



Quick Dive into Innovation Practices:

Ideas Worth Stealing 🤔

Inatel

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Structured 20 Minutes Breakout rooms in Zoom

- Context in which you apply it
 - Online instructor lead courses
- What problem it solves
 - Engagement and exchange of experiences between participants
 - Productive and meaningful discussions
- How it works
 - Tasks must be objective and clearly describe what the result (deliverable) should be
 - Introduce and explain the task before starting the breakout rooms
 - Create rooms lasting 20 minutes
 - Allow screen sharing within breakout rooms
 - During the execution, visit the rooms to check the progress
 - After the rooms close, allow each group to share and present the results
 - After each presentation, the tutor must begin to make comments, which will encourage other participants to share their experiences.
- Why it works (evidence it works)
 - The 20-minute time frame brings a certain feeling of urgency that prevents participants from losing focus on the task
 - Tasks with clearly defined outcomes bring better results
- Biggest limitation
 - Not very intuitive zoom settings
- If you want to try it, my advice is*:
 - Allow at least 1 hour for this activity
 - Run tests with Zoom to check how it works and make the necessary settings before starting the course



Illustration

Practical Group Activity

Theme: PQC or QKD? Which Path Should Governments Prioritize?

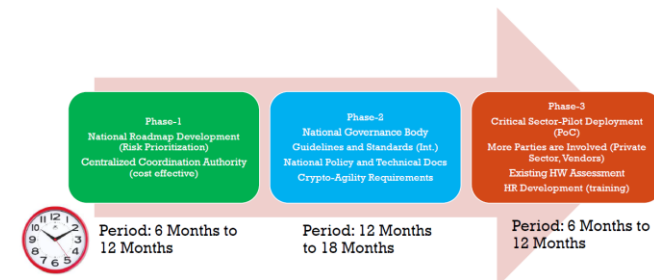
Description: Compare Post-Quantum Cryptography (PQC) and Quantum Key Distribution (QKD) in terms of feasibility, cost, implementation readiness, and security impact. Which approach makes more sense as a national starting point?

Deliverable: Simple comparison table (1 page or slide) showing pros/cons of PQC vs. QKD and a final group recommendation with brief justification.

Time: 01 hour.

M. T. Ramzan e S. Cimato, "Blockchain in the Quantum Era: Surveying Security Challenges and Post-Quantum Cryptography," em 2025 IEEE 49th Annual Computers, Software, and Applications Conference (COMPSAC), 2025. DOI: 10.1109/COMPSAC65507.2025.00311.

PQC MIGRATION- NATIONAL ROADMAP



QKD

TEAM TSMI

Early adoption should be concentrated in **security-sensitive sectors** like government, finance, ICT/Telecom, and critical infrastructure.

Sector	Risk Level	Value	Feasibility
Government & Defense	Very High	Very High (classified info, military)	High Budget, Policy
Financial Services	Very High	Very High (transactions, commercial, Geopolitical, PII)	Related to existing infrastructure (ICT, fiber)

Priority 1: Government & Defense

1. Very high risk (national security, classified communications, Grid Control)
2. Confidentiality requirements
3. Budget and policy support

Priority 2: Financial Services

1. The value of real-time transactions under risk
2. Existing fiber/data infrastructure enables fast deployment
3. Regulations and competition are security related

TIMELINE SLIDE WITH 3 ACTIONABLE STEPS

Step	Actions	Timelines
Discovery & Baseline	Identify all cryptographic assets: applications, networks, devices, data.	6 Months
Analysis & Vulnerabilities	Risk assessment, determine current vulnerabilities and prioritization.	6-10 Months
Planning & Implementation Blueprint	Develop migration strategies Select PQC algorithms to be used Implementation & Testing Blueprint	6-10 Months



Results

Which aspects of the training course helped achieve the learning objectives?

1. Good explanation, **good group dynamic**. I appreciate both professors for the good willing to teach
2. Presentation gave lot of information **but discussion with teammates is where we brainstorm to learn** and also constant clarification of doubts by professors in chat has helped achieve my objective of clarification of quantum technology.
3. The progressive module structure, clear slide decks, real-world case studies (NIST standards, global strategies), **engaging debates**, and practical policy frameworks (roadmap dimensions, crypto-agility, hybrid migration) all contributed directly to achieving the learning objectives.
4. In my opinion, the aspect of the training that **helped achieve the learning objectives was the group activities**. This is because interacting with other participants leads to a better understanding of the course material.
5. The course provided strong theoretical foundations and a well-structured progression of topics, which helped build a clear understanding of key concepts. **Interactive discussions and relevant examples supported the application of knowledge to real-world contexts.**
6. **The break out sessions is where the reinforcement of the learning objectives really made a difference to me.** I still value learning through action and practice and I'm glad there was still an interactive human component to the online led course.