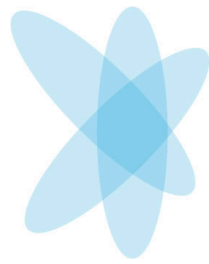


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QUANTUM+

Uncovering technology for business

QUANTUM+ Project

Newsletter #5

Quantum+ is an Erasmus+ EU funded collaborative project between industry and universities to develop a new quantum technology online training pathway. Its goal is to adapt to the growing need for trained target group and technology-industry personnel by giving them a study course in quantum fundamentals and applications, thereby improving employability and equipping them to tackle future technological problems.

Quantum Current Context

RED.es Project

GAIA announced the development of 36 practical applications based on quantum technology as part of the project “APP-TC,” a public-private partnership funded by Red.es with a €4.6 million budget. The initiative involves dozens of Basque companies and aims to strengthen Euskadi’s quantum ecosystem while bringing this emerging technology closer to real economic and business use.

Most of the use cases are being developed in the Basque Autonomous Community, with others distributed across Andalusia, Asturias, Castilla-La Mancha, and La Rioja. These projects apply quantum technologies to strategic sectors such as industry, energy, healthcare, telecommunications, finance, logistics, cybersecurity, and artificial intelligence.

The applications include supply chain optimization, quantum sensors for industrial environments, improvements in communication and power grids, urban traffic management, drug discovery, satellite image processing, financial optimization, and advanced defense and biotechnology solutions.

In addition to technological development, the project also includes training programs for professionals and companies, impact evaluation, and knowledge dissemination. It will further assess regional capabilities in quantum technologies to identify opportunities for growth, aligning in Euskadi with initiatives such as Basque Quantum (BasQ) and BIQAIN.

BIQAIN - Bizkaia Quantum Advanced Industries Strategy

Bizkaia Quantum Advanced Industries Strategy is an initiative by the province of Bizkaia to promote the development and use of quantum technologies as a driver of social progress and business competitiveness.

The strategy began taking shape in 2021 with an action plan designed to build and energize a specialized ecosystem focused on applying quantum technologies in industry. This included bringing together existing stakeholders and creating early collaborations with technology and industrial companies interested in developing innovative quantum-based projects.

In 2024, BIQAIN was established as a priority strategic project, introducing a governance model and resources to further advance its goals. These include developing quantum technologies and skills for industry and society, providing infrastructure, knowledge, and services to support real industrial use cases, and encouraging collaborative business projects.

The strategy also aims to attract companies, talent, investment, and innovative projects to the region, positioning Bizkaia as a leading hub for applied quantum technologies. Additionally, BIQAIN contributes to broader initiatives such as the Basque Quantum alliance, Quantum Spain, and the European Quantum Flagship, helping integrate the region into national and international quantum ecosystems.

European Quantum Strategy

The European Commission has adopted a Quantum Strategy to position Europe as a global leader in quantum technologies by 2030.

Although the EU has made strong scientific and technological progress in this field, it still struggles to turn its innovation capacity into real market opportunities. One of the main challenges is the fragmentation of strategies and roadmaps across different member states, which slows down coordinated progress.

The strategy aims to build a strong, resilient, and sovereign quantum ecosystem in Europe. Its goal is to support the growth of startups, turn cutting-edge research into market-ready applications, and maintain Europe's leadership in quantum science.

To achieve this, the strategy focuses on five key areas. First, it promotes research and innovation to strengthen Europe's scientific excellence and support industrial applications. Second, it calls for the development of coordinated and scalable quantum infrastructures to enable production, design, and application development. Third, it seeks to reinforce the quantum ecosystem by investing in startups, securing supply chains, and advancing industrialization. Fourth, it emphasizes quantum technologies for space, security, and defense, integrating secure and sovereign capabilities into these strategic sectors. Finally, it highlights the importance of skills, aiming to build a highly qualified workforce through education, training, and talent mobility across the EU.

Overall, the strategy is designed to ensure that Europe not only leads in quantum research but also successfully competes in the global quantum market.

Quantum Flagship

The Quantum Flagship is one of the European Commission's most ambitious long-term research and innovation programs focused on quantum technologies. It is a €1 billion initiative running over 10 years, designed to bring together leading researchers, companies, and institutions across Europe under a single, coordinated effort.

The program funds a portfolio of research and innovation projects that are selected through a rigorous peer-review process. These projects follow a common Strategic Research Agenda, which ensures that all participants are aligned toward shared goals and that efforts across Europe are coordinated rather than fragmented.

The main objective of the Quantum Flagship is to strengthen and expand Europe's scientific leadership in quantum research while also translating that knowledge into real-world applications. In particular, it aims to help build a competitive European quantum industry,

support innovation, and make Europe an attractive place for investment, business development, and cutting-edge research in this field.

In essence, the Quantum Flagship acts as a bridge between science and industry, helping move quantum technologies from the lab into practical use, while positioning Europe as a global leader in the quantum economy.

Our Project

All these initiatives form a connected ecosystem to advance quantum technologies in Europe, and Quantum+ plays a key complementary role within it.

At the European level, the EU Quantum Strategy and the Quantum Flagship set the vision and fund research, aiming to make Europe a global leader while turning science into market-ready applications. At the regional level, initiatives like BIQAIN focus on building ecosystems and developing real industrial use cases, bringing quantum technologies into practice.

Quantum+ fits into this landscape by addressing a critical gap: skills and talent. While other initiatives focus on technology and industry, Quantum+ develops training programs aligned with industry needs, helping create a qualified workforce.

This makes Quantum+ essential in the current quantum context, as Europe's main challenge is not only innovation but also having the skilled people needed to scale and apply quantum technologies in the real economy.

For more information visit our website:

Website

Thanks for reading. See you soon!

QUANTUM +



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