CORA
CONNECTING
REMOTE
AREAS

Digital transformation

Stories of connecting remote areas
with digital infrastructure and services

Interreg
North Sea Region
CORA
European Regional Development Fund

EUROPEAN UNION

Is your region equipped with a future-proof digital environment? Not sure? CORA partners share their stories of transformation towards a digital society.

For rural and remote areas to stay attractive for families and businesses, they need a healthy digital environment. This requires a digital infrastructure, well-developed digital services, and sufficient digital skills among the population.

However, investments in digital infrastructure are often too low in rural and remote areas due to high financial risks, and digital skills fall short of the desirable level. And while local authorities are often still exploring their future digital needs, end-users' skills are too limited to create an effective level of demand.

The CORA partners faced their specific set of challenges and tested solutions designed to bridge the digital divide in the North Sea Region.

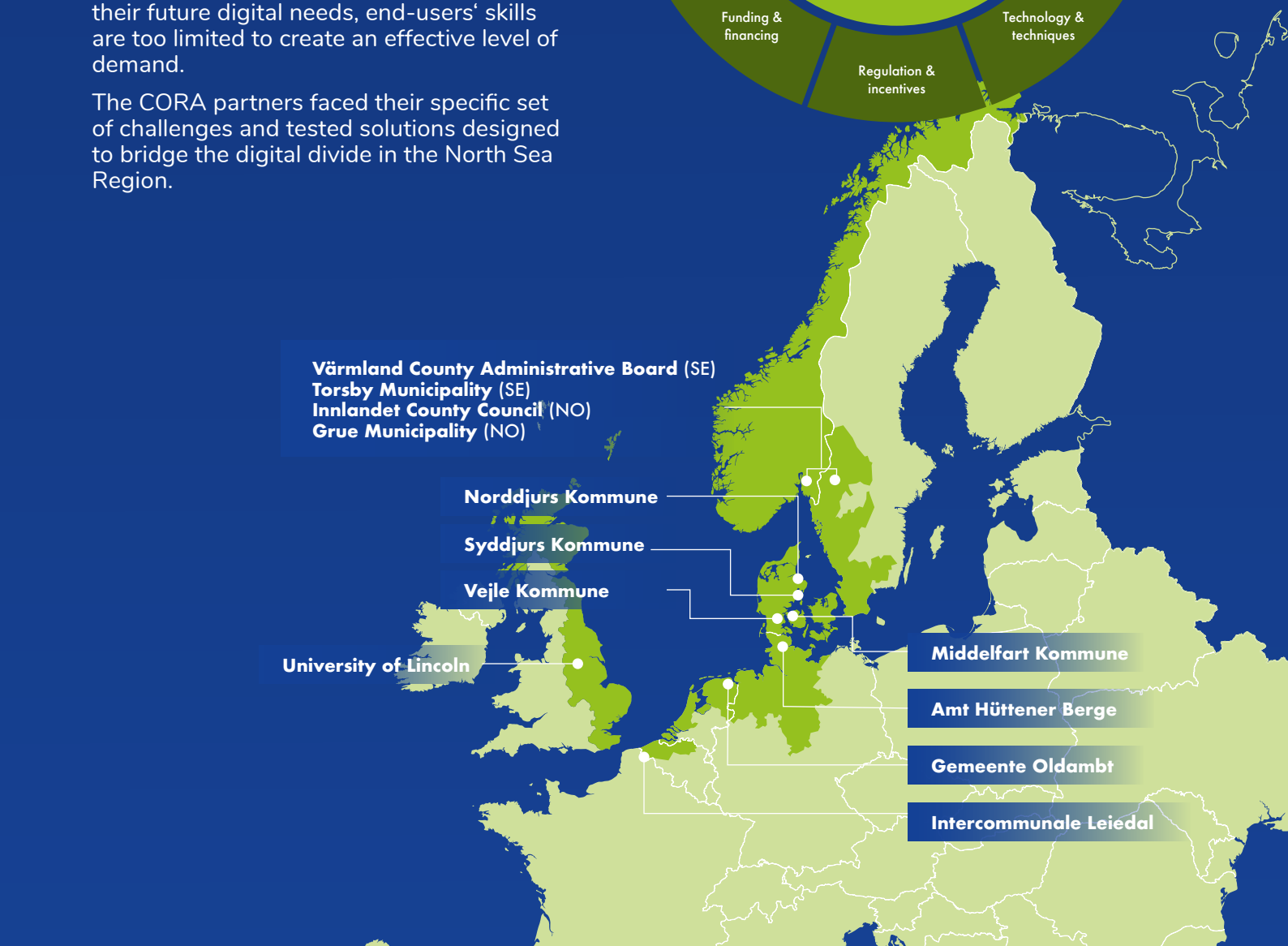
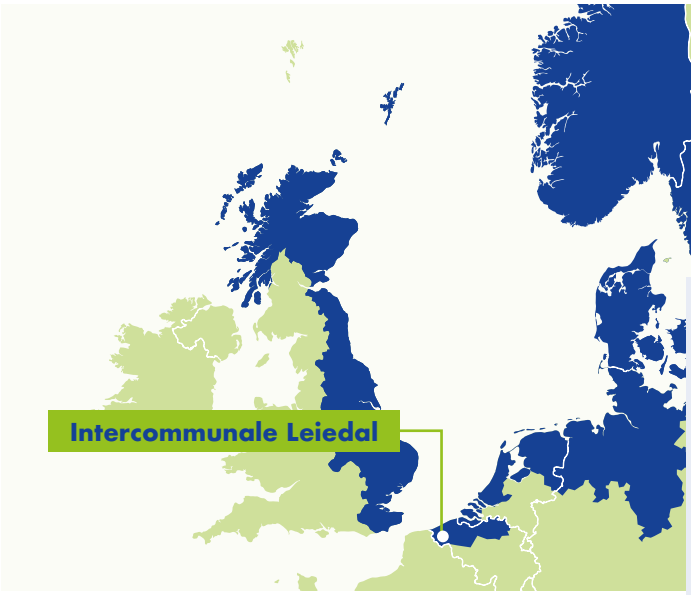


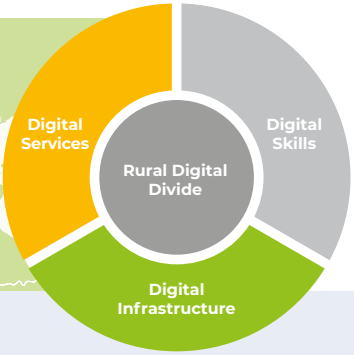
Table of Contents

Intercommunale Leiedal, BE

Smart fibre hubs

The aim of the Smart fibre hubs pilot in South West Flanders was to connect urban and rural areas by installing an open access fibre network, developing new digital services and creating added value from data collected by these new services.





Background

As a public institution, and on behalf of the local governments of South West Flanders, Intercommunale Leiedal has been developing business parks since 1960 and connectivity, smartness and effective digital service delivery are among their main areas of work. An open access fibre network was seen as a way to help implement fibre networks and enable users to collect data and access services at high speed, thus creating affordable, smart services for local authorities, businesses and citizens.

Designing and delivering the pilot

How has it been designed?

Initially meetings were held with local broadband providers, companies, organisations and local government representatives to obtain a clear view of the current situation, their needs, opportunities and potential obstacles. Following this, fibre optics were installed to enable a digital hub for business start-ups, K-orner, to be opened and digital services were developed for local authorities.

Opening of the digital business hub K-orner in Feb 2020 © Leiedal

Who is it for?

This pilot has a range of beneficiaries. Firstly, companies and digital start-ups have the opportunity to use a digital business hub with a high speed internet connection. Secondly a number of tools were developed for use by local authorities within the Leiedal region and finally citizens were empowered through the installation of telraam sensors on their premises.

How has it been delivered?

The project has been delivered in three concurrent phases. Firstly, the digital business hub K-orner was opened. Secondly the network of telraam sensors was installed, a range of data collected and an integrated data platform Leiedal Data As A Service (LDAAS) developed to store data-sets in a future-proof way. Finally, a range of workshops, trainings and webinars took place to improve knowledge and skills and to guide employees of local governments, companies and citizens in using and adopting the developed digital services.

Outcomes of the pilot

What outputs has the pilot achieved?

As well as installing a fibre network as part of the new business hub, K-orner, the pilot is also finalizing its network 'business plan', which outlines a generic technical governance model and legal framework for an open access network. Three new tools are also now actively used by employees of local government within Leiedal:

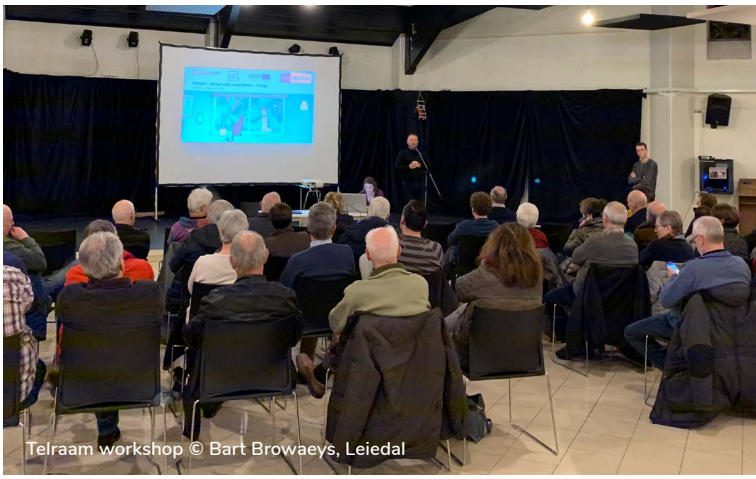
- **Telraam platform:** 140 traffic monitoring devices installed at private dwellings automatically and efficiently collect valuable data on mobility such as pedestrians, bicycles, cars and heavy transport throughout the region.
- **Renovation Tool:** Developed in cooperation with the Flemish Energy Agency this tool informs citizens about the (potential) energy efficiency of their houses, energy targets and renovation options and offers a back office instrument for government officials to manage this transformation.
- **Street Smart Tool:** LiDAR-data and orthophotography enable local governments to identify required infrastructure changes, assess dangerous situations and perform low-cost but accurate measurements.

Several trainings, workshops and webinars for citizens, participating municipalities and Leiedal employees have also led to the digital upskilling of participants.

Unintended outcomes?

The region-wide approach of the telraam sensors installation demonstrated to local authorities the relevance of a stable broadband access in private as well as in all public buildings. E.g. during the Covid-19 pandemic, the relatively cheap network of sensors discretely and immediately monitored the drop in car and heavy vehicle traffic, beating expensive national and private monitoring networks, both in speed and level of detail.

Cyclomedia car © Cyclomedia



Telraam workshop © Bart Browaeys, Leiedal

Lessons learned

Cost reduction and the usefulness of data

- An open access network with a transparent cost structure for all is the only way to catch up to other European countries with implementing fibre networks in Belgium. The roll out of the open access network is still a work in progress in which we also depend on political opinions and willingness and collaboration of the big telco providers.
- For municipalities and government bodies, an open access network approach can enable a true 'smart' city.
- Relatively inexpensive data collection tools, such as traffic sensors, can provide a range of secure, detailed and transferable data for local authorities to improve service delivery, planning and policy making.

Remaining pilot activities and future plans

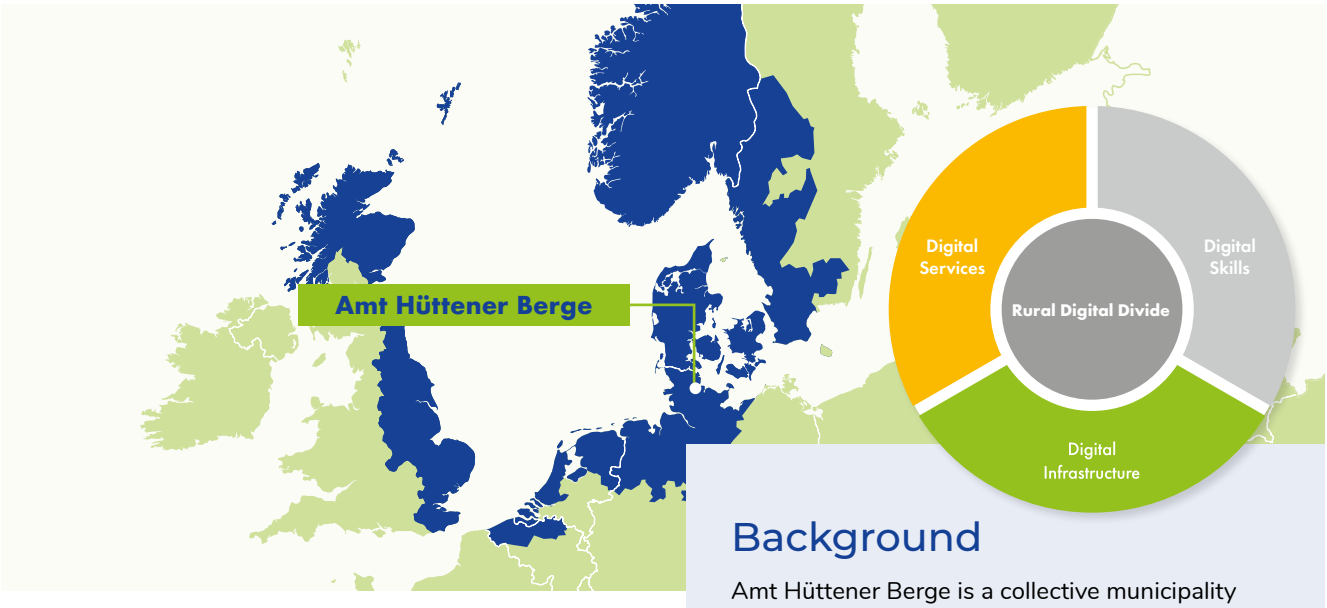
Data from the installed telraam sensors will continue to be collected as a basis for analysis and policy preparation. In the future it will be used to examine how custom-made platforms can be used to visualize mobility data through user-friendly dashboards. The LDAAS platform will also continue to be developed.

Beyond CORA, Leiedal intends to prepare for 5G delivery in rural areas. Workshops for policy makers, industry leaders and radiation experts are being planned. The team intends to investigate under which conditions 5G deployment could be feasible in business parks and mixed land-uses (e.g. houses, businesses and sports facilities).

Amt Hüttener Berge, DE

Digital Citizen Portal

The aim of the Digital Citizen Portal pilot was to implement a technology solution, which would modernise information delivery across the region. As part of the pilot, Amt Hüttener Berge planned to build data terminals (large-format digital outdoor and touch-sensitive indoor screens) in public areas, such as village community houses, to share information with citizens and tourists about the region: connecting content and different participants together. Amt Hüttener Berge hoped that through the introduction of these screens (plus some tablets), citizens, elementary schools, local institutions and tourists would be empowered to use new services available through fibre networks.



Background

Amt Hüttener Berge is a collective municipality and service provider for 16 municipalities in a remote area of Schleswig-Holstein. Its strategic aims are to increase the attractiveness of those municipalities and to enhance their competitiveness to neighbouring cities. Modernising how information is provided to citizens and tourists is identified as a priority for the collective municipality. The introduction of data terminals was identified to help increase information flows and allow interaction between the information user and the information provider.

Designing and delivering the pilot

How has it been designed?

In 2017, Amt Hüttener Berge held focus groups with stakeholders over a 6-month period to discuss the Digital Agenda, a multi-year regional framework for the interaction of digital infrastructure, digital services and e-government. Following this, larger feedback groups, made up of people who were well versed in the projects and/or had a high level of interest in using the project results, were contacted via email and given the opportunity to engage in the debate.

Who is it for?

Local government policymakers and citizens groups were targeted to support the design of the pilot. They were identified based on their involvement in the Digital Agenda.

Focus group participants chose local residents, young people and tourists to be the end-users of the technology. Targeting school age and adult learning institutions was also recognised as being important to ensure learning opportunities, given the prominence of digitisation in all areas of society.

How has it been delivered?

Amt Hüttener Berge partnered with local associations to ensure that the screens and tablets could be delivered effectively. They delivered the following technology in specific spaces:

- information terminals: publicly accessible indoor/outdoor weather-resistant screens with limited functionality,
- e-screens: touch monitors with full interactive options, in village community centres such as adult education centres, volunteer fire departments and other local clubs,
- tablets in elementary schools.

They also ran workshops in partnership with the broadband association and the regional development agency to encourage uptake.

Outcomes of the pilot

What outputs have the pilot achieved?

The project has installed 5 information terminals (4 outdoors and 1 indoors), 5 e-screens in community centres and provided 132 tablets for 6 class sets at 5 elementary schools. Using all of this means local residents can more easily access up-to-date municipal services and information.

Wider benefits?

The project implementation involved not only citizens and communities, but also private and municipal companies. Amt Hüttener Berge created a three-stage participation approach to encourage user engagement, which can be applied to future projects:

1. Focus groups as a driving force behind needs-based design and development of digital services
2. Feedback groups as larger, tailored, 'virtual' groups, not meeting in person. By creating tailored feedback lists for each theme under the Digital Agenda, Amt Hüttener Berge ensured higher involvement from respondents, and an increased number of local actors who supported digital change
3. Citizen's forums as a way to amplify media coverage and update people on the status of the project, but also to receive suggestions and critiques.

Lessons learned

Creating a new approach

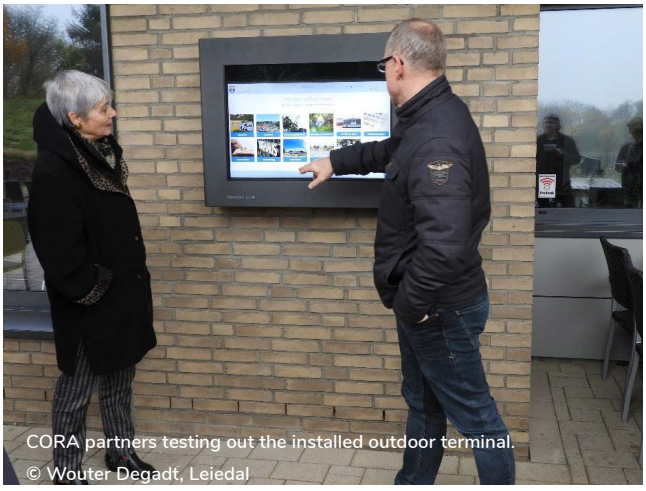
Through this pilot experience, Amt Hüttener Berge created five guiding principles for both the conception and implementation of digital services:

1. High degree of citizen participation: include stakeholders at all stages from design to delivery to ensure expected use is met
2. Consistent look and feel: create a standard for digital services, 'if you know one, you know them all'.
3. LEGO® strategy: use the same basic technologies for software, customising only when necessary
4. Citizen portal: make digital services accessible via a secure user interface that may be personalised by every citizen
5. Reusability: Use open source to ensure solutions can be replicated elsewhere by other municipalities.

These principles ensure that digital solutions at the municipality level can be designed and developed effectively, with users (including practitioners and end-users) in mind.

Remaining pilot activities and future plans

Amt Hüttener Berge have delivered the pilot as intended. Future plans include creating training guides on how to use the technology, which will target elderly users in the first instance. They are also associated with another Interreg project, COM³, where their pilot will connect producers, retailers and craftsmen with customers to improve marketing and access to regional products and services.

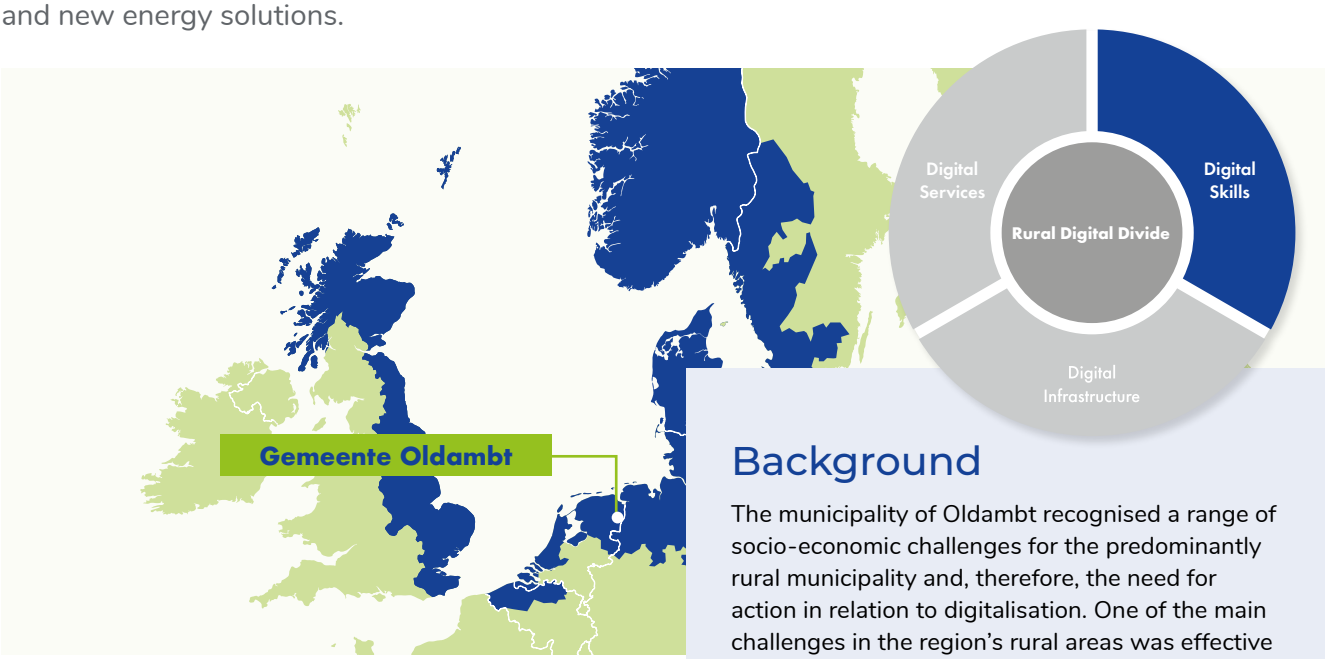


CORA partners testing out the installed outdoor terminal.
© Wouter Degadt, Leiedal

Gemeente Oldambt, NL

Smart public welfare solutions and in place support

The aim of the pilot was to raise awareness and improve the digital skills and competencies of citizens and enterprises in the municipality of Oldambt, as well as testing public welfare solutions using digital technology. Oldambt aimed to create a digital hub (a Broadband Innovation Centre) for local enterprises and start-ups to help improve digital business activ-ities in the area. It was hoped that the Centre would become a place for all citizens, entre-preneurs, civil servants, unemployed, old and young, to get inspired, be engaged and par-ticipate in a range of innovation projects in the field of broadband and digitalisation. Topics to be covered included home automation, e-health, virtual reality applications, agri-projects and new energy solutions.



Background

The municipality of Oldambt recognised a range of socio-economic challenges for the predominantly rural municipality and, therefore, the need for action in relation to digitalisation. One of the main challenges in the region's rural areas was effective communication and how to involve citizens and local entrepreneurs in the development and use of telecommunication and digital technologies.

Designing and delivering the pilot

How has it been designed?

The Oldambt Verbindt Foundation and Groningen Internet Exchange (GN-IX) planned to co-create a digital hub, the Broadband Innovation Centre Oldambt, for local people, enterprises and start-ups to establish and improve digital activities in the area.

Who is it for?

The Broadband Innovation Centre was intended to be accessible by anyone with an interest in ICT and the target audience therefore included all residents and businesses in the region. It was meant to be an inspiring Centre for various Inter-net and ICT-related projects as well as local community initiatives.

How has it been delivered?

In 2019 the decision was taken to separate the project into two parts as it was felt residents required more informa-tion on the possibilities of digital technologies. The first stage was there-fore to provide a Broadband Information Centre, with a focus on awareness of the Digital Agenda followed by the second stage of the Innovation Centre, focusing more closely on businesses.

The Broadband Information Centre will focus on promoting and stimulating the use and opportuni-ties of broadband, becoming an educa-tion/information focused pilot project.

Outcomes of the pilot

What outputs have the pilot achieved?

The pilot gathered a significant amount of data on the opportunities for an Innovation Centre, which will be used for future phases of the project. The project has successfully increased awareness and interest in a Broadband Information Centre, created partnerships with schools and achieved buy-in from new political leaders for future phases which include the original Innovation Centre concept.

Unintended outcomes?

Although there have been delays to building the Broadband Innovation Centre, the pilot team have been able to get support from local schools, in addition to the local government partners, therefore creating a stronger local partnership. These schools are taking part in planning for the first phase, the Information Centre.

Lessons learned

- Overcoming insufficient digital aware-ness: local government and key actors must be able to see the importance of the digitalisation programme in order to buy into developments such as an Innovation Centre. In this case they did not always see the importance, and were not moti-vated to act, which slowed progress for the pilot.
- Joined-up interest: having individual buy-in from local actors is not enough, digitalisation must be on the agenda at a high level to ensure constant attention and prioritization.
- Getting the right space: requiring a specific building or physical space can slow a project. This pilot had earmarked a suitable building, but it was sold before it could be purchased for the purpose of the Innovation Centre. Not being able to identify an alternative space slowed the pilot down.
- Communication with stakeholders: it is important to spend a significant amount of time with prospective local users in order to engage their interests and ensure future use of the Centre.

Remaining pilot activities and future plans

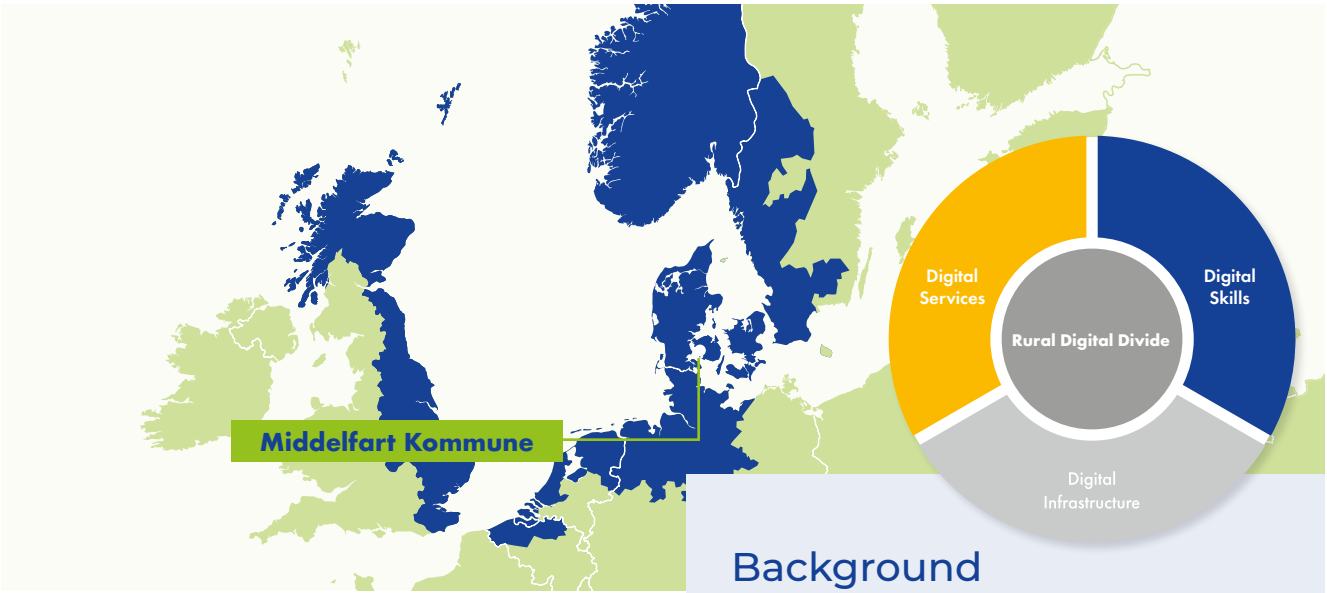
The first phase, the Broadband Information Centre, is now being pursued, with a potential location identified in the centre of Winschoten, the main city in Oldambt (as of end of 2019). The pilot now includes support from the larger Province of Groningen, local schools and private companies. The local partners intend to investigate and build an Innovation Centre as a second, future phase to the Broadband Information Centre created as part of the CORA pilot. They remain engaged with CORA project partners and have also begun a partnership under COM3 (another NSR Interreg project) to see this vision become a reality. They intend to spend more time with local enterprises and the local authority to increase communication and user engagement, with a goal to make Oldambt the SME-friendliest municipality in the Netherlands.

Aerial view of Winschoten, the main city in Oldambt municipality, The Netherlands © Oldambt municipality

Middelfart Kommune, DK

COME ALONG (KørMed) – sustainable transportation and mobility in rural areas

The aim of the COME ALONG – sustainable transportation and mobility in rural areas pilot, called KørMed in Danish, was to make ride-sharing easier, greener and more attractive to the inhabitants of the Middelfart Municipality. The pilot team planned to develop an IT-based car-sharing platform to make transportation in the countryside smoother using digital solutions, and provide training and local workshops to enhance take-up of this solution.



Background

Transportation is a major source of CO_2 emissions and car or ridesharing is a mechanism to reduce this. Mobility is also more of a challenge in rural areas where local buses may not be available, and those who do not have their own car are therefore often left without the appropriate means to get around. In the Middelfart Municipality, the local committee examining sustainable traffic and public transportation has great interest in these issues, and this pilot hopes to make life in rural areas easier, whilst supporting the environment.

Designing and delivering the pilot

How has it been designed?

This pilot was designed to support short, local trips in rural areas outside the major cities of the Middelfart Municipality. The aim was to first investigate technological solutions, test those solutions using small groups in the Municipality, and then design concepts to influence people's behaviour and encourage greater ridesharing.

Who is it for?

Local knowledge held by the staff of Middelfart Municipality was used to help determine the most appropriate target audiences. First, the Municipality identified three target groups to test the technology solution: employees of a local workplace (city hall), members of a local sports club (gymnastics) and an educational institution (high school). These three test areas helped confirm the expected target audiences. Once operational, the target audiences are believed to be local residents, young people of school and college age, and people of working age.

How has it been delivered?

KørMed engaged residents in market research around ridesharing apps, particularly GoMore, which is an existing ridesharing online platform gomore.dk. They set up a partnership with the regional bus company, FynBus, which had data on the habits and needs of citizens regarding

public transport. Through this they identified that transportation was a critical issue for young people, and worked with a local high school to design a survey around transport needs and to explore whether there was interest in car-sharing.

KørMed then set up a partnership of three local groups to act as a 'test bed' for the actual ridesharing app (local workplace, sports club and educational institution), and conducted first trials of the ridesharing solution in Autumn 2019. They are now focusing on designing the final stages of the pilot and designing concepts to influence people's behaviour by making it easy and attractive to share rides.

Outcomes of the pilot

What outputs have the pilot achieved?

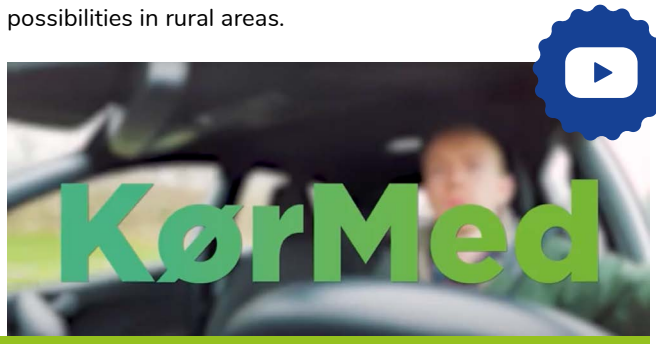
Approximately 200 people responded to the initial survey about transportation habits with the overall conclusion being that people are willing to offer rides and take rides in rural areas. The project team has gone onto successfully design a pilot ridesharing concept that was tested in late 2019. During the test period, the target groups were able to sign up to offer or use transportation in different ways using digital services. The pilot team has collected and analysed the data from this test period to make further plans.

Unintended outcomes?

Significant partnership opportunities have emerged with local communities, high schools and the Local Government Denmark, which is the association of all Danish municipalities.

Wider benefits?

By including the local high schools in designing and testing the idea of a car-sharing platform, the pilot has contributed to education opportunities for local residents. The partnership opportunities created through KørMed have also created a greater awareness around digital possibilities in rural areas.



Check out the KørMed video on CORA YouTube Channel
https://youtu.be/fPBohO2u4cQ

Middelfart Municipality staff evaluating the pilot so far
© Tina Frisch Karstensen, Middelfart Kommune

Lessons learned

Technology versus Behaviour

- Digital Tool availability: technology and ridesharing apps are either already available or are being developed, so it is more effective to identify existing tools, than design new ones.
- Individual and collective behaviour: regardless of digital tool availability, the main challenge for the project was about how people behave and how to change peoples' behaviour to maximise a technology-related solution. The inhabitants showed an interest in doing "something for the environment and each other" through ridesharing, but needed help and nudges to move this forward and make it happen. Identifying how to do this might 'crack the code' for more ridesharing in the future.

Remaining pilot activities and future plans

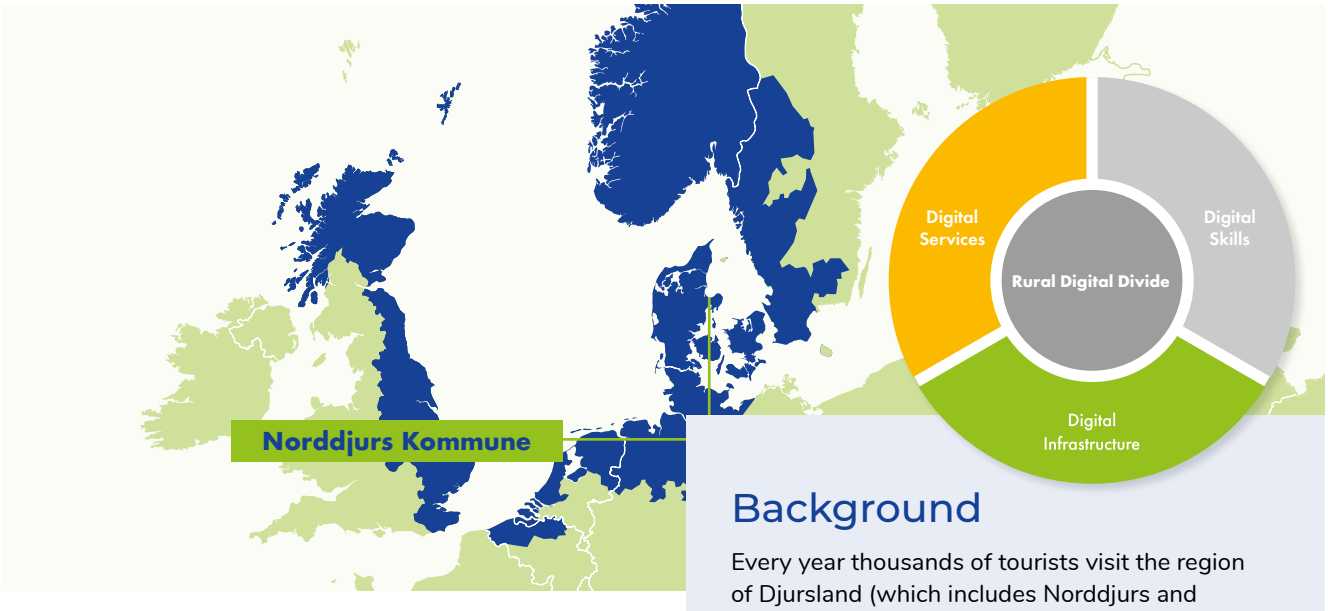
Based on the findings and experiences gained in KørMed, Middelfart Municipality has received further funding under the Danish Business Authority to develop and test new ways to get (even) more citizens to drive together. The behaviour-changing measures will be tested in three different settings, workplaces, leisure institutions and educational sites, and will include nudging, digital nudging and nudging through communication. This will help make ridesharing accessible to more citizens in rural areas, benefiting the local community, economy and environment.

Norddjurs Kommune, DK

SAINT – Strategies on e-Tourism

The aim of the SAINT – Strategies on e-Tourism pilot was to develop new tourism-oriented digital services to enhance the visitor experience in Norddjurs Municipality and increase the awareness of how Next Generation Networks (NGN) can boost the local economy. The pilot was divided into three areas:

- deploying a pilot WiFi Hotspot in one tourist attraction in a nature area,
- providing access to tourism-oriented digital services and information,
- developing a good practice guide for local businesses to help them boost business activities and tourism in rural areas using the benefits offered by NGN.



Background

Every year thousands of tourists visit the region of Djursland (which includes Norddjurs and Syddjurs), located in a beautiful nature area facing the Kattegat sea. Tourists expect to have the same digital opportunities when they are on holiday as they have at home, and providing free WiFi access in a nature area may therefore enhance the visitors experience. Norddjurs has a special interest in tourism as part of improving the local economy and business activities in the area, and their development strategy specifically works to support local SMEs, in order to boost the economy of the municipality and the area of Djursland.

Designing and delivering the pilot

How has it been designed?

The pilot was designed to support the development strategy of Norddjurs Municipality and in particular their commitment to support local SMEs. The Municipality sought to provide at least one WiFi hotspot to support tourists, alongside conducting workshops with local tourist businesses to support their digital skills.

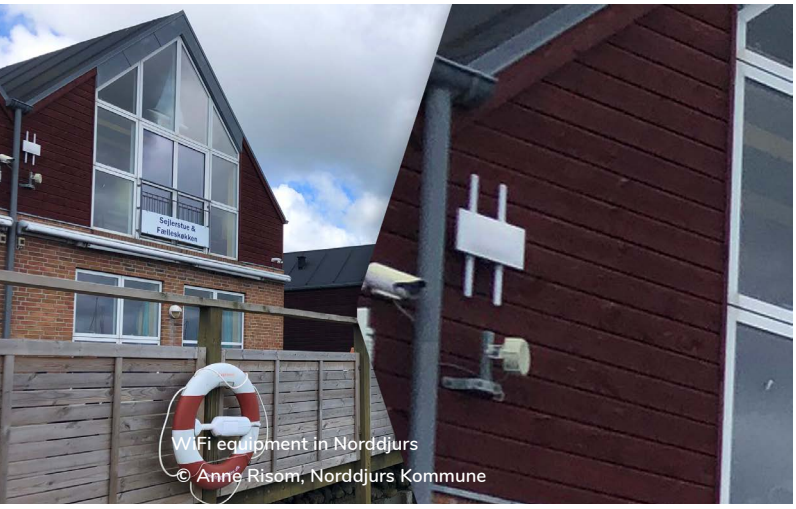
Who is it for?

The main beneficiaries of this project would be visitors to the area, residents of the municipality and the local tourism industry. These groups aligned with the development strategy of Norddjurs Municipality. Interested businesses and individuals were identified using advertising, work-shops, interviews and presenting the project at local fairs.

How has it been delivered?

As a local authority with control over the nature area, the pilot delivery team were able to engage an NGN expert and install a local WiFi hotspot to the nature area at the port of Bønnerup. A second WiFi spot was also installed in February 2020 at Fjellerup Beach, hosted by a popular local ice cream house and waffle bakery. This was chosen as an ideal location for tourists and residents alike.

The Municipality remains committed to providing workshops to support businesses digital skills (needs, challenges and current use of NGN), and is conducting interviews first to gauge interest and ensure local businesses, such as holiday home owners, are motivated to attend and give them the courage to explore digital opportunities.



WiFi equipment in Norddjurs
© Anne Risom, Norddjurs Kommune

Outcomes of the pilot

What outputs have the pilot achieved?

The pilot has worked with businesses and stakeholders, conducting interviews to get a picture about digitalisation and what needs they have in the region. Two WiFi hotspots were successfully installed. The project is still developing a process for collecting data from these hotspots (i.e. how many users access it, how often, where do the visitors come from, where do they go afterwards and so on).

Unintended outcomes?

By keeping costs low on the first WiFi hotspot installation, Norddjurs Municipality have installed a second, additional, hotspot in another tourist area, working with a local business as host.

Lessons learned

Creating awareness about digitisation

- Even before the WiFi hotspots were installed, the Municipality's participation in CORA had created a greater awareness of the need, and possibilities for digital infrastructure and digital skills.
- The demand for access to digital services in general has increased since the start of CORA, and it is becoming a focus for all stakeholders in the region including local businesses and tourism organisations.

Challenges

- Whilst national strategies can underpin digitalisation, Norddjurs Municipality has found that the national strategy is too far for a rural municipality. It is therefore left to local groups to promote and work to achieve greater digital infrastructure and services. This puts a strain on staff time and resources.
- There can be conflict between public provision of broadband or WiFi services and private companies. In Norddjurs, such tension delayed the second WiFi hotspot – a local private company planned to provide services in the same area as a proposed public WiFi spot, which resulted in the installation of the second hotspot in an alternative location to the one originally planned.

Remaining pilot activities and future plans

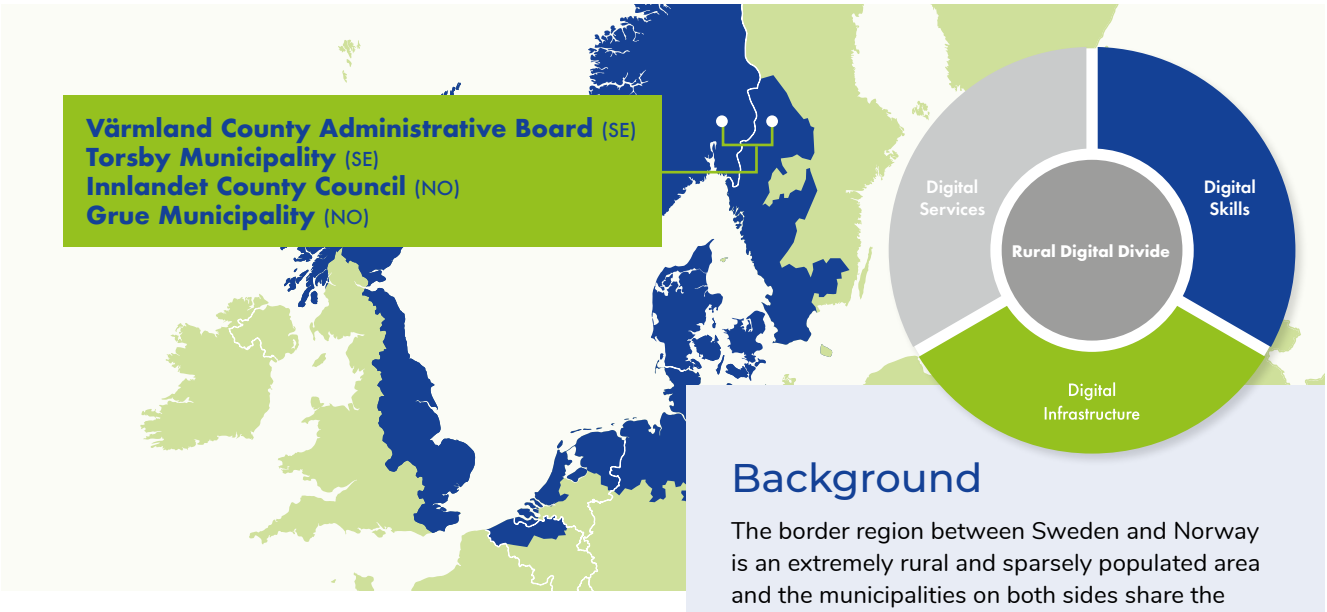
Norddjurs Municipality is now focused on the education element of their pilot, which involves running interviews and two workshops with local tourism businesses across Djursland on the theme of 'Data driven business development for tourist businesses'. Norddjurs plan to use outputs from the interviews, workshops and the two CORA WiFi hotspots to develop and write a good practice guide for local businesses to help them identify and engage with the benefits offered by NGN.

WiFi equipment in Norddjurs
© Anne Risom, Norddjurs Kommune

Värmland County Administrative Board (SE),
Torsby Municipality (SE), Innlandet County Council (NO), Grue Municipality (NO)

BROADEN – Broadband across border Sweden-Norway

The aim of the BROADEN – Broadband across border Sweden-Norway pilot was to provide high speed Internet access on both sides of the border between Torsby municipality in Sweden and Grue municipality in Norway. The pilot aimed to trial an infrastructure-sharing model in a transnational context with different legal and administrative frameworks. The findings have the potential to be replicated in other places along the Swedish-Norwegian border, as well as between other neighbouring countries.



Background

The border region between Sweden and Norway is an extremely rural and sparsely populated area and the municipalities on both sides share the same challenges concerning depopulation and a high proportion of elderly residents. Broadband access could help make the region more attractive for businesses and inhabitants, by improving the opportunity to work, learn and access public services, such as e-health, at distance.

Designing and delivering the pilot

How has it been designed?

Prior to this project, there were no plans to offer broadband to the most remote areas on the Norwegian side of the border. However, on the Swedish side, fibre broadband was planned, ending at a few remote villages. In this context and, with a history of collaboration between Värmland (Sweden) and Innlandet (Norway), the cross-border infrastructure sharing model was developed with the aim of providing rural border regions with superfast connections.

Who is it for?

The target groups were identified as all people living and working in the border area between Värmland and Innlandet, including businesses, public organisations, residents and tourists.

How has it been delivered?

The Sweden and Norway partnership developed an operational plan and model for infrastructure sharing. This involved extensive research with the telecommunications industry to determine technical requirements as well as identifying any differences in models for broadband expansion and legal issues. Roll out of fibre was planned from Sweden to Norway in the first instance. The physical building of the cross-border fibre started: a 'test' case, running fibre from a small town in Sweden to a small tourist site and village on the Norwegian side.

Outcomes of the pilot

What outputs have the pilot achieved?

Working with telecommunications operators and the local municipalities the pilot has developed a technical plan for cross-border fibre deployment. This is of potential interest to other cross-border regions in the EU, as well as cross-border regions between EU and non-EU countries. An underwater cable was placed into Lake Röjden/Røgden. The fibre is now extended from Sweden up to the border with Norway. On the Norwegian side, the fibre was taken from the border cabinet and extended (1.2 km, also through the lake Røgden) to a fibre cabinet at the crossing direction Svullrya. Finnskogtoppen Hotel (on the Norwegian side) installed 1.5 km fibre and already connected to this cabinet. The visitors of the Finnskogtoppen Hotel can now enjoy 900 Mbps speed (upgraded from 3 Mbps before). The partners have also held a digital inclusion seminar in Torsby, as part of knowledge sharing activities.

Wider benefits?

The technical plan containing all legal and technical requirements for a cross-border fibre sharing arrangement is potentially replicable to other cross-border areas.

Lessons learned

Opportunities for a Digital Single Market

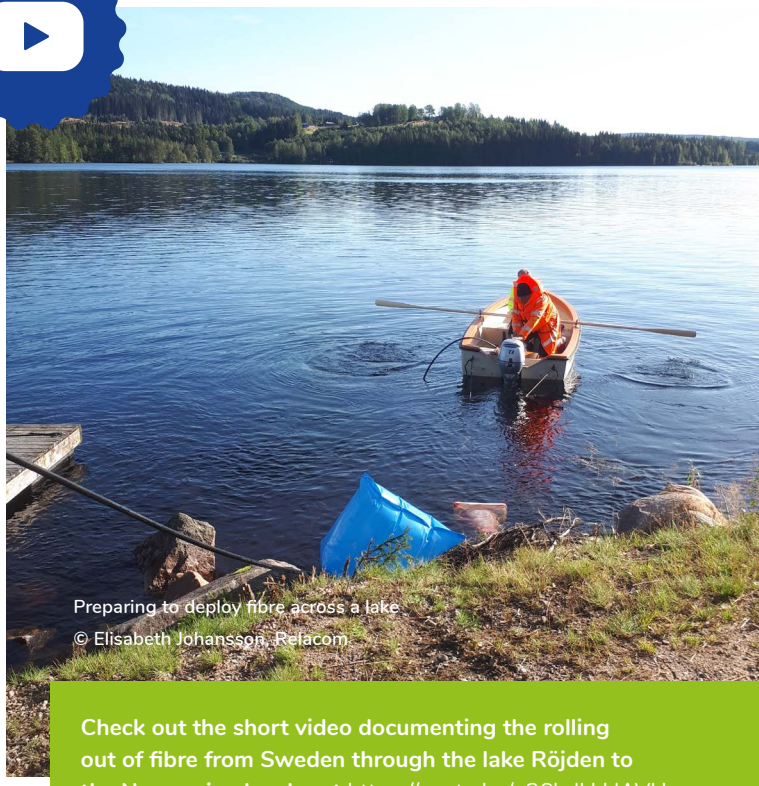
- This project has identified that there are no major legal restrictions to building fibre broadband across administrative, national and EU borders.

Challenges

- Whilst there are no legal restrictions, different business models, national broadband strategies and mechanisms for public funding across borders has been hard to reconcile, slowing project progress. Finding common ground to ensure buy-in at all political levels is important. For example, Swedish regions often use EU funding alongside national and regional funding for broadband expansion in remote areas, whereas Norway does not, and broadband expansion is mainly in areas with higher density of premises (i.e. not rural).
- If a broadband provider is located in a different country to the end-user, the end-user receives an IP address from the originating country. This can affect user experience of TV services, for example.
- The customers on the Norwegian side cannot yet buy services from Sweden. Telia Sweden offered service to Finnskogtoppen Hotel exclusively in this project, as a test case. Telia Sweden and Telia Norway now are in a dialog on how to offer services to customers on both sides.

Remaining pilot activities and future plans

Four other companies and two households that are close to the new fibre cabinet in Norway are also planning to connect to the new fibre from Sweden. The partners also intend to deliver more digital learning seminars for elderly people in Torsby (Sweden), Grue, Eidskog and Kongsvinger municipalities (Norway). Expected benefits include increased digital literacy, better digital conditions for existing and future companies and support for residents.



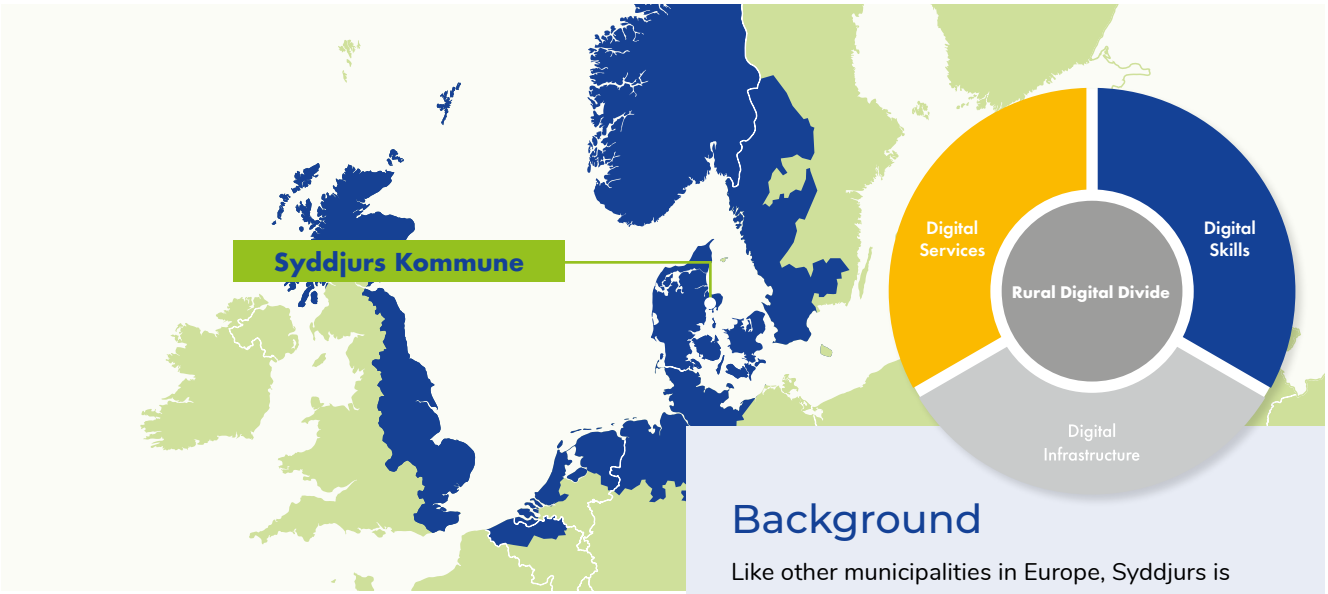
Preparing to deploy fibre across a lake
© Elisabeth Johansson, Relacom

Check out the short video documenting the rolling out of fibre from Sweden through the lake Röjden to the Norwegian border at https://youtu.be/p36hdkkHAVU

Syddjurs Kommune, DK

CORD – COnsultation for tReatment of Dementia

The aim of the COnsultation for tReatment of Dementia pilot is to help relatives of people with dementia within the Syddjurs Municipality to get counselling quickly. The anticipated result is a digital system for patients with dementia and their families, which allows for a faster response time to current incidents. By providing consultations online, the travel time of coordinators is also reduced, which will lead to more efficient medical care. The workshops involve all parties concerned in the development and implementation of a system. The pilot is being carried out in close cooperation with the neighbouring municipality of Norddjurs, which also shares the same challenges.



Background

Like other municipalities in Europe, Syddjurs is facing a significant increase in the number of citizens over the age of 80. The budget for elderly care has not been adapted to address the larger proportion of the population that may need such care. Therefore, municipalities such as Syddjurs are responsible for finding new ways to maintain a high quality of elderly care within the same budget. Videoconferencing has long been seen as a technological solution that can address these challenges.

Designing and delivering the pilot

How has it been designed?

Video consultation in the context of e-health is a priority topic in the Syddjurs municipality: there are four coordinators working with people diagnosed with dementia. Their job is to help and guide patients and their families. There are about 400 known patients with dementia in the municipality, with an additional estimated 300 unregistered. Due to the rurality of Syddjurs the dementia-coordinators currently spend a lot of time travelling to visit patients. Syddjurs designed this pilot using workshops with healthcare professionals to test the integration of video consultation services.

Who is it for?

The target audiences are local, older residents suffering from dementia, as well as their families and healthcare professionals.

How has it been delivered?

The pilot was designed to be delivered in three stages:

- Technical pre-study and market analysis to find relevant suppliers
- Designating a supplier
- Designing the implementation plan to be used across the municipality.

Outcomes of the pilot

What outputs have the pilot achieved?

The pilot has selected LifeManager to supply suitable technology as they are able to provide the broad functionality, configurability and technical support required. The implementation process is initially offering training through videoconferencing with 15 citizens. The focus is on one-to-one activities between the citizen and the trainer. The pilot's next step is to start group-training once participants are familiar with the technology.

Unintended outcomes?

The pilot has become part of a larger project around videoconferencing for all home healthcare visits and potentially other public organisation engagement with citizens. There is now a strong national focus on using videoconference systems as a communication platform between public organizations and citizens. By becoming part of a national conversation, the pilot has become part of a bigger network with more stakeholders that will ideally ensure the implementation is successful. As of spring 2020, the municipality has 250 citizens using the system and the health care department using it for internal communication and coordination, spurred by the Covid-19 pandemic.

Lessons learned

Challenges to implementation

- Changing political landscapes, such as the concept of videoconferencing becoming more of a national priority, has had the effect of slowing progress for this pilot.
- Taking a broader perspective on the use of videoconferencing is good but can make it difficult to implement a bespoke solution: the videoconferencing service must work for a range of services.
- The COVID-19 pandemic forced the municipality to implement videoconferencing more quickly, but implementation had to be adjusted to focus on one-to-one activities as opposed to group workshops.

Technical solution?

- The project was about finding a technical solution, but in practice getting the public organisation staff to engage meant that the majority of the project time has been spent on organizational change management. This included persuading the dementia coordinators of the value of the technology and working with them on how it could be implemented. This is a very important finding: addressing how people hope to engage with the technology in the planning phase is important for future projects.

Remaining pilot activities and future plans

Syddjurs remains committed to rolling out videoconferencing for all dementia coordinators and patients in the region. Expected benefits include faster and more frequent contact between the municipality staff, citizens and their next of kin, faster diagnoses and a more flexible workday, including less time spent on transportation for staff. Over time, Syddjurs municipality also hopes to have closer cooperation between the IT and health care departments for future technology related projects.

Foto: Colourbox

24.10.2018 kl. 11.48

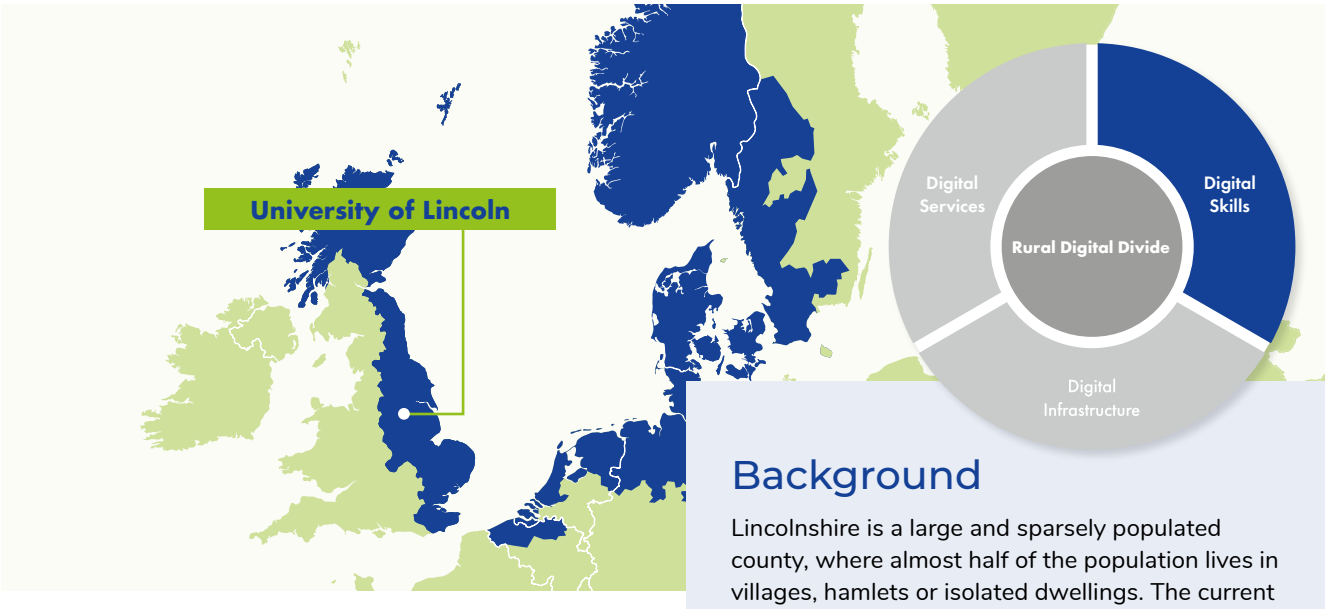
Sophie Løhde: Skærmbesøg kan i nogle tilfælde erstatte fysisk ældrepleje

„Screen visits" can in some cases replace physical elder care. Interest in video-conferencing is growing
© Syddjurs Kommune

University of Lincoln, UK

THINK – Technology hubs: Improving Networking and Knowledge

The aim of the THINK – Technology hubs: Improving Networking and Knowledge pilot was to engage Lincolnshire Technology Hubs in selected CORA workshops, in knowledge exchange activities with CORA partners, and in developing the CORA Digital Hub concept. Through this engagement, the hubs and CORA partners contributed to the creation of the CORA Digital Hub Guide, which sets out guidance and support to improve hubs' capacities to enhance digital skills and improve local business activities/processes.



Background

Lincolnshire is a large and sparsely populated county, where almost half of the population lives in villages, hamlets or isolated dwellings. The current challenge is the low take-up and use of broad-band-enabled technologies among both local enterprises and communities. The 'Onlincolnshire.org' initiative, run by Lincolnshire County Council, piloted three interconnected Technology Hubs across Lincolnshire to provide access to broad-band-enabled technologies to local businesses and communities. The purpose of the hubs was to demonstrate the use of digital technologies such as 3D printers and scanners, CAD equipment and motion sensor technology, and thereby promote the take-up and use of fast broadband. With several years' experience, the Lincolnshire Hubs can contribute significantly to knowledge exchange within CORA.

Designing and delivering the pilot

How has it been designed?

THINK was designed to be a knowledge sharing pilot, engaging existing hub practitioners from Lincolnshire to contribute to CORA project ideas, and contributing to the creation of the CORA Digital Hub concept and Guide. The Lincolnshire Technology Hubs exemplify an existing, successful, digital hub approach that is based in a rural county of the UK. By engaging with them, the CORA project learned more about hubs in practice, and shared the knowledge within CORA.

Who is it for?

The target audience of this pilot was the Lincolnshire Technology Hubs and the CORA partners. The CORA Digital Hub Guide, created as part of this pilot, was aimed at local authorities, universities and organisations either considering setting up a hub, or supporting others to set up a hub.

How has it been delivered?

This pilot engaged with the Technology Hubs from the outset of the CORA project. Hub managers were involved in face-to-face and virtual meetings, invited to CORA events, and participated in local events to describe and motivate future hub developments. The Digital Hub Guide has been developed from a survey of CORA regions, desk research, and has also incorporated feedback from exchanges with Technology Hubs.

Outcomes of the pilot

What outputs have the pilot achieved?

The pilot successfully enabled knowledge exchange, gathering information about what makes a successful hub, the challenges hubs have faced, and related issues. The team developed a digital hub guide "Be Bold. Be Innovative. Be a Digital Hub" along with two e-learning modules about hubs, to inform organisations and individuals across the North Sea Region and further afield about digital hubs and what they could look like. This guidance is hosted on the CORA project web platform at coraproject.eu, where it is free to use and explore. It has been disseminated to regions across the UK and Europe, and picked up by local economic development groups, rural businesses and community organisations.

Lessons learned

Co-creating and sharing knowledge

- By including successful, existing digital hubs to this pilot from the outset, the University team aimed to co-create knowledge, identifying new ways of working and creating real world guidance for other organisations and individuals around digital hubs.
- This form of partnership can be replicated across any project or local development initiative and is beneficial to maximise benefits of the pilot in a short space of time.

Challenges

- Working with existing organisations meant that priorities often conflicted and achieving the outcomes necessary for CORA did not always align with partners' needs or staff resource. Creating appropriate and manageable timescales and outcomes that recognised this was a challenge.

Remaining pilot activities and future plans

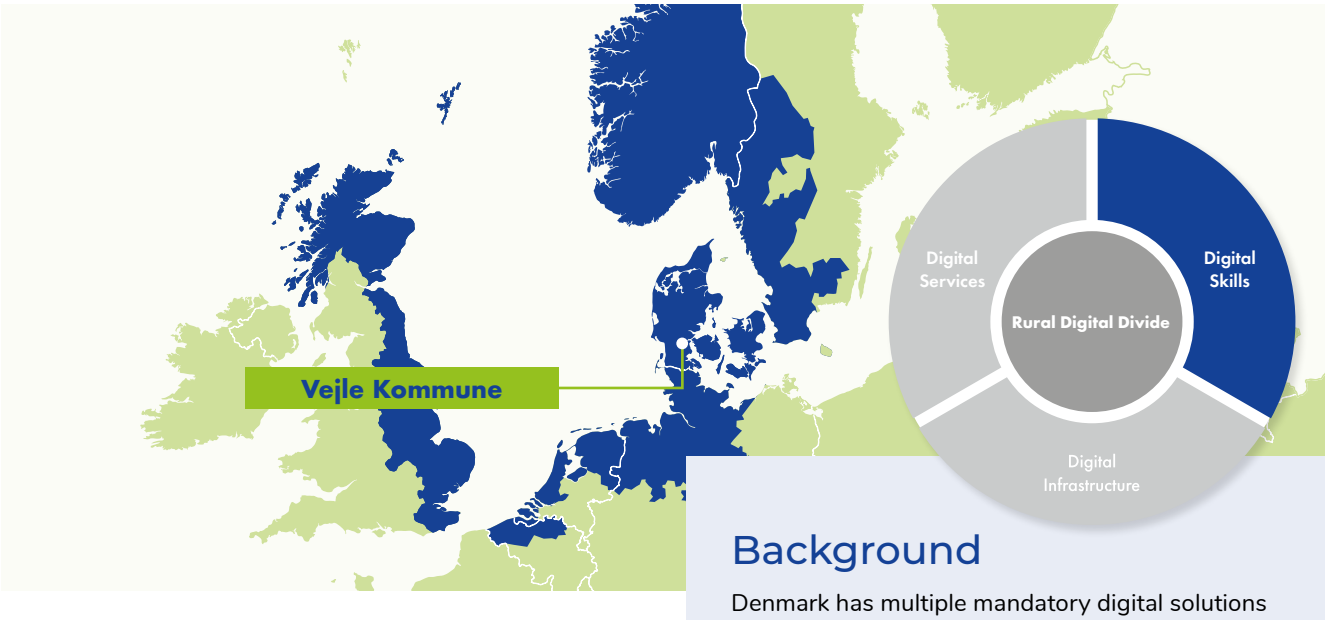
The pilot, as part of CORA, has completed its intended activities. Future plans include working with the Lincolnshire hubs for continued knowledge sharing about a 'hub' as a mechanism for rural development and using the Digital Hub Guide to engage with other organisations about the development of digital hubs. The pilot team also hopes to engage the Lincolnshire Technology Hub practitioners in final CORA events.

CORA partners visiting the Horncastle Hub, one of Lincolnshire's Technology Hubs © Fiona Ashmore

Vejle Kommune, DK

DILA – Digital Learning for All

DILA – Digital Learning for All was implemented by Vejle Library and regional stakeholders to establish two digital learning hubs in the rural villages of Smidstrup and Give. These spaces offer access to local public services, as well as new meaningful activities for digital learning. An inclusive approach was taken to include the local population of rural areas, not only in training activities, but also in developing the activities to be offered. The pilot offered train-the-trainer activities and public workshops, through which potential digital trainers got upskilled in regards to digital skill and competence training.



Background

Denmark has multiple mandatory digital solutions for public services which require citizens to be digitally competent. In addition to this, rural areas often require alternative solutions to enable citizens to benefit equally from the often remote public services. The pilot activities in Vejle helped local communities and rural areas in Vejle Municipality get the opportunity to develop digital skills, try new tools and build communities around this.

Designing and delivering the pilot

How has it been designed?

The two digital learning hubs were developed as part of the service offered by Vejle Library. These bridged the gap between two rural villages in the region, and the main centre of Vejle. Vejle Library engaged with key stakeholders in both villages to help design and plan services offered by a physical or flexible hub. A public school and a local digital meetup of older residents played a central role, together with local interest groups, citizens and administrative staff.

Who is it for?

The target audiences were based on local demographics, anticipated needs for digital learning and through local volunteer groups that had an interest in digital hubs. Vejle Library engaged specifically with older adults through volunteer organisations and with young people by providing school introductory sessions in the libraries and 'new tech workshops' in, or close to, the new digital hubs.

How has it been delivered?

The hubs are being delivered through Vejle Library in Smidstrup and Give. These are two remote rural towns with unique local characteristics and fewer digital learning options than elsewhere. Give has a centrally located local library and community-house with good facilities and Smidstrup has a public school with an interest in collaborating and promoting digital learning. Workshops and events were held with local stakeholders including local government, library staff and interested citizens to design the hubs. This has included setting up cooperation with local groups, including a volunteer group for elderly offering IT help and advice, a local development council

and a small local business, specializing in 3D printing and digital technology, called KIDSprint.

Both hubs are still being developed, specifically sourcing the remaining appropriate equipment, and planning future activities. Vejle Library has conducted a range of workshops and engaged in dialogues with local citizens to ensure this is done collaboratively with users and interest groups.

Outcomes of the pilot

What outputs have the pilot achieved?

The pilot has conducted a range of events and workshops to help design and activate the hubs. At Give, the pilot has equipped the hub with digital learning equipment and created a mini-makerspace area. It includes a 3D printer, VR headsets, Scan N Cut machines, a green screen and mBot robots, among other things. The local school has sought inspiration and borrowed robots, so children can learn to code. Local citizens have been invited to several activities or offered digital support. In Smidstrup, the pilot has worked with the local public school, municipality stakeholders and the fablab@school network to equip a new 'crafts and design' area. They have held workshops and equipped the hub with a laser cutter, scan n cut machines and micro:bits. The hub has also delivered train-the-trainer activities and formed good relations with the local development council.

Wider benefits?

The hubs are intended to be a place for co-creation, by forming an active and engaged digital community with explorative learning, learning through experience and encouraging curiosity. With new activities and a local focus on digital learning the pilot is facilitating new collaborations, attracting new investments and increasing municipality's focus on local perspectives related to digital learning.

Lessons learned

The potential for co-creation

- Co-creation, in the context of a digital hub, allows for the provider and user to equip the hubs with equipment and services that most effectively support the needs of local residents. It ensures regular use by users, as they play a role in designing what would be offered, but also ensures that the offering is realistic in terms of budget and staff time for the provider.

Challenges

- Getting users into the hub is a constant challenge. It requires getting information out about what the hub is, how it could be used, and can be particularly challenging if key stakeholders lose interest or leave. In this pilot, a key stakeholder left, and a local volunteer group dissolved, which meant new contacts had to be created.
- Local political changes, such as merging of local authorities or tensions between initiatives, can change how people engage with a project like a digital hub. Navigating this political landscape means there must be a clear communication approach. Planning in a cooperative way, as opposed to top-down solutions, remains a priority. However, mediating contradictory interests while also seizing opportunities is no small feat!

Remaining pilot activities and future plans

Vejle Library is continuing to equip both hubs with suitable equipment and services. This includes more specific technology, identified by the users and interest groups. They are also seeking to run more events and create an active community around the digital hubs. Vejle Library is also considering more online activities or demos, as part of the pilot.

At the digital learning hub with
© Thomas Munk-Osmundsen, Vejle Library

Digital bus in Djursland, DK

The digital infrastructure has become as important as electricity and water supply. How to visualize this to the citizens and stress the importance of digital infrastructure in rural areas? CORA partners in Djursland used a bus to meet the citizens! The CORA Digital Bus brings knowledge of digital infrastructure to citizens. The bus is used at events in the local communities and functions as a showroom within the five topics:

- High speed broadband
- The digital future
- Digital solutions
- Smart communities
- Digital skills

The Digital Bus is the result of cooperation between the municipalities of Syddjurs and Norddjurs in Denmark, and a way to explore the concept of a mobile digital hub – a place where the public can gain access to wireless network, explore technologies and develop digital skills.

Quick facts about the bus:

- 12 metres long
- Originally the bus was a mobile library
- Used as a showroom and a mobile meeting room with video conference

More Digital Workshops

More than 300 older people In Innlandet, Norway could improve their digital skills during More Digital workshops. Wide collaboration across municipal boundaries, sectors and generations has helped the seniors to gain inspiration and motivation. The initiative is a huge success in the municipalities of Eidskog, Kongsvinger and Grue.

During these innovative sessions, teenagers have voluntarily offered their services as computer guides to help the seniors learn more about the use of tablets, smartphones and the internet. Not only have the seniors improved their digital skills, but bridges have been built between generations and social inclusion encouraged. The seniors praised the youth for their patience and kindness during the trainings.

For the municipalities, it is crucial to get all the inhabitants join the digital highway. Digital mastery and courage are needed to be able to use public services and digital tools in everyday life.

“I finally got my first email address and I never would have thought of coming this far.“

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.

CORA

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