

## Quantum communication

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In this project you will be involved in the development of a quantum communication network. The aim is to demonstrate quantum communication with single photons in a deployed optical fiber network to realize quantum key distribution and demonstrate its practical relevance. You can choose and combine your contribution: with coding, optical measurements, protocol development, data analysis.

Quantum communication offers an entirely new opportunity for cryptography where an encryption key can be shared between two parties and any attempt at eavesdropping can be identified, this means that data security is given by the laws of physics. This technology remains to be implemented in the real-world and is the goal of this project carried in collaboration with Ericsson.

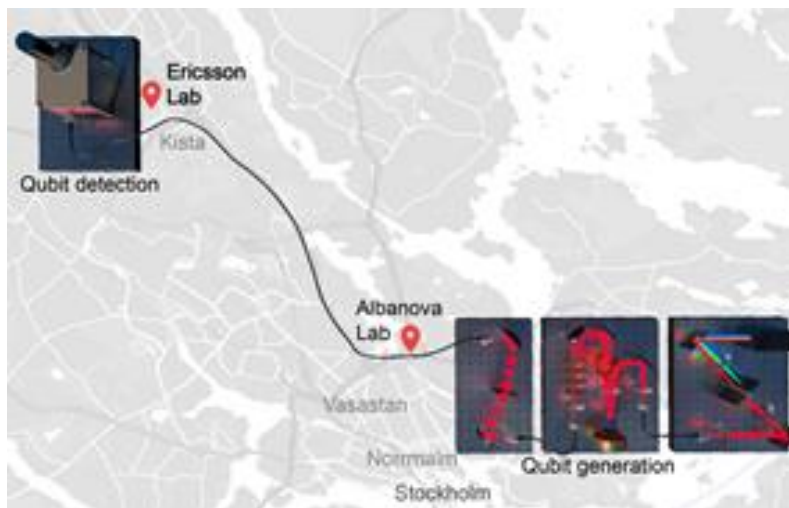


Figure 1. The Stockholm metropolitan quantum network connects the Quantum Nano Photonics lab at KTH with Ericsson research lab in Kista. It allows for quantum communication at the single photon level to be implemented and tested.