

Quantum Cyber Readiness

Deloitte's approach on PQC





PQC Landscape

The advent of **quantum computing** introduces **new risks** to today's cryptographic landscape. **Post-Quantum Cryptography** aims to **develop algorithms capable of withstanding these emerging threats**, ensuring long-term data security.

NIST PQC Standardization

- **Selection of CRYSTALS-Kyber and Dilithium as reference algorithms**
- Migration guidelines for transitioning from classical RSA/ECC to **PQC-safe algorithms**

EU/Global Regulations

- **EU NIS2 Directives**
- **ENISA recommendations** for **quantum-safe strategies**
- **DORA directives on threats** from quantum advancements
- ISO/IEC 18033 updates for **PQC-compliant encryption**



PCI DSS

- **Global standard** mandatory for all entities handling payment card information
- PCI DSS 4.0 **promotes crypto-agility** to quickly switch to stronger encryption as threats evolve

Industry Risks

- **“Harvest now, decrypt later”** attacks threatening sensitive policyholder data
- **Increased vendor and supply-chain dependency risks**





PQC Milestones

2025

Publication of the first deliverable of the **NIS Cooperation Group** on PQC, aimed at the EU Member States.

11/06/2025

2026

Develop a national PQC transition plan, including quantum risk assessment, cryptographic inventory and roadmap definition, starting from high and medium-risk use cases.

By end of 2026

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Initiate the transition phase towards PQC, **progressively implementing quantum-safe algorithms**.

Ongoing

2030

Complete migration to PQC for high-risk use cases (e.g., critical infrastructure and applications); implement quantum-safe algorithms.

By end of 2030

2035

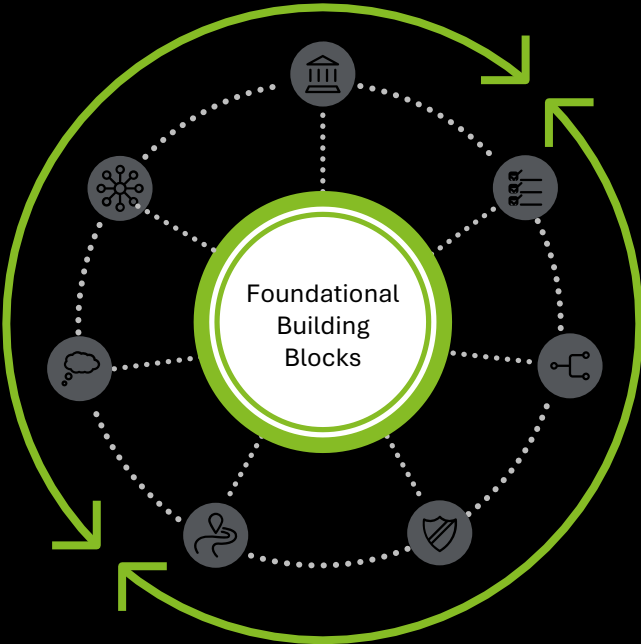
Extend migration to medium and low-risk use cases.

By end of 2035





Our Approach is based on:



**Program Set-Up &
Roadmap**



**Cryptographic
Governance**



Asset Prioritization



**Third Party
Ecosystem**



Crypto-Inventory



**Technology Remediation
& Crypto Agility
Implementation**



**Awareness &
Knowledge**



Contact us for more information



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