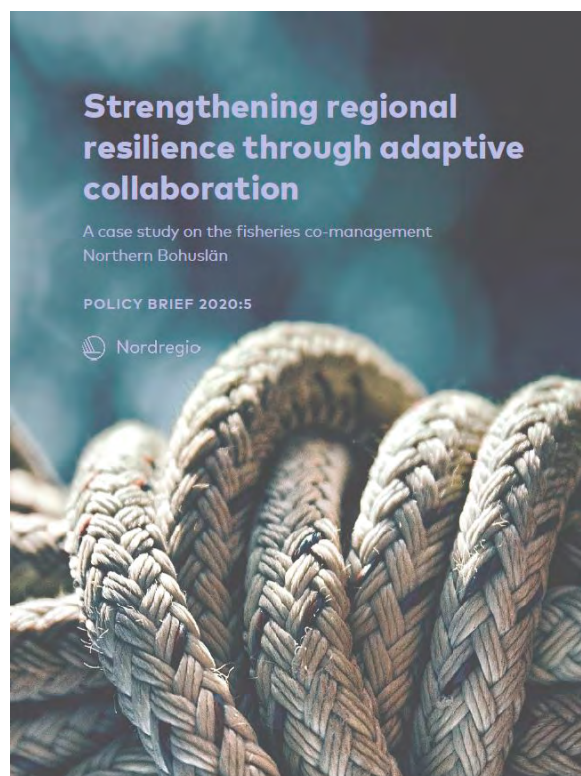
[The role of digitalisation for enabling blue growth in the cross-border region of Svinesund \(2019\) – a case study report](#)

Strengthening regional resilience through adaptive collaboration

The study explored how co-management arrangements within small-scale fisheries can play a key role in enhancing sectoral and regional resilience. The focus of the case study was on co-management Northern Bohuslän (Samförvaltning Norra Bohuslän) located in the Swedish part of the Svinesund cross-border area, which promotes sustainable local fisheries and blue growth on Sweden's west coast. Despite major challenges, 'multi-stakeholder collaborations'—such as co-management—demonstrate the potential for innovative knowledge transfer and strategic adaptation processes within the fisheries sector. The case illustrates how, under appropriate conditions, participatory local efforts can significantly contribute to sustainability and resilience. The policy brief (see below) presents findings on related challenges and opportunities, including recommendations on future directions for the co-management initiative itself, and more general suggestions for co-management as a means to promote sectoral and regional resilience in the Nordic Region.

Learn more:

[Strengthening regional resilience through adaptive collaboration. A case study on the fisheries co-management Northern Bohuslän \(2020\) – a policy brief](#)



3.3 A joint cross-border study: Effects of Covid-19 on cross-border regions

The cross-border study on the impacts of Covid-19 on the cross-border regions of Bothnian Arc and Svinesund aimed to provide a brief description of the immediate economic and social consequences of Covid-19 on cross-border activities in these cross-border areas, including challenges and opportunities regarding the post-Covid-19 future. The qualitative study draws on interviews with several relevant stakeholders in the cross-border areas and input from a joint web-conference in November 2020 hosted by the Bothnian Arc, the Committee of Svinesund, and Nordregio. The conference brought together perspectives on the impacts of Covid-19 from the European and Nordic levels, before delving into two case studies on the pandemic's effect in Bothnian Arc and Svinesund.

Learn more:

[A policy brief on the effects of Covid-19 on cross-border regions \(published in February 2021\)](#)

4. Synergy study: Nordic innovative and resilient regions

This report explored the synergies and interrelatedness between the major study themes of TG2 and identified ways in which different perspectives can be jointly addressed. Because the major study themes of TG2 all touch on different but interlinked perspectives of regional development, it could be useful to look at them together when designing regional actions and strategies.

For instance, digitalisation is seen as a trend—a threat or opportunity—within resilience thinking. Digitalisation can be a tool or a strategy for ensuring adaptation, developing skills, increasing productivity, and reducing environmental impacts. Likewise, the concept of resilience can help integrate systems thinking into the design of regional strategies to minimise risks and strengthen adaptation. Cross-cutting visualisations (Figures 4 and 5) were produced to assist decision-makers to integrate the different global perspectives and regional actions in fostering regional resilience.



Figure 4. Skills development, smart specialisation, and digitalisation reinforce resilience.



Learn more:

[Synergies between Nordic studies on resilience, digitalisation, smart specialisation and skills development \(2020\) - Working paper](#)

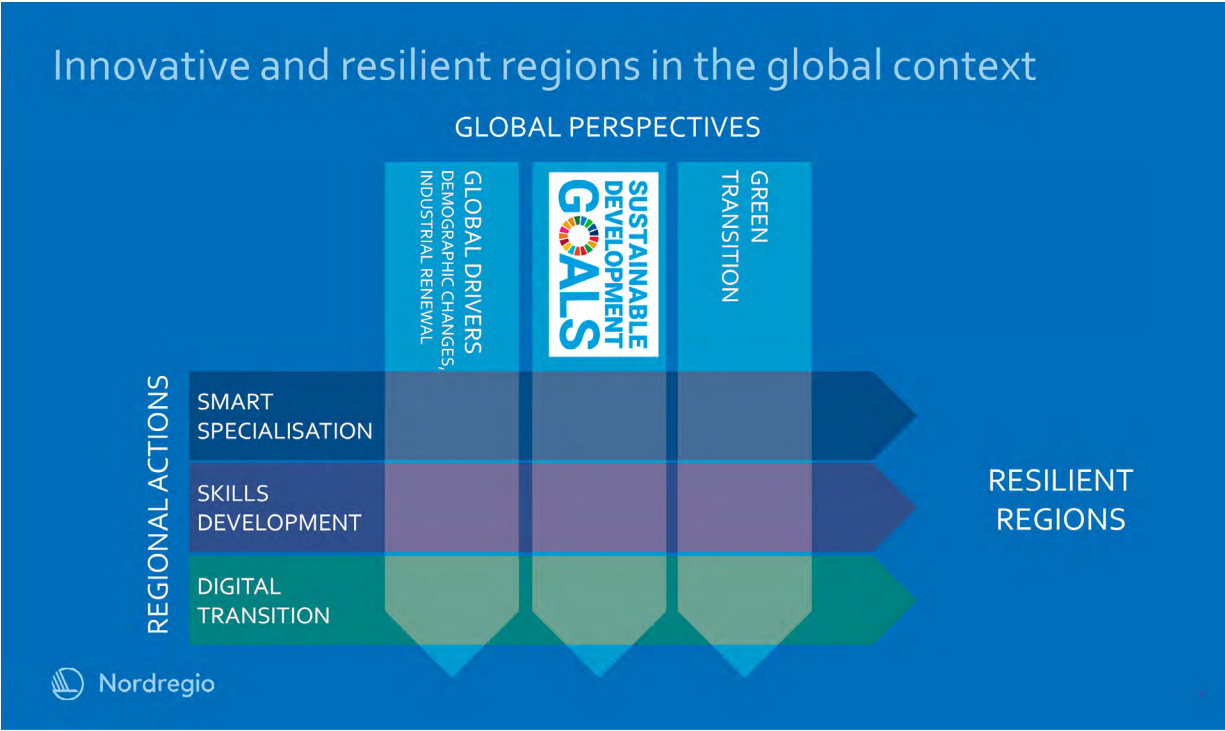
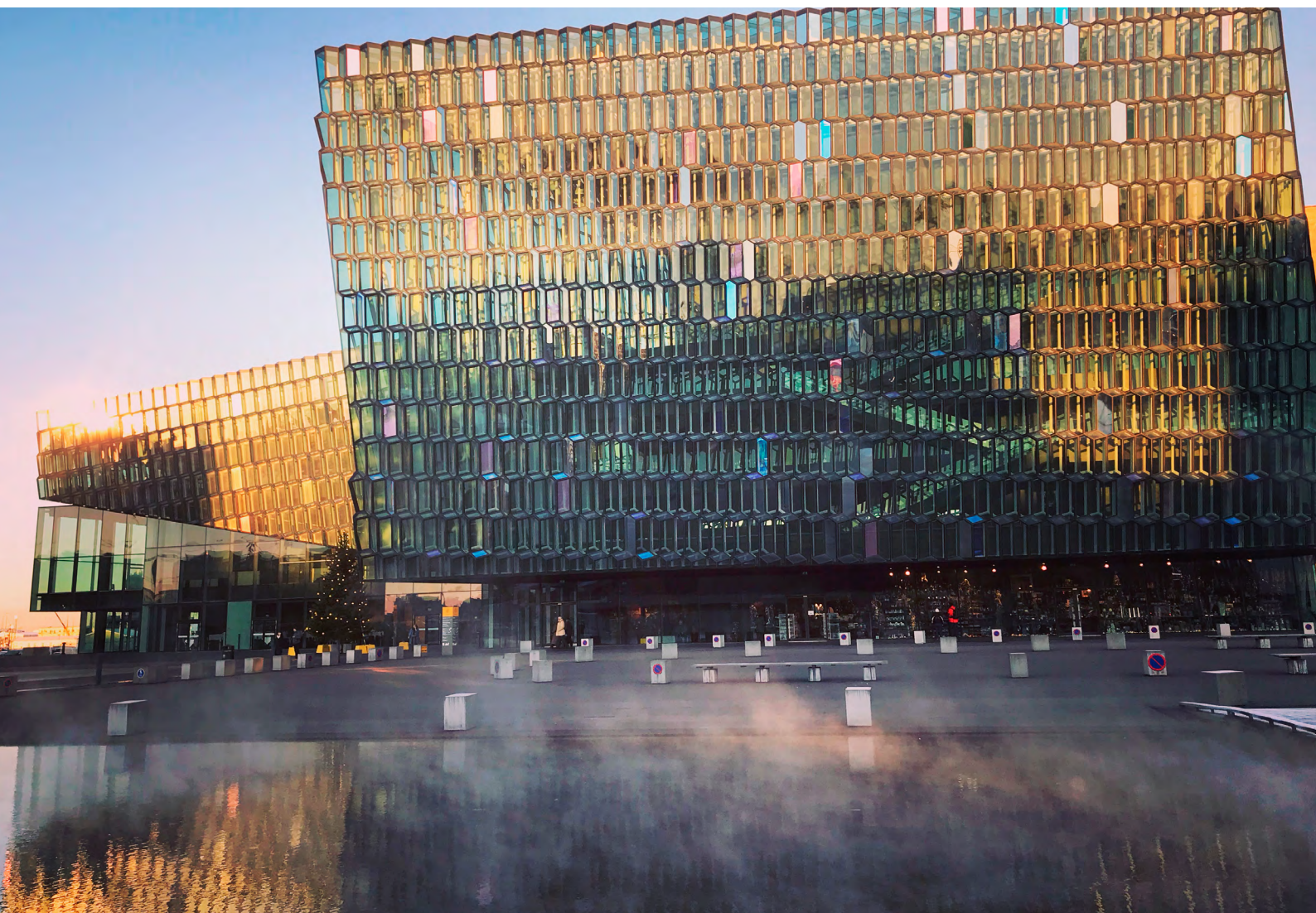


Figure 5. Innovative and resilient regions in the global context.



5. TG2 Dissemination and communication

Dissemination has been important for the work of the TG2 thematic group. A wide range of dissemination activities, both national and international, were undertaken by the Nordregio researchers and the communications team, with contributions from the members of the thematic group. The purpose of the dissemination activities was to share the outputs of the Nordic thematic group in the form of knowledge and policy recommendations with a wider audience of relevant stakeholders and decision-makers, to engage in policy discussions, and to contribute to enhancing Nordic co-operation.

The thematic group worked actively by encouraging early stakeholder engagement. This was done by presenting 'work in progress' at the dissemination events and by asking for written comments on discussion papers. This approach made it possible to contribute to the policy discussions in the right timing, while the results were fresh, and helped researchers to test and validate their results and receive additional perspectives from the stakeholders.

5.1 TG2 Roadshow

The TG2 Roadshow has been an essential part of not only the dissemination of research results but also of the dialogue between TG2, Nordregio, and Nordic and international stakeholders.

Further in the report, there is a snapshot of the main TG2 Roadshow events that took place during 2018–2020 (see table 1, p.28). A more detailed description is provided in the roadshow report, including the reflections on the key emerging issues and Nordic added value of the events.

The year 2019 was marked by extensive outreach activities including participation in external events and giving lectures based on the results

of the thematic group's projects (including not only Nordic events but also international events e.g. Colombia, Split, Washington D.C., Moscow, and Malta). Fortunately, a large majority of the planned Road Show events could be organised as physical events before the outbreak of Covid-19 in early 2020. The majority of dissemination activities in 2020 were organised as webinar series and web-conferences.

[Learn more:](#)

[Roadshow report \(published in February 2021\)](#)

5.2 Co-operation with the Nordregio Communications team

Nordregio's communications team has contributed to the final editing, layout, and dissemination of the TG research reports. The focus has been on providing high-quality accessible research results suited to different audiences and recommendations with policy implications. The communications material was prepared for physical and online discussions to boost cross-learning and active collaboration. To reach a diversity of stakeholders across policy, academic, and business arenas, the communications team used targeted outreach methods by offering a variety of products, such as scientific reports, short policy briefs, and visual materials. Some of the results were also summarised in one of the Scandinavian languages, increasing accessibility of information for the local actors.

Table 1. A selection of TG2 Roadshow events 2018–2020.

City (Country)	Time	Theme	Participants
Dalvík and Vestmannaeyjar (IS)	April 2018	Hela Norden Ska Leva—Nordic Co-operation	25
Tornio (FI)	February 2019	Regional, Economic, and Social Resilience in the Bothnian Arc Cross-border Region	18
Dalsland (SE)	April 2019	Thematic Groups: Findings from research on smart specialisation, resilience, and digitalisation	35
Ministry of Local Government and Modernisation (NO)	May 2019	Thematic Groups: Findings from research on smart specialisation, resilience, and digitalisation	12
Mariehamn (Åland)	May 2019	Attractive and Resilient Nordic Regions	20
Örnsköldsvik (SE)	May 2019	Nordic Green Growth and Regional Development	20
Barranquilla (Colombia)	May 2019	Forum on Local Economic Development in Latin America and the Caribbean	13
Bol (Croatia)	May 2019	Regional Economic and Social Resilience	26
Split (Croatia)	May 2019	Regional development in a post-crisis and post-globalised world	40
Santiago de Compostela (Spain)	June 2019	Smart specialisation: Lessons from the Nordic Region	15
Trondheim (NO)	August 2019	Resilience theme at the Omstilling conference	Appr. 100
Moscow (Russia)	October 2019	Smart specialisation: the case of Norway	75
Helsinki (FI)	October 2019	Thematic Group and Resilience	10
Isafjördur (IS)	November 2019	Digitalisation and digitalisation for blue growth	20 + 29 online
Reykjavík (IS)	November 2019	Skills for resilient regions: Nordregio Forum 2019	Appr. 150
Web-based	March 2020	Webinar series: Rural perspectives on digital innovation	Appr. 90
Web-based	September 2020	Skills and Resilience Seminar for Tillväxtverket	20
Web-based	November 2020	Strengthening cross-border communities: Lessons from Covid-19	Appr. 80
Web-based	November 2020	Nordregio Forum: Skills, matching, and future workplaces	Appr. 60

The TG2 studies were published and disseminated in various formats:

■ **Subsite.** Launched in February 2020, the subsite presents projects, publications, and members of the Nordic Thematic Group for Innovative and Resilient Regions: <https://nordregioprojects.org/innovation/>

■ **Publications.** Nearly 15 publications have been published since 2017, including reports, policy briefs, working papers, discussion papers, and executive summaries: <https://nordregioprojects.org/innovation-publications/>. Some of them attracted over 2000 readers (see Figure 6).

■ **Video campaigns.** 'Regional development in action' and 'Regional development – what changes with Covid-19'. The campaigns included interviews with researchers working in the thematic group studies. Among the most viewed, there are videos: '3 Ingredients for Smart Specialisation', 'What Makes Regions Resilient', and 'How do the Nordics work with digitalisation?'

■ **Story maps.** This format was used to present the study 'Rural perspectives on digital innovation:

[Experiences from small enterprises in the Nordic countries and Latvia'](#)

■ **Nordregio Magazine.** Nordregio magazine has 2300 subscribers. The studies under the thematic group's work were covered in the following issues: [NM #1.2017 Innovation and Governance](#), [NM #2.2017 20 years of regional development](#), [NM #1.2019 Regional Development in Action](#), [NM #4.2020 Skills for Resilient Regions](#), and [NM #3.2020 Post-pandemic regional development](#)

■ Other forms of dissemination included maps, newsletters, physical and digital events, and social media campaigns.

In addition, Newsmails were used to share achievements of the thematic group, invite stakeholders to events and have also been used for internal communication. Nine hundred seventy people have subscribed to the Regional Innovation topic that is based on the thematic group activities (as of October 2020). Figure 6 below shows several downloads of publications of the thematic group as of the end of December 2020.

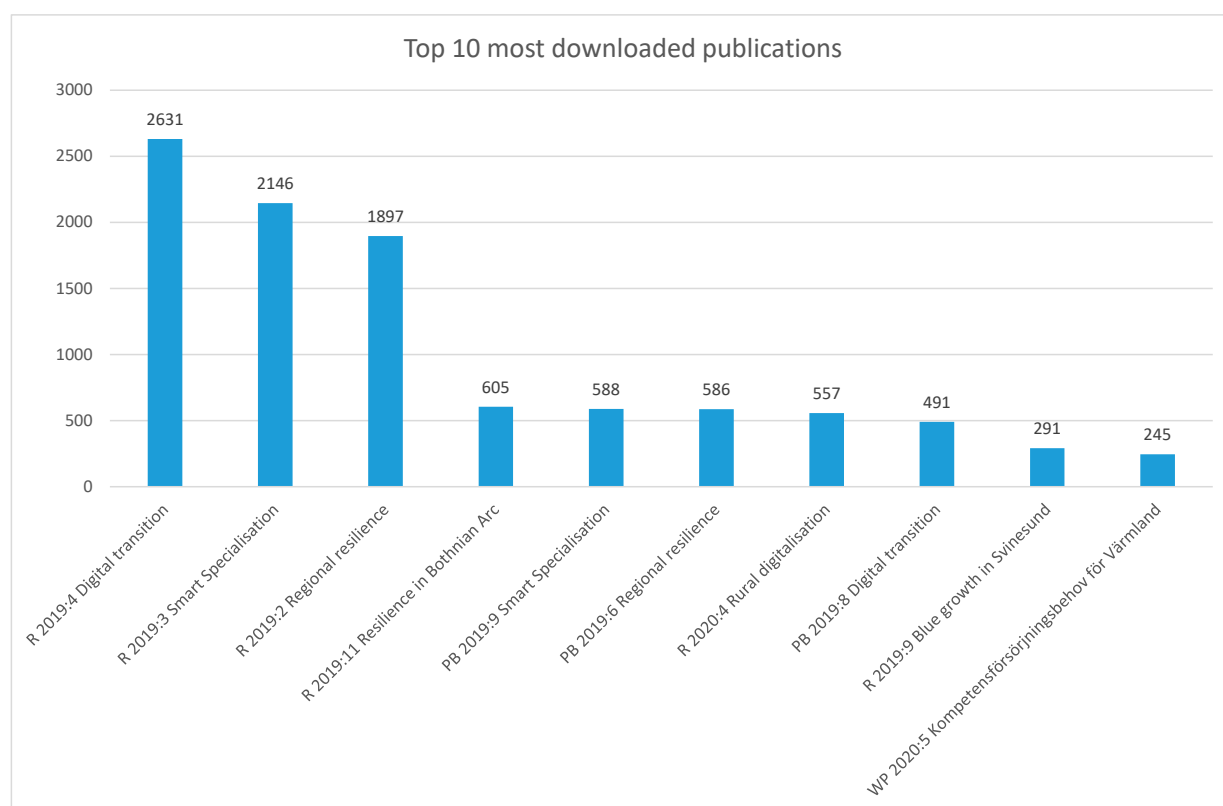


Figure 6. Top 10 most downloaded publications from the TG2. Source: Nordpub library (last accessed December 2020).

6. Major findings and conclusions

As the four-year programme period draws to a close and we look towards the Nordic Co-operation Programme 2021–2024, it is valuable to reflect on the results achieved by the Nordic thematic group for innovative and resilient regions 2017–2020. Project activities were expected to stimulate and develop innovative regional economies at all policy levels, as well as supporting and stimulating regional stakeholders to leverage their innovation and development potential. Interregional and international co-operation, dissemination of research results, and the creation of Nordic added value were also among the key objectives of the TG2 Programme.

The major TG2 activities were jointly discussed and decided by the TG2 group at an early stage of the four-year programme period. The selection of the prioritised research themes as a joint Nordic effort within the TG group set the positive, collaborative tone for the entire TG2 programme work. It ensured that the major research themes responded to the needs and expectations of stakeholders in the Nordic countries and regions represented by the TG2 group. The work of the TG2 group in identifying the major research themes and their efforts to mobilise the researchers to disseminate the findings at an early stage meant that the results of the various studies could be discussed with a broad range of stakeholders at the physical roadshow events already in 2019. The choice of topics, in particular the focus on resilience and digitalisation, turned out to be incredibly relevant in light of the situation with the Covid-19 pandemic in the year 2020.

The work of the thematic group was characterised by a high degree of interaction between the thematic group members and the Nordregio researchers. Ongoing dialogue between Nordregio researchers, TG2 members, and other relevant stakeholders was further enabled through the combination of TG2 activities, including e.g. joint workshops, study visits, and Road Show dissemina-

tion events. These interactions resulted in the co-creation of knowledge, creating a high degree of ownership of the results and ensuring their relevance to the Nordic decision-makers.

The major research projects on resilience, smart specialisation, digitalisation, and skills policies proved to be highly relevant in a Nordic context both as separate themes and when addressed jointly. The TG2 research work revealed and analysed the synergies and interrelatedness between the major study themes of TG2 and identified ways in which different perspectives can be jointly addressed in the Synergy project. This has provided new ideas and helped to deepen understanding of the added value of these themes for regional development. As an example, the TG2 analysis of skills policies at different geographical levels could place skills policies as fundamental elements in making regions innovative and resilient. Digitalisation is both a goal and the means to improve governance and quality of services, skills supply, and boost the green transition. Smart specialisation strategies can serve as a tool to integrate resilience perspectives and systems thinking, including the actions to address skills development. The key results of the TG2 synergy work were presented and discussed at the annual Nordregio Forum in November 2019 in Reykjavík, Iceland.

The dissemination activities sought to go beyond simply presenting the research results, and instead placed significant emphasis on the policy and practice implications of these results for the particular audience being addressed. Stakeholder feedback suggests that the research reports and policy briefs have been well received, not only in the Nordic countries but also in a broader international context. The TG2 visit to Brussels in March 2018 serves as an illustrative example of a strategy through which to increase the visibility and impact of the Nordic Thematic Group work beyond the Nordic Region.

Cross-border issues have been given a high priority in the work of the TG2. The cross-border studies on skills and regional resilience have been highly timely and provided valuable input for discussions especially in times of Covid-19 because the pandemic affected the cross-border communities in specific ways.

In conclusion, the TG2 was highly successful in implementing policy-relevant Nordic research on innovative and resilient regions. The close dialogue between Nordregio researchers, TG2 group members, and other relevant Nordic and international stakeholders was a core ingredient in the success of this work. The feedback received from the stakeholders suggests a need for continued research, communication, and matchmaking work to develop Nordic innovative and resilient regions further.

Road ahead

The Nordic Council of Ministers has a vision to make the Nordic Region the most sustainable and integrated region in the world by 2030. At the same time, the Covid-19 crisis has presented significant challenges for Nordic co-operation. In working to achieve the Nordic vision in a post-pandemic world, the research results of the TG2 thematic group in 2017–2020 remain highly relevant, both in and of themselves, and as a basis for further work.

Reinforcing regional resilience and preparing for

future shocks and disturbances remains a central priority, perhaps even more so now than when the TG2 work began. Smart specialisation in combination with sustainable development will remain high on the Nordic and international innovation policy agenda. Alongside and in combination with this, skills development is crucial for Nordic countries and regions in the future. Digitalisation is forcing Nordic countries, regions, and individuals to think and work in new ways. Though our ability to adapt to these changes is often slow, the Covid-19 pandemic has demonstrated our ability to adopt digital tools relatively quickly when the need arises. Finally, cross-border collaboration on these topics is incredibly important in the development of the Nordic Region into the most sustainable and integrated region in the world.

While the impacts of the pandemic may be long-lasting and severe, it is important to remember that crises also present opportunities to spark innovation and boost creativity. This innovation and creativity were demonstrated in several of the TG2 case studies, where Nordic actors spearheaded positive change for their communities after being forced to think in new ways. Continuing to share experiences and knowledge will be vital in supporting national and regional recovery from the pandemic, while at the same time fostering Nordic co-operation and striving towards the goal of being the most sustainable and integrated region in the world by 2030.



P.O. Box 1658
SE-111 86 Stockholm, Sweden
nordregio@nordregio.org
www.nordregio.org
www.norden.org

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