



Parlem Telecom launches 5G demonstration for online shopping with augmented reality and real time products

* The Catalan operator, together with **Cellnex Telecom, Lenovo and Red.es,** have created a technology solution that will transform e-commerce in local shops by offering the virtual user an immersive shopping experience equivalent to face-to-face shopping in a marketplace
* The minimal latency and high bandwidth of 5G opens the possibility of augmented reality and personalised virtual retailing in traditional crowded markets, where remote users could choose specific products from various stops with the help of a "personal shopper" equipped with augmented reality glasses
* Today's shopping demonstration, which took place at the "Olives Francesc" stop of Barcelona's La Boqueria Market, was made possible thanks to a Parlem Telecom application developed with augmented reality technology, the 5G network deployed by Cellnex Telecom and edge computing solutions provided by Lenovo.
* This is the first use case of the 5G Catalonia pilot, developed by a joint venture of 8 companies led by Cellnex Telecom and the MASMOVIL Group, in which the following companies participate: the operator Parlem Telecom, the company specialised in augmented reality for industry, Aumenta Solutions, the engineering company Atos, the consultancy Nae, the technology company Lenovo and the start-up Nearby Computing - a spin-off of the Barcelona Supercomputing Center.

**Barcelona, 7 April 2022. -** 5G, together with the Internet of Things and edge computing, can create new possibilities for personalised and immersive online sales in traditional markets, which aspire to recreate the same experience in digital environments as customers received in physical locations. This has been demonstrated today at La Boqueria market in Barcelona, where an innovative 5G trial led by Parlem Telecom has been carried out to provide remote users with a virtual shopping experience using augmented reality technology that preserves the distinctive values of traditional shopping. This technological solution

promoted by the Catalan telecommunications operator gives new opportunity for the *e-commerce* platforms of traditional shops, as it allows customers who cannot shop physically (due to lack of time, remoteness, physical impediments, etc.) to purchase fresh products as if they were in the market itself.

The application presented (called *Augmented Reality Personal Shopper*) allows virtual shoppers to select in real time from their devices (PC, tablet, mobile phone) specific products from market stalls and obtain additional information about them with augmented reality. The system, which is based on a private 5G network based on edge computing servers that guarantees minimum latency in communications and high-capacity bandwidth, includes the participation of a La Boqueria *personal shopper* equipped with augmented reality glasses as an intermediary between buyer and seller, who interacts with the stallholders and communicates live with the online shopper via videoconference with ultra-high-definition images. During the shopping process, the virtual user receives an augmented reality interface that the *personal shopper* is observing with their glasses in La Boqueria.

The initiative in the Barcelona market is the first use case of the 5G Catalonia pilot being run by Red.es, an entity attached to the Spanish Ministry of Economic Affairs and Digital Transformation. The pilot is being developed by a joint venture of eight companies led by Cellnex Telecom and the MASMOVIL Group, with the participation of the operator Parlem Telecom, the company specialising in augmented reality for industry, Aumenta Solutions, the engineering company Atos, the consultancy Nae, the technology company Lenovo and the start-up Nearby Computing - spin-off of the Barcelona Supercomputing Center. The 5G Catalonia project has a total budget of 5.4 million euros and is co-financed by the European Regional Development Fund (ERDF).

The 5G demonstration presented today, which took place this morning at the *Olives Francesc* stop in La Boqueria, was made possible thanks to the 5G network designed and deployed by Cellnex Telecom and Lenovo's *edge computing* solutions. The network, which is entirely 5G - a concept known as stand-alone - will remain installed in Barcelona after the end of the use case. Specifically, a radio equipment (5G access cell) has been located in La Boqueria, which receives the signal and transmits it via fibre optics to a facility located in the Municipal Institute of Parks and Gardens of Barcelona, which plays the role of a *datacenter* and processes the signal to connect to the local Cellnex server located in the same space. As for the *Augmented Reality Personal Shopper* application, it has been developed by the i2CAT Foundation on behalf of Parlem Telecom as the leading company in this use case in La Boqueria.

The press conference to present this 5G test in Barcelona was attended by **Alberto Martínez Lacambra**, General Director of Red.es; **Ernest Pérez-Mas**, CEO of Parlem Telecom; Eduardo Fichmann, Global Director of Innovation and Product Strategy, Cellnex Telecom and Òscar **Ubide**, Manager of La Boqueria Market. In turn, **Manolo Ginart**, Head of Telco Operations at Parlem Telecom, oversaw presenting the technical demonstration of the 5G use case together with **Mohamad Hjeij** (virtual reality software engineer at the i2CAT Foundation) and **Gianluca Cernigliaro** (technical leader in Virtual Reality and Augmented Reality at the i2CAT Foundation).

In his speech to the press, **Alberto Martínez Lacambra** pointed out that "5G is a technology with a transformative power that will mark a revolution and is an essential vector in the digitalisation drive envisaged in the Spanish Government's Recovery, Transformation and Resilience Plan and is one of the pillars of the Digital Spain 2025 strategy. Today we have seen a clear example of the real impact that the use cases of the 5G Pilot projects will have on our way of life, on the way we move around or shop; without a doubt, a unique opportunity for our cities, our citizens and to improve the productivity of our economy".

**Ernest Pérez-Mas,** highlighted that "Parlem Telecom is proud to lead this first use case of the 5G Catalonia pilot, with which we consolidate our operator's commitment to technological innovation in the metropolitan area of Barcelona and in Catalonia as a whole. The development of an innovative application with augmented reality in an environment as emblematic as La Boqueria can be a step forward for the e-commerce sector and ensure that local businesses can evolve digitally without losing their identity thanks to the potential of 5G".

**Eduardo Fichmann** pointed out that "the deployment of this stand-alone 5G network in Barcelona, based on a model of neutrality, will facilitate technological progress and digitalisation. Thanks to this network, all mobile operators will be able to offer their services to companies and citizens from a single shared infrastructure equipped with the best technology.

Finally, **Antonio Bocigas** highlighted that "Lenovo is enabling a future upgrade for La Boqueria. This traditional market experience can be enhanced with augmented reality by working with Lenovo *edge computing* servers to deliver a truly immersive retail experience. With our 5G core-enabled servers and our tools that automate the deployment and optimisation of the overall infrastructure, the complete retail experience perfectly mirrors Barcelona itself: the nexus of old and new.

# About Red.es

Red.es is the driving force behind the Digital Agenda in Spain, developing initiatives and projects for digitalisation and technological development in the fields of the economy, public services, citizenship, infrastructures and the internationalisation of companies.

Since its creation in 2002, it has managed European Regional Development Fund (ERDF) and European Social Fund (ESF) projects, to which it has recently added the management of Recovery and Resilience Mechanism (RRM) funds.

Red.es also acts as a connector between different entities, including ministries, public bodies, Autonomous Communities, local entities and international organisations, facilitating the identification of needs, the generation of synergies and the promotion of collaboration between public, private and digital actors.

More information: [www.red.es](http://www.red.es/)

**About Parlem** Telecom

Parlem Telecom is a telecommunications operator founded in 2014 that offers comprehensive telecommunications services, both for individuals and companies, from Catalonia and in Catalan. It is committed to customer proximity with its own identity. The company, chaired by Ernest Pérez-Mas, is in an expansion phase and has appeared in the last two years among the 200 fastest growing companies in Europe in the annual top 1000 of the Financial Times. From June 2021, Parlem Telecom will be listed on the BME Growth market. The telecommunications operator recently created Parlem Ventures, an accelerator for start-ups in the technology sector.

Located in Barcelona's 22@ district, Parlem Telecom is a cutting-edge operator that develops innovation projects linked to fields such as 5G or artificial intelligence and at the same time is heavily involved in boosting the Catalan ICT sector. The company offers multiple innovative technological solutions tailored to the needs of each company through the Parlem Empresas business line and is implementing a plan to open physical shops throughout Catalonia. Parlem Telecom aspires to become a large telecommunications group, promoting the implementation of regional proximity operators in other Catalan-speaking territories and in Europe that adapt to the social and cultural identity of each area. In this sense, in 2021 it launched the operator Aproop, which offers comprehensive mobile, internet and local fixed telephony services in the Valencian Community.

More information at [https://www.parlem.com](https://www.parlem.com/)

# About Lenovo

Lenovo is a $60 billion Fortune Global 500 company serving customers in 180 markets around the world. Focused on a bold vision to deliver smarter technology for everyone, everywhere, Lenovo develops technologies that change the world by powering (through devices and infrastructure) and empowering (through solutions, services and software) millions of customers every day and creating a more inclusive environment and a trusted, sustainable digital society.

For more information, visit [https://www.lenovo.com](https://www.lenovo.com/) and read the latest news via the Lenovo [StoryHub.](https://news.lenovo.com/)

# About Cellnex Telecom

Cellnex Telecom is the independent provider of neutral wireless and broadcasting telecommunications infrastructure, giving operators access to Europe's most extensive network of advanced telecommunications infrastructure on a shared-use basis, helping to reduce barriers to entry for new entrants and improve services in remote areas.

Cellnex manages a portfolio of more than 130,000 sites -including deployments planned until 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 main areas: services for telecommunications infrastructures, audiovisual broadcasting networks, security and emergency networks and private networks for companies, and solutions for the intelligent management of infrastructures and urban services (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 IBEX35 and EuroStoxx 100. It is also present in the main sustainability indices, such as CDP (Carbon Disclosure Project), Sustainalytics, FTSE4Good, MSCI and Standard Ethics.

For more information: [https://www.cellnextelecom.com](https://www.cellnextelecom.com/)