



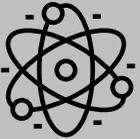
R&D strategies for Quantum Computing



Implementing a hybrid approach to early realize quantum computing

Shintaro Sato Challenges & market needs

While there is a need for computers capable of processing exponentially increasing amounts of data, conventional computers cannot solve complex problems, and the limitations of Moore's Law are becoming apparent. This has led to growing interest in new approaches suggested by the principles of quantum mechanics.



Differentiation factors



Technologies in hardware and software cultivated since the mainframe era.



Technology to virtually realize quantum computers on supercomputers.



Extensive knowledge, know-how, and connections with customers across various industries.

Strategy

Collaborate with world-leading research institutions in all technical areas, from quantum devices to foundational software and applications.

While focusing on software technology, we also pursue a wide range of possibilities in hardware.

Utilize quantum simulators to work with end-users on early application development.

Target customers

Cutting-edge customers' research and development departments with challenges in quantum scientific computing, machine learning, exploration, and combinatorial optimization.