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CORA Concept

Guiding Measures

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1 Introduction

Digital divide across rural areas of the North Sea Region is limiting their attractiveness for families and businesses. This phenomenon represents a market failure, as infrastructural investment is not adequately delivered due to high financial risks. Digital skills also fail to meet a certain level of progress. Local authorities are often not aware of their future-coming digital needs and end-users have limited skills to create an effective level of demand. The digital divide between urban and rural areas is one of the main challenges that rural areas are facing today. This does not only apply to the lack of appropriate fast and superfast ('next generation') broadband connection, but also the lack of appropriate digital services and digital skills to use digitalized opportunities and move towards digital transformation. Official statistics from the European Statistical Center (Eurostat) show that a great number of inhabitants in Europe are currently living in less populated rural areas¹. In 2015 more than 140 million European were living in these types of settlements, comprising 28% of the whole population in Europe. Hence the geographical distribution and coverage of rural areas in Europe shows even a larger share of these settlements in Europe. As a results, it is of high importance to change the focus towards further empowerment of rural areas towards digital transformation.



Figure 1. Distribution of population, by degree of urbanisation, 2015 (Source: Eurostat)

At the EU level, the Digital Agenda for Europe (DAE) sets the overall policy goals for 2020 and 2025. Accordingly, the national and regional policy makers are called to plan for improving the connectivity in their regions. Planning broadband in these domains would typically include considerations about:

- How NGN broadband infrastructure can help to leapfrog development, speed up innovation and learning, underpin business start-ups and growth, not only for the digital sector, but also across other sectors of the economy.

¹ Density of at least 300 inhabitants per km² and a minimum population of 5 000.

- The role of the NGN in closing the gaps in social, economic and territorial cohesion to ensure equal access services to all areas and population sectors (broadband access is becoming as important as access to other utilities like water and electricity)
- The reform of public administration and the transformation of public services to deliver greater efficiencies and better quality, and speed up innovation in all sectors from education, to health, research, agriculture, manufacturing, energy efficiency, environment, tourism, culture, etc.
- The prevention economic activity reallocation, and the departure of young people, help raise business productivity, and facilitate product and service innovation
- The need to ensure that citizens can benefit fully from the new digital services and that as few possible suffer from digital exclusion.

Against this background, the CORA project focuses on solutions to stimulate digital infrastructure, services and skills in rural areas with a total budget of 3.845.736€ from which 50% are co-financed by the Interreg North Sea Region Programme. The CORA partnership comprises a transnational consortium of 18 partners from seven European member states. CORA partners will help local authorities to identify their common challenges and empower them to exchange experiences, test innovative solutions and create an advanced digital environment. To do so, CORA emphasizes the main components of digital divide, namely lack of digital infrastructure, services and skills.

In order to improve and empower rural areas to enhance the use of digital services towards improving the living and working qualities and growths, a digital ecosystem is required to be created. The one comprising of the main dimensions of digital transformation, namely digital infrastructure, digital services and digital skills and competences. CORA takes these factors in to account and emphasizes on empowering rural areas towards digital transformation. It aims to enable local authorities to identify their common challenges and empowers them to exchange experiences and test innovative solutions to create an advanced digital environment.

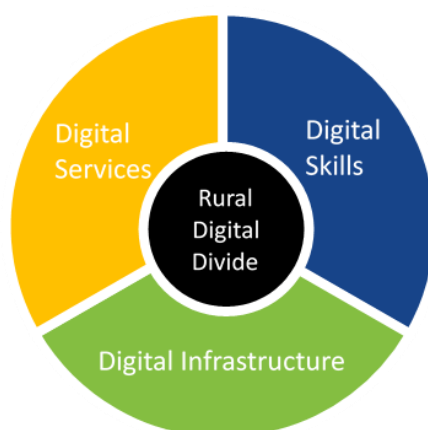


Figure 2. CORA 3 dimensions (Source: atene KOM)

CORA targets the rural digital divide as a shared concern in Europe. It enables local authorities in rural areas to identify their digital barriers and empower them to test new tools and solutions facilitating the development of advanced digital infrastructure and services as well as enhancing the digital skills and competences. The aim is to bridge digital divide, improve public services delivery and create an environment stimulating digital innovation in rural areas. To do so, CORA partners develop a model, which provides a comprehensive set of guiding measures towards digitalization in rural areas. The model employs fixed and mobile digital hub concepts for providing in-place advice, technology demonstration and incubator spaces. It is built on “train the trainer”, face-to-face and online training concepts. The results will be utilized to formulate digital strategies for rural areas to be streamlined to the regional, national and European authorities and influence EU digital inclusion policy.

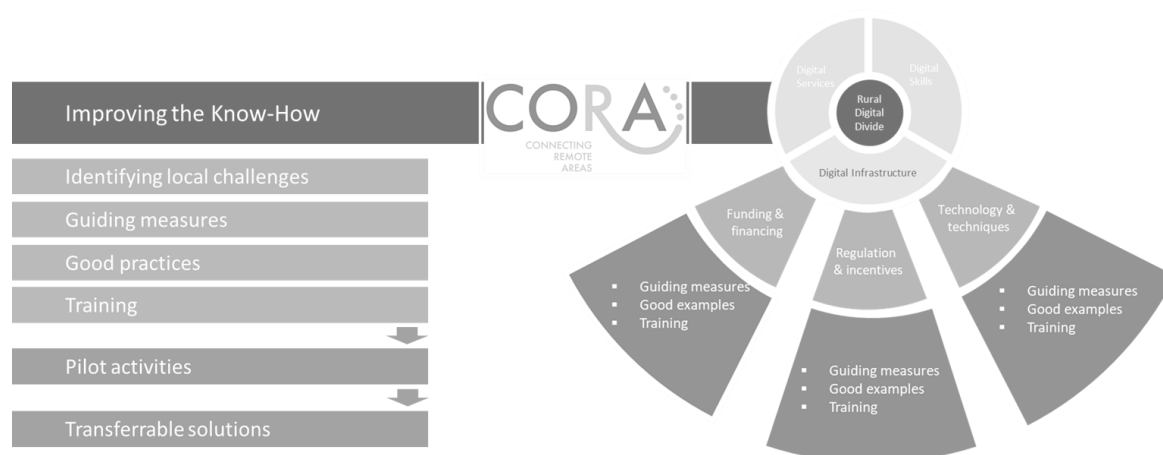


Figure 3. CORA process (Source: atene KOM)

CORA concept comprises of three main steps namely identifying the common local challenges, testing solutions to overcome the challenges and streamlining and knowledge transfer. The aim is to first identify the exiting challenges in the local context and deliver responsive solutions to overcome these challenges accordingly. The abstract conceptual solutions and approached shall be tested and the impacts to be analysed. Such an experimental approach, provides new views in terms of barriers in the real implementation activities.

CORA partners will develop a comprehensive set of guiding measures that will help the local and regional authorities to bridge the infrastructural digital divide in rural areas. To do so, the process starts with developing a survey guide and carrying our regional surveys to identify local digital baselines and demonstration of common transnational challenges among local and regional participating partners. Built on the findings, the CORA Model (Systematic Synergy Enhancement) will be developed. The model is an online tool comprising on guiding measures, good exmples as well as selective training materials for the main target groups namely local communities, authorities and enterprises.

Besides, the digital hub guide concept will be developed, which provides knowledge on planning and operation of fixed and mobile digital hubs such as their physical features, space design as well as their activities and services. Built on the idea of “train the trainer”, the CORA partners will develop the conventional and online training concepts and materials. Here the

training measures will focus on introducing the use cases as well as the benefits of high capacity networks as well as financial and technical solutions for an effective and cost efficient rollout of digital infrastructure in rural areas. CORA will improve the digital skills and competencies of citizens and enterprises in rural areas. The partners will establish a common knowledge base of solutions that enhance the use of digital technologies and services in rural areas. To do so, the CORA partner will develop a guide and carry out surveys to identify the existing common local gaps in digital skills and services. The results will be utilised in shaping guiding measures and solutions for improving the level of digital skills among rural communities and enterprises. Based on identified local gaps, the respective training concepts and materials will be developed. These include local workshops and online training courses for citizens (i.e. internet, programming and social media courses) as well as for enterprises (i.e. e-commerce, website development and online marketing and sale).

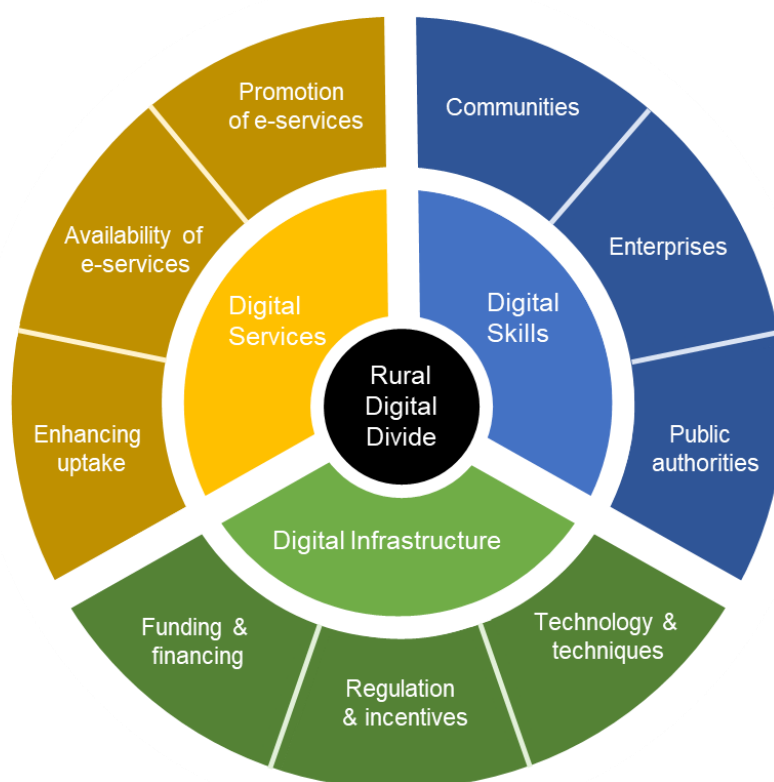


Figure 4. CORA digital transformation ecosystem model (Source: atene KOM)

2 Digital infrastructure

The infrastructure dimension revolves around the development of superfast broadband infrastructure and its quality. Access to fast broadband-enabled services is a necessary condition for regional competitiveness especially in rural areas. To guarantee a future proof and complete coverage of superfast broadband services, several factors play fundamental role. These include; fare competition, demand stimulation and uptake level, the availability of state aid and financial instruments, a decent regulatory framework, geographic and demographic characteristics, availability of ducts and upgradable networks as well as willingness to pay and affordability.

Results from CORA pilot and research activities will form a set of strategic recommendations on best applied technologies and techniques for an efficient NGA extension in remote areas.

2.1 Funding and Finance

Although there is still significant private investment across Europe and the number of white spots decreases on a daily basis, some areas will hardly be commercially viable. Alternative funding schemes such as community based initiatives as well as public intervention are therefore sometimes inevitable to close the digital divide. In this context, the European funds are an important cornerstone of many broadband projects and help to develop ICT-infrastructures, especially within rural areas with low commercial interest.

Rural areas have to provide appropriate incentives and means for increasing investment whilst local actors and the ICT industry need to make use of these instruments. Furthermore, public intervention should focus on reducing the cost of investment and, where necessary, provide public funding within the policy framework of national strategies, while making sure that private investment is not displaced.

A survey conducted by the University of Groningen for CORA identified several finance and business models in use in the participating European countries. Further details on business models, co-investments and funding possibilities will be provided throughout the project.

2.2 Regulation, Incentives & Leadership

When it comes to the involvement of local stakeholders and leadership, a crucial factor is that the responsible actors (usually at local level) feel that they are attached to the strategic targets and fully involved. Generally speaking, the involvement of local actors is especially important in rural areas, where there is a need for demand aggregation and bottom-up initiatives. Besides leadership, regulation plays a major role in facilitating the NGA roll-out. Examples are regulatory measures for increased use of alternative methods of deployment (e.g. micro- and minitrenching, aerial deployment etc.), aggregated demand via special purpose associations or financial incentives such as vouchers or tax deductions. In this context, sup-

portive regulation for funding schemes, digital agendas, shareholder constructions and demand subsidies play a major role for NGA extension.

2.3 Technology and techniques

In terms of technologies, the availability of different broadband technologies is an important factor for a fast and qualitative expansion of broadband infrastructure, meeting different local needs occurring from topography and population structure. With DSL, cable access, the optical fibre technology, radio broadcasts and new mobile standards, a variety of technologies is available on the market that ensure reliable broadband services. However, it is important to choose a technology that is best for the individual region.² In this context, many of the EU member states are aiming for a full coverage of fiber network which has been considered as the future-proof technology.

3 Digital services

Access to adequate broadband services has crucial importance to the economic and social development. The digital public services dimension emphasizes on the digitisation of public services, focusing on eGovernment and the social infrastructures. Modernisation and digitisation of public services can lead to efficiency gains for the public administration, citizens and businesses alike as well as to the delivery of better services for the citizen. The Use of Internet services accounts for the variety of activities performed by citizens already online. Such activities range from consumption of online content (videos, music, games, etc.) to modern communication activities, online shopping and banking as well as a wide range of government services.

CORA pilot activities test different offers of e-services and analyzes their impact on the living quality and attractiveness of rural areas.

3.1 Enhancing uptake

Take up means especially the regular internet and e-services use by people, enterprises and administration. This indicator suited to estimate how and if the use of internet has become a tool of everyday life. In this context, main barriers for local authorities, enterprises and citizens to take up possibilities of NGA are for example the lack of knowledge/skills, affordability, accessibility as well as lack of awareness.

In response, local and national digital agendas are already setting supportive measures aiming to enhance the awareness of target groups for the enhanced use of internet and digital services.

² <https://ec.europa.eu/digital-single-market/en/news/comparison-broadband-technologies>

3.2 Availability of e-services

As traditional administrative processes are often linked to burdensome procedures (especially time and commuting), there can be a strong incentive to use digital services instead. To achieve a proper and massive use of e-Services a common objective must be shared by all public administrations when planning for the future of public service delivery. There are various ways to deliver more valuable e-services. Public administrations must become “citizen driven” in order to become more user-oriented. Multi-channel service delivery and need-oriented e-services development for specific target groups such as elderly, business agents, young people etc. are key for successful e-services development.

3.3 Promotion of e-services

Adoption of e-services must be pushed through effective communication. To enhance the use of e-services, target groups must be aware of the new facilities and services public administration bring to them. Local and regional government must adopt strong strategies and action plans to promote e-services in order to make users perceive the use of ICT as an advantage. This is a problem of many organizations to increase the uptake and effective use of e-services. Therefore, one of the main conditions to succeed is to guarantee an effective communication amongst the actors concerned. This includes improved interoperability and increased awareness of citizens and businesses.

4 Digital skills

Limited access and use of digital technologies in rural areas are accompanied with a lack of digital skills of different social groups (e.g. elderly people) and in businesses. This includes basic digital skills and competences, which enable individuals to interact online and consume digital goods and services as well as advanced skills, which empower the workforce to take advantage of technology for enhanced productivity and economic growth. Digital literacy and the awareness of the possibilities digitalisation offers is a key driver for new business models, applications and services to develop and contributes to the social cohesion and economic prosperity in Europe. To ensure that everyone can engage in and benefit from the digital economy and adapt rapidly to new and unexpected occupations and skill needs, education and training systems should place a stronger emphasis on promoting ICT generic skills, ICT specialist skills, and ICT-complementary skills, including foundational skills, digital literacy, higher-order critical thinking skills as well as social and emotional skills. Greater efforts are also needed to raise the skills of those adults with weak literacy, numeracy and digital skills to enable them to fully participate in the digital economy and society. The target groups of digital skills in rural areas are:

- Communities
- Enterprises

- Public authorities

CORA pilot regions will test face to face and online training methods with the aim of improving the level of local digital skills and competences.

4.1 Communities

Awareness raising and training of citizens is key to enable a digital society and exploit already existing networks to ensure the future expansion and use of digital technologies. Measures need to be in place to improve a range of basic to advanced digital skills of different socio-economic groups of the society. This includes:

- Digital literacy and basic digital skills for disadvantaged social groups such as elderly to benefit from a wide range of digital services offered in their daily lives;
- Basic and advanced digital skills for students with high learning capacities at schools;
- Target/professional digital skills for special target groups such as professional workforces who are active in different sectors of the economy/society.

4.2 Enterprises

Small and Medium Sized (SMEs) enterprises shall be supported and empowered to benefit from the opportunities offered by digital technologies. Digital competences of enterprises need improvements with the aim of increasing the use of digital technologies in the process of design and service/product delivery. While recent years have shown a growing trend towards buying ICTs as a service, SMEs lag in their adoption of cloud computing and other sophisticated digital technologies. It is essential to help promote adoption of these digital technologies among SMEs because they can help overcome some of the traditional barriers to investing in digital technologies, including the often high, upfront sunk costs of these investments, and allow them to switch more rapidly from one technology to another to avoid being locked in.

4.3 Public Authorities

Awareness, leadership and interest of national, regional and local public administrations and politicians is key to successful and sustainable digital transformation in rural areas. Public authorities as the main providers of public services need to improve their compatibility and skills in planning, provision and delivery of advanced digital services to citizen and enterprises. As the main provider of public and welfare services, local and regional authorities require adequate knowledge and skills for future-proof development of their regions. This includes a certain level of awareness to develop future oriented digital strategies as well as competences to develop digitally enabled services in a responsive design manner for communities and businesses.