



**Powerful Lawful Interception,
Investigation and Intelligence**

Short overview

CERIS



Project vision

Advance European LEAs to a novel lawful-interception (LI), investigation and intelligence era in which they will be able to achieve high throughput of LI amid the challenges new age of communication (5G, application level E2EE and Quantum based cryptography).

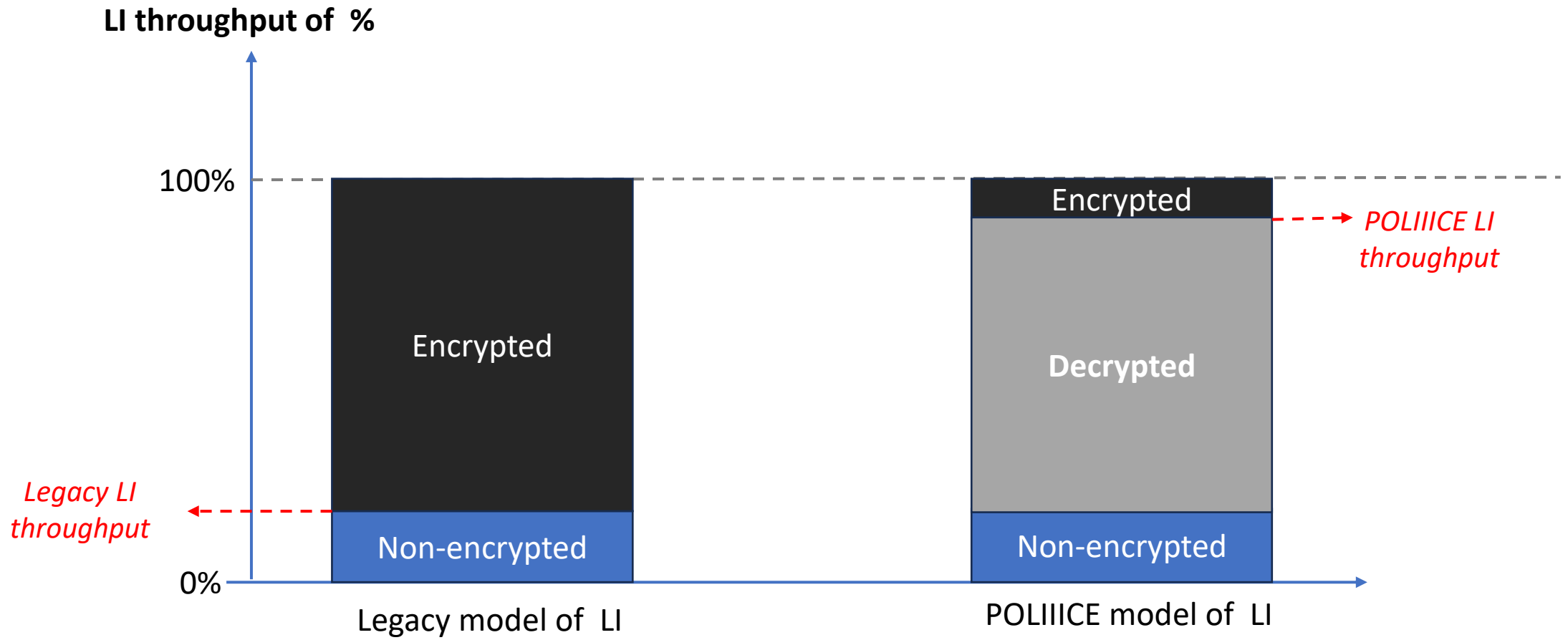
These new age of communication technologies turn legacy LI solutions to totally in-effective and therefore put significant risk on Europe's fight against crime and terrorism.

POLIIICE project researches, validates and demonstrates array of innovative LI measures at cloud , network and edge-device levels which together enable LEAs to efficiently overcome the new age challenges and achieve high throughput of LI.



POLIIICE main impact in the new age of communication

POLIIICE LI throughput >> Legacy LI throughput

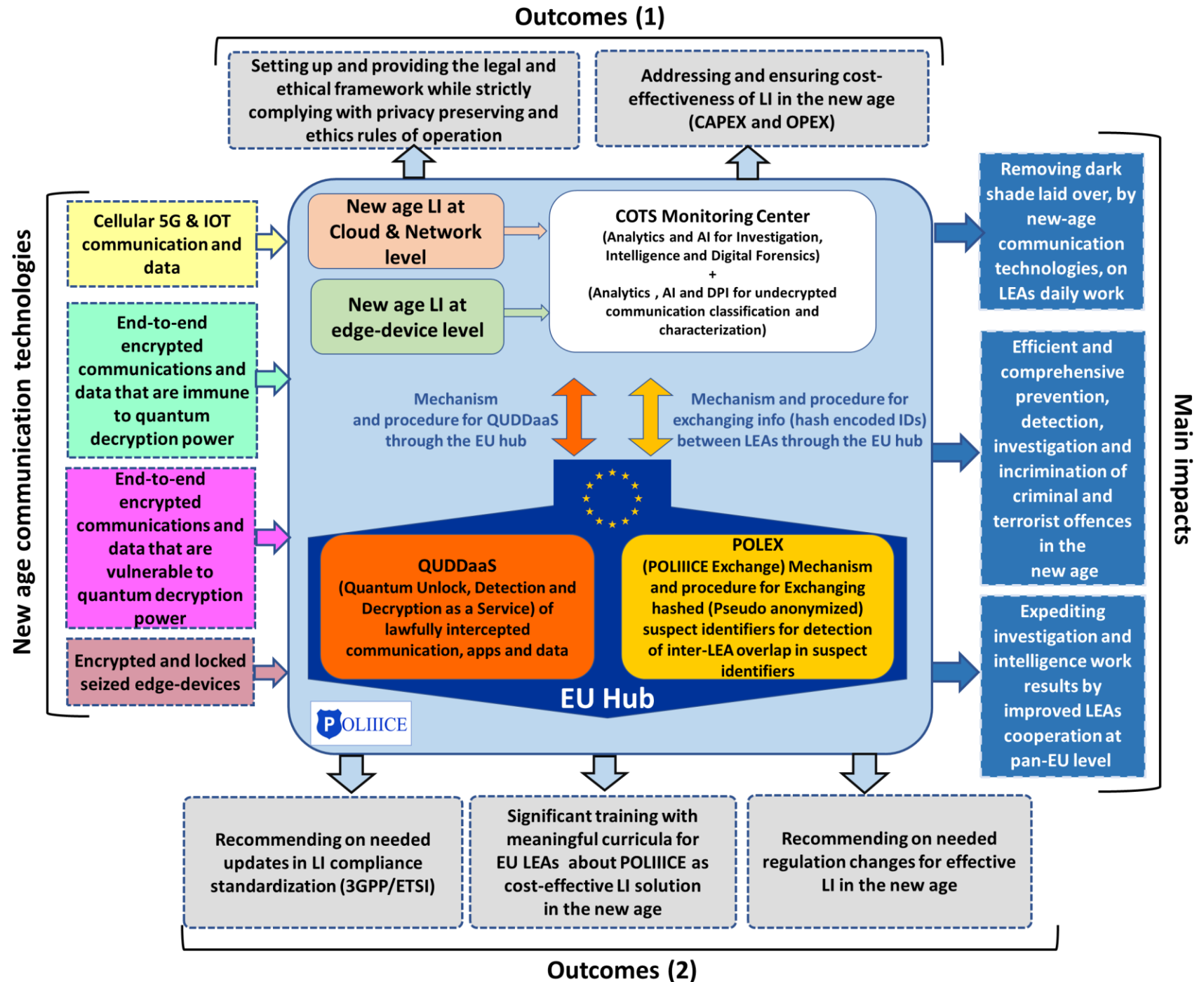


Project main objective

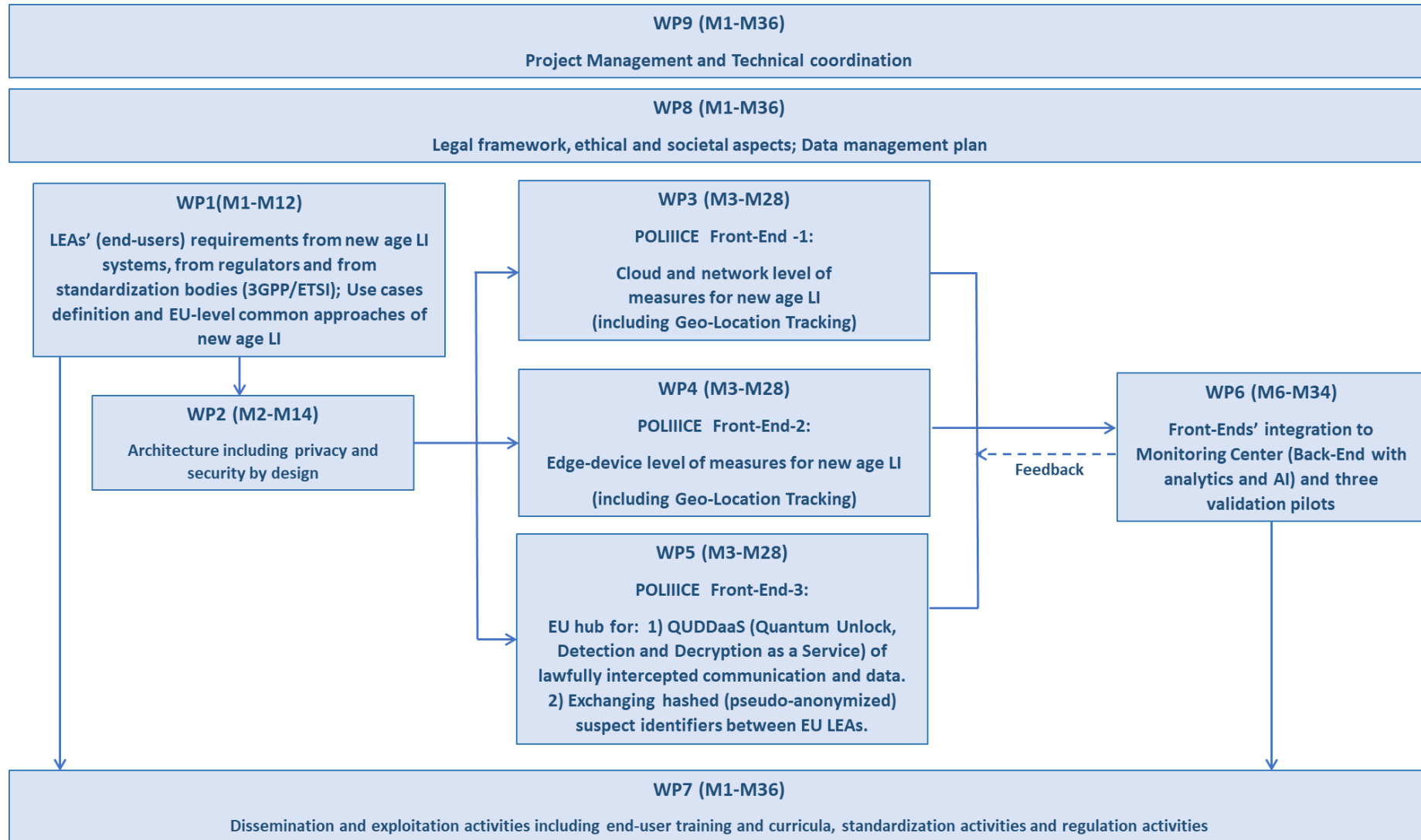
Research, develop and demonstrate POLIICE as the concept, model and solution of actionable LI in the new age and train EU LEAs about POLIICE model.

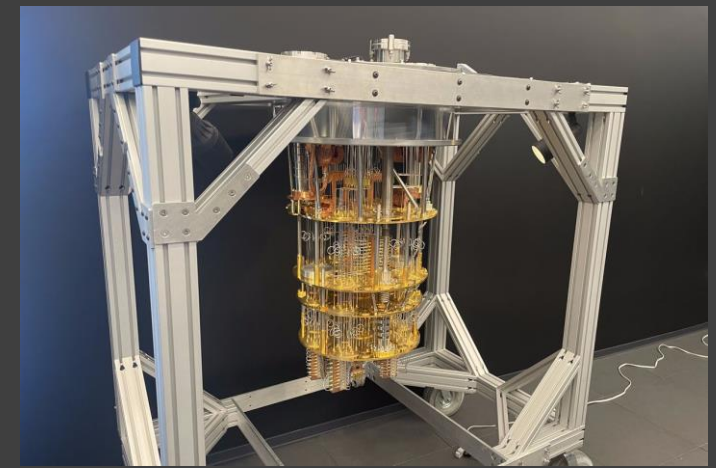
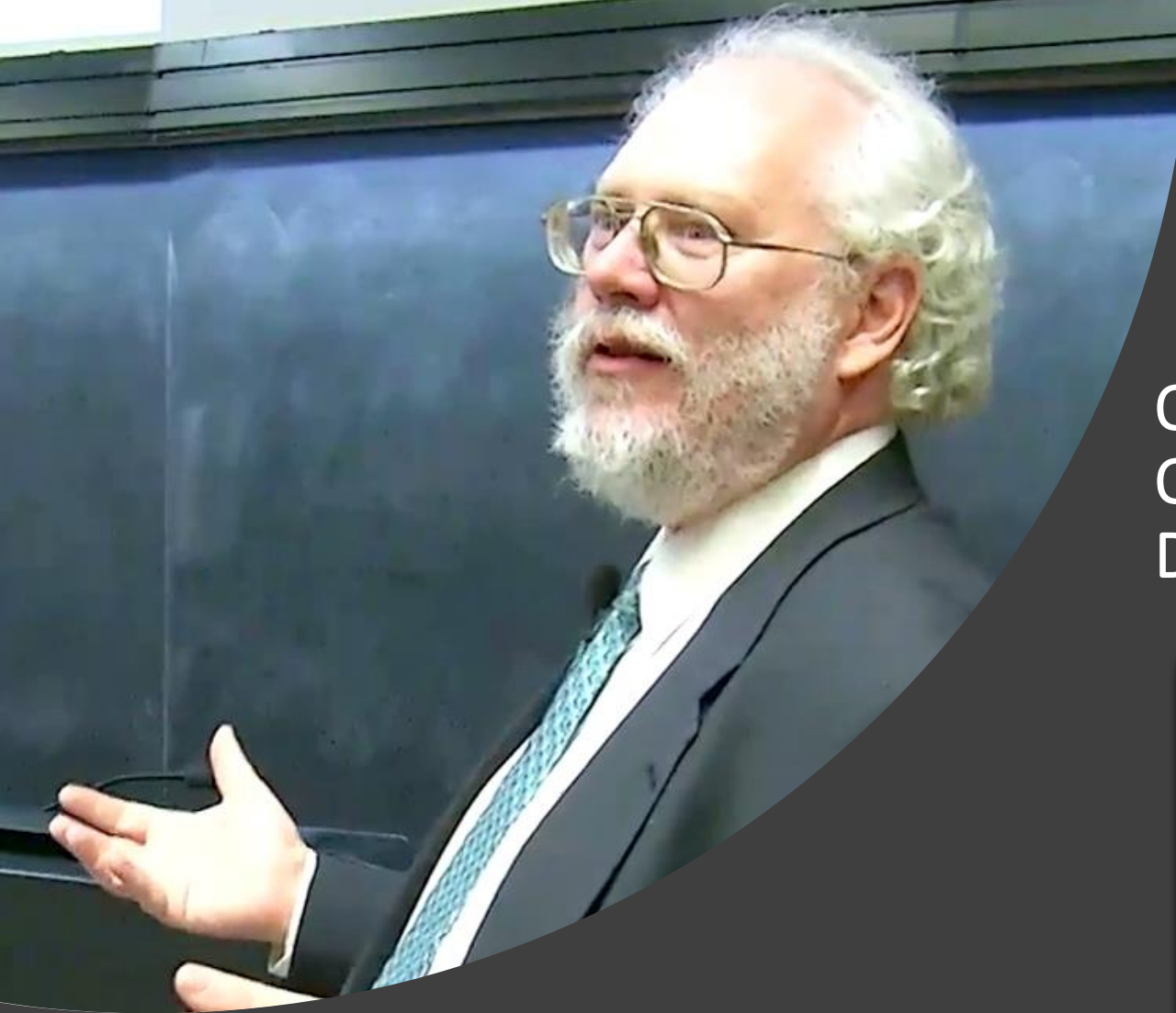


POLIICE model



POLIIICE project structure





QUDDaaS - Quantum unlock, Detection and Decryption as a Service

An envisaged central service, potentially outsourced at pan-European level, which will harness quantum computing for decryption of lawfully intercepted legacy encrypted communication (utilizing Shor's algorithm) , for brute force access to encrypted cloud-native apps and for Quantum unlock of lawfully seized mobile devices (by utilizing **Grover's algorithm**).

Prof. Peter Williston Shor (born 1959)

- American professor of applied mathematics at MIT.
- Known for his work on quantum computation, in particular for inventing Shor's algorithm- a quantum algorithm for decryption which is exponentially faster than the best currently-known algorithm running on a classical computer



POLEX - POLIICE Exchange of hash encoded identifiers

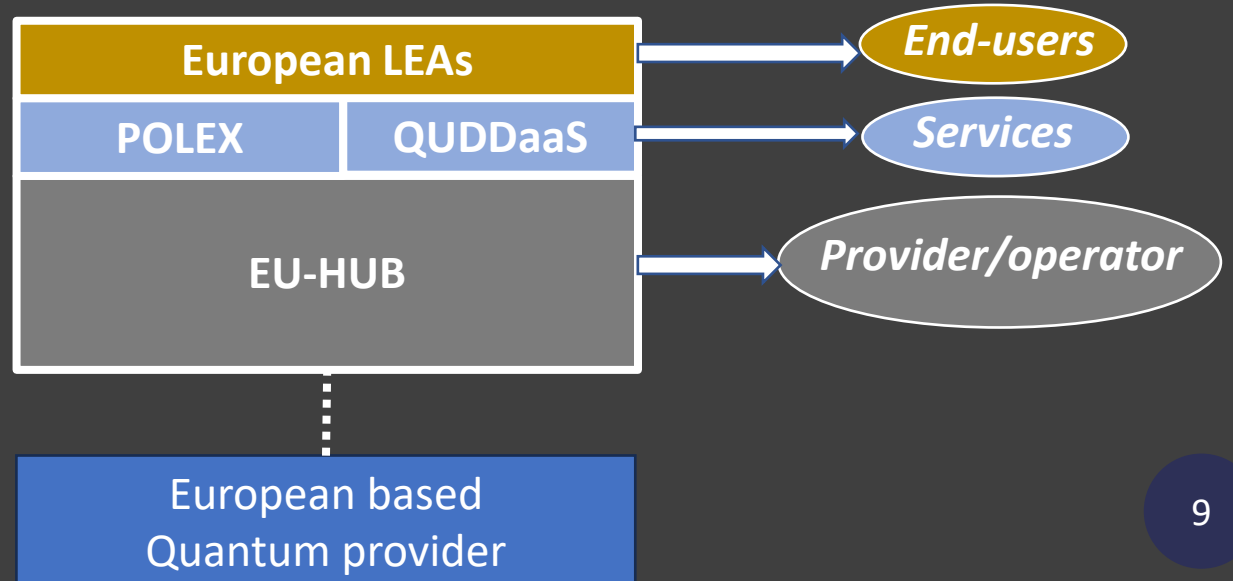
- A mechanism and procedure for exchanging pseudo-anonymized suspect identifiers (captured by LI) between different LEAs for the purpose of **detection of inter-LEA overlap in suspect identifiers**
- POLEX will enrich LEA intelligence and expedite investigation of cases.



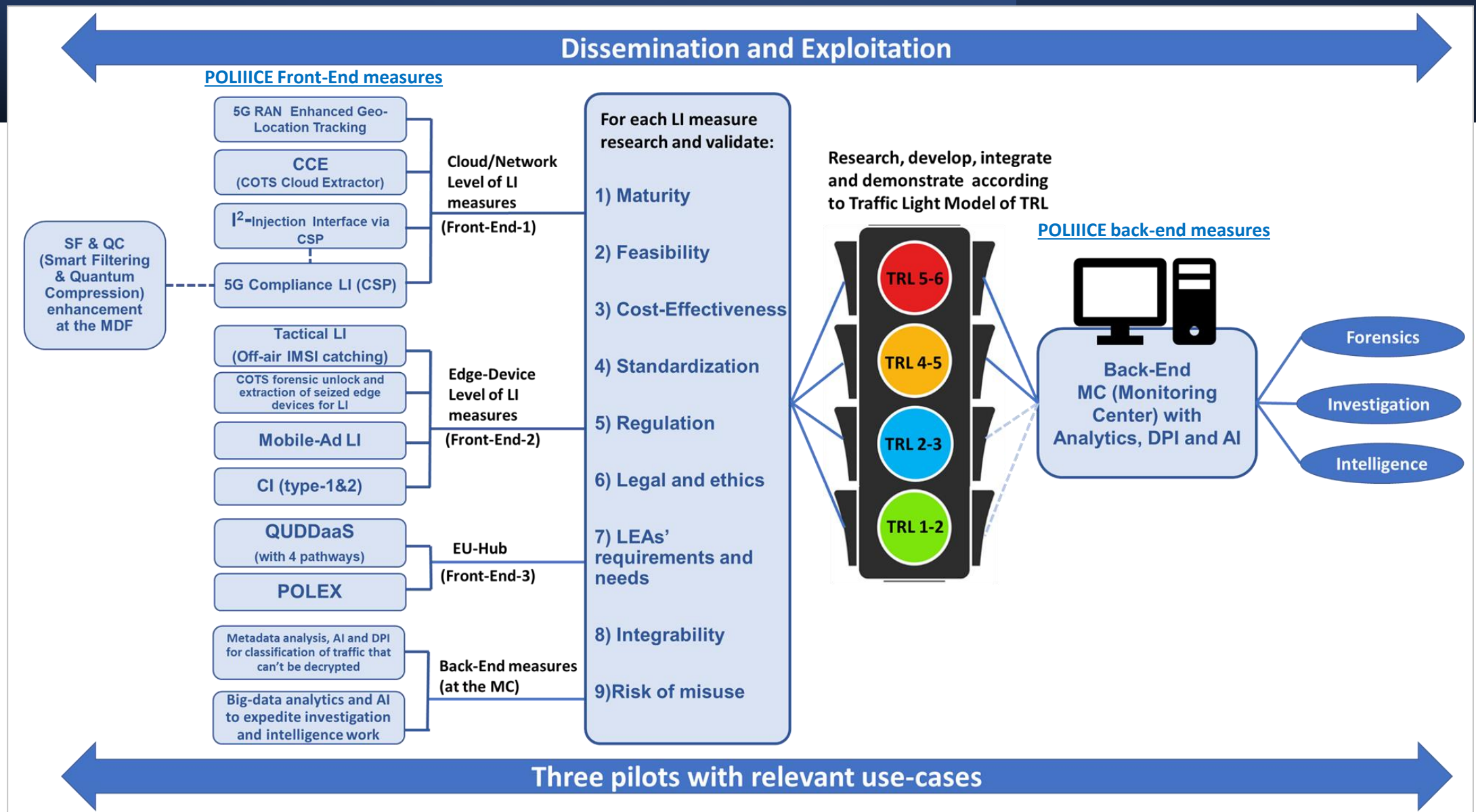


EU-Hub

QUDDaaS and POLEX service provider
(e.g., EU agency like EC3 can be such service provider)



Methodology



Integrability to COTS Monitoring Center (MC)

POLIIICE integrates all its innovative measures into one COTS Monitoring Center (MC) platform that runs analytics, DPI and AI for investigation, intelligence and digital forensics and also for classification and characterization of the residue part of encrypted lawfully intercepted communication that can't be decrypted.

The integrability to COTS MC is important for ensuring the cost-effectiveness and interoperability of POLIIICE LI measures.

Why multiple LI measures?

Facing the new age challenges of LI, LEAs will have to use variety of measures to overcome them and provide LEAs with **high throughput of LI**.



Key achievements until today

- **WP1-** Effectively captured LEAs' needs and requirements for LI technologies, standards and regulations in the new age contributing significantly to the project's progress and laying the foundation for successful implementation and exploitation of POLIICE measures.
- **WP2-** Provided complete architectural design and spec of the POLIICE system
- **WP3-**Development of all POLIICE Front-End-1 (Cloud/Network Level of LI) measures and preparation for their demonstration in the first Pilot on March 20, 2024 (Nokia cyber and LI lab in Lannion, France).
- **WP4-** Development of all POLIICE Front-End-2 (Edge-Device Level of LI) measures and their initial testing towards their demonstration in the second Pilot November, 2024 (Nokia cyber and LI lab in Lannion, France).
- **WP5-** Development of all POLIICE Front-End-3 (EU-Hub) measures, including EU-Hub UX/UI and their initial testing towards their demonstration in the second Pilot November, 2024 (Nokia cyber and LI lab in Lannion, France).
- **WP6-**Integration of all POLIICE measures demonstrated in pilot-1 to POLIICE COTS monitoring center (provided by BAE). Preparation of Nokia lab (in Lannion) to pilot-1 and integrating NNF 5G lab Core Network to BAE compliance LI modules.
- **WP7-** Launch of the Website and Social Media accounts; Running campaigns on social media platforms.; 1st Press Release and 1st Newsletter published; Successful 1st and 2nd Project Workshops; Preparing pilot-1 dissemination activities and training material.
- **WP8-** Provided legal toolbox and compliance checklist and assessment for all POLIICE measures.
- **WP9-** Comprehensive coordination activities (admin, financial and technical); SAB and DMP.

Thank you!

