

**Connect
Europe**

**Views from
telecom operators on**

Quantum Technologies

April 2026

Connect Europe

Connect Europe is the voice of the leading providers of connectivity networks and services in Europe. Our members are at the forefront of innovation in the telecom and technology ecosystems, connecting over 270 million Europeans with cutting-edge mobile and fixed networks, such as fibre and 5G. They also deliver advanced services, ranging from first-class IT, AI and cybersecurity solutions, to entertainment and content.

As the main investors in the industry, our members drive the digital transformation of the Continent, accounting for more than 70% of total telecom sector investment in Europe. Formerly known as ETNO, we stand for an improved policy and regulatory environment that enables citizens and businesses to benefit from digital connectivity and services. [Continent](#)

Views by Telecom Operators on Quantum Technologies

Connect Europe, representing the leading providers of connectivity networks and services in Europe, would like to take this opportunity to share our views on the needs, concerns and constraints of our sector related to the quantum ecosystem.

Quantum technologies have the potential to transform the digital landscape, and present a wide range of potential uses for telecommunication operators, particularly with regard to quantum-secure communication and encryption, quantum computing and quantum sensing. Beyond technical capabilities, embracing quantum technology feeds into the EU's strategic goals related to competitiveness and Europe's role on the global stage. Our members have been actively exploring the opportunities that quantum technologies bring in a number of ways, and are following developments with interest.

Quantum computers are uniquely suited to simulate quantum mechanics itself, with the ability to directly model many interacting, entangled particles and outperform classical computers. **This makes quantum simulation one of the most economically important applications of quantum computing, representing opportunities in the telecoms sector related to secure communications, new capabilities for network transmission and management, and for service delivery.** At the same time,

quantum computing introduces profound risks, and could compromise much of today's public-key cryptography, which underpins secure internet communications. **The cryptographic disruption triggered by quantum computing therefore must be handled in parallel to the development of quantum technologies.**

While it is clear that there is enormous potential for quantum technologies, the EU must take strong action to make these goals materialize, and likewise implement effective safeguards to bolster European achievements in this area. Against this backdrop, we are sharing our remarks on the key opportunities and the key challenges & recommendations to maximize the potential of quantum technologies for the telecommunications sector, as well as examples of where our members are already actively engaged. A shared understanding of the potential impact of these technologies will help to form a stable foundation for Europe, and to establish legal certainty for industries that will be central to its evolution.

Key Opportunities:

- ◆ **Telecom operators will be key players in Europe's quantum ecosystem.** European telecom operators will be strong actors in the quantum ecosystem, and key to guaranteeing quantum-safe communication infrastructure.
- ◆ **Taking early action on quantum technologies.** Connect Europe's members are already actively engaged in research, projects programs and testing related to quantum technologies.
- ◆ **Strengthening European leadership in emerging technologies.** With the correct support for key industries like telecom operators, there is significant potential for European leadership in quantum technologies, complementary to developments in other emerging technologies.

Key Challenges & Recommendations:

- ◆ **Urgent quantum security risk and technical/operational challenges:** The future ability of quantum computers to break current public-key cryptography creates a security risk that must be addressed.
- ◆ **Uptake, infrastructure and skill challenges:** There is a gap in practical guidance, testing frameworks, certification schemes, funding and best practices to support real-world, large-scale deployment of quantum-safe solutions. Europe attracts limited private capital and holds limited quantum patents, and faces a lack of readily-available skills and operational capabilities.
- ◆ **Fragmented governance and funding landscape:** Quantum and post-quantum initiatives and funding remain fragmented across the EU, limiting coherence and impact. A harmonized, outcomes-based regulatory environment is needed to support

Key Opportunities:

Telecom operators will be key players in Europe's quantum ecosystem

The telecommunications sector is set to be a key player in quantum, making the opportunities afforded by quantum technology high on our agenda. As mentioned above, there are several areas that offer potential for our members, stemming from the higher processing power of quantum computing and sensing technologies. **From the Quantum Internet, Quantum-Safe communication infrastructure, and potential further use for defence and security purposes, quantum technologies stand to be transformative in the telecommunications sector.**

Quantum technology creates the possibility of the Quantum Internet, which is capable of connecting quantum computers enabling to send and receive information via qubits; making communications implicitly secure. However, quantum computing also poses significant threats to cryptography, particularly through its ability to break widely used public-key algorithms¹. This is why our sector has a strong focus on adopting Quantum computing safe techniques, like post-quantum cryptography (PQC),

Symmetric Key Infrastructure (SKI), and, where needed, Quantum Key Distribution (QKD). Additionally, Quantum Random Number Generators (QRNGs) are critically important for next generation networks, as they strengthen end-to-end security. All of these separate elements enable a Quantum-Safe communication infrastructure.

The fact that telecommunications solutions have a dual-use potential for defence and security, makes quantum technologies particularly useful. Quantum computing will enhance large-scale simulation (e.g. network digital twins), modelling (exploration of complex 6G scenarios) and optimisation (e.g. congestion control, spectrum and traffic management). Additionally, for specific issues, quantum computers have the potential to reduce overall computational complexity and energy consumption, thereby contributing to more energy-efficient and sustainable network deployments. Finally, quantum sensing technologies offer precise measurement capabilities² that can be utilized in new types of monitoring and sensing services that are both useful for managing infrastructure and providing commercial value for customers.

Taking early action on quantum technologies

Quantum technology's potential for the telecommunications sector is clear, and **our members are already engaged and active in research, projects, programs and testing, from involvement in European initiatives, startups and industry consortia to quantum test infrastructures and research centres.** Our members' activities focus primarily on quantum communication technologies, including quantum key distribution, and on quantum computing, as well as on relevant non-quantum technologies such as post-quantum cryptography. It is important to act early in these areas, since even though advancements are still needed before quantum technology can be used in the areas we have detailed so far, it is already necessary to come forward with solutions for future threats to security. This is particularly true for protecting against vulnerabilities from attacks based on "store now, decrypt later" (SNDL), where encrypted information can be stored now

and saved to be decrypted later when quantum technology enables this. This is why our sector maintains a strong focus on different quantum-safe cryptographic solutions, ensuring we are ready for these technological changes.

Strengthening European leadership in emerging technologies

The EU can support European telecom operators to reap the benefits of quantum technology in the actions it is set to take soon, for instance within the upcoming Quantum Act in 2026, preserving its first-mover advantage beyond the competitiveness of its innovation, while developing synergies with AI that could generate other opportunities (e.g. complex systems' simulation or cyberthreat intelligence) with a lower environmental impact. Our members are already part of the existing ecosystem, and **the EU's actions should aim to support and build upon this existing activity, while avoiding potential pitfalls.**



Key Challenges & Recommendations:

As established in the Quantum Europe Strategy, the EU has several advantages when it comes to quantum technology, but faces significant challenges as well. In order to make the most of these advantages in the long run, there are several ways in which telecom operators can be supported. Upcoming legislation, such as the Quantum Act, present an opportunity to strengthen Europe's technological sovereignty and accelerate the market uptake of European technologies as well as position the EU as a key player in this critical field.

Below, we outline the three main challenges European telecom operators face, and our recommendations on how policymakers can support the right environment to establish Europe as a leader in quantum technologies.

1. Urgent quantum security risk and technical/operational challenges

Quantum technology is set to dramatically impact communication technology, which will require major advancements to security infrastructure. Along with the expected advancements it can bring, it also creates threats to security that could exploit cryptographic vulnerabilities. Developing and deploying quantum-safe communication infrastructure should be a priority, using trusted European suppliers and like-minded international partners, ensuring strategic autonomy and resilience. This includes promoting European IP, standards, and certification frameworks, maintaining sovereign control over cryptographic material and key management systems, and fostering collaboration between relevant actors to guarantee trust and interoperability.

There are multiple complementary methods related to security – Symmetric Key Infrastructure (SKI), Quantum Key Distribution (QKD), Post-Quantum Cryptography (PQC) and quantum random number generation – that can provide solutions to some

quantum security risks. **As no one method is perfect, the best results will come from methods being applied in a layered approach.** Combining methods helps address both current and future threats, and applying quantum-safe cryptography to ephemeral and engineered connections ensures effective risk mitigation for organizations.

However, we note that PQC and SKI are further developed than other methods, such as QKD and quantum random number generation (NIST standards are already in place, with progress being made in IETF and in EITCI³). For this reason, **a step-by-step model that reflects today's technological reality and the practical applicability of each method would be advised.** Testbeds, funding, and standardized cryptographic inventory tools should be implemented to help migration and compliance. Additionally, practical guidance will be essential to allow migration to quantum-safe cryptography.

To ensure legal clarity, EU rules should clearly define responsibilities when attackers use “Store Now, Decrypt Later” strategies, and should give operators a “regulatory safe harbour” when they use approved NIST/ETSI post quantum algorithms and certified quantum-secure approaches. There is also a need for clarity on how Lawful Interception (LI) should work in networks that use Quantum Key Distribution (QKD), which can be supported by technical standards.

2. Uptake, infrastructure and skill challenges

Quantum infrastructure & supply chain

Adopting quantum technologies goes hand in hand with the high cost of the infrastructure necessary to support them, which could pose a barrier to development in Europe. **The EU should therefore support building up pan-European quantum infrastructures, such as systems and plat-**

forms for computing, the deployment of resilient communications, and sensing, while ensuring the supply of critical components down to the critical raw material level.⁴ Additionally, building European-based “Quantum-as-a-Service” (QaaS) platforms should be encouraged, ensuring that telecom data can be processed within Europe and under EU rules. Receiving certified, secure, stable and standardized supplier components is likewise necessary.

There should be low entry barriers for the seamless integration of quantum communications at large in existing networks (i.e. hybrid networks and clouds) by easing pan-European compliance, thanks to common ENISA and NSA guidelines and security frameworks. QKD deployment should also be interoperable at European level and with like-minded international partners, in support of the EU’s sovereignty and resilience.

Quantum startups, IP, and research

A positive environment to foster startups should be supported and will be essential for quantum technology rollout. The EU should also stay ahead of emerging and especially promising areas for applying quantum technologies, from quantum manufacturing up to a real quantum internet, prioritising the areas of: 1) seamless quantum-safe communications, including new protocols & interfaces for satellite-terrestrial coms, routing & synchronization for hybrid networks (both classical/quantum and PQC/QKD), 2) all-photonics clouds and cloud-access with proper algorithmics & connectivity for quantum computing, including quantum processors & switches & repeaters, 3) tools to support implementation including architecture guidelines and dimensioning tools, 4) new quantum services including sensing, and 5) standardisation.

The EU should also aim to protect and retain strategic European IP, developing policies to prevent IP leakage toward non-European actors. Even though the EU

performs strongly in research and development, once results begin to materialize in the form of start-ups or spin-offs, they are often acquired (together with their Intellectual Property Rights) by large companies based outside the EU. Concrete steps to prevent such scenarios, clear frameworks for Intellectual Property Rights (IPR) sharing among EU-funded projects, as well as mechanisms for IPR alignment that enable technical interoperability and industrial exploitation, are needed to protect and retain Europe’s strategic capabilities.

Finally, the link between research and European industry should be strengthened in order to support research centres and universities, while ensuring that funding targets higher Technology Readiness Levels (TRLs) than those typical of low-level academic research. Joint research between companies and academic or public research centres as well as proposals tailored to the needs of investors and startup ecosystems should be actively encouraged. Proposals should also support the development and deployment of infrastructure and technology, providing opportunities across EU regions, while also fostering cooperation between them.

Quantum-ready workforce

Quantum skills will be key to competitiveness, and should be supported through relevant industry-academic programs, pooling resources and attracting international talent across different quantum technology areas. Skills management and training offers at scale should be included, and programmes and funding must address newly graduated students, postgraduate and mid-career upskilling pathways, and specialised professional profiles alike. Industry participation should be strongly encouraged. Initiatives currently supporting AI development could be combined with quantum computing to foster a mutually helpful technological development, and to support a workforce that has skills in using both kinds of technology.

3. Fragmented governance and funding landscape

In order to support the innovation needed to develop resilient, quantum-secure networks, avoiding fragmentation and ensuring adequate financing systems are in place are fundamental. Strong Member State cooperation is therefore key, as well as pooling resources on an EU level, aligning major R&D programs and supporting public-private investment schemes. This necessitates providing long-term funding for quantum-safe communication infrastructure, quantum communications and computing in order to support scalable deployment and industrialisation⁵. Creating strategic security bonds, modelled on the successful framework of European green bonds, could be a helpful way forward in this regard.

Public funding governance should be streamlined, and funding and procurement procedures must be simplified in order to bring technologies and secure infrastructures to market and scale them in Europe. Incentives should be introduced to support the adoption of quantum solutions and a coordinated approach to public procurement should give precedence to both European technologies and suppliers. In general, public funding should be prioritised not only for research, where Europe has traditionally excelled, but also to accelerate the translation of innovation into market deployment, scaling, and implementation.

Harmonized standards & interoperability

Funding is also key to supporting European activities in standardisation, certifications and patents. For this reason, cooperation between standardization committees (e.g. coordination between ETSI groups for PQC and QKD) should be encouraged for hybrid solutions, up to their certification.

In order to enhance interoperability and commercial viability, development of harmonized standards must be promoted based on current industry standards, best practices, processes, and capabilities of providers.

Harmonized, outcome-based regulatory environment

The European regulatory environment for quantum technologies should create the conditions for greater private sector freedom to achieve returns on investment, thereby mobilising additional private funding for advanced technologies and encouraging intellectual property monetisation.

The regulatory framework should be harmonized across member states to streamline deployment.

For instance, national strategies and EU-level strategies on quantum should be aligned and coordinated. Fragmentation must be avoided in order for Europe to fully grasp the potential of quantum technologies. To ensure long-term relevance and resilience, the regulatory framework must prioritize outcome-based objectives over rigid technical mandates. By focusing on security outcomes rather than static algorithmic choices, the framework permits the necessary flexibility to adapt to dynamic advancements in quantum computing. In this context, adopting a holistic approach that encompasses quantum-related technologies – moving toward greater technological neutrality – is essential to ensure coherence and effectiveness.

ANNEX

Connect Europe's Quantum Offer

Deutsche Telekom

Deutsche Telekom's work focuses on quantum communication, sensing, and computing, with a strong emphasis on building hybrid quantum-secure networks that combine Quantum Key Distribution (QKD) and Post-Quantum Cryptography (PQC).

With [T-Labs](#), Deutsche Telekom is making significant investments in the development of quantum technology applications in telecommunications such as the implementation of quantum algorithms in the field of network optimization and planning, the construction of quantum cryptographic platforms, and the harnessing of quantum resources (e.g. entanglement and teleportation) for novel communication and coordination possibilities.

Through their [Quantum Labs in Berlin](#) and Darmstadt, as well as large-scale test infrastructures such as the quantum link between Berlin and Bonn, Deutsche Telekom is exploring how quantum technologies can be integrated into existing telecommunications networks.

Deutsche Telekom was in the past and still is involved in major European initiatives, ranging from early contributions to funded projects directly from or related to the Quantum Flagship (CiViQ, OpenQKD) to commercial studies for the European Quantum Communication Infrastructure (EuroQCI), for example in the feasibility study QCI4Eu (Ref: EC H2020 SMART 2019/0086) or the detailed design study (Ref: CNECT/LUX/2020/CPN/0062 as prime).

Deutsche Telekom was the consortium leader for the recently-finished Coordination & Support Action [PETRUS](#). Currently, Deutsche Telekom is priming the EC-funded project [Nostradamus](#), which designs and develops a blueprint for a testing and

validation infrastructure for evaluating QKD devices with the goal to enable certification through European and national security authorities.

In 2024, Deutsche Telekom established the Quantum Safe Competence Centre led by Deutsche Telekom Global Business Solutions Belgium. With Deutsche Telekom Security, Deutsche Telekom Technik, Deutsche Telekom Geschäftskunden and Telekom Laboratories, the full chain from research over deployment and business development to security assessments is covered, and the Quantum Safe Competence Centre started productization and commercialisation of quantum safe solutions.

In collaboration with partners from research and industry through initiatives such as [QUTAC](#) and [DIVQSec](#), Deutsche Telekom is working to translate Europe's quantum research excellence into real-world applications that strengthen both the economy and cybersecurity.

FiberCop

FiberCop, within its role of infrastructure owner with nearly 27 million kilometres of fibre optic cable already laid, 10,500 central offices, over 160,000 street cabinets and ultra-broadband coverage reaching 14 million active lines, runs Italy's most advanced, extensive and pervasive digital network infrastructure to provide high-performance connectivity for millions of users with the commitment of building the network of the future in line with the objectives of the European Digital Agenda and offering service operators reliable and innovative solutions.

For what concerns **Quantum Safe Connectivity**, the best in class and pervasive coverage of national Italian territory with fi-

bre optic infrastructure and capillary housing facilities is exploited to provide connectivity services, that can be enhanced by an additional complete Quantum Key Distribution (QKD) large-scale network layer for unconditional security. According to the operators' use-cases and geographical location of endpoints, these solutions for the QKD layer are deployable in point to point and point to multipoint architectures, over dedicated connectivity, metropolitan MAN and on a backbone infrastructure. In an integrated approach, other quantum safe solutions can complement the QKD layer to implement a Quantum Safe Network infrastructure for a Quantum Safe connectivity provisioning.

As regards **Quantum Internet Connectivity**, consultancy and research actions towards the definition of the Quantum Communication layer of the future Quantum Internet are envisageable, exploiting the value of the knowledge and the experience of the FiberCop personnel into the Quantum Technologies.

Orange

Orange is already executing a pragmatic, end-to-end quantum strategy to protect customers today and enable tomorrow's Orange services, fueled by cybersecurity and telco-grade network expertise as well as long-standing research excellence. Orange intends to cover the three complementary fields of Quantum-Proof Encryption & Data Management, Quantum Communications & End-to-end Networks, and Quantum Computing, now combining research, product development and industrial partnerships, in order to deliver value-generating quantum-safe and quantum-enabled capabilities at scale.

1/ What Orange offers to B2B customers and partners

- The flagship "Orange Quantum Defender" offer: a pilot quantum network across Île-de-France combining QKD (quantum key distribution) and PQC (post-quantum cryptography), that underpins a three-offer portfolio com-

posed of consulting, PQC-as-a-Service, and quantum-safe infrastructure services.

- Hosting options for quantum-computing: a potential specific offer under evaluation to support the to-come quantum cloud.
- Quantum exploration: R&D and pilot projects (incl. digital twins) for highly sensitive verticals where quantum threats and quantum-enabled value are highest such as finance, healthcare & biochemistry, logistics and critical infrastructures.

2/ What Orange envisions for themselves and for operators of vital infrastructures

- PQC migration: bespoke diagnostic and migration plan to help organizations assess quantum risk, prioritize assets and implement pragmatic migration paths to quantum-safe cryptography.
- Telco-specific use cases: high-value applications of quantum computing for resilience and optimization (e.g. real-time routing, dynamic CNF placement, cyber-defence), and for future quantum networks architecture.
- Next-generation networks: maturity roadmap to quantum networks and quantum clouds, meshing quantum devices (esp. sensors) and/or computers.

3/ What Orange is building for the long run

- Skills: comprehensive skills allowing hybrid approaches (esp. PQC + QKD, classical + quantum computing) across Orange Cyberdefense and Orange Business, ignited by research programs in the three quoted fields.
- Active partnerships: European examples within industry, startup ecosystem and academia such as Cryptonext, Ekinops, Welinq, Quandela, Atos or Côte d'Azur, Clermont and Troyes universities
- Policy engagement: coordinated telco positions following the EU call for evidence and contributions to the French "Comité Stratégique de Filière – Infrastructures Numériques" to favor quantum leadership and sovereignty for Europe.

Telefónica

Telefónica's [early engagement in quantum technologies](#) positions it at the forefront of preparing for both the risks and opportunities of the quantum era. Telefónica has established a dedicated [Centre of Excellence for quantum technologies](#).

The company is already making strides towards [quantum-safe networks and services](#) by integrating an additional layer of protection through quantum-resistant technologies, combining traditional cryptographic methods with post-quantum cryptography (PQC).

Going beyond the lab, Telefónica is also advancing future technologies such as Quantum Key Distribution (QKD), [having deployed them operationally within the EuroQCI network](#), to accelerate their maturity.

Telefónica has recently launched '[Interconexión CPDs](#)', Spain's first data-centre communications service secured with post-quantum cryptography and supporting quantum key distribution (QKD) technology.

Overall, Telefónica collaborates closely with a broad range of third-party partners. Several use cases were [showcased at MWC25 and MWC26](#), including [applications in healthcare](#), defence, and utilities, as well as broader efforts to build a robust quantum ecosystem.

This includes partnerships with quantum computing manufacturers and diverse collaborations, such as [with the Provincial Council of Biscay](#) offering a range of Quantum Computers as a service or the creation of the [Javier Echenique Talent and Technology Centre in Bilbao](#).

TIM

TIM, through QTI, a leading company in quantum technologies applied to communications security controlled by Telsy, the cybersecurity factory of TIM Enterprise, develops and provides quantum-based solutions in the quantum communications domain, in particular a complete Quantum Key Distribution (QKD) system (Quell-X) for the generation and distribution of cryptographic keys for unconditional security, a Key Management Entity (QKME) to manage classical and quantum cryptographic keys by heterogeneous sources including QKD, PQC and classical keys (Ekate), and a Quantum Software defined network solution (QSDN) to control large-scale QKD networks.

These solutions have been tested and deployed in several contexts, including on TLC infrastructures, and for several use cases in sectors including TLC, finance, critical infrastructures, defence. Main use cases include:

Use case 1: Securing communications

Keys distributed through QKD systems can be used to secure communications in point-to-point or more complex architectures. Telsy-QTI provided QKD, QKME, and SDN proprietary solutions to deploy several national QKD networks, including in Italy, Denmark, Bulgaria, Spain, Portugal, Cyprus, Luxembourg, Austria, Malta on both terrestrial and underwater links.

Use case 2: Securing High Capacity Data Centre link

Keys distributed through QKD systems can be used to secure high-capacity links between data centres. Telsy-QTI QKD solutions have been used to implement this scenario in Athens, achieving encryption over multiple individual clients on a high-speed link of 400 Gbps total throughput per single optical channel in collaboration with Sparkle (Fiber Optic and telco infrastructure provider) and Ribbon (OTN/WDM Transport Equipment provider). The large quantity of keys made available by QTI's QKD and the flexibility of transport equip-

ment allow the network operator to individually configure the encryption on the single access port, precisely defining which services require Quantum Security. In another scenario, in the metropolitan area of Milan, a QKD network (beyond point-to-point) has been deployed and demonstrated including advanced capabilities of SDN control and Key Management layer.

Use case 3: Backbone Protection

Keys distributed through QKD systems can be used to secure Optical backbone links interconnecting remote sites re-using the existing infrastructure even on long links. Telsy-QTI implemented QKD encrypted WDM interconnection between two Ministry of Defence sites in Italy. In this case the existing equipment was used to implement all the classical channels on a single fiber, leaving the other one for the quantum channel, allowing to stretch the maximum distance for a single QKD span.

Use case 4: Long Distance nodes and submarine cables

Keys distributed through QKD systems can be used to secure long distance link even if the distances are too long for a single link, through a trusted node. Trusted nodes allow keys propagation to other endpoints which are not directly connected to the same QKD link in order to achieve E2E encryption. Telsy-QTI deployed this architecture in Lisbon, Portugal activating a QKD metropolitan link over a submarine cable managed by the local telecom operator⁶.

With the aim of creating a secure “quantum highway” for long-distance data transfer, a [network](#) was also developed in spring 2026 in collaboration with MedITec that connects the Naples data center with the TIM hub in Acilia (Rome), guaranteeing secure 1 Gbit/s connections by integrating QKD and post-quantum cryptography (PQC) technologies

Overall, these use cases are also part of TIM’s broader commitment to quantum security communications at European level.

TIM has successfully coordinated the three-year European QUantum ecOsystems (EQUO⁷) project (2023–2025)⁸, funded by the European Commission as part of the Digital Europe Programme (DEP) to support the development of the European Quantum Communication Infrastructure (EuroQCI). Main objectives of EQUO included the development of quantum key distribution networks and services, according to control and management architectures consistent with emerging standards.

TIM, with the Group companies Telsy and QTI, also participates in several other EU-funded projects, including the DEP “Quantum Italy Deployment” (QUID⁸) project (2023-2025), Horizon FPA “Quantum Internet Alliance” (QIA), FPA “Quantum Secure Network Partnership” (QSNP) and Horizon Europe project QPIC 1550.

4iG

4iG is a member of the QCIHungary consortium, which aims to build a secure quantum communication backbone across [Hungary](#).

FOOTNOTES

- 1 For example, RSA (Rivest-Shamir-Adleman) and ECC (Elliptic Curve Cryptography)
- 2 For instance, precise time synchronisation, essential for many advanced applications and network functions, can be supported by quantum clocks, enabling improved time-critical services.
- 3 [EITCI-QSG-EQRNG PROTOCOL | EITCI Institute](#)
- 4 i.e. advanced pilot lines for quantum chip manufacturing, platforms for computing, communication and sensing
- 5 For example, through industry-led consortia, a simplified IPCEI on Quantum Communications, redirecting unspent NextGenerationEU funds, or leveraging remaining funding lines under the 2021–2027 MFF
- 6 <https://www.mobileeurope.co.uk/meo-deploys-qkd-on-terrestrial-and-submarine-cable-around-lisbon/>
- 7 DEP European QUantum ecOsystems (EQUO) project: <https://www.equoproject.eu/>
- 8 DEP Quantum Italy Deployment (QUID) project <https://quid-euroqci-italy.eu/it/home-2/>

The background is a dark blue gradient. There are several large, stylized graphic elements: a blue U-shaped element on the left, a blue U-shaped element on the top right, and a pink-to-blue gradient U-shaped element on the bottom right. The text 'Connect Europe' is centered in the middle.

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