

Asia: VN/7574/2024

Luonnos Suomen kvanttiteknologiastrategiaksi 2025-2035

Lausunnonantajan lausunto

Kommentit lukuun 3: Tilannekuva

The strategy as articulated is clear.

Fujitsu would point to several key factors in the developing Quantum ecosystem:

- Many parties, both in the private and public sector, are working on the development of the Quantum device, with Fujitsu alone focusing on the Diamond Spin Cubit and Super Conducting Cubit.
- Fujitsu has produced a 64 cubit machine, are about to announce a 256 cubit machine and will have a 1000 cubit machine within 12 months.
- Perhaps the Strategy should consider greater levels of partnering rather than a core emphasis on hardware development.
- Further as a stop gap measure how will the Strategy consider Quantum Simulation and Quantum Inspired Technologies in, for example, the field of Materials Discovery?
- We agree with the Strategy as it proposes work on Fault Tolerant Quantum Computers (a major challenge), Quantum Algorithms and the development of Quantum Applications.
- Towards the development of a practical Quantum, you may wish to consider Fujitsu recently published Star Architecture Partially Fault-Tolerant Quantum Computing Architecture with Error-Corrected Clifford Gates and Space-Time Efficient Analog Rotations | PRX Quantum

Kommentit lukuun 4: Visio 2035 ja tavoitteet

Well considered development of a self-sustaining Quantum ecosystem.

Perhaps:

- We could add additional sections on the roles of Industry and define the types of industries and service business that might be developed and the possible dimensions of employment within these industries.
- What will be the important KPIs in the development of the ecosystem.

Also we would like to underline that HW is very challenging area due to "big players" and applications on the top of it is more easy for Finland and also where the money can be made.

Kommentit lukuun 5: Ehdotetut toimenpiteet vuosien 2025-2030 tavoitteiden toteuttamiseksi

Since the prerequisite for success is the participation of companies, this should be studied from many different directions, "how to make this a profitable activity for companies".

The eight areas presented support the implementation well.

In addition to financing for the internationalization of companies, we would suggest developing a framework / operating model for developing companies' business and accelerating market entry, and around it "best practice" to share the lessons learned.

Thank you for the opportunity to comment and we would be happy to discuss further, if appropriate.

Muut kommentit strategialuonnokseen

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Koskinen Jouko
Fujitsu Finland Oy - Jouko Koskinen