Telefónica España, partner of the Government of Biscay for the development of its quantum technology industrial strategy



Telefónica España has signed an agreement with the Government of Biscay to become its technology partner and collaborate in the development of its quantum technology industrial strategy in this historic territory.

This agreement demonstrates the importance of public-private collaboration in the development of technology, as both parties will analyse in a joint session to be held in the Agora at the Telefónica stand during the Mobile World Congress in Barcelona. It will take place on 4 March at 11:15 a.m., and both Ainara Basurko, Deputy for Economic Promotion of the Government of Biscay, and Patricia Díez, Director of Network and Systems Security at Telefónica, will take part in the session, entitled 'Quantum technologies and public-private collaboration'.

Since 2021, the Government of Biscay has generated and nurtured a quantum ecosystem made up of universities, technology and research centres, large international technology corporations, companies, startups, clusters, startups and public administrations. As part of the Basque Government's BasQ alliance, Biqain's objective is to continue with applied research, technological development and innovation in this field so that companies can carry out projects and experiment with quantum technology.

Telefónica has been researching quantum solutions for more than ten years on the most stable and advanced quantum network infrastructures in Europe, formed not only by its own industrial ring, in service since 2018, but also by the research infrastructures to which it is connected.

Quantum technologies are set to revolutionize many aspects of our society and drive breakthroughs in different industries and sectors, from finance, energy or telecommunications, to medicine, mobility, chemistry or advanced manufacturing. The main levers that will allow progress in this direction are quantum computing, with computers that will have the capacity to solve very complex problems that cannot be solved today with traditional computers; quantum communications and cryptography, which bring extremely secure communication methods; and quantum sensors, which can provide hyper-precise measurements.

Platforms based on quantum computing

The framework collaboration project between the Government of Biscay and Telefónica will have the latest generation equipment necessary for its development. It will incorporate a Digital Annelaer (DA) provided by Fujitsu, which will be housed in a Telefónica central office in Biscay. This is the first DA hosted in infrastructures outside Japan in history. This quantum computing solution is capable of solving problems of up to 100,000 variables, making use of different quantum phenomena (superposition, entanglement, tunnel effect) to speed up calculations.

In addition, it will have a specific platform for quantum emulations. The aim is to be able to emulate the operation of quantum circuits, which is achieved by running software on a classical digital computer based on supercomputing (HPC), thus obtaining several emulation modes: state vector, tensor networks and MPS (Matrix Product State).

Under the agreement, Telefónica will provide the parties involved in the project with remote access to Fujitsu's quantum computing and emulation platforms. These new platforms will complement those already provided by Telefónica to the Government of Biscay. In this way, Biscay is the place in the world with access to more quantum platforms of different technologies and different manufacturers, such as Amazon Web Services (AWS), DWave, IBM, IONQ, IQM, Microsoft, OQC, Pascal, qci Quantum Circuits, Qilimanjaro, QUANTINUUM, QuEra and Rigetti.

Ainara Basurko, Biscay's Councillor for Economic Promotion, considers that 'the collaboration between technology and research centers, the university, business initiatives and the Government of

Biscay will accelerate the development and commercialization of innovations in quantum technology in the territory. We want companies to experiment in this field'.

Manuel Ángel Alonso, Telefónica Spain's Northern Territory Director, said: 'This collaboration with the Government of Biscay seems to us to be a project that is as necessary as it is exciting. Quantum computing is set to change the rules of the game at many levels, which makes it essential to be prepared to face its risks and also to benefit from the opportunity it represents. Alonso stresses that at Telefónica we have been working on quantum computing for more than a decade and collaborating with a public institution committed to technology, such as this one, seems to be the way forward for the benefit of all'.

For more information: Telefónica at MWC 2025

Press release distributed by Wire Association on behalf of Telefónica, on Feb 18, 2025. For more information subscribe and <u>follow</u> us.

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