press release

# Successful conclusion of the LEAN project, which brings connectivity and technology closer to the rural environment

- The project, developed in Soria by Cellnex, Nokia and Quobis, combines cutting-edge technology and economic efficiency to offer communication services in rural areas
- The presentation ceremony was attended by the Delegate of the Spanish Government in Castilla y León, José Javier Izquierdo Roncero, Miguel Latorre, Sub-delegate of the Spanish Government in Soria, and Maria Luisa Aguilera, Mayor of San Esteban de Gormaz

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**Soria, March 3, 2021.** Matanza de Soria, a town belonging to the municipality of San Esteban de Gormaz, was the scenario of the LEAN project, a joint initiative led by Cellnex, Nokia and Quobis with the support of the Spanish Ministry of Economic Affairs and Digital Transformation (through the AEESD programme, file number TSI-102102-2017-2).

LEAN (**L**ow cost, **E**merging countries, **A**rchitecture, **N**etwork infrastructure) aims to roll out advanced, neutral and shared mobile broadband telecommunications infrastructures in extreme rural areas that lack connectivity to promote their sustainable economic development and facilitate their digital transformation, enabling key applications like real-time data transmission or local processing.

The necessary network infrastructure was deployed to perform the project, developing a series of use cases in collaboration with the La Loba winery, whose project takes place in the Ribera de Duero Denomination of Origin area.

The demonstrations covered by this project took place in an event chaired by the Delegate of the Spanish Government in Castilla y León, José Javier Izquierdo Roncero and it counted on the presence of Miguel Latorre, Sub-delegate of the Spanish Government in Soria and the Mayor of San Esteban de Gormaz. It showed the viability of connectivity services in rural areas and the features offered by 5G in the agricultural and business sectors.

## Sustainable equipment with the most advanced technology

The challenge posed by deploying technology in rural Spain (large investments in sparsely populated areas) in this project highlighted the need to design the appropriate site model to address the challenges inherent to these rural areas.

The innovative characteristics of the network infrastructure developed for the LEAN project in Matanza de Soria make it a key element in the roll-out of mobile broadband technologies in rural areas, thanks to its low cost and efficiency:

- Mobile broadband connectivity (4G and 5G)

- Completely autonomous power supply using renewable energy
- "On-premises" processing for applications with very low latency and efficiency in transport ("backhauling"), resulting in cheaper services
- Deployment of high-performance 4G and 5G CPE (Customer Premises Equipment) to support advanced applications, services and use cases
- Connectivity with the rest of the network ("backhauling") based on latest generation high-capacity wireless technology as an alternative to complex and expensive fibre deployments in rural environments

The site is also equipped to offer advanced services and high-interest use cases such as the Internet of Things, Edge Computing, M2C (Mobile to Consumer) and UCaaS and CPaaS ("Unified Communications as a Service" and "Communications Platform as a Service") (both next-generation platforms for work environments with applications such as messaging, video conferencing, mobile office, etc).

## Real-time information for better crop control at the La Loba winery

This use case aims to collect data related to atmospheric and soil temperature and humidity, as well as infrared and ultraviolet radiation levels.

Various probes installed in the crops, including a real-time data monitoring system, send measurements using the connectivity provided by the site. This information, together with an alert system, allows fast and flexible decision-making in the crop model.

## High-quality connectivity for rural and professional environments

This use case provides real-time communications capabilities to organisations within the so-called "Polígono 4.0", (which includes all municipalities and hamlets located on the outskirts of San Esteban de Gormaz) and has been designed to offer high quality connectivity in rural settings. The users covered by this use case include the organisations located in the surrounding area and professional users performing their activity from their homes or offices in rural areas who require a real-time communications platform to communicate with their customers, colleagues or co-workers.

## A communal project with support from the Administration

Nokia, Quobis and Cellnex worked together to commission the new site, designed and built with sustainable energy systems and equipped with latest-generation wireless communication equipment and the most advanced services.

Nokia supplied the 4G and 5G mobile broadband technology, users' mobile access terminal equipment and high-capacity radio link transport equipment. Quobis provided its platform for edge computing environments, which can run real-time human-to-human (H2H), machine-to-human (M2H), and machine-to-machine (M2M) communication services autonomously from the telecommunications tower itself.

Cellnex integrated the telecommunications site and equipment into its infrastructure and control systems and provided its data transport network, a cutting-edge Edge Computing solution and the central network elements to enable execution of the pilot project, with the collaboration of the Masmóvil Group for the use of 5G frequencies.

The LEAN project is supported and funded by the Spanish Ministry of Economic Affairs and Digital Transformation through the AEESD programme (File TSI 102102 2017 2).

## About Cellnex Telecom

Cellnex Telecom is Europe's leading operator of wireless telecommunications and broadcasting infrastructures with a portfolio of c. 120,000 sites, 75,000 of which are already in the portfolio, and the rest in the process of finalisation or planned roll-outs up to 2028. Cellnex operates in Spain, Italy, Netherlands, France, Switzerland, the UK, Ireland, Portugal, Austria, Denmark and Sweden. Cellnex's business is structured in four major areas: telecommunications infrastructure services; audiovisual broadcasting networks, security and emergency service networks and solutions for smart urban infrastructure and services management (Smart cities and the "Internet of Things" (IoT)).

The company is listed on the continuous market of the Spanish stock exchange and is part of the selective IBEX 35 and EuroStoxx 600 indices. It is also part of the FTSE4GOOD and CDP (Carbon Disclosure Project) and "Standard Ethics" sustainability indexes. Cellnex's reference shareholders include Edizione, GIC, ADIA, Canada Pension Plan, CriteriaCaixa, Blackrock & Wellington Management Group.

For more information: https://www.cellnextelecom.com

**Corporate Affairs Department**
Corporate Communication

Tel. +34 935 021 329
comunicacion@cellnextelecom.com

cellnextelecom.com/press