

UNED awards Cellnex an energy-efficiency project based on IoT technology and artificial intelligence

Cellnex is to equip UNED university campuses with sensors to enable remote data collection and monitoring for real-time control of lighting and air-conditioning systems, thereby cutting energy consumption.

Madrid, 15 June 2022. UNED has awarded Cellnex a project to optimise the energy efficiency of the air-conditioning and lighting systems of its university campuses through Internet of Things (IoT) technology.

The objective is to reduce and optimise energy consumption, especially in empty spaces, maintaining pre-comfort conditions that, in turn, avoid cost overruns by reducing or raising the temperatures of spaces when unoccupied and also avoiding too drastic differences between occupied and unoccupied spaces that prevent them being kept at optimal levels. It is estimated that the improvement in energy efficiency could amount to at least 15% across all UNED buildings.

To achieve this objective, Cellnex will use IoT (Internet of Things) technologies, installing sensors to collect, transmit and monitor data, mainly related to detecting occupancy, temperatures and light intensity.

Cellnex will also implement a new module in the UNED Information System that will use artificial intelligence algorithms to analyse the information provided by the sensors and will control the actuators of the lighting and air-conditioning systems. Cellnex will implement this module with the collaboration of Vatecno engineering.

The whole system implemented by Cellnex: sensors, real-time connectivity –through the use of LoRA technology, actuators, and the energy-efficiency module– will enable UNED to equip the buildings with intelligence in line with European Union digitisation criteria. It will also allow progress to be made on the configuration of a comprehensive information system, which will also be able to optimise the energy efficiency of the installations in line with the programmes associated with this area of the Spanish Government's Recovery, Transformation and Resilience Plan.

More than three million devices connect daily to Cellnex IoT networks in Spain.

Cellnex has extensive experience, particularly in Spain –including the Balearic Islands and the Canary Islands– in the roll-out, maintenance and operation of multi-technology IoT networks, to which more than three million objects are currently connected daily, and on which many services are based.

Networks of this type feature low bandwidth, long range, robustness and energy efficiency. They also have a direct impact on everyday situations beyond energy efficiency, such as water management –automatic leak detection and remote meter reading– equipping social housing

with sensors –to monitor and improve the comfort and energy efficiency of these homes– capacity control –in spaces with a high footfall– car park management –to optimise the use of space–, traffic control and waste collection –thanks to sensors in containers that can detect when they are full, thereby helping to optimise collection routes– and monitoring and geolocation in the logistics sector, among many other use cases.

About UNED

UNED is the largest public university in Spain in terms of both student numbers and academic offerings, and the largest campus in Europe. It is devoted to providing universal quality higher education through a leading model of online and semi-face-to-face teaching in its sector.

More than 200,000 students a year place their trust in UNED and its innovative learning system that combines online tuition with face-to-face support, backed by a constantly evolving technology platform that offers a flexible model tailored to the individual needs of each student. An active system that is applied in all of the wide range of academic courses on offer, in which students become the protagonist of their own learning, as established by the European higher education system. And it also operates without minimum grades and by adapting study to working hours, personal circumstances and family and professional obligations.

This year, 2022, marks the 50th anniversary of its founding in 1972. Over those five decades, UNED has been fulfilling its vocation of public service with quality, rigour and excellence, while more than three million students have been part of this large university community, together with thousands of academics and staff who make up the institution.

For more information, see: <https://www.uned.es>

About Cellnex Telecom

The efficient deployment of next-generation connectivity is essential to drive technological innovation and accelerate inclusive economic growth. Cellnex Telecom is the independent wireless telecommunications and broadcasting infrastructure operator that enables operators to access Europe's most extensive network of advanced telecommunications infrastructure on a shared-use basis, helping to reduce access barriers for new operators and to improve services in the most remote areas.

Cellnex manages a portfolio of more than 137,000 sites –including forecast roll-outs up to 2030– in Spain, Italy, the Netherlands, France, Switzerland, the United Kingdom, Ireland, Portugal, Austria, Denmark, Sweden and Poland. Cellnex's business is structured in four major areas: telecommunication infrastructures 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 100 indices. It is also present in the main sustainability indexes, such as CDP (Carbon Disclosure Project), Sustainalytics, FTSE4Good, MSCI and Standard Ethics. Cellnex's reference shareholders include Edizione, GIC, TCI, Blackrock, Canada Pension Plan, CriteriaCaixa, Wellington Management Group, Capital Group, FMR and Norges Bank.



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