

Boosting the Delivery of Digital Infrastructure in Rural Areas



Why is Digital Infrastructure Important?

Access to a fast and reliable broadband connection is of crucial importance to the economic and social development of an area. It is key to business competitiveness and social inclusion, providing the opportunity for equal access to a range of emerging technologies linked to business, public sector services, health and education. However across Europe 10% of premises in rural areas still do not have access to a fixed broadband network and only 41% are covered by any Next Generation Access (NGA) technology¹.

This policy brief presents a range of solutions identified as part of the Connecting Remote Areas (CORA) project. The project has explored how municipalities, stakeholders and users can work together to and improve delivery of broadband infrastructure in remote areas.

Key Messages

- | Ensure political leaders have sufficient awareness to 'buy in' to the benefits of improving digital infrastructure
- | Ensure the unique challenges faced by rural municipalities are considered to help rural proof national broadband strategies
- | Provide services in partnership to benefit municipalities, residents and service providers



Lincoln International Business School
University of Lincoln
Brayford Pool, Lincoln LN6 7YS

www.coraproject.eu
www.lincoln.ac.uk

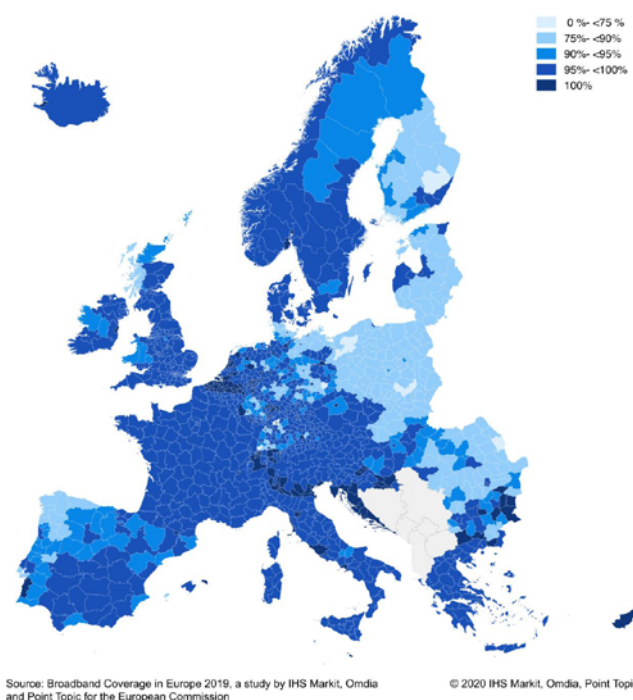
¹ European Commission (2020). The Digital Economy and Society Index 2020. Available at: <https://digital-strategy.ec.europa.eu/en/policies/desi> (Accessed 21/10/2020).

The Magnitude of the Challenge

Many rural areas have low population densities and limited public service provision that affect how people live and work. Access to a fast and reliable broadband connection can respond to these challenges by providing rural residents with new ways of accessing services, creating new opportunities for rural businesses, improving transport networks and fostering stronger social and business networks.

To help residents and businesses take full advantage of these opportunities, the EU aims to create a European Gigabit Society where high speed networks enable the widespread use of products, services and applications. To achieve this the EU aims to provide all households with access to a connection of at least 100Mbps by 2025 and a Gigabit by 2030². However in some of Europe's remote and rural areas access to the internet remains poor³. This enduring digital divide leads to rural businesses and citizens being disadvantaged, with a risk of being further left behind as use of digital technology becomes embedded in everyday life.

To help achieve the EU's aim broadband infrastructure in rural areas needs to be improved. This policy brief provides information on a range of solutions developed under the CORA Project to help work towards equal access to digital technology for all rural citizens.



Overall fixed rural broadband coverage across Europe 2019

The CORA Key Messages and Solutions

Key Message 1: Ensure political leaders have sufficient digital awareness to 'buy in' to the benefits of improving digital infrastructure

The experience of some CORA pilots is that political leaders are not always fully engaged in the commitment to improve digital infrastructure, resulting in a lack of 'buy in' to potential solutions. This is sometimes the result of competing (often shorter term) priorities, or a lack of awareness of the transformational potential of digitalisation for their region. This could lead to municipalities being unable to take advantage of the opportunities offered

by broadband connectivity, because projects are delayed, or dismissed as not relevant or too costly. There is, therefore, a need to brief politicians on the benefits of digitalisation, which include attracting businesses and residents to rural areas, and creating sustainable communities. Linking infrastructure investment to strategic targets (such as population retention, firm creation, GDP growth) can raise its prominence on the political agenda. Flagship projects (see page 3) can make the benefits of broadband access more tangible, and provide a focal point for politicians to associate with.

² European Commission (2021). 2030 Digital Compass: the European Way for the Digital Decade. Publications Office of the European Union, Brussels.
³ European Commission (2020). Broadband Coverage in Europe 2019: Mapping progress towards the coverage objectives of the Digital Agenda. Publications Office of the European Union, Luxembourg.

Key Message 2: Ensure the unique challenges faced by rural municipalities are considered to help 'rural proof' national broadband strategies

NGA coverage continues to grow across Europe and there are targets in place at European and national level to support this. However it is important that broadband policies are 'rural proofed' to reflect the unique challenges of rural areas. A national target for NGA coverage of 95%, for example, can leave large swathes of rural areas unserved as they represent such a small proportion of the overall population. Sparse populations and varying terrain reduce the return on investment for infrastructure providers.

Many rural municipalities have responded to this market failure by working with local communities and smaller infrastructure providers to address gaps in coverage (as in the example of Norddjurs below). The demography of rural areas, with ageing populations, often means that demand for broadband is lower than in urban areas, so there can be benefit in activities to raise awareness of the benefits of broadband adoption alongside its deployment.



Raising the profile of digitalisation on the political agenda. Oldambt, Netherlands

Through CORA, The Netherlands municipality of Oldambt planned to develop a Broadband Innovation Centre in the town of Winschoten. This would be a place for local enterprises and start-ups to improve their digital business activities. With limited buy-in from local stakeholders, the project had a slow start. However, the election of an Alderman with an interest in digitalisation meant that the project was championed and highlighted as a policy priority. The municipality and businesses are now working together to create a Broadband Innovation and Information Centre, which is focused on helping residents and businesses understand the benefits of broadband adoption.



Securing fixed and wireless broadband connectivity for citizens, businesses and visitors in rural areas. Norddjurs, Denmark

Every year thousands of tourists visit the region of Djursland in Denmark. However, with large areas of woodland and a remote coastline, NGA access is poor. The CORA project enabled the local municipality to consider alternative methods and install two WiFi hotspots. Alongside this, workshops were carried out to help businesses recognise the potential of, and improve demand for, broadband-enabled services. As a result the demand for access to digital services has increased and local businesses have been able to develop new tourism-related activities and improve the visitor experience.

Key Message 3: Take a partnership approach to broadband infrastructure deployment

As the use of digital technology increases, the full economic and social benefits will only be realised with the deployment of high capacity networks across rural as well as urban areas. However, laying fibre optic cable across sparsely populated rural areas is prohibitively expensive and, without government subsidies, there is little economic return for broadband providers. One way to overcome this is via an open-access network in which the physical infrastructure is supplied separately, often by the local municipality, to the delivery of the broadband services by internet service providers. The shared costs of this option make it more viable for rural areas. Such open access networks enable internet service providers to compete to provide their broadband service, therefore still making a profit whilst the municipality can recoup its costs over the long term.

Developing open access fibre networks. Leiedal, Belgium.

In 2020 only 5.6% of households in Belgium were covered by FTTP compared with an average of 52.5%⁴ across the EU. Implementing an open access network with a transparent cost structure was therefore seen as one clear way to close this gap. Intercommunale Leiedal therefore set up a pilot project to test an open access network consisting of fibre broadband and all end-user equipment (e.g. wall sockets) in the business hub K-ormer in Kortrijk. The installation of this service has led to cost efficiencies and greater flexibility for the end users. There are now opportunities for small businesses to obtain telecom services at lower prices, as well as a simple, user friendly way to switch between providers.

COnnecting Remote Areas (CORA)

The COnnecting Remote Areas (CORA) Project is an Interreg funded initiative, which brings together 18 public authorities, universities and private sector organisations to identify common challenges to help improve and empower rural areas through the topics of digital infrastructure, services and skills. The project enables partners to exchange experiences and test innovative solutions to create an advanced digital environment.

This policy briefing was written by Liz Price, Jane Deville and Fiona Ashmore, Lincoln University, UK. For further information see www.coraproject.eu or contact Liz Price on lprice@lincoln.ac.uk.



Further CORA Policy Briefs

- | **Digital Infrastructure:** Policy Brief 1 Opening up Opportunities for Cross-border Fibre in Rural Areas
- | **Digital Skills:** Policy Brief 3 Enhancing digital skills in rural areas
- | **Digital Services:** Policy Brief 4 Developing and delivering digital services in rural areas



www.coraproject.eu

Interreg
North Sea Region
CORA
European Regional Development Fund



The CORA (COnnecting Remote Areas with digital infrastructure and services) project is co-financed by the European Union (European Regional Development Fund) in the frame of the North Sea Region Interreg Programme.