PROJECT FACTSHEET

www.list.lu/index.php?id=29&no_cache=1&L=2&tx_listprojects_listprojectdisplay%5BlistProjects%5D=732&cHash=22a7c8bb89ae78ab70f5f80f1448e8a5

COMMECT

Bridging the digital divide and addressing the need of Rural Communities with Cost-effective and Environmental-Friendly Connectivity Solutions



Inspiration

Rural and remote areas remain largely unconnected to the internet as they face several challenges, ranging from obvious ones - lower population density, greater distances, and rough terrain – to less obvious ones that greatly affect the success of the deployment process: policies, regulations, cost of deployment, difficulty in attracting investment, lack of technical knowledge to select the most appropriate connectivity, and more. As recognised by the EU, digital access is an imperative to ensure that every citizen has an equal opportunity to thrive. Reliable high-speed broadband connectivity is therefore a primary need for the sustainability of rural communities, to improve their lives in the immediate as well as the long-term.

COMMECT will support the specific needs and opportunities of rural areas and their populations, helping them overcome current challenges. To bridge the digital divide, COMMECT will provide quality, reliable and secure access for all in rural and remote areas. The goal of extending broadband connectivity in rural and remote areas will be achieved by integrating Non- Terrestrial Networks (NTNs) with terrestrial cellular XG networks, and low-cost Internet of Things (IoT). Artificial Intelligence, Edge and Network Automation will be adopted to reduce energy consumption, both at connectivity and computing level, with the final objective of designing energy-efficient, and environmental-friendly connectivity solutions.

Innovation

COMMECT is an EU project, funded under the Horizon Europe programme, which proposes a two-pronged approach toward digital inclusion of rural communities: (1) easy access to fast and reliable broadband Internet (making it affordable for all, and able to meet different end-user's needs), and (2) training rural communities and businesses toward the adoption of the digital technologies.

A joint approach with end-users and ICT experts working together on development challenges will be the key for the digitalisation of the agro—forest sector. To ensure the rich exchange of best-practice and technical knowledge among the actors of the agro-forestry value chain, COMMECT will set up five Living Labs across and outside Europe: digitalisation of viticulture in Luxembourg, connected forestry in Norway, connected livestock transport in Denmark, smart olive tree farming in Turkey, and sustainable agriculture and preservation of natural environment in Serbia.

In the Living Labs, the end-users' pains and connectivity gains will be discussed, but from different perspectives, e.g. societal, economic, and environmental. These Labs will ensure co- production of knowledge; continuous participation and involvement of end-users and other relevant stakeholders; experimental approaches in real-life contexts, toward the design of a purpose-driven digital infrastructure, tailored to the real needs of the rural communities.

Impact

COMMECT aims at contributing to a balanced territorial development of the EU's rural areas and their communities by making smart agriculture and forest services accessible to all. COMMECT will facilitate that, by developing a decision-making support tool (DST) able to advise on the best connectivity solution, according to technical, socio-economic, and environmental considerations. This tool, incorporating collaborative business models, will be a key enabler for jobs, business, and investment in rural areas, as well for improving the quality of life in areas such as healthcare, education, e-government, among others. The DST will lay the groundwork for a sustainable, balanced, and inclusive development of rural areas beyond agriculture, farming and forestry. COMMECT will also contribute towards the achievement of UN Sustainable Development Goals (SDG), in particular, SDG 9 Industry, Innovation and Infrastructure, SDG 10 Reduced Inequalities and SDG 11 Sustainable Cities and Communities, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, and SDG 17 Partnerships for the Goals.

COMMECT brings together a consortium of 20 partners from 11 different countries. LIST is coordinating the entire consortium, and project activities, in particular the coordination and collaboration among the 5 Living labs and leading the Living lab in Luxembourg on viticulture.

Partners

University of Aarhus (DK) , Aalborg Universitet (DK) , Inland Norway University of Applied Sciences (NO) , Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek (NL) , Seinäjoki University of Applied Sciences (FI) , SES Techcom S.A. (LU) , Telenor ASA (NO) , Turkcell Teknoloji Araştırma ve Geliştirme Anonim Şirketi (TR) , DunavNET doo (SRB) , Huawei Technologies (Ireland) Co Limited (IRL) , Luxsense (LU) , Padborg Transportcenter F.m.b.a. (DK) , Viveris Technologies (FR) , Institut fir biologesch Landwirtschaft an Agrarkultur Luxemburg (LU) , Klosser innovasjon (NO) , Ministry of Agriculture and Forestry (TR) , Local Council Gospodjinci (SRB) , Zemljoradnicka zadruga Solar Agro (SRB) , Huawei Technologies Duesseldorf GMBH (DE)

Financial Support

Horizon Europe

Contact

5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
phone: +352 275 888 - 1 | LIST.lu

Dr Maria Rita PALATTELLA
(mariarita.palattella@list.lu)

© Copyright March 2024 LIST

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY | LIST