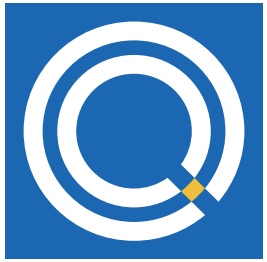
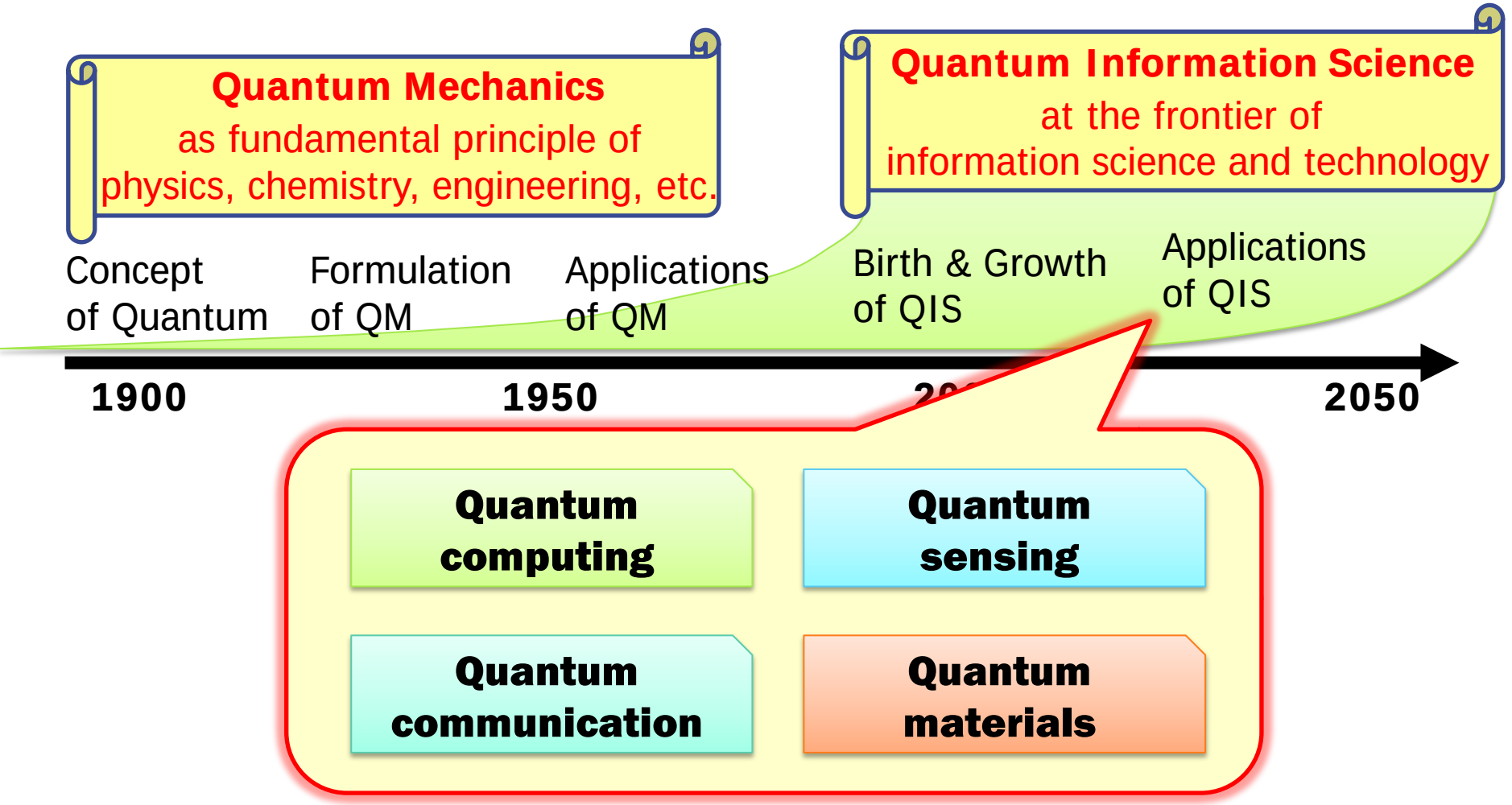
RIKEN Center for Quantum Computing (RQC)

Since April 2021



RIKEN
QUANTUM
COMPUTING

20th century: Century of Quantum Mechanics
21st century: Century of Quantum Information Science



RQC organization

RIKEN QUANTUM COMPUTING

RIKEN Center for Quantum Computing

Director: Yasunobu Nakamura
Deputy derector: Akira Furusawa, Shinichi Yorozu

- Superconducting Quantum Electronics: Yasunobu Nakamura
- Superconducting Quantum Simulation: Jaw-Shen Tsai — **Superconducting circuits**
- Superconducting Quantum Electronics Joint Research: Eisuke Abe
- Superconducting Quantum Computing System: Yutaka Tabuchi
- Hybrid Quantum Circuits: Atsushi Noguchi
- Optical Quantum Computing: Akira Furusawa — **Optics**
- Quantum Many-Body Dynamics: Takeshi Fukuhara — **Atoms**
- Floating-Electron-Based Quantum Information: Erika Kawakami — **Electrons**
- Semiconductor Quantum Information Device: Seigo Tarucha — **Semiconductor**
- Semiconductor Quantum Information Device Theory : Daniel Loss
- Quantum Computing Theory: Keisuke Fujii
- Quantum Information Physics Theory: Franco Nori
- Quantum Computational Science: Seiji Yunoki — **Theory**
- RIKEN RQC-Fujitsu Collaboration Center: Yasunobu Nakamura — **Supercond.**
- Office of the Center Director: Shinichi Yorozu — **Administration**

RQC PIs

RIKEN QUANTUM COMPUTING


Eisuke Abe


JawShen Tsai


Seigo Tarucha

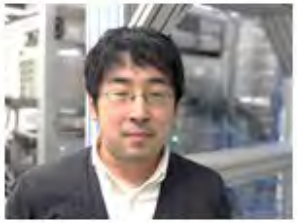

Akira Furusawa


Shintaro Sato


Erika Kawakami

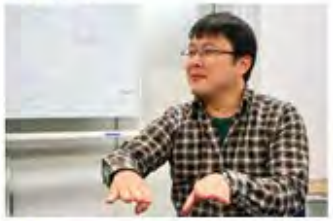

Yasunobu Nakamura


Shinichi Yorozu


Yutaka Tabuchi


Daniel Loss


Takeshi Fukuhara


Atsushi Noguchi


Franco Nori

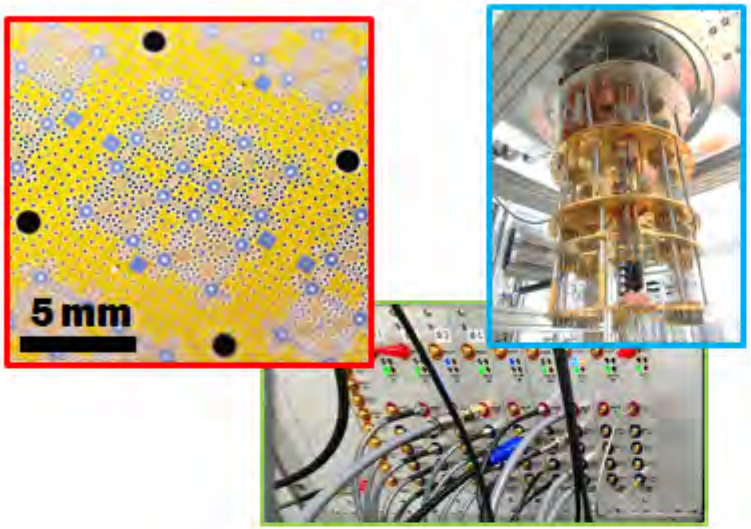

Keisuke Fujii


Seiji Yunoki

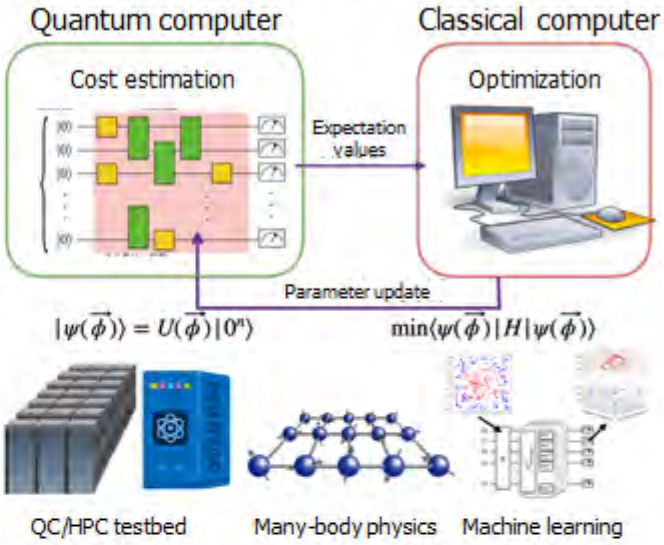
RQC research topics

RIKEN QUANTUM COMPUTING

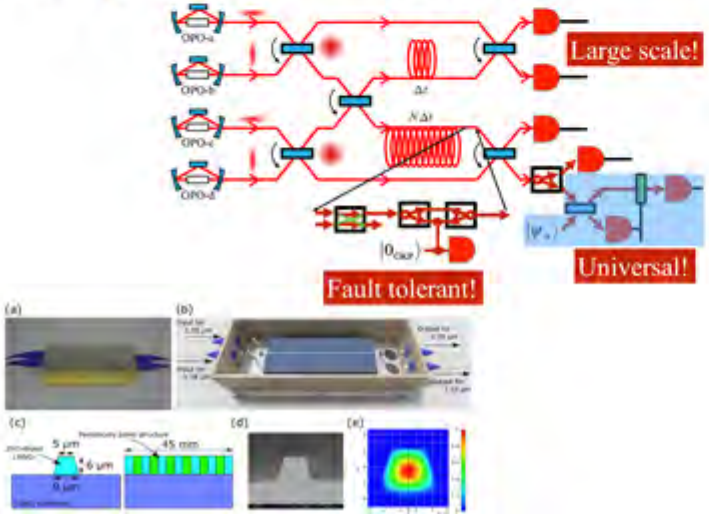
Superconducting quantum computing



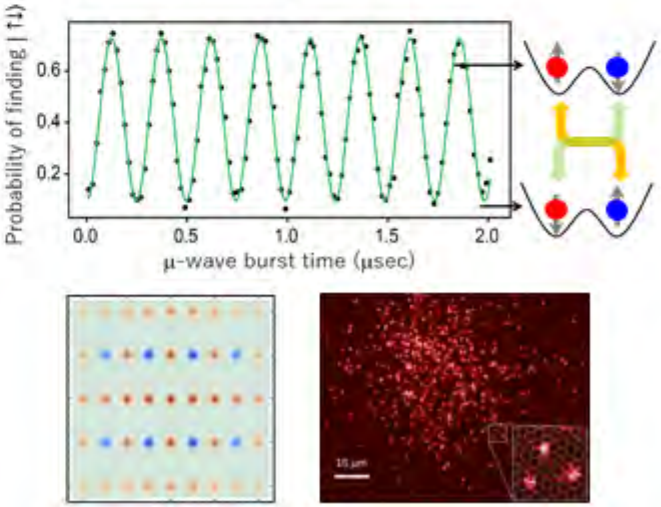
Quantum computing theory



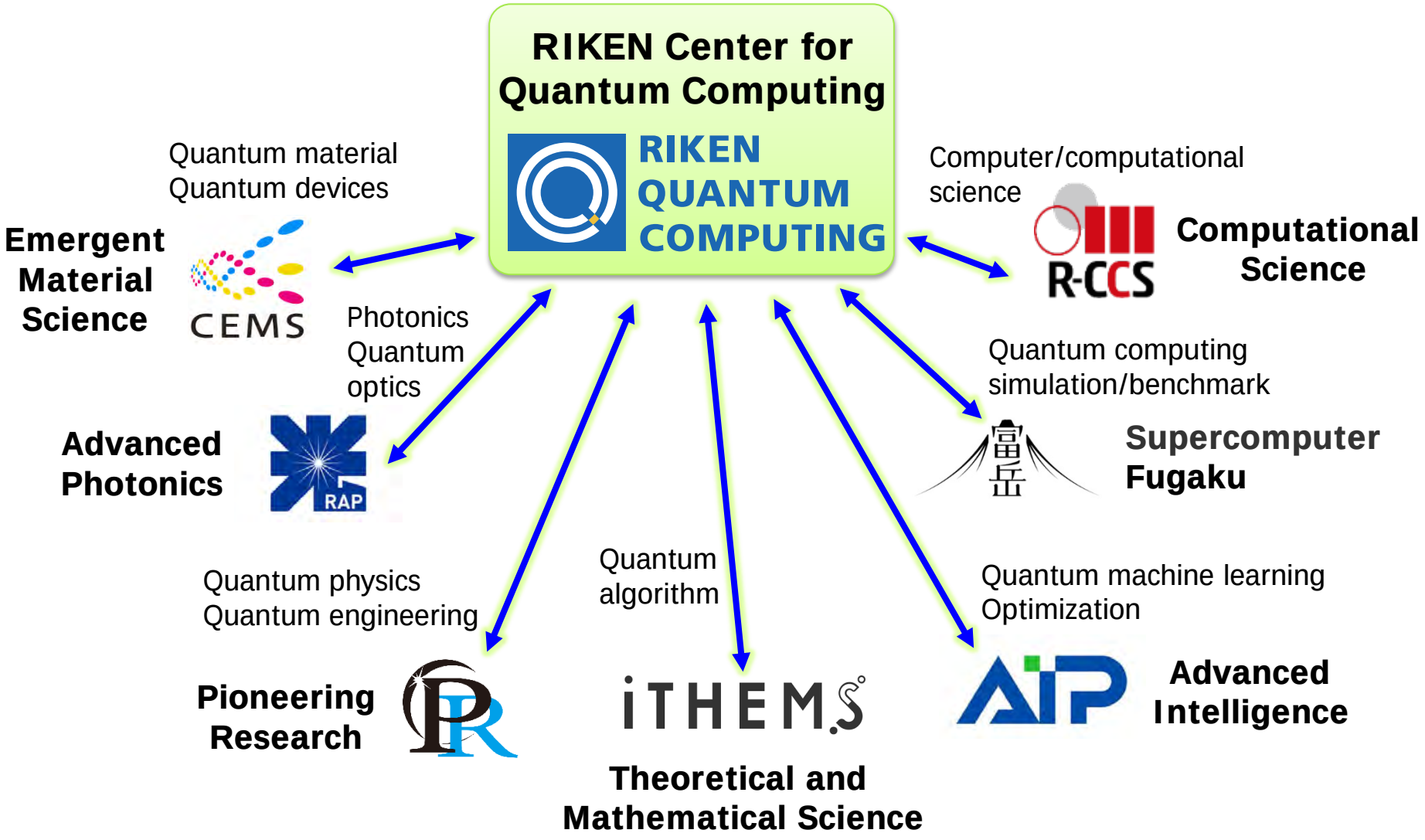
Optical quantum computing



Other quantum platforms

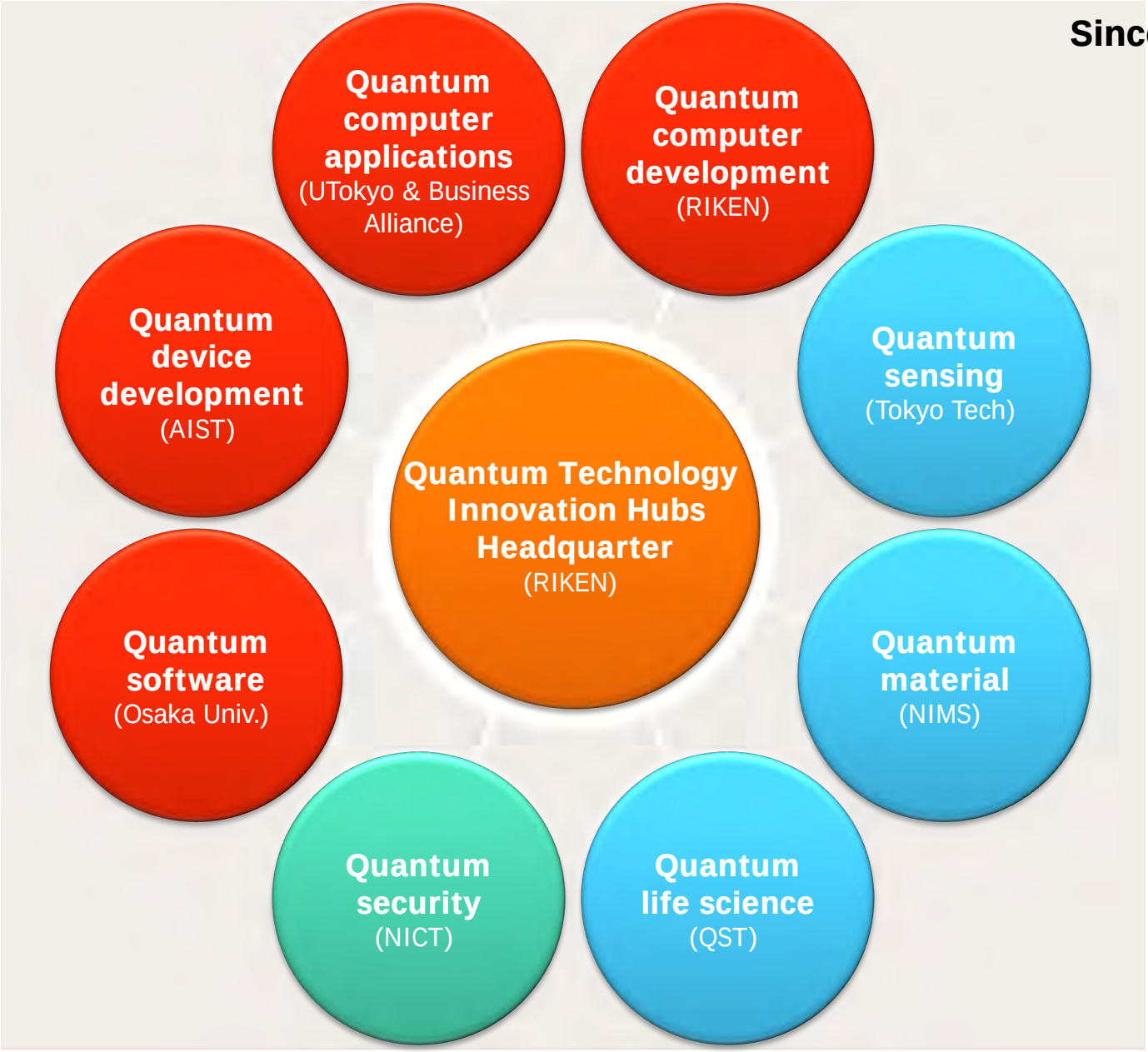


Intra-RIKEN connections



Quantum Technology Innovation Hubs

Since Feb 2021



Quantum computing related projects in Japan

文部科学省 MEXT

FY2018-2027

MEXT - Quantum Leap Flagship Program (MEXT Q-LEAP)

NEDO

FY2016-2027

Project for Innovative AI Chip and Next-Generation Computing Technology Development

JST

FY2016-2021

Macroscopic Quantum Machines

ERATO

FY2016-2021

Creation of an innovative quantum technology platform based on the advanced control of quantum states

CREST

FY2016-2021

Quantum state control and functionalization

PRESTO SAKIGAKE

FY2019-2024

Technological Foundation of Advanced Quantum Computing and Information Processing

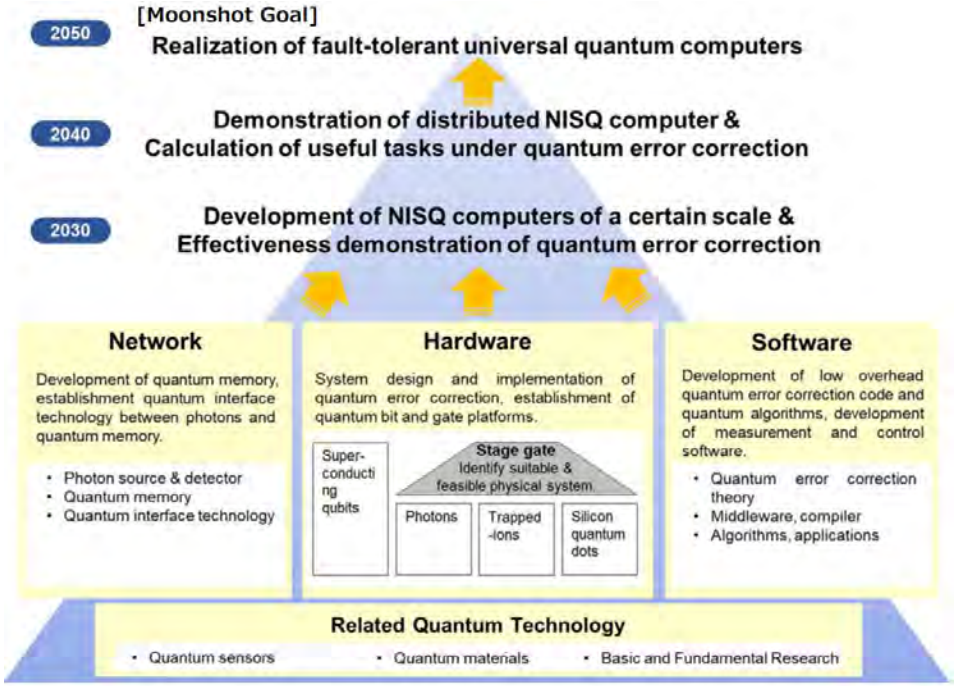
内閣府 Cabinet Office

MOONSHOT

FY2020-2024

Moonshot R&D program

Realization of a fault-tolerant universal quantum computer that will revolutionize economy, industry, and security by 2050



https://rqc.riken.jp/en/