

Press release

Telefónica and the Polytechnic University of Madrid sign a new 'Joint Research Unit' to strengthen their alliance in quantum technologies

Madrid, 11 May 2026. Telefónica and the Polytechnic University of Madrid (UPM) have today formalised the creation of a new Joint Research Unit (JRU) focused on quantum technologies. Both entities thus reinforce the strategic collaboration they have maintained for more than a decade in the field of advanced communications.

The agreement was signed by the rector of the UPM, Óscar García Suárez, and Juan José Marfil Márquez, director of Network, IT and TV at Telefónica, in an institutional event that highlights the joint commitment to cutting-edge research and the development of innovative solutions in the field of quantum communications.

This new JRU, based at the Higher Technical School of Computer Engineers of the UPM and linked to the Quantum Information group, GIICC, aims to consolidate and expand more than 12 years of collaboration between the two entities in this emerging field. This is the second joint research unit between Telefónica and UPM, following the existing one focused on data communications.

Joint Research Units are stable collaboration agreements between corporations and public research bodies that allow them to act as a single team on initiatives funded by the European Union. This model facilitates the development of high-impact projects and strengthens knowledge transfer between academia and business.

In the case of the new JRU, the collaboration between Telefónica and UPM has been key in almost all of the main European quantum communications projects since 2016, which include initiatives such as CIVIQ, OPENQKD, DISCRETION and EuroQCI-Spain that contribute to strengthening Europe's own technological capabilities and moving towards greater digital sovereignty.

Furthermore, both entities actively participate in international standardisation processes, especially within ETSI, the European Telecommunications Standards Institute, a collaboration that helps define the future of these technologies.

The alliance is also part of the promotion of national initiatives in quantum communications, where the UPM plays a prominent role as one of the leading research centres, in addition to having coordinated the complementary plan for Quantum Communications. Telefónica has led key projects such as the deployment of one of the first private experimental fibre networks in the Madrid metropolitan area (TEFQCI) and

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has actively collaborated with the deployment of the MADQCI ecosystem, achieving pioneering milestones in Europe.

Furthermore, the collaboration integrates the innovation ecosystem through the participation of specialised startups and SMEs such as Qoolnet, a spin-off of the UPM, and QCentroid, a company focused on platforms for accessing quantum computing, expanding the scope of technological developments and facilitating their practical application.

Juan José Marfil, director of Network, IT and TV at Telefónica, states: “This agreement demonstrates Telefónica’s innovative profile in fulfilling its purpose of being the best way for companies, citizens and government agencies to access digital technologies. We are very proud to continue working with UPM on the development of research and solutions based on quantum technologies.”

Óscar García Suárez, rector of the Polytechnic University of Madrid, says: “Quantum technologies are at the centre of a new revolution; with this agreement, UPM reinforces its leadership in the transfer of these technologies to industry. UPM is very proud to have shared a long journey with Telefónica and to be committed to the joint development of innovative solutions that will place Spain and Europe at the forefront of technological transformation based on quantum physics.”

With this new Joint Research Unit (JRU), Telefónica and the UPM reinforce their commitment to the development of disruptive technologies that will be key to the future of telecommunications, positioning Spain as an important player in the field of quantum communications on a European and international scale.

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