SHERPA
Rural Science-Society-Policy Interfaces

MAP Position Paper

# DIGITALISATION IN RURAL AREAS

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# 1. Summary and key messages

This MAP Position Paper deals with *digitalisation in rural Finland*. This is approached from the perspective of the Finnish Multi-Actor Platform (MAP) in the SHERPA project. *Digitalisation in rural areas* is one of the four main themes addressed by the SHERPA MAPs across the EU in the current SHERPA cycle of 2022. The Finnish MAP selected the theme of digitalisation as it has particularly high relevance for rural development and rural policy in Finland.

The paper focuses on the key development needs and existing policy interventions to better connect rural areas and rural populations with the digital society in Finland. Among the sub-themes addressed in the paper are challenges and opportunities concerning skills, capabilities, and the utilisation of information and infrastructure, as well as digitalisation as a way of increasing rural attractiveness and enabling the future development of rural areas. In this paper, the Finnish MAP also presents key recommendations concerning what types of policy initiatives are needed, along with key knowledge and research needs.

The main messages of this Position Paper are the following:

- Uncovering the potential of digitalisation for rural areas requires efforts to improve digital competence and to overcome digital exclusion so that digitalisation will benefit the whole society.
- Improving broadband infrastructure can strengthen the vitality and attractiveness of rural areas but it requires public support and coordination, as well as adaptation to local needs and conditions.
- Making policy work more efficient, coordinated, and based on cooperation across administrative and societal levels would help managing digitalisation efforts and alleviating digital exclusion.
- Funding should be better targeted to address emerging digital innovations and related phenomena.
- The role of people and their means to participate in a digital society need to be better acknowledged.
- Better evidence-based practice and decision-making requires more research and knowledge on the connection between digitalisation and rural development from numerous perspectives.

# 2. Introduction

In this Position Paper, the Finnish SHERPA Multi-Actor Platform (MAP) focuses on the theme of **digitalisation in rural areas**, which has become a central theme within Finnish rural policy. The importance of this topic is visible in various policy initiatives that have been launched in recent years to guide digitalisation development in rural Finland to better connect these areas to the digital society and economy. Among the main sub-themes addressed in the paper are challenges and opportunities related to digital skills and capabilities, as well as the utilisation of information and infrastructure. Digitalisation is also addressed in connection to rural attractiveness and as a catalyst for change for the future of rural areas.

The following four questions have guided the work of the Finnish MAP and the other SHERPA MAPs:

- What are the needs in Finland in relation to digitalisation?
- What are the policy interventions already in place, and what are examples of actions taken by local actors addressing these needs implemented in Finland?
- Which policy interventions are recommended by MAP members to be implemented at the local, regional, and/or national level? How can the EU support these interventions?
- What are the knowledge gaps and which research projects are needed?

In chapter 3, the current situation concerning digitalisation in rural Finland is discussed based on previous studies and evidence. The purpose here is to describe the prevailing conditions and trends over time to illustrate the context against which recent policy initiatives have been launched. Chapter 4 presents the position of the Finnish MAP regarding opportunities, needs and challenges, as well as recommendations on the types of further policy initiatives and measures that are needed, along with needs for research and currently existing knowledge gaps. Chapter 5 summarises the main conclusions and provides a summary of the most important recommendations.

# 3. Current situation based on background research and evidence

**Finland is among the global and European leaders in digitalisation.** This can be observed in many measures. For instance, according to the Digital Economy and Society Index (DESI, 2022) report, Finland is one of the frontrunners within the EU regarding digital skills of the population and has one of the highest proportions of ICT specialists (7.4%) in the labour force. Finland has one of the most advanced digital economies in the EU, ranks among the highest in digital transformation of businesses, including SMEs, and is among the top performers in the integration of digital technologies. Finland also scores top in e-governance, with more than 90% of internet users (aged 16–74) interacting with the public administration through government portals. Nevertheless, these national averages conceal quite considerable (territorial) differences within the country (DESI, 2022).

Data by the Finnish Transport and Communications Agency Traficom (2022) shows **noticeable differences in broadband availability across Finnish regions**, both regarding optical fibre as well as regarding 100 Mbit/s internet speed. For instance, Åland enjoys an almost 100% coverage in both regards, whereas in Lapland only 50% of all households have access to 100 Mbit/s speed and 17% to optical fibre (see more regional details in Figure 1). Finnish interregional differences are particularly noticeable in a European comparison and, according to the DESI (2022) report (see thematic chapters), **Finland has the largest urban-rural differences** in next generation access (NGA) broadband coverage and fixed very high capacity network (VHCN) coverage within the EU. Disparities in the quality of digital infrastructure are also highly noticeable between different types of municipalities: urban municipalities have the most advanced digital infrastructure, while that of sparsely populated rural municipalities is the least developed (see Annex 2).

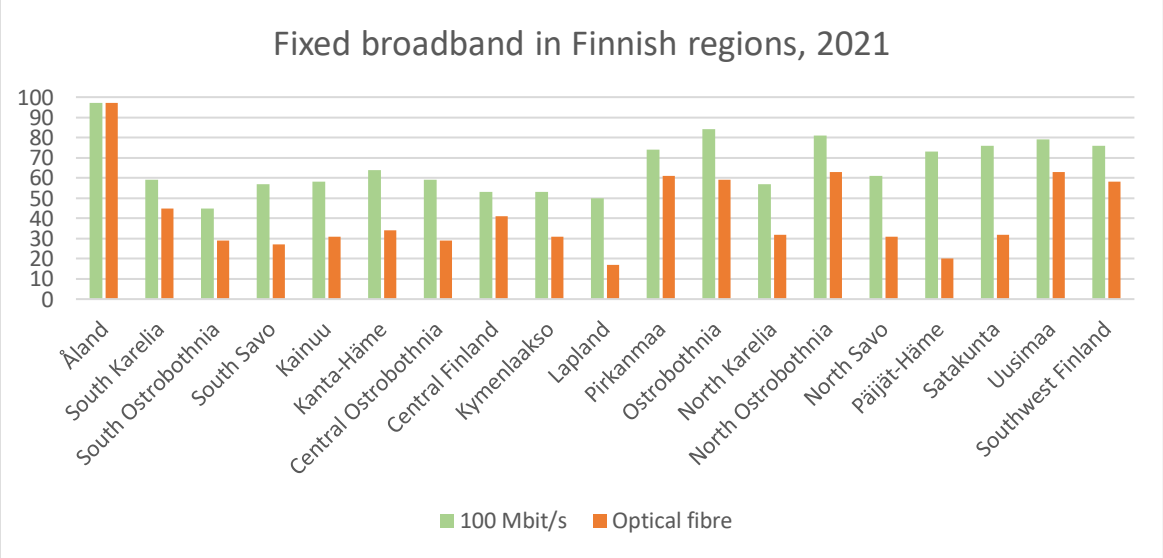


*Figure 1. Fixed broadband (100 Mbit/s and optical fibre) in Finnish Regions in 2021. Source: Traficom 2022.*

The risk of **digital exclusion also has a regional dimension**. The share of people not using internet increases as the degree of urbanisation of the municipality decreases. For instance, as shown in Figure 2, the proportion of people who do not use the internet was 16% in rural municipalities in 2019, compared to 6% in urban municipalities, highlighting a noticeable urban-rural divide (see also Ahola & Hirvonen, 2021).

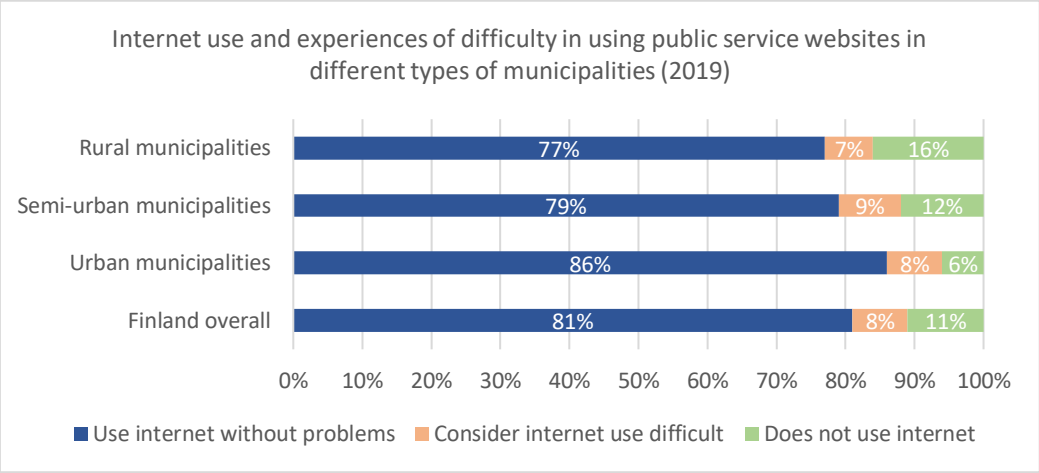


*Figure 2. Internet use and experiences of difficulty in using public service websites in different types of municipalities, 2019 (Adapted from Ahola & Hirvonen 2021, source: Statistics Finland).*

There are not only considerable differences regarding fixed broadband between but also within regions. Lehtonen (2020) estimated the territorial impacts of the expansion of broadband infrastructure on the population development in Finland during 2010–2018. Relying on spatially detailed grid-level statistics (1 km × 1 km) on the availability of broadband, the study evaluates the impact of broadband availability on rural development and demonstrates that the **availability of broadband reduces depopulation** in remote and sparsely populated rural areas. An impact assessment based on the Difference-in-difference (DiD) regression analysis shows that areas with broadband access have lost on average 2.2% less population than areas without it. From this perspective, Finnish telecommunication policy can be regarded as successful, encouraging expanding broadband infrastructure in rural areas. Furthermore, previous research and development projects have found that the availability of **broadband increases the attractiveness** of specific locations from the perspective of business development, (including agriculture) and when choosing a place to live (Kurvinen et al. 2018; Antikainen et al. 2017; Honkaniemi & Luoto 2016). In sum, fast internet connections improve the attractiveness of rural areas as places to live and work, especially for young people, highly educated people, and women (Kurvinen et al. 2018).

A mapping of digital services was carried out in a study by the Ministry of Finance (2020) to discover what types of digital services are provided and how, what type of user support is available and whether an accessibility statement is available on the official website. The study examined the public municipal websites and their digital services from the viewpoint of customers using the service and discovered that municipalities with higher populations exceed others in both quantity and quality of their digital services.

According to a study conducted by market research company Taloustutkimus in 2021, digitalisation constitutes one of the most important development areas in cities and municipalities. Municipal leaders considered improvements in the quality and accessibility of services, cost-efficiency and speed as the main benefits of digitalisation, yet only 22 of all municipalities surveyed had a strategy on digitalisation. Fragmented systems and digital infrastructure, as well as lack of personnel and financial resources were considered as the biggest barriers to advancing digitalisation. (Kivra, 2021)

Overall, it is evident that although Finland overall ranks high on many measures of digitalisation, there are significant territorial differences. From a rural development perspective, there are several challenges, as well

as existing interventions and initiatives to deal with them and harness the untapped potential of rural areas. These are examined more closely in the next section.

# 4. Position of the Multi-Actor Platform

This chapter presents the position of the Finnish MAP concerning the key opportunities, needs and challenges related to digitalisation, recommendations on what types of policy interventions and actions are needed, and current research needs and knowledge gaps.

## 4.1. Identified needs

The focus in this section is on the main needs and challenges related to digitalisation of rural areas in Finland. First, the section presents and discusses key policy initiatives launched in recent years, particularly at the national level, followed by the more specific needs in Finland, and interventions that have been implemented to deal with these challenges at different levels of governance and particularly at local level and in rural areas. The key question addressed here is: *what are the key needs in rural Finland regarding digitalisation?*

**Key national policy initiatives and actors**

Various policy initiatives have been launched in Finland in recent years to guide digitalisation development and rural digital transformation. One important strategic document is the current Government Programme (Finnish Government, 2019), stating that Finland aims to be a pioneer in developing and using the opportunities offered by digitalisation and technological development across administrative and sectoral boundaries. The aim is to increase the technological and digitalisation capabilities of the public sector and to promote cooperation between the public and private sectors.

To implement the objectives of the Government Programme, a specific Programme for the Promotion of Digitalisation (Ministry of Finance, 2022) for the years 2020-2023 has been drawn up. It provides more knowledge and better coordination to achieve more strategic cooperation structures for impacting regional and rural development in a more balanced way. In response to this, the Coordination Group for Digitalisation was established (Ministry of Finance, 2022a). It was tasked with strengthening interministerial cooperation, coordination and the flow of information on digitalisation and the digital economy. The permanent interministerial working group is led by the Ministry of Transport and Communications, the Ministry of Finance and by the Ministry of Economic Affairs and Employment. Its duties include maintaining a digital transformation portfolio on current state-of-affairs of Finnish digital and data policy and serving as a contact point for citizens and stakeholders.

At the national level, the Ministry of Finance is one of the main actors in promoting digitalisation and one of its current key initiatives is a Situational Awareness, concerning the digital development of Finland (Ministry of Finance, 2022b). The work provides a snapshot of the state of affairs of digitalisation based on various indicators and expert views. The Ministry of Finance also coordinates an annual funding call for municipalities and joint municipal authorities for projects promoting digitalisation.

Other essential actors include the Association of Finnish Municipalities (*Kuntaliitto*), which has a role in monitoring and promoting the digitalisation of municipalities, the Digital and Population Data Services Agency, providing digital support, and the Finnish Information Society Development Centre TIEKE, involved in providing a blueprint for a digital future. Examples of related initiatives include a mapping of digitalisation and its current challenges and opportunities in Finnish municipalities carried out in 2021 (Association of Finnish Municipalities, 2021). Another example is the Järjestödigi survey carried out annually since 2017 by the Finnish Information Society Development Centre TIEKE, focusing on the development of digitalisation, digital skills, communications and social media within civil society organisations in Finland (Järjestödigi 2020).

Another key strategy currently under preparation is Finland's Digital Compass, a national strategic roadmap guiding national digitalisation and data economy transition development (Finnish Government, 2021). This document corresponds to the EU Digital Compass (2019) and focuses on the same four areas outlined in the EU strategy (skills, digital infrastructure, digitalisation of businesses, and digital public services). Finland's Digital Compass includes national targets related to the EU objectives as well as goals and themes that complement the EU Compass and are necessary for accelerating Finland's digital development until 2030.

Digitalisation is a theme that features prominently in Finnish regional policy. This can be seen in the Government's Regional development decision 2020–2023 where sustainable development and digitalisation are cross-cutting themes. For instance, under the theme "Building sustainable communities with good connections", one of the strategic focal points concerns promoting digital services and the availability of communications links to support business and work independent of location. Here, it is also stated that the tools provided by regions, central government and the EU would be utilised to boost digitalisation in a coordinated manner. (Finnish Government, 2020)

From a rural development perspective, the Rural Policy Programme for the years 2021–2027 (Kattilakoski et al., 2021) is key. One of its focal points is the new knowledge-based economy, and within it, the role of digitalisation. Digitalisation and location independence are linked with the ongoing transformation of work and new ways of organising, producing, and using services. Ensuring comprehensive telecommunication connections in rural areas is a part of the programme's theme "Strengthening competitiveness and vitality." The programme stresses equal access to high-speed telecommunication connections as key for reducing the disadvantages of geographical distances for business and education and for the provision of services, as well as for enabling remote work, entrepreneurship, and learning. Fibre optic connections may contribute to positive demographic and business development, whereas high-speed and high-quality broadband connections are regarded as an investment especially in rural vitality. (Kattilakoski et al., 2021)

The advisory board "Digi arkeen" (Digital everyday), led by the Ministry of Finance (2020a), supports dialogue as a platform that links NGOs, researchers, public authorities, and the Ministry of Finance, which is the ministry in charge of digitalising public services.

**Addressing the needs**

Building broadband in areas without viable market conditions is one of the major unresolved problems in Finland and requires multi-level governance solutions. As previously mentioned, in Finland there are large regional disparities in the availability of broadband (100 Mbps download speeds) within and between municipalities and regions. For instance, ten municipalities have no 100 Mbit/s connections, and in 31 municipalities the connection is available to less than 10% of the population, while in some municipalities the coverage is even as low as 0%. The conditions in Eastern Finland are also affected by the frequencies used by Russia, which especially distresses 5G connections in a band around 1,300 km long and 60 km wide and may affect the future performance of this network (Wirén et al., 2019).

In terms of telecommunications connectivity, much remains to be done to harness digitalisation throughout the country, for example to improve accessibility and availability of services, and to renew skills and industries. Another need is to ensure that Finns have equal opportunities to participate in the digital society and the digital economy, regardless of where they live or where their businesses are based. 5 million Euros have been earmarked to support broadband construction and, for the time being, 32 million Euros from the EU Recovery Package (RRF). During the 2014–2020 programming period of the Rural Development Programme for Mainland Finland, the village network investment measure has been an important mechanism for financing the construction of local "village networks" (100 Mbps symmetrical connection) in rural areas where connections would not be provided on a commercial basis (Ministry of Agriculture and Forestry, 2021).

Similarly, the European Agricultural Fund for Rural Development (EAFRD) supports projects in rural areas where connections are not provided on market terms. Decisions on implemented projects are extracted from

a public consultation as well as of Traficom's Monitoring service, which relies on geographic information, for example, on the coverage and speed of mobile broadband throughout the country. With funding from the 2014–2020 programming period and from the EU Recovery Plan (16 million Euros in 2021 and 2022), around 120 projects have been implemented, with budgets ranging from 10,000 Euros to over 1.8 million Euros. More than 5,000 km of fibre optic lines have been built.

As broadband support is funded through different instruments, coordination is vital. In response to this, Finland's national Broadband Competence Office (BCO, 2022) provides information on broadband, fibre and network construction opportunities and also coordinates broadband subsidies. The BCO is a collaborative virtual organisation comprised of the Ministry of Agriculture and Forestry, the Ministry of Transport and Communications and the Finnish Food Authority and Traficom.

The challenges and opportunities from a governance perspective, in terms of skills and preparedness, concern both the administrations themselves and citizens, but also the private sector, including businesses ranging from farms to tourism. Developing digital skills is essential also for improving cyber security, crisis preparedness and the deployment of new administrative tools, as well as for business development and growth, inclusion and equality. The key is for everyone to keep pace with the development. Addressing structural issues, from EU legislation to national legislation and agreements between municipalities and the third sector, is crucial for the capacity of administrations to promote digitalisation in rural areas. Currently, more knowledge is needed regarding best tools and guidelines to promote digitalisation at local levels.

Services are crucial for the vitality and attractiveness of rural areas. In connection to this, digitalisation can enable better and more efficient public and private services (e.g., social services, commercial services, school and education, hobbies) such as multi-service centres and "one-stop shops". Remote working hubs and different networks are important for improving the connectivity of rural communities, and the development of sharing economy platforms may enhance the efficiency of digital services. The initiative Etätyöpisteet elinvoiman kasvualustoina (2021) seeks to support multi-locality by creating a network of remote working hubs spanning throughout Finland. These remote working hubs should enhance local vitality and knowledge and act as platforms for knowledge sharing and development, encouraging new business models.

Location-independent work, remote work and remote working hubs, distance learning and, more broadly, multi-locality have become topical issues in Finland in recent years. The role of the private sector in developing job opportunities in rural areas in the context of the knowledge economy and multi-locality is an important issue on the policy agenda. The Government's Spring 2022 Decision of Principle on the promotion of multi-locational work, study and housing contains objectives and proposals that are strongly linked to the digitalisation of rural areas (Finnish Government, 2022). While no new budget is linked to the decision, the guidelines will be implemented as part of official work and ongoing development projects.

Digitalisation is linked to several unanswered questions regarding the future of rural areas, both as a tool and as a catalyst for change. However, unless digital exclusion is more explicitly addressed, there is a risk that benefits continue to agglomerate to a small group, instead of benefitting the whole society. Digitalisation can help promote a transition to a more just and sustainable society, for example through smart energy communities and solutions, e-inclusion and co-creation. To achieve this goal, it is crucial to bring people together to discuss the needs and views of different population groups, acknowledging aspects such as gender, age, and ethnic background. Inclusive dialogue is necessary for revealing challenges such as the male dominance in the knowledge economy. More broadly, tapping into the full potential of digitalisation to benefit different parts of society in a fairer and equal way remains as a key challenge.

## 4.2. Existing interventions and actions

In order to succeed in the digitalisation and data economy transition of Finland as well as in order to guide digitalisation development, several initiatives and interventions have been launched at different levels, ranging from the national to the local level. Several of the key national level interventions were addressed in

the previous section, so this section focuses more on initiatives and actions to promote rural digitalisation at local levels. The key question addressed here is *what are the policy interventions already in place and what are examples of actions taken by local actors addressing these needs implemented in Finland?*

**Projects, networks, and local interventions**

As previously discussed territorial disparities in broadband coverage, both between and within regions, are a major challenge, making it crucial to enable equal participation in the digital society and economy, irrespective of location. As highlighted in the previous section, both national and EU funding have been important for implementing broadband, fibre and network construction projects in rural areas where such infrastructure is lacking. The construction of critical infrastructure places different regions and areas in unequal positions, depending on the activeness and competence of actors at the local level (Honkaniemi & Luoto, 2016). This is a major challenge for Finnish rural areas, where only few local companies are constructing infrastructure and there is a lack of skilled entrepreneurs. One exception is Siikaverkko (2022), operating in the regions of Kainuu and Northern Ostrobothnia. This cooperative is currently working on expanding high-speed, reliable fibre-optic connections in the regions to strengthen the vitality of areas.

In Finland, the concept of smart village has been a central theme in rural digitalisation. It has been promoted for example by the Smart Village thematic working group (2019–2020) of the Finnish Rural Network and by the smartest village in Finland competition (Rural Network of Finland), and it is also central for LEADER work in the forthcoming CAP programming period (2023–2027). Another example is the recently founded thematic group for smart rurality in the Swedish-speaking rural areas of Finland named "Smarta landsbygder i Svenskfinland och Norden" (part of the Rural Network). The smart rurality concept is also present in several other networks, projects and activities that have emerged in recent years.

Several networks are important for promoting digitalisation in Finland's rural areas. One example is AgriHub (2021), a farm-business competence network that gathers Finnish agriculture and horticulture operators such as farmers, advisors, educators, and researchers to collaborate, with the aim of improving farmers' long-term profitability, sustainability and risk management. The network focuses on stronger business management skills to support smart farming uptake and a better use of data sources. Another network is TUUMA (2022) promoting new opportunities for work and entrepreneurship in Finnish rural areas as part of the sustainability transition. The network highlights rural solutions for entrepreneurship and a sustainable society to strengthen skills and increase competitiveness and vitality in rural areas. The objectives and measures of TUUMA are woven around different thematic clusters, such as location independence, knowledge transport and broadband. Its activities aim to secure access to employment and business services, improve access to continuous learning and promote the spread of location-independent work in rural areas. TUUMA is part of the Rural Policy Council network, which implements the overall rural policy programme and provides support to policymakers on key rural policy issues.

In 2021, the Rural Policy Council (MANE) under the theme of sustainable rural (digital) knowledge economy funded a number of research and development projects. The purpose of these projects is to investigate the roles of businesses and civil society in relation to the knowledge and digital economy, place independence and multi-locality. These projects include: MAASTIETA, focusing on the knowledge economy and its different directions, options and conditions for development; the UUTTU project addressing the opportunities for new types of employment in rural areas from the perspective of women; the MATTI project dealing with multi-locality, place independence and the rural knowledge economy (Aro & Ruokonen, 2021); JÄRKEVÄ (2021) aiming to develop NGO's skills to exploit the potential of technology, by exploring the role and activities of civil society organisations as users and promoters of digitalisation with the help of workshops and live events; and the HYMY network (2021) which seeks solutions to curb digital exclusion in cooperation with the LEADER group of Northern Savo and the Ministry of Justice.

**LEADER and Local Action Groups (LAGS)**

Throughout Finland, there is an extensive network of 54 rural development societies (52 in 2023–27) also known as local action groups or LAGs, making Finland one of the most prominent countries in Europe in LEADER **LAG work** (see Figure 3). Finnish LAGs are registered associations that develop rural areas by funding local rural development projects and supporting local enterprises. The LAG Network Unit of Finland links these active development groups together on the national level and their work is based on extensive co-operation.

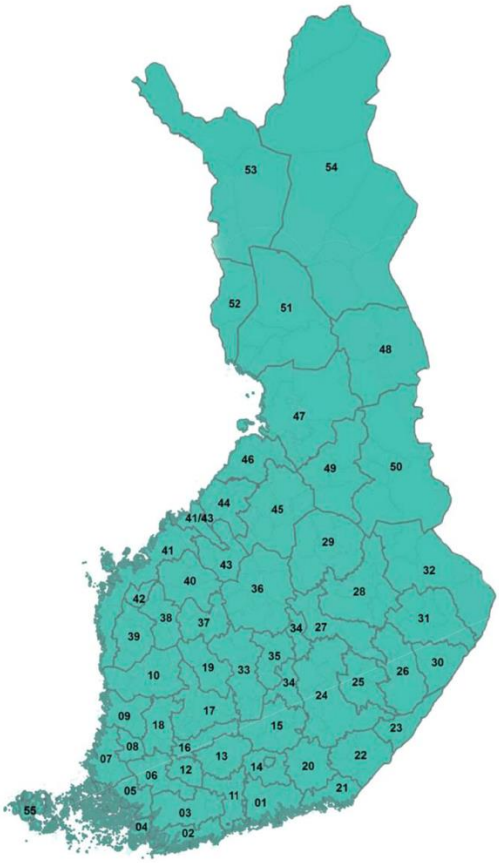


*Figure 3. Finnish LEADER Local Action Groups 2014-2022. Source: Leader Suomi (2022)*

Examples of activities organised by these groups are digital cafés, managed by the LEADER groups Aisapari, Kuudestaan, Liiveri and Suupohja in Southern Ostrobothnia through the KYLILLE II project (KYLILLE, 2017), where older adults are taught "hands-on" how to use smartphones, important applications, and new communication methods to "stay in touch" (see also KYLILLE, 2021). The AVOTDIGI project (application pending) aims to strengthen the digital capital of rural residents and communities and to increase interaction between the residents and public administration in land use and planning. Experiences from residents about, for example, the sense of place, its drawbacks or development needs, or valuable natural and cultural sites are to be collected through participatory GIS.

For the upcoming programming period to be implemented in 2023–2027 (under evaluation during the time of writing), 52 LEADER groups have applied to implement more than 450 smart village strategies or projects throughout the country. The upcoming 52 LEADER strategies also provide a good overview of regional differences in the development of broadband in all of rural Finland. Importantly, they discover perceived development needs as well as strategies to overcome current weaknesses. A number of examples from the LEADER strategies in different parts of rural Finland are highlighted below.

Covering a bilingual region in Southern Finland, the LEADER group *Pomoväst* sees great potential in developing different digital solutions for all age groups, including remote work, and increased international business opportunities for young people. *Varsin Hyvä* from Western Finland views digitalisation and virtual technologies as potential enablers for multi-local living, remote work, and location-independent recruitment via promoting new forms of work and service solutions and wider recruitment of skills and talents. This is a highly important task, also raised in the Varsinais-Suomen Maaseutuluotain study, emphasising that the transfer of new skills to the rural economy is weak (Saukkonen & Tiittanen, 2020). For *I samma båt* (Western Finland), covering an area with a vast archipelago and islands, digital connections are one of the key development needs and strategic focal points. Activities will include building a fibre optic network, a remote working hub, and radio links to islands where fibre connections cannot be built. Increasing digital services also introduces a greater need for more training in using them. According to the *Vaara-Karjala* group from Eastern Finland, LEADER groups can play an important role in providing or financing such training. *Tunturi Lappi* - a group from sparsely populated Lapland – estimates that services provided "at a distance", either partially or fully, increase equality, quality of life, and opportunities for work, study, learning and leisure for rural residents.

Table 1 – Examples of actions involving and implemented at local levels.

| Initiative | Key Information |
|---|---|
| Siikaverkko | Siikaverkko is a cooperative working on expanding high-speed, reliable fibre-optic connections in the regions of Kainuu and Northern Ostrobothnia. It was founded in 2013 and currently has over 1,000 members. |
| AgriHub | Agrihub is a networking project coordinated by the Natural Resources Institute Finland (Luke) that gathers Finnish agriculture and horticulture operators such as farmers, advisors, educators, and researchers to collaborate, with the aim of improving farmers' long-term profitability, sustainability, and risk management. It is part of the rural network's (Maaseutuverkosto) thematic group for green growth during 2021–2022. |
| Finland's Smartest Village | The purpose of the "Finland's Smartest Village" competition was to uncover new solutions for providing services in areas such as healthcare, education, food and energy production, mobility, retail, leisure, and culture. 33 villages from all over Finland participated in the competition organised by the Rural Network (European Agricultural Fund for Rural Development) in cooperation with the numerous partners ranging from the EU-level to the national, regional, and local levels. The competition ended in 2019 with Vuolijoki from the sparsely populated region of Kajaani winning the competition. The jury pointed out the visibility of digitalisation in everyday life in the village. |
| KYLILLE II | The overall aim of the KYLILLE II project was to increase inclusion, well-being, and health among rural residents, improve the quality and effectiveness of services and reduce regional disparities between rural and urban areas. Among the more concrete activities organised were digital cafés, where older adults were taught to use smartphones, important applications, and other digital communication tools to promote the use of digital devices and services in everyday life. Project activities were organised by local LEADER groups in Southern Ostrobothnia during 2017–2022. |
| TUUMA | TUUMA is a networking project for promoting new opportunities for work and entrepreneurship in rural Finland. The network highlights rural solutions for entrepreneurship and a sustainable society, to strengthen skills and increase competitiveness and vitality in rural areas. The network includes the University of |

| | |
|---|---|
| | Helsinki's Ruralia Institute, the University of Turku's Brahea Centre, the University of Vaasa's Innolab platform and the Aisapari LAG. TUUMA is one of the networks operating under the Rural Policy Council network 2021–2023. |

## 4.3. Recommendations from the MAP

The SHERPA project has the goal of developing recommendations for future rural policies and research agendas. In this chapter, the Finnish MAP presents its main recommendations concerning what types of policy initiatives and measures are needed along with key research needs and currently existing knowledge gaps.

The main question addressed in section 4.3.1 *is which policy interventions are recommended by the Finnish MAP members to be implemented at the local, regional, and national level and how can the EU support these interventions? Section 4.3.2 addresses current knowledge gaps and what type of research is needed?*

### 4.3.1. Recommendations for future rural policies

As highlighted previously, **digitalisation** can be both **a tool and a catalyst for change** in addressing several unresolved challenges that rural areas in Finland are witnessing. In order to fully tap into the opportunities of digitalisation for the benefit of rural Finland, several key aspects need to be acknowledged:

Investing in **improving digital skills and competence is fundamental for uncovering the potential of digitalisation** and therefore must reach all members of society. Only then can we ensure reaching aims such as diversifying and developing the rural economy, finding new employment opportunities in rural areas, deploying new administrative tools, providing better and more efficient public and private services, and strengthening social participation. Recent times have also highlighted the importance of digital competence regarding cyber security and crisis preparedness.

**Opportunities of digitalisation can only benefit the whole society if we can overcome digital exclusion.** From the perspective of inclusion and equality, it is important to ensure that everyone can keep pace with development, as society becomes increasingly digitalised. The preconditions for participating in the digital society and economy differs between different population groups, and various aspects such as age, gender, socio-economic and ethnic background, impact it. If digitalisation inequalities and exclusion are not fully addressed, there is a risk that digitalisation will only benefit certain population groups and areas. Hence, it is crucial to bring different user groups together to gain an understanding of how the views, needs and preconditions differ between population groups. Additionally, public cross-sectoral cooperation at all policy levels and across sectors is essential for building strong networks of participation.

**National attention towards improving broadband infrastructure is essential, as this is key for strengthening the vitality and attractiveness of rural areas** and overcoming regional differences. At the moment, the regulatory requirement of a fixed municipal contribution represents a considerable burden to certain municipalities and as such endangers reaching national and regional goals regarding issues such as digital and green transition and economic development. While Finnish rural areas are often in a disadvantaged position in terms of digital infrastructure, evidence shows that availability of broadband reduces depopulation in remote and sparsely populated rural areas. Broadband investments can help increase the attractiveness of specific locations from both residential and business perspectives. Therefore, expanding broadband infrastructure in rural areas should be encouraged as it is an investment in vitality and competitiveness and can contribute to positive demographic, economic and labour market prospects in these areas. Equality aspects are crucial to consider, and it is important to ensure that people have equal opportunities to participate in the digital society, irrespective of where they live or work. Finnish rural areas are not homogenous, leading to varying local conditions and needs. As one solution, LEADER strategies can

provide a good overview of regional differences across rural Finland along with valuable insights on local needs and solutions for addressing these needs.

Since ensuring adequate digital infrastructure cannot rely solely on market conditions in rural areas, **strategies need to rely more on current knowledge and coordination to achieve more strategic cooperation structures, as well as on active and competent local actors**. Fragmented systems and digital infrastructure, along with a lack of personnel and financial resources are among the major barriers to advancing digitalisation in rural Finland. As funding comes from different sources, it is important to have mechanisms to invest in infrastructure in locations where the market is not strong enough.

**Policy work must acknowledge the interlinkages between rural and urban areas and aim to bridge the administrative gap existing between them**. The future of rural areas depends not only on rural but also on urban population living in rural areas, regarding, for instance, choices related to food and leisure time. Although rural and urban areas are strongly interlinked, as policy areas they are separated and administrated by two different ministries. Synergies between rural and urban policy should be strengthened to overcome fragmented policies in digitalisation, and concerning smart cities and villages, along with other policy areas. More specifically, Finland should start implementing multi-funded community-led local development (CLLD) as recommended by the European Commission. This could enable the creation of urban Local Action Groups like in many other EU Member States and create new kinds of cooperation and partnerships between rural and urban areas and LAGs.

**Summary of main recommendations for future policies**

1) Constant work on developing digital competence is needed to decrease digital exclusion and ensure benefits reaching the whole society.
2) Sufficient digital infrastructure is crucial for the vitality of rural regions, but it cannot be ensured without public support.
3) Managing digitalisation efforts would benefit from making policy work more efficient, coordinated, and based on cooperation across administrative and societal levels.

### 4.3.2. Recommendations for future research agendas

**Research may further support knowledge and capacity building** by exploring the state of digital skills, network society, platforms in rural communities and related policy instruments; **however, funding should be better targeted** to achieve digitalisation objectives. Concerning governance challenges and opportunities, further research is needed related to discrepancies in the demand and supply of telecom connections and to opportunities regarding the Fourth Industrial Revolution (4IR), e.g., Connected Autonomous Vehicles, Internet of Things, and Smart Grids. More research is needed also on several new or emerging digital phenomena, including: the development and use of digital services; platform-based innovations; sharing economy; the actual local prevalence, benefits and barriers of remote working strategies (in critical comparison with the related "hype"); the smart working phenomenon; and the valuation of location-independent work as linked with supporting rural attractiveness.

Another important arena for research is **the role of people in digitalising rural areas and local participation**: **citizen-led innovations, citizens' science tools for digitalisation, smart models including smart participation approaches** and experiences of them, as well as forming of smart configuration of villages, municipalities, and regions with the help of digitalisation. We are currently lacking knowledge on the effects of digitalisation on different population groups and their livelihoods. More knowledge is also needed about the impacts of digitalisation on civil society, the third and fourth sector, on entrepreneurship, management and needs of business financing, as well as on the socioeconomic impacts

of broadband connections. The discourse on digitalisation has for long emphasised monetary savings, cost efficiency, electrification, and the idea of digitalisation as the ultimate solution. Here, the citizen, resident or customer is left in the margins and the relationship between digitalisation and people is undefined. While municipalities have their different challenges, human factors beyond the location, size, or economic situation also matter, such as attitudes towards one's and their community's future development.

In general, there is and has been **a lack of research on knowledge economy from a rural perspective** since most research has thus far focused on urban areas. Some projects mentioned above (UUTTU, MATTI, and JÄRKEVÄ) will work towards mending this situation by focusing on rural labour, place independency, and knowledge economy, which all have important digital implications.

**Summary of main recommendations for future research**

1) Funding should be targeted towards emerging digital innovations and related phenomena.
2) The role of people and their participation in the digital society is too often neglected.
3) A rural focus in digitalisation is a perspective that requires more attention.

# Conclusions

This position paper addresses digitalisation in rural Finland, focusing on the key development needs and what types of policy interventions have been taken to better connect rural areas and rural populations to the digital society and economy. Among the sub-themes addressed in the paper are challenges and opportunities from the perspectives of skills and capabilities and the utilisation of information and infrastructure. Digitalisation is also addressed from the perspective of rural attractiveness and digitalisation as an enabler for the future development of rural areas. This paper also presents key recommendations from the Finnish MAP, regarding what further policy initiatives and measures are needed at different levels of governance as well as what types of knowledge and research needs there are.

While Finland is among the global and European leaders in terms of digitalisation across many policy measures, there are several unresolved challenges from a rural development perspective. There are noticeable territorial differences in broadband availability, both between and within regions, and digital exclusion also has a clear urban-rural divide.

To fully uncover the potential of digitalisation, one of the main focus areas should be to **further invest in developing digital competence to overcome digital exclusion and to ensure that digitalisation will benefit the whole society**. The preconditions for participating in the digital society differ between population groups and places of residence. It is only by overcoming these barriers and obstacles that we can fully harness the opportunities offered by digitalisation, such as diversifying the rural economy and labour markets and providing better services.

Another key issue concerns the need to **improve broadband infrastructure,** as it is **an investment in strengthening the vitality and attractiveness of rural areas**. As the construction of adequate digital infrastructure cannot rely solely on market conditions, public support is essential, and it is central that strategies rely more on topical knowledge of local needs and conditions and coordination across sectors and governance levels. This also includes the needs to better acknowledge the interlinkages between the rural and urban areas and the emerging rural-urban continuum.

To allow for **better evidence-based practice and decision-making**, more knowledge is needed on the connection between digitalisation and rural development from a variety of perspectives. This includes more knowledge about the role of local citizens and communities in digitalising rural areas to better understand the preconditions and effects of digitalisation on different population and stakeholder groups. Another important area concerns undertaking further research on knowledge economy from a rural perspective, as this field of study has long had a strong urban bias. Overall, funding should be better targeted to support knowledge and capacity building that can help is achieve digitalisation objectives in rural policy and development.

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# Annex 1 Methodology used by the MAP

This MAP Position Paper on Digitalisation in rural areas in Finland has been developed through a co-creative process involving the Facilitator and the Monitor and the members of the Finnish MAP. The Finnish MAP consists of 12 members (see list of contributors), with four members representing each of the three main domains of the SHERPA project (policy, research, civil society).

The work was kick-started on 24 May 2022, when the first MAP meeting was held. The purpose of this meeting was to introduce the current MAP cycle for the Finnish MAP to decide on the more specific approach for developing the Position Paper. First, the previous SHERPA cycle was recapped including a discussion about the key findings that emerged from the previous SHERPA Position Paper dealing with "Change in production and diversification of the rural economy", where one of the sub-themes was smart rurality, smart communities and digitalisation. As the former SHERPA Position Paper has thematic relevance for the Finnish MAP's work in the current cycle, it was fruitful to discuss the possible linkages between the previous SHERPA cycle and the current one. This was followed by a discussion about the current MAP cycle and the key takeaways from the SHERPA Discussion Paper on Digitalisation in Rural Areas, which sets the broader context for the work of the SHERPA MAPs working with this theme in 2022. Next, Jamboard was used as a tool to discuss the following key questions in workshop format: 1) relevant current sub-themes, 2) relevant projects, strategies, and actions, 3) key challenges and needs, 4) key knowledge and research gaps. This was followed by discussion and agreement on the process for drafting the Finnish MAP Position Paper more concretely. Here, it was decided to develop the paper through a co-creative process, using a common, shared working document that all members can edit. As all MAP members were not able to attend the first meeting in May, a second follow-up meeting was held on 29 June in order to anchor the process and the main takeaways from the workshop at the May meeting with the members who did not attend then.

During June-August 2022, members of the Finnish MAP, together with the Facilitator and Monitor, drafted text in a shared working document. On 29 August, a MAP meeting was held to present and discuss a draft version of the Finnish MAP position paper and agree on the coming steps for finalising the paper. The purpose of this meeting was to gather input from MAP members regarding the key messages and initial recommendations, as well as more general reflections on the paper and any further development needs. Based on the input gathered, this MAP Position Paper was finalised in September 2022 through successive rounds of commenting and editing.

A follow-up assessment will be carried out upon complement of the MAP Position Paper to more properly evaluate the process and methodology used in this cycle.

# Annex 2 Availability of digital infrastructure in different types of municipalities

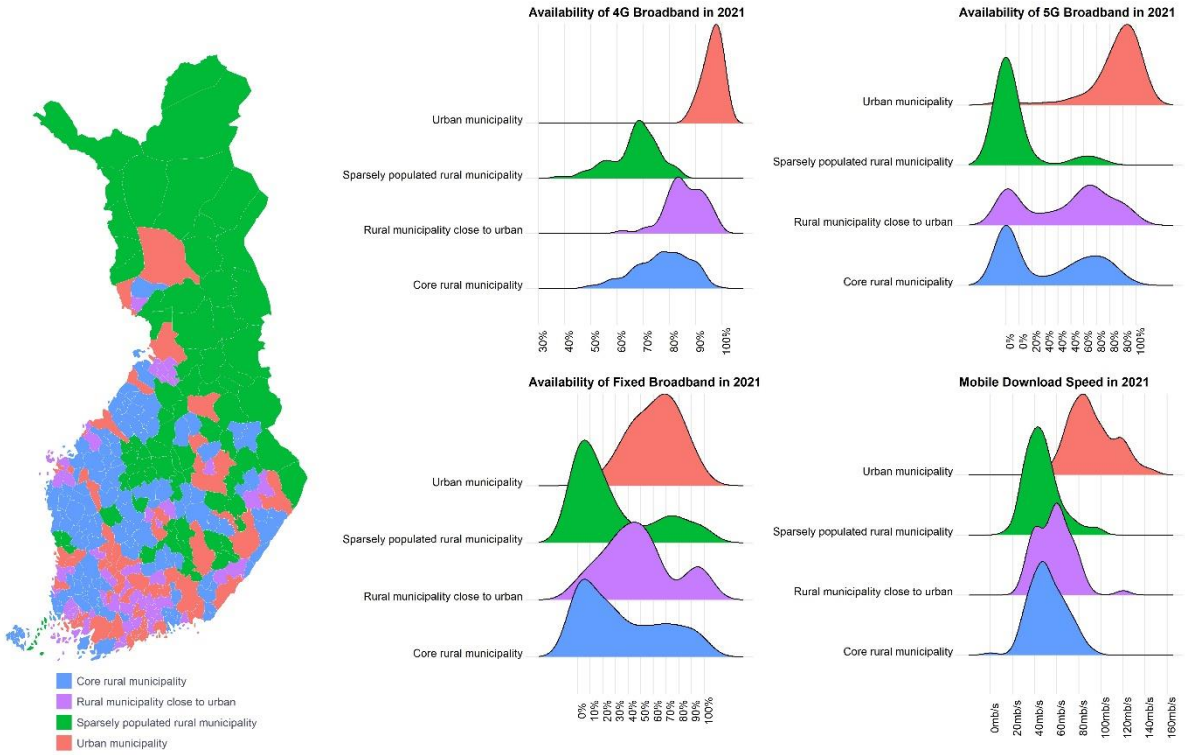


*Figure. Availability of digital infrastructure in urban-rural municipal classes in 2021. (Source Lehtonen et al. 2022)*

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