

Crypto inventory and Cryptoagility

The new post-quantum security standard

What is Crypto inventory?

The **crypto inventory** allows us to **identify, unify, and map** all of the organization's **cryptographic mechanisms, algorithms, certificates, libraries, and systems** where they are used. It also serves as the basis for conducting a risk analysis of the **cryptographic security** posture of the company or organization, providing a structured view of the **cryptographic footprint** and serving as an essential starting point for any **post-quantum transition**.

Advantages of having a crypto inventory	Disadvantages of not having a crypto inventory
Complete visibility of the cryptographic environment	Lack of knowledge of critical assets and dependencies
Early identification of weak or obsolete algorithms	Presence of undetected obsolete algorithms
Prioritisation of migrations based on actual risk	Improvised migrations and increased operational risk
Reduced operational impact on update processes	Exposure to scenarios such as Harvest Now, Decrypt Later
Greater alignment with regulatory requirements and audits	Difficulty in complying with regulatory requirements

What is Cryptoagility?

Cryptoagility is an organisation's ability to **manage, update, replace or remove its cryptographic mechanisms in a fast and controlled way**, without disrupting operations. It is a **strategic digital resilience capability** that enables **cryptographic architecture** to be adapted **dynamically** and in a **governed** manner. In an environment of emerging threats, constant advances in technologies such as quantum computing and artificial intelligence, and **increasing regulatory pressure**, it allows **security** to evolve at the pace of the business without becoming a technological constraint.

What does it allow?

-  Agile adaptation to new vulnerabilities or regulatory requirements
-  Hybrid transition between traditional and post-quantum cryptography (PQC)
-  Progressive migration to post-quantum cryptography without massive redesigns
-  Lower risk in rigid infrastructures and greater long-term resilience

Our value proposition

Telefónica Tech offers a comprehensive approach that combines **methodology, technology, and governance** to turn the post-quantum transition into a well-structured, measurable process that is aligned with the business.

Our proposition is based on three pillars:



Identification

Automated discovery across networks, code, APIs, containers, and cloud environments to generate a comprehensive Crypto Bill of Materials (CBOM), contextualised by criticality and risk.



Protection

We implement post-quantum protection without disruption, decoupling applications from algorithms and ensuring operational continuity in the face of cryptographic evolution.



Governance

We integrate cryptographic management into the corporate risk and compliance model, ensuring traceability, regulatory alignment, and future readiness.

Why are we your ideal partner?

- We provide **comprehensive support** from initial cryptographic visibility to the effective implementation of **Quantum Safe** architectures, ensuring operational continuity.
- We have proven experience in **critical and highly regulated sectors**, where cryptography is a pillar of **continuity, compliance, and digital trust**.
- We build a **technological ecosystem** and strategic alliances that integrate inventory, **protection** and **governance** into a **unified platform**, accelerating the **post-quantum** transition with control and sovereignty.
- We offer a **cryptoagility** operating model that transforms **cryptographic** migration into a structural and permanent capability of the **organisation**.