

# Broadband Good Practices 2019



The European Broadband Awards

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### Introduction



This brochure presents the winners of the European Broadband Awards 2019.

Through the European Broadband Awards, the European Commission wishes to highlight good practices in European broadband projects that show innovative ways of achieving the Gigabit Society objectives. The aim of this competition is to identify, give recognition to, and share good practices in planning, management and implementation of high-capacity networks in Europe.

In this annual competition, the European Commission selects the most successful broadband projects applying from across the EU. The Awards are open to all types of projects regardless of the size, location or technologies used. The competition targets national, regional and local public authorities, as well as large and small privately funded projects, that adopt innovative models of investment, business or financing structure, such as financial instruments.

Candidate projects apply each year and are assessed by a jury composed of five experts in broadband. Five projects are selected as winners in each of the five Award categories. The winners are announced and given their awards by the European Commission at the award ceremony in Brussels.

### Application and assessment

Projects are submitted, assessed and awarded under five award categories:

### Innovative models of financing, business and investment

Projects are assessed according to the effectiveness and innovation of the models of financing, business and investment applied.

### Cost reduction measures and co-investment

Projects are assessed according to the measures applied exploiting the synergies between different infrastructures, and the cooperation among relevant stakeholders in building and investing in infrastructure.

### Socio-economic impact in rural and remote areas

Projects are assessed according to the direct and indirect socio-economic impacts achieved and the substantial improvement of connections to and in remote and rural areas.

### Demand generation and take-up of connectivity

Projects are assessed according to the measures implemented to stimulate demand and to increase the take-up of services.

### Quality and affordability of services

Projects are assessed according to the focus on providing high-quality and affordable services for end-users.

### Who can apply?

All types of projects are encouraged to apply, irrespective of size, location or technologies and whether led by public or private organisations. The competition's target groups are public entities such as municipalities, regions and Member States' administrations, as well as communities, private actors such as network and service operators, utilities and other project promoters that are actively involved in building high-capacity infrastructure. At the time the application is submitted, at least 80% of the project must be completed.

### How to apply?

Once the call for applications opens, candidates:

- download the application form from the European Broadband Awards webpage
- submit their applications by email before the deadline
- receive a confirmation email

The dates are communicated in the lead-up to the call for applications.

### Who selects the finalists and winners?

A jury composed of five experts in broadband with different professional backgrounds and from different Member States assesses all projects and selects three finalists from each of the five award categories.

The finalists are informed and announced on the European Commission's Broadband Europe portal and newsletter. The winners are announced and awarded at the awards ceremony in Brussels.

The finalists and winners are then featured in the European Commission's website, newsletters and good practices database.

### The jury

#### Ivančica Urh

Ivančica Urh works as Head of the Electronic Communications Department at the Croatian Ministry of the Sea, Transport and Infrastructure.

She holds an M.E.E. degree from the Faculty of Electrical Engineering and Computing of University of Zagreb and Univ. Spec. degree for electronic communications market regulation.

Ms Urh's career in the telecom industry started in 1991 at Croatian Telekom as a senior specialist for mobile communications and as International roaming manager. She joined the Ministry of the Sea, Transport and Infrastructure in 2005 at the beginning of the negotiations for accession of Croatia to the EU. In the past fourteen years, she worked on improving the electronic communications legal and regulatory framework. As Head of Department, Ms Urh is also responsible for the development and implementation of the National Broadband Strategy and coordination of the national framework programmes for broadband infrastructure deployment.

She is the President of the Croatian Post Supervisory Board.

### Mart Võrklaev

Mart Võrklaev has been the mayor of Rae parish, one of the fastest growing municipalities in Estonia, since 2012. He is a member of the European Committee of the Regions since 2015. During this time, he has adopted two opinions: "A review of the telecom package" and "Boosting broadband connectivity in Europe".

Mr Võrklaev is also a member of the Broadband Platform, which was launched jointly by the European Commission and the Committee of the Regions in 2017, which helps highspeed broadband reach all regions of Europe.

In Rae municipality, under the leadership of Mr Võrklaev, an emphasis has been placed on developing e-services and building good IT infrastructure for all educational institutions such as kindergartens and schools. Over the past years, almost all of the schools and kindergartens in the municipality have been connected to the fibre-optic network established by the Estonian State, with support from the European Regional Development Fund. This network provides high-speed and high-quality internet connections to the educational institutions.

#### Koen Salemink

Dr. Koen Salemink is an assistant professor at the Dutch University of Groningen, Faculty of Spatial Sciences, focusing on rural geography, digitalisation and community development.

He has monitored and studied the developments of rural broadband initiatives since 2012, particularly the interaction between market players, various levels of government, and local communities.

He is involved in the project, "CORA - Connecting remote areas with digital infrastructure and services", and several other Interreg projects that deal with digitalisation in rural areas.

Over the years, Dr Salemink has advised a variety of ministries and governmental agencies, as well as local initiatives.

His research has been published in various international peer-reviewed academic journals, such as the Journal of Rural Studies and Telecommunications Policy.







### Maija Ahokas

Maija Ahokas works as Director of the Networks Regulation Unit at the Ministry of Transport and Communications of Finland.

Before her current position, Ms Ahokas worked as Director in the Ministry's Services Department. Ms Ahokas also served in several other ministries before joining the Ministry of Transport and Communications in 2010.

Ms Ahokas holds a Master's degree in Law from the University of Helsinki.

### Konstantinos Champidis

Konstantinos Champidis is the Chief of Staff at the Ministry of Digital Governance in Greece.

Mr Champidis served as the first Chief Digital Officer of Athens and was responsible for the digital transformation of the city, from 2017 until 2019.

Before this, Mr Champidis spent two years as a special advisor to the Mayor of Athens.

After a successful career in the private sector as an independent engineer, Mr Champidis released the first Digital Roadmap that includes all the digital initiatives of Athens.







# Rural Network (RuNe) Slovenia and Croatia

Innovative models of financing, business and investment

The "Rural Network" (RuNe) project aims at deploying a greenfield cross-border wholesale broadband network targeting underserved areas in Slovenia and Croatia. The targeted project lots are over 14 000 km² with more than 3 600 villages spread in a very rural and sparsely populated area along the two countries' borders. By creating infrastructure conditions that enable access to broadband internet throughout the territory, it significantly improved the quality of life in these areas.

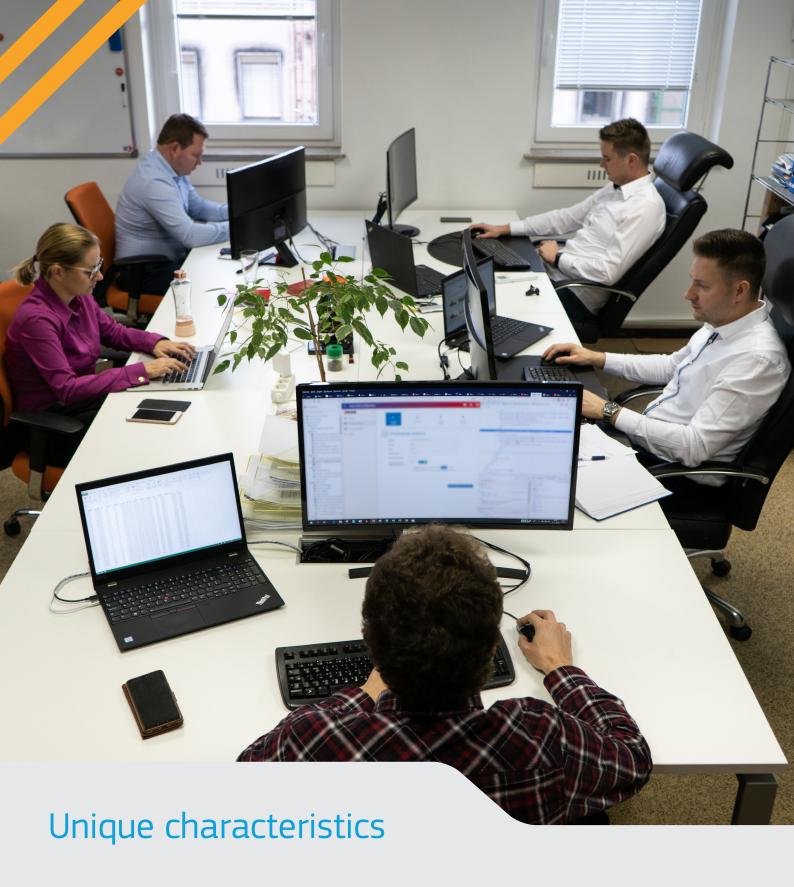
The infrastructure will provide residents and small businesses located in these regions with a gigabit Next Generation Access (NGA) broadband infrastructure. The project will provide Fibre to the Home (FTTH) and will offer wholesale services only, on an active layer open-access basis, to other service providers. As a result, citizens of the area will enjoy gigabit broadband speeds.





The project is based on an innovative financial model and was the first project to be funded by the Connecting Europe Broadband Fund (CEBF). It foresees a total estimated investment of  $\[Emailto]$  4246 million,  $\[Emailto]$  110 million of which derived from CEBF and other private equity funds. Additionally,  $\[Emailto]$  136 million will be debt from EU financial institutions. The project preparation was financed by private resources and it also received technical assistance from the European Commission.

The quality of services in these deeply rural areas will be the same or higher than in the rest of the country as the end-users will be able to choose from among different service providers. The project is expected to have a very positive impact on the social and economic regions targeted, as it will counter depopulation, create new business opportunities and improve local education and healthcare services.



RuNe is the first case where a rural-only, wholesale-only, open access, active layer fibre infrastructure has obtained private financing without non-refundable, public grants.

It is perceived as a cross-border pilot that will potentially resolve some issues in the Digital Single Market that are currently still assigned country-by-country, such as inadequate data, traffic rules, cross-border phone number portability, IP numbering and legal interception between Member States.

The project is also a result of successful cooperation between strong local-community initiatives and the successfully developed business model of private project promoters (Vahta d.o.o. and 3T Cable), which is the key force driving the project.



Rural Network is a cross-border wholesale broadband network. It is the first project to be funded by the Connecting Europe Broadband Fund.



Further information: www.ruralnetwork.eu



### Results and impact

RuNe will guarantee broadband connections to more than 370 000 households, businesses and public institutions in rural areas of Slovenia and Croatia. The most daunting social and economic challenge faced by both regions is the phenomenon of depopulation. The availability of next generation broadband access can serve as a strong incentive for the younger generations to stay in theses regions.

The introduction of NGA networks will revitalise current industrial practices and create opportunities for the emergence of new technological applications across sectors. Local government agencies and offices in both regions will benefit from improved internet connectivity. This will facilitate communication with central government authorities as well as with citizens in their respective districts, including improved access to and provision of e-government services.

Lastly, reliable and affordable ultra-fast broadband connectivity can help improve local education and healthcare services.





# Support for broadband infrastructure - PRIP2 Lithuania

### Cost reduction measures and co-investment

In order to contribute to the Lithuanian and the EU Digital Agenda 2020 targets, "Plačiajuostis internetas" is implementing the project «Support for broadband infrastructure (stage II)» (PRIP2). The project focuses on rural and agricultural areas in Lithuania where previously there was no commercial interest, and creates the conditions to secure 30 Mbps and higher bandwidth availability.

The goal of PRIP2 was to construct approximately 340 km of optical fibre lines and to connect more than 400 agricultural sector objects (farmsteads, agricultural industries, food processing companies, etc) to existing infrastructure. The goals of the project were met and as a result, a population 79 000 is served with high-speed broadband.





Following the implementation of the project, private operators started to show interest in investing in those areas by providing next generation access services to end-users and by covering the "last mile".

The project has built infrastructure only in areas where third parties had no plans to invest and is currently providing backhaul wholesale broadband networks to operators. The residents of the rural areas can now choose from a variety of internet providers depending on their services' prices and quality.

The project was supervised by the National Paying Agency under the Ministry of Agriculture of the Republic of Lithuania.



The project has a particular focus on ensuring high-speed broadband connectivity for the agricultural sector of Lithuania. The country's economy is to a large extent reliant on agriculture, which is mostly based in remote territories with limited or no connectivity.

The project was mainly funded by the European Agricultural Fund for Rural Development (EAFRD) and was implemented by a public Design Build Operate (DBO) model, Plačiajuostis Internetas. Through good cooperation with municipalities' local institutions, rural communities managed the project efficiently.



The residents of remote rural areas can now choose from a variety of internet providers depending on their services' prices and quality.



Further information: www.prip2.lt



### Results and impact

During PRIP1 and PRIP2, more than 800 agricultural objects were connected, but there is still a lot of improvement ahead, as 1500 are still pending.

In PRIP2, network operators use data transmission services of 100 Mbps. The project helped in reducing the digital divide for Lithuanian residents and enabled them to acquire knowledge and skills to effectively use the technology.

The initiative encouraged the creation of technologically advanced public and administrative electronic services corresponding to the needs of the citizens in rural areas and stimulating the service recipients to use them.

Lastly, the project ensured a geographically uniform development of highspeed broadband network infrastructure and promoted the use of online services.





# uropean Broadband Awar

### **PEBA Basque Country**

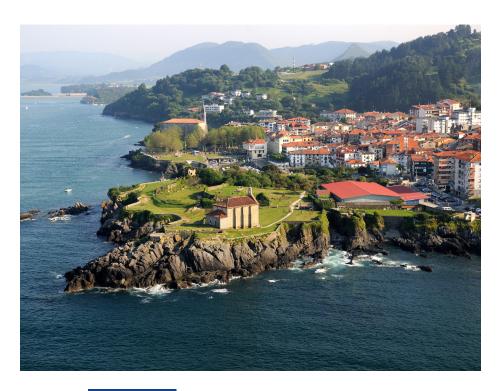
Ultrafact broadband services extension in areas of economic activity and rural zones

Spain

### Socio-economic impact in rural and remote areas

The Basque Government, in conjunction with the three Provincial Councils of the region, launched a series of ultrafast broadband extension aids for private operators, with the objective of expanding the services in economic activity and rural areas where the deployment of these networks was not planned by other parties.

To address the problem of unserved areas and the lack of commercial interest, the first governmental aid programme increased the network deployment in areas relatively close to urban areas or existing networks, with low intensity subsidy. Once the existing network infrastructure was extended, in the following aid programmes, the extension to further areas was addressed, raising the subsidy intensity. This approach has managed to attract the attention of the telecom operators.





The project has been carried out under the umbrella of the Basque Digital Agenda 2020 and has set the basis for the Basque Country to reach the Gigabit Society objectives.

The goal is to connect 100% of the economic zones and rural villages by 2020 with speeds of at least 100 Mbps, and 100% of the remote households in the deeply rural areas with at least 30 Mbps. Fibre infrastructure was deployed throughout the Basque Country, a fact that will also facilitate the deployment of 5G technology in the coming years.

These programmes reduced the gap between rural and urban areas in terms of connectivity, helping to slow the relocation of businesses and citizens.



The scope of the project is regional, covering the whole Basque Country region. Within an area of more than 7000 km<sup>2</sup>, with a population of 2.19 million inhabitants and 251 municipalities distributed in three provinces, the project focused in the industrial and underserved areas, which are mainly rural and scattered across the region.

The Basque State aid rules take into account the use of existing infrastructure and planned civil works.

This project also ensures that prices of broadband services for end-users are comparable to those in areas with effective competition. The project provides the same quality of services by the market as in competitive areas.



In total, more than 5 000 businesses and 70 000 inhabitants benefit from this project, which is a closer step towards making Digital Europe a reality.



Further information: www.euskadibandazabala.eus



### Results and impact

In total, more than 5 000 businesses and 70 000 inhabitants benefit from these measures, which is a further move towards making Digital Europe a reality.

By 2020, almost all industrial estates and approximately 97% of households will have access to ultrafast broadband services (>100 Mbps), exceeding the objectives of the European Commission.

The administrations have been convinced of the priority nature of these measures and there are already signs of significant economic and social impact in the area.





### Sarantaporo.gr Wireless Community Network Greece

### Demand generation and take-up of connectivity

Sarantaporo is a small, remote village in the mountainous part of Thessaly, in central Greece. The area was underserved by telecommunication companies, as telecom operators had shown no interest in investing in broadband infrastructure.

A small team of local young people joined forces in order to convince their fellow villagers, firstly, of the importance of internet access, and secondly, to design and deploy a Wireless Community Network.

Addressing the problems of the local community, which were related to their isolation and digital exclusion, has been one of the main drives for this project's success.





The network's architecture comprises an access and a backbone layer. Specific locations of the backbone nodes ("super nodes") are planned according to the overall network needs. Each super node carries at least two point-to-point links for redundancy, adding robustness to the infrastructure. Wireless routers are also installed in various points. Each new access-layer node added is installed on each resident's house. That resident thus becomes a member of the network and has the responsibility of maintaining the equipment.

This approach adds resilience to the infrastructure and brings down the maintenance costs, since the end-users are actively involved in performing basic maintenance themselves.

The Community Network also worked together with the University of Applied Sciences of Thessaly to bring a portion of the University's backhaul to local communities. The project expanded in 11 neighbouring villages and the services are open to the local inhabitants and visitors.



This project is a good practice example of collaboration between a local actor, Sarantaporo.gr Non-Profit Organisation, and academia in providing internet connectivity to isolated local communities.

The founders of the network actively seek opportunities to share the knowledge and experience with other regions as well, so they visited other local communities during the last year in order to train the locals. Before implementing their project, the local team carried out a wide public consultation, which involved public events in each of the villages. At these events, they presented their plan for deploying the network, engaged with the local community members and ensured sustainability for their project.

With regards to technology, mesh networking is by its nature a very flexible technology, allowing various mesh protocols to interoperate and automate the routing process according to node availability and current load.



A small team of young people joined forces to build a wireless network in order to create development opportunities for local economy and improve the quality of life in their region.



Further information: www.sarantaporo.gr



### Results and impact

The project now serves approximately 3500 inhabitants residing in 1000 households with speeds of at least 30 Mbps. Internet connectivity in these isolated areas enables access to remote resources for farming or other industry, such as access to raw materials and machinery parts, as well as to new markets for farmers and animal herders, who are the cornerstone of the local economy. It also enables public online services, such as electronic medicine prescription, the income tax statement portal, etc.

The project creates further development opportunities for the local economy, improves quality of life for local communities and enhances social cohesion by expanding the idea of community networks in other areas of Greece where it is not common practice.





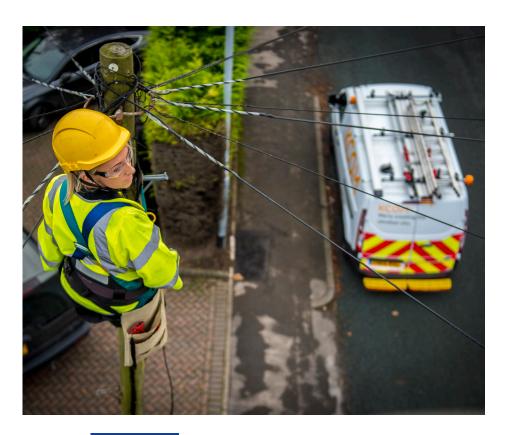
### KCOM Lightstream full fibre broadband deployment UK

### Quality and affordability of services

In 2012, KCOM communications and broadband provider embarked on a major programme of infrastructure investment to bring ultrafast full fibre broadband (using Fibre to the Premises technology) to its entire network in Hull and East Yorkshire, in the UK.

The city of Hull, situated on the north east coast of England, has experienced many social challenges in recent decades, mainly as a consequence of the decline of its traditional fishing industry.

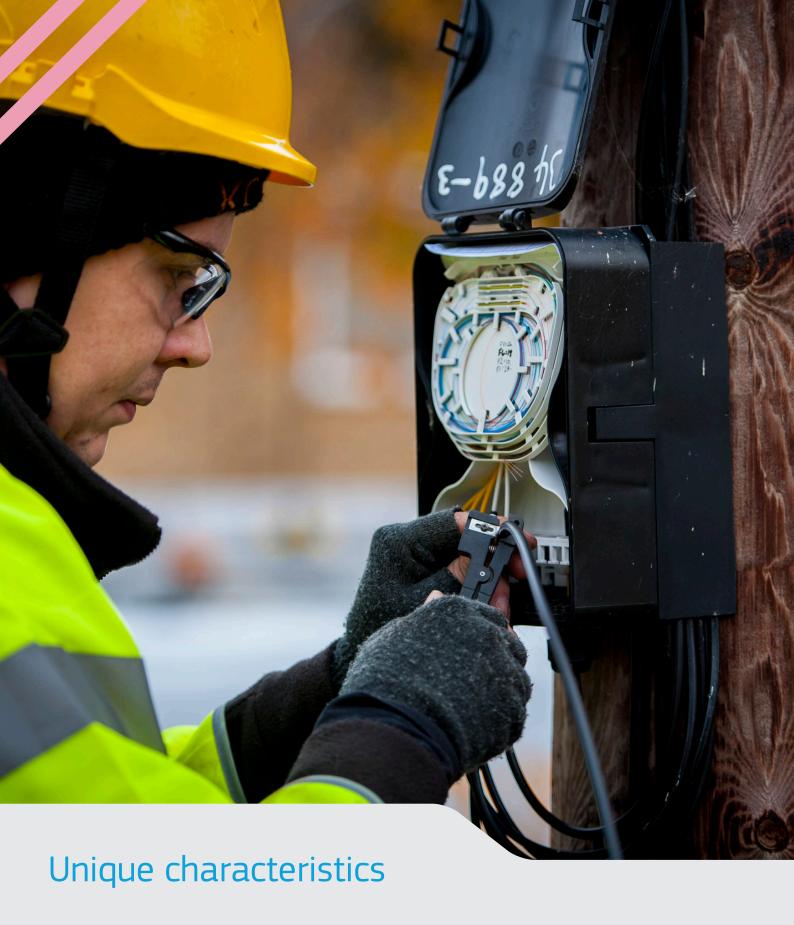
This ambitious €99 million project has been entirely funded by private investment and has taken seven years to complete.





KCOM's challenge was to provide a universal, future-proof, FTTP service to the 200 000 properties served by its network. Its goal was to offer ultrafast speeds able to cope with the demands of modern life and business, providing a reliable and affordable service to enable Hull and East Yorkshire to compete with the rest of the UK, Europe and the world.

Before starting deployment in January 2012, the company engaged closely with approximately 100 households over a three-month period to test a range of installations of its full fibre service and to seek feedback on pricing models.



Hull and its surrounding area set up its own phone network in 1904 and has maintained its independence from the national telephone network provider since then. Hull and East Yorkshire are now the only areas in the UK not served by British Telecom.

KCOM used the existing copper telecoms network in the region to deploy a full fibre network. Overhead cabling was used in order to deliver services to 70% of properties on the network. In instances where ducts in the underground network were blocked, congested or armour-cabled, they erected additional poles to deliver the FTTP service.



This project delivers a full fibre broadband network to Hull and East Yorkshire, areas that have faced many socio-economic challenges during recent years.



Further information: www.kcom.com



### Results and impact

With 100% of Hull and East Yorkshire covered, both home and business broadband users in the region now have access to speeds over 30 Mbps.

Access to ultrafast connectivity has contributed to Hull being identified as one of the UK's fastest-growing tech hubs in annual reports by Tech Nation.

The project contributed an extra 547.89 million euro to the Hull and East Riding economy between 2012 and 2018. It now adds an extra 145.93 million euro to the local economy annually. This equates to 238.16 million euro of total extra salaries of staff employed in local businesses due to this initiative.



### Finalists



Community decision as trigger for FTTH





Superfast Internet Program Hungary





Loikumer Glasfaser Modell





Wohnstadt «im Asemwald» Brandenburg





Senden: Total coverage with FTTH by private sector and civic initiative

DE





We beat the cities! Children for a future country life

DE



Digital Scotland Superfast Broadband



unser netz. unsere zukunft.



nöGIG - Phase 2





Catalan Gigabit Society Plan





**WEMACOM Breitband** 



### BCO Network



The European Broadband Competence Offices Network is a European Commission initiative supporting Member States and regions to bring high-speed broadband access to all citizens, and contributing to the achievement of the EU Digital Agenda targets and Gigabit Society objectives.

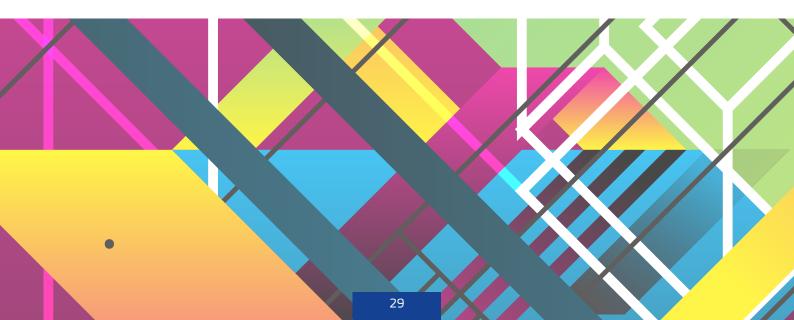
BCO Network members - the national and regional public authorities in charge of broadband deployment - benefit from a knowledge exchange and training programme designed to build their capacity to overcome deployment challenges.

BCO Network www.bconetwork.eu

Contact a BCO directory.bconetwork.eu

Videos on good practices, funding and policy videos.bconetwork.eu

Factsheets on Member States www.broadband-europe.eu





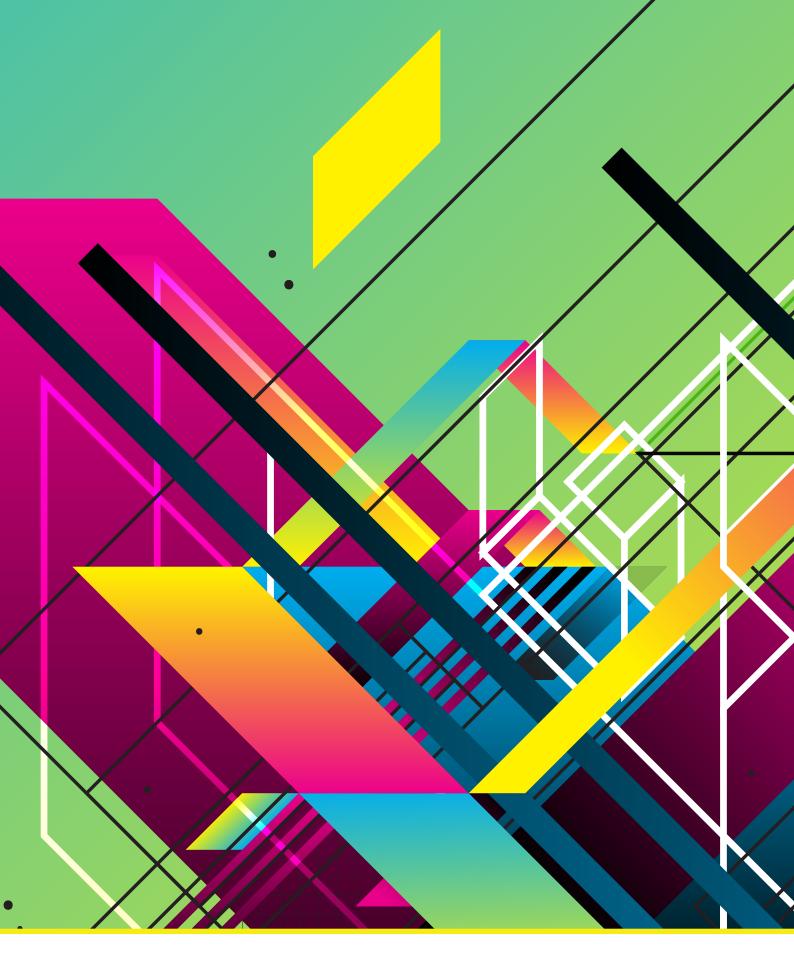
Don't forget to submit your project for the European Broadband Awards **2020** 

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### Disclaimer

The information and views stated in this brochure are those of the authors and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.





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