

Post-Quantum

Cryptography Conference

Get Fit For The Qubit: The Dutch approach to a Quantum Secure Society



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KEYFACTOR

CRYPTO4A

SSL.com

ENTRUST

HID

October 28 - 30, 2025 - Kuala Lumpur, Malaysia

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Consortium



Rijksoverheid

Get Fit for the Qubit!

Pieter Schneider
29 October 2025



***“It’s not a sprint, it’s a
marathon”***



Rijksoverheid

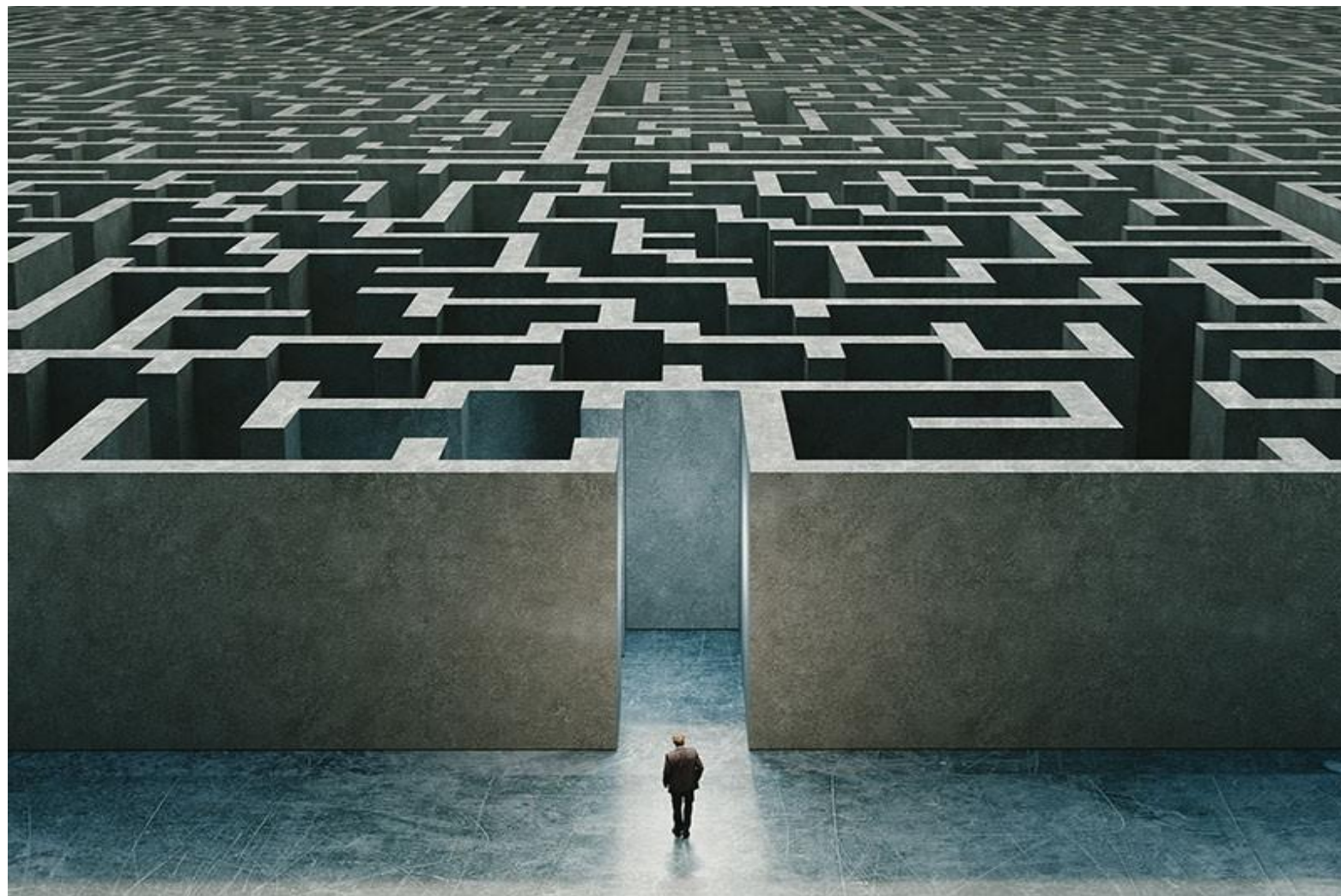
**Are you Fit for
the Marathon?**



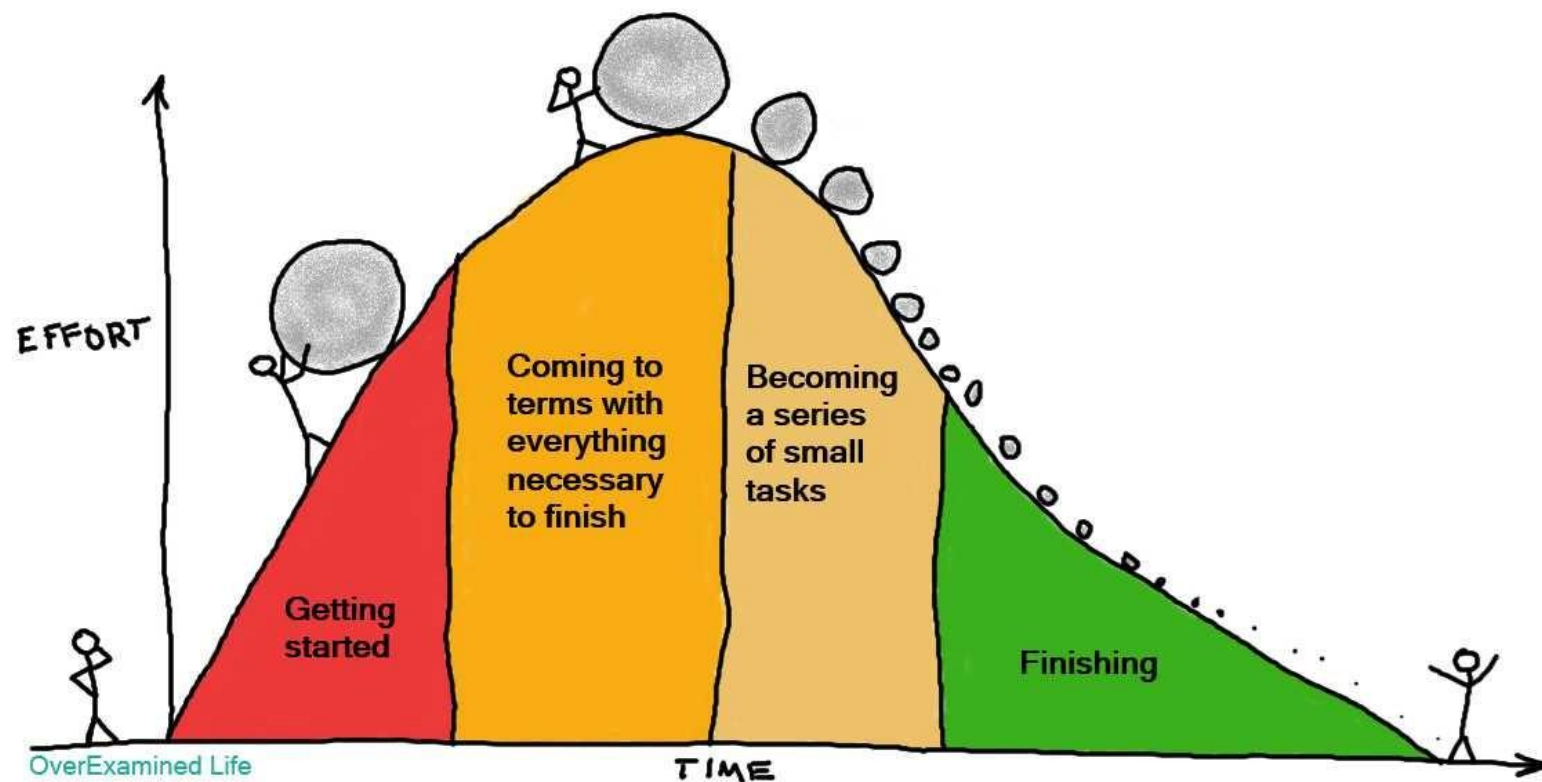


Rijksoverheid

**Are you Fit for
the Qubit?**



How do we get Fit for the Qubit?



“Acknowledge that the transition to quantum-safe cryptography is not just an IT project, but covers many elements (technical and nontechnical) on multiple layers and cannot be managed by a single organization”

Rikken, O., Christiansen, L., Janssen, M., Bharosa, N. (2025). Quantum Safe Public Key Infrastructure transition – applicability of existing (IT) governance models



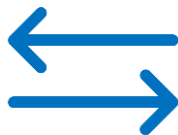
Awareness, knowledge
and communication

**The Human factor: Create awareness and urgency
– We need to act now**



Policy, frameworks and
international collaboration

**Process: Gives direction to what needs to be
done**



Migration Support

**Technical: Supports efforts on how it should be
done**

The Human



Risicomanagement

Te beschermen
belangen

Dreigingen / actoren
/ motivaties

Risico's

Compliance

Doorvertaling requirements

Informatiebeveiliging doelen

Beschikbaarheid

Integriteit

Vertrouwelijkheid

Authenticiteit

Onweerlegbaarheid

Doorvertaling requirements

Cryptografische functionaliteiten (functioneel doel)

Ondertekenen

Versleutelen

Authentiseren

Sleuteluitwisseling

Dataverificatie

Geïmplementeerd middels

Implementatie
requirements

Cryptografische
Standaard

Library

Mechanisme

Protocol

Implementatie

Parameters

Suite

Algoritme

Geïmplementeerd in

Bouwblokken voor

Cryptografische primitieven

Symmetrische
encryptie

Asymmetrische
encryptie

Random number
generation

(Cryptografische)
hashfunctie

Digitale
handtekening

MAC (message-
authentication code)

Sleutelaflading
(key derivation)

Sleuteldistributie
(key distribution)



How Do I Reach These..

How Do I Reach These..



Ecosystem

You

**are not / should not
be**



Fase One: Migration of 3 applications

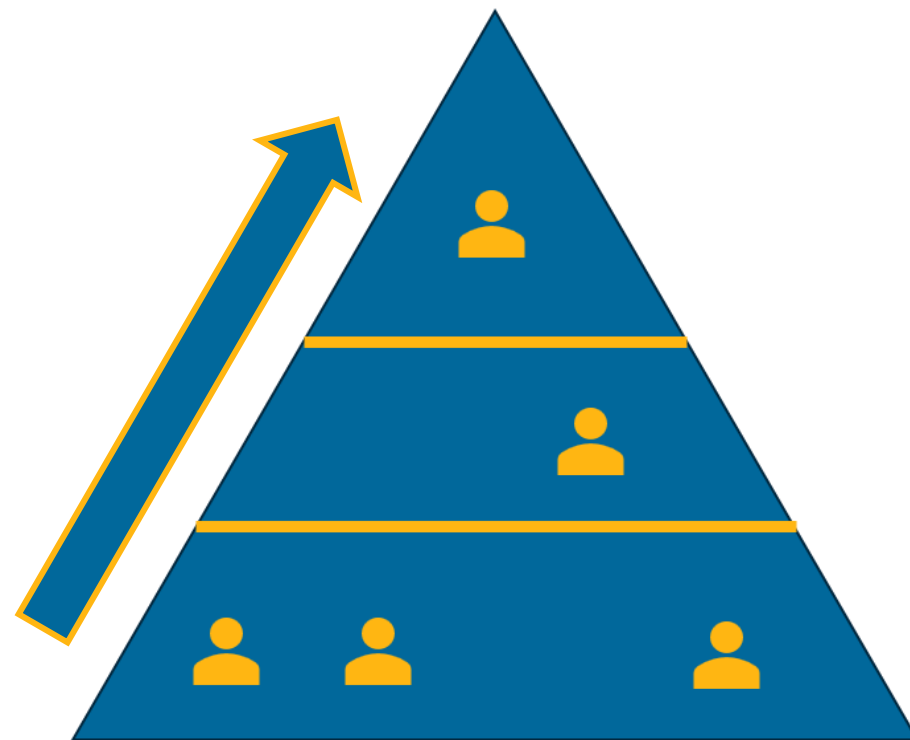
PQC project leader
Crypto specialist
Training & Education
Optimizing LCM
Crypto Asset Discovery

Supplier management
Updating purchase conditions
Updating Internal Cryptographic Policy
Documentation of lessons learned



You

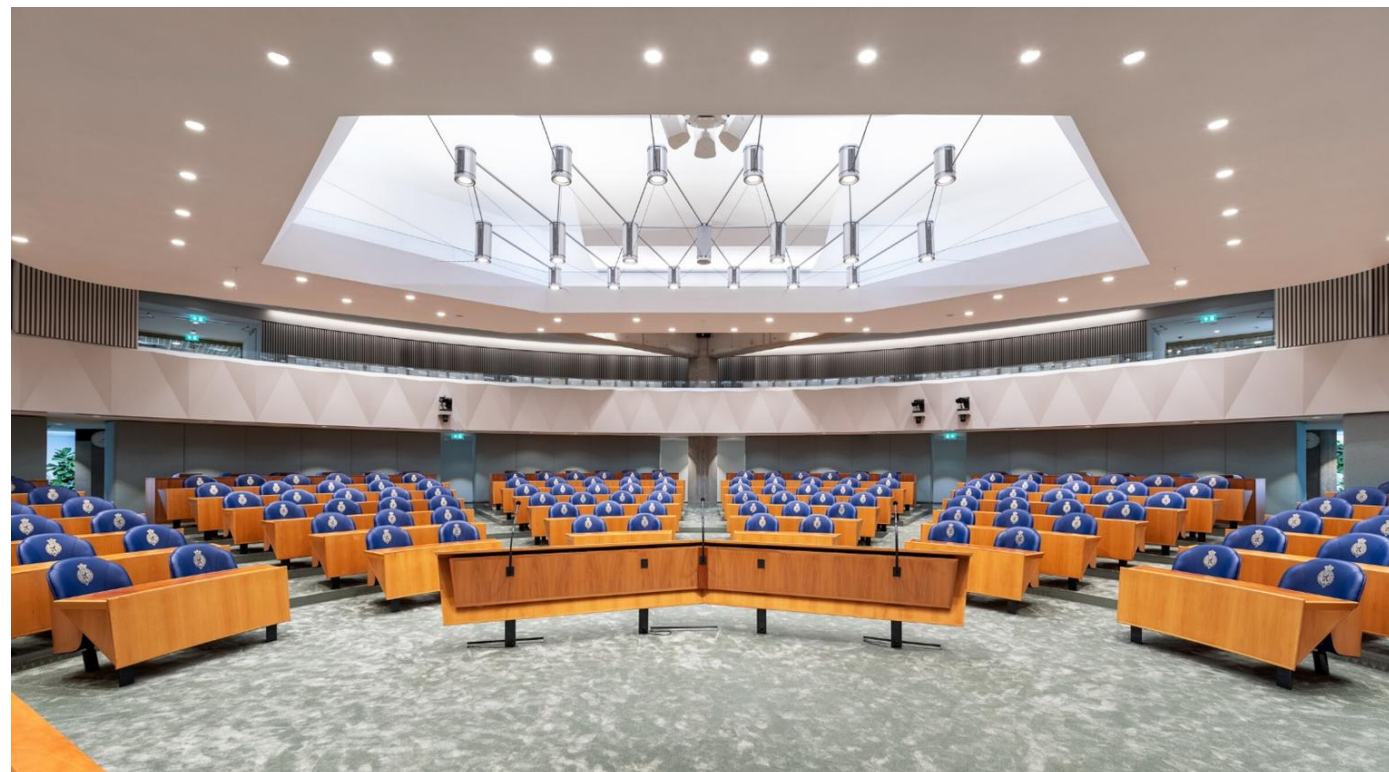
are not / should not be



Process



Process



November '24: Quantum Computing Risks part of the Dutch Cyber Security Landscape 2024
December '24: State Secretary of Digital Affairs receives 2nd edition PQC Migration Handbook
January '25: State Secretary of Digital Affairs request meeting on Quantum Computing developments
January '25: Discussion on Quantum Technology in the Dutch parlement
June '25: Launch of the Dutch Digitalization Strategy
July '25: General Audit Office starts with investigation into Quantum
November '25: General Audit Office presents outcome investigation to parlement

Technical

Three Pillars:

1. Knowledge & Research
2. Advice & Knowledge Sharing
3. Tests & Experiments



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Cryptographic Asset Discovery and Inventory

Een marktverkenning en fit-gap-analyse

Auteurs

Thom Sijpesteijn
Maaïke van Leuken
Frederik Kerling
TNO Publiek

Rubricering verslag

Aantal pagina's

64

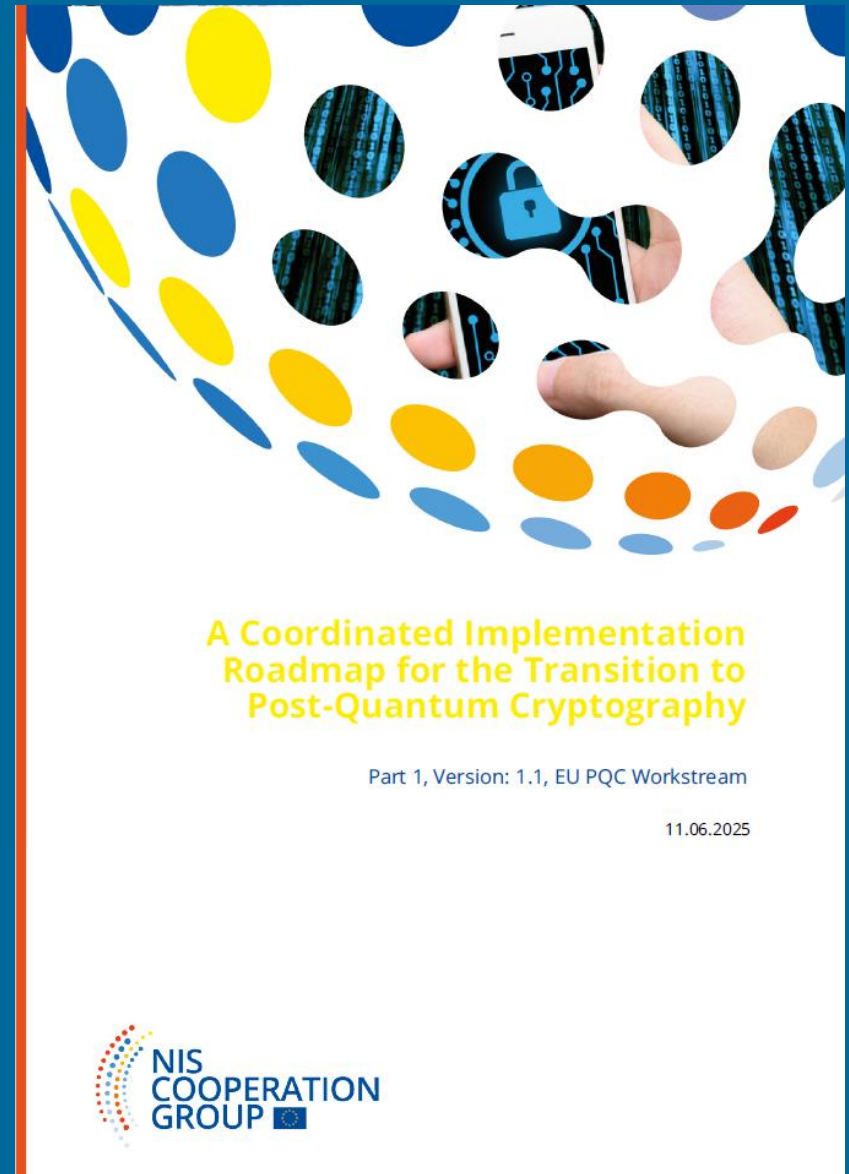
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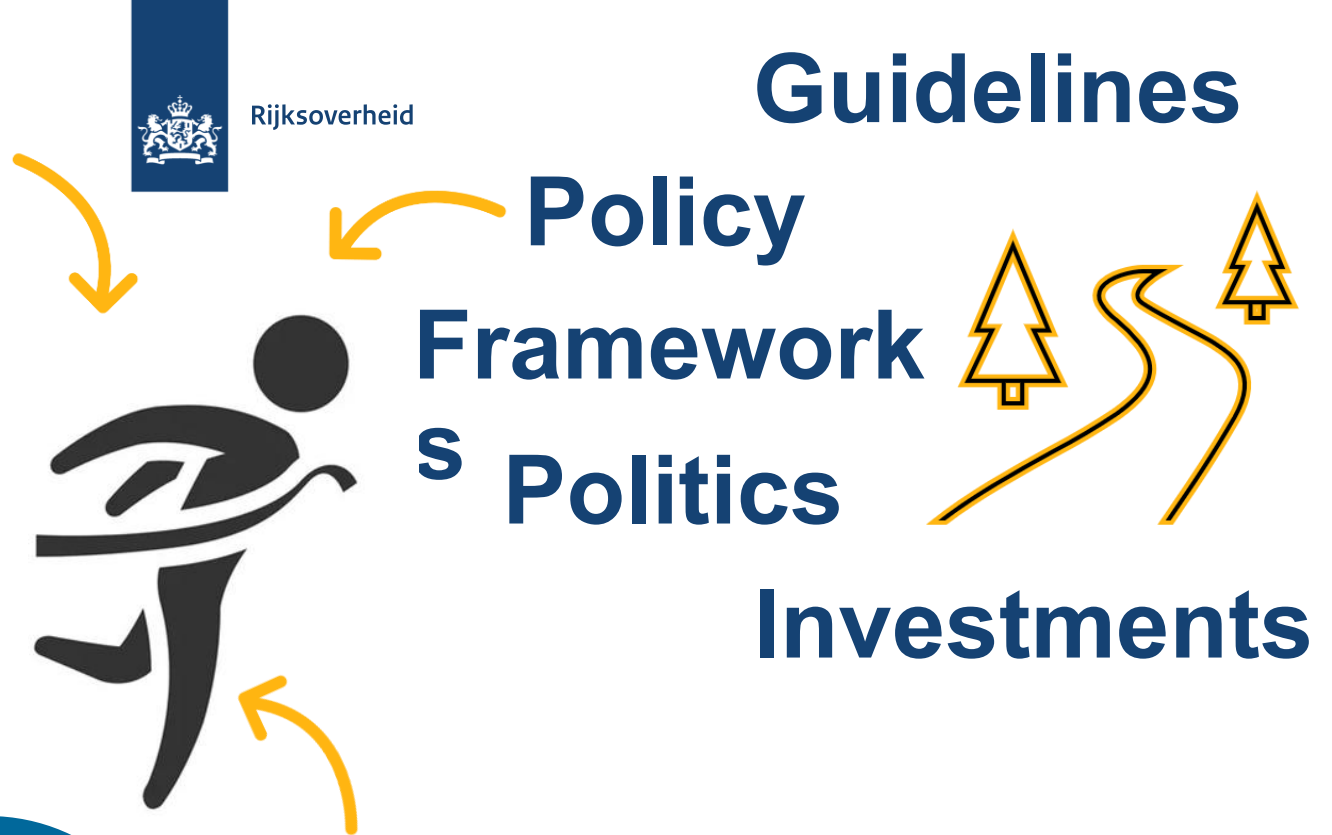
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Gefinancierd door

CIO Rijk
Nationaal Cyber Security Centrum
Ministerie van Economische Zaken

What's next?

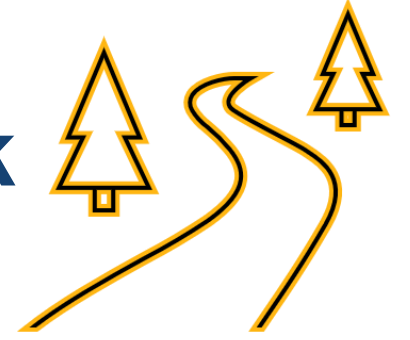




Rijksoverheid

Guidelines

**Policy
Framework
s
Politics**



Investments

Experiments



**Knowledge
library**

**Lessons
learned**

**Our marathon in
summary**



Thank you
& Get Fit for the
Qubit!