

# Rural perspectives on digital innovation:


Experiences from small enterprises in the Nordic countries and Latvia

**POLICY BRIEF 2020:03**



Digitalisation holds considerable potential for rural areas. It offers the promise of overcoming geographical distance, ensuring equal access to opportunity regardless of where people live. At the same time, rural and sparsely populated areas are thought to lag behind their urban counterparts when it comes to the provision of digital infrastructure and the development of digital knowledge and skills. These urban-rural disparities are often referred to as the digital divide and can prevent rural communities from unlocking the opportunities associated with digitalisation.

This Policy Brief explores strategies to overcome the digital divide, with a focus on increasing the competitiveness of small rural enterprises through digital innovation. It is based on a larger project which included desk-based research, a series of workshops held in rural locations around the Nordic-Baltic Region and a webinar series.

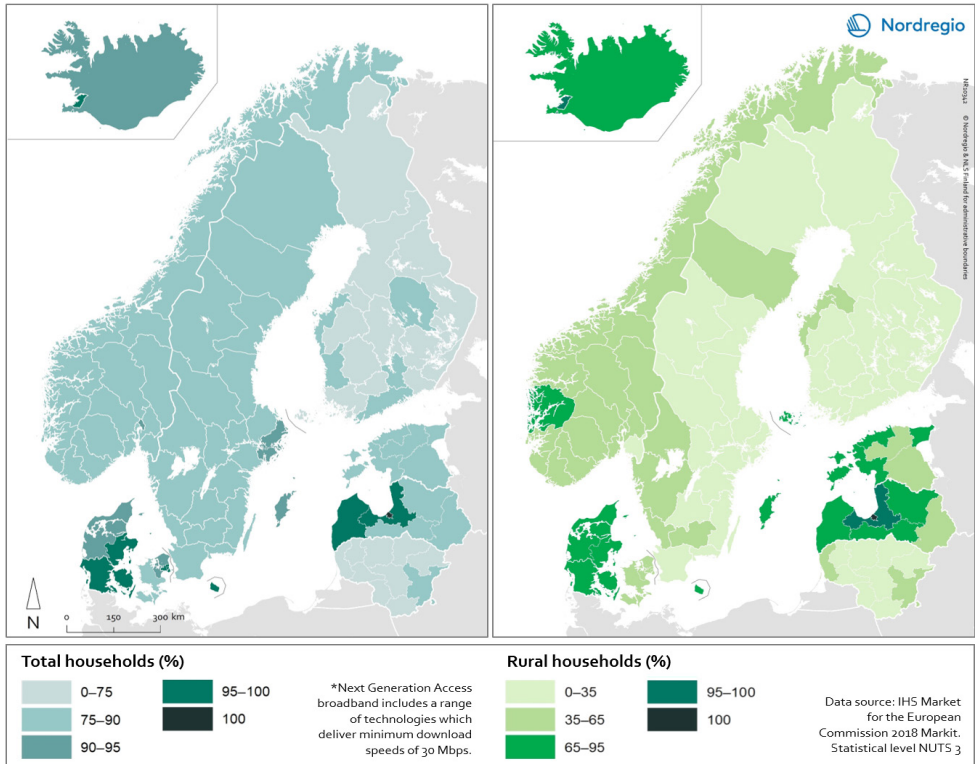
 Small and medium sized enterprises (SMEs) in rural areas face the prospect of a double digital divide. They are less likely to have implemented digital tools than larger companies and less likely to have access to people with high levels of digital competence than SMEs in urban areas. Addressing this is complex. It begins with the need to acknowledge the stage companies are at in their digital journey, and frame digitalisation in a way that small enterprises in rural areas can relate to. This might mean putting less focus on the digital tools themselves and more focus on the expected outcome of different opportunities.

These opportunities are likely to vary by sector, geography and even between individual businesses. As such, an individualised approach that generates a dialogue between technical experts and experts in traditional industries may be necessary.

This dialogue is vital in building trust. It also presents an opportunity for technical experts and industry experts to develop a common language through which to explore the potential for digital innovation in different sectors.

Alongside the need for tailor-made approaches within different sectors, it is crucial to develop locally-anchored initiatives to support SMEs in rural areas to engage with digitalisation. While the overall goals may be set at the regional, national or even the supranational level, the strategies to get there should be developed through a dialogue with the relevant local actors (e.g. local business associations). These actors play a vital role in getting local businesses on board with the need for change and can be far more effective in breaking down barriers to engagement (e.g. lack of time and resources).

## Household coverage of Next Generation Access broadband\* 2018

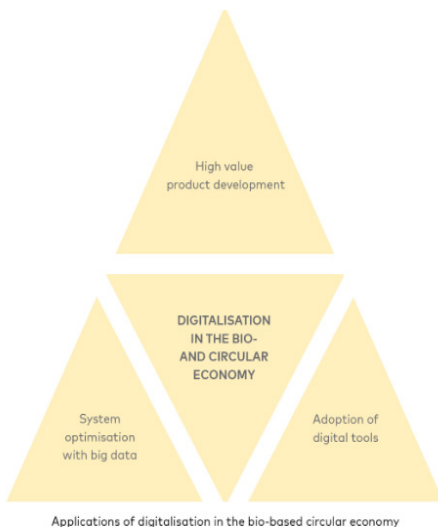


Cartographer: Oskar Penje

The maps shown here provide a clear demonstration of the digital divide from an infrastructure perspective. The first map shows NGA coverage for “all households”, with over 75% of households having access to NGA coverage in most regions for most countries, with the exception of Finland and Lithuania. The second map shows the same indicator but only includes rural households and reveals a strikingly different picture. In most of Finland and Lithuania, as well as many regions in Sweden, less than 35% of rural households have access to NGA coverage. Norway performs somewhat better, with NGA access for 35-65% of rural households in most regions. Iceland, Latvia and Denmark have both the highest levels of connectivity overall and the smallest urban-rural divide. NGA coverage includes a range of technologies, all of which deliver minimum download speeds of 30 Mbps.

## DIGITAL INFRASTRUCTURE

Digital infrastructure is the foundation for digital innovation and, as such, ambitious broadband connectivity targets have been set by all countries in the Nordic-Baltic Region. All the Nordic countries aim for total coverage at minimum download speeds of 100 Mbps at various points between 2020 and 2025. The Baltic States aim for 100% coverage at minimum download speeds of 30 Mbps and 50% (Latvia & Lithuania) or 60% (Estonia) coverage at minimum download speeds of 100 Mbps by 2020. Progress towards these targets has been good overall, however disparities remain, with households in rural and intermediate areas less likely than their urban counterparts to have access to a high-speed broadband connection. Ensuring equivalent access to infrastructure for all is a crucial step towards bridging the urban-rural digital divide. Thus, it is vital that all countries continue to work towards broadband infrastructure provision targets until every last household is connected.



## BIOECONOMY

A digital revolution is underway in the bioeconomy. This revolution has at least three dimensions including: 1) the adoption of digital tools as a vehicle for precision-use and monitoring (e.g. real-time monitoring of crops and livestock in farming practice); 2) the use of data to optimise systems in the circular bio-based economy (e.g. using data to determine spillage and waste, and use this information to integrate these streams new ways); and 3) data-driven innovation for high-value product development (e.g. the use of genomes in medicine; the development of biochemicals as replacements for petrochemicals). Ensuring that rural areas reap the benefits of these advances involves reframing of the conversation to focus not only on the digital tools themselves but on the development potential they present. This potential is multifaceted and includes the creation of new products, systems, services and even industries. Though based on rural resources, these opportunities may require new types of collaboration that strengthen urban-rural linkages. The digital transformation of the bioeconomy also has the potential to make jobs in traditional bioeconomy sectors appealing to a broader cross-section of people. This could result in job opportunities in rural areas for young people with high levels of education and may also make these sectors more appealing and accessible to women.

## TOURISM

In the tourism sector, digital media has become increasingly powerful in shaping tourist choices while at the same time creating a range of new business opportunities. Here, small enterprises found it easier to relate to the concept of dig-

italisation and were more likely to need guidance on how to use digital tools and determining which ones were best for them. At the same time, tourism actors recognised an inherent tension between the infinite potential of digital reach and the finite capacity of the natural environment. Thus, while growth in the tourism sector may promote economic development in rural areas, it is important that this development is consistent with the capacity of the local area to receive tourists. To address this, those responsible for promoting tourism at the different levels should work collaboratively with the local community to address the implications of increased digital media attention at tourism sites. This may include developing an understanding of what improvements might be necessary to protect a natural site in the event of larger visitor numbers (e.g. designated paths, signage, toilet facilities). It may also include working with local residents to explore potential business opportunities that may emerge in light of increased tourist numbers.

## **MANUFACTURING**

For small manufacturing companies, a central challenge was understanding how abstract concepts like digitalisation relate to their business. Getting over this hurdle requires initiatives that take a company-centred approach and promote mutually beneficial collaboration. Partnerships between companies or between companies and universities can be particularly important drivers of innovation, providing small companies with access to knowledge and expertise that may otherwise be out of reach. It is important however, that those providing the expertise are prepared to meet the company where they are, both physical-

***“There is something of a paradox in the very limited physical world we have and the unlimited digital world. In some way you try to push the unlimited into this very limited land area ... It is a huge logistical challenge to receive maybe 400,000-500,000 people in just a few years. How on earth are we going to do that?”***

*-WORKSHOP PARTICIPANT,  
FAROE ISLANDS*

ly (by visiting their production site) and metaphorically (by acknowledging where they are at on their digital journey).

## **NORDIC-BALTIC COOPERATION**

Interestingly, workshop participants in the different countries raised similar challenges. At the same time, support structures appear to operate within national boundaries. This suggests an untapped potential for cross-border collaboration and knowledge sharing that could provide a valuable source of inspiration for rural enterprises and boost digital progress in the region. It could also provide space for rural actors to contribute to the dialogue around Nordic-Baltic cooperation on digitalisation. Importantly, initiatives aimed at fostering such collaboration should respect the principals described above and be developed in partnership with local actors.



## POLICY RECOMMENDATIONS



- Continue to work towards broadband infrastructure provision goals until every last household has access.

- Acknowledge the stage companies are at in their digital journey.

- Frame digitalisation in a way that small enterprises in rural areas can relate to.

- Take an individualised approach that generates a dialogue between technical experts and experts in traditional industries.

- Develop locally-anchored initiatives to support SMEs in rural areas to engage with digitalisation.

- Focus on the development potential presented by digital tools and the data they generate.

- Work collaboratively with the local community to address the implications of increased digital media attention for tourism sites.

- Take a company-centred approach and promote mutually beneficial collaboration.

- Create opportunities for cross-border collaboration between participants in successful locally-driven digitalisation initiatives.

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Full project report: Randall, L., Vestergård, L. O. & Wøien Meijer, M. (2020). Rural perspectives on digital innovation: Experiences from small enterprises in the Nordic countries and Latvia . Nordregio Report 2020:4.

All project outputs are available at: <https://nordregioprojects.org/innovation-outputs/>

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