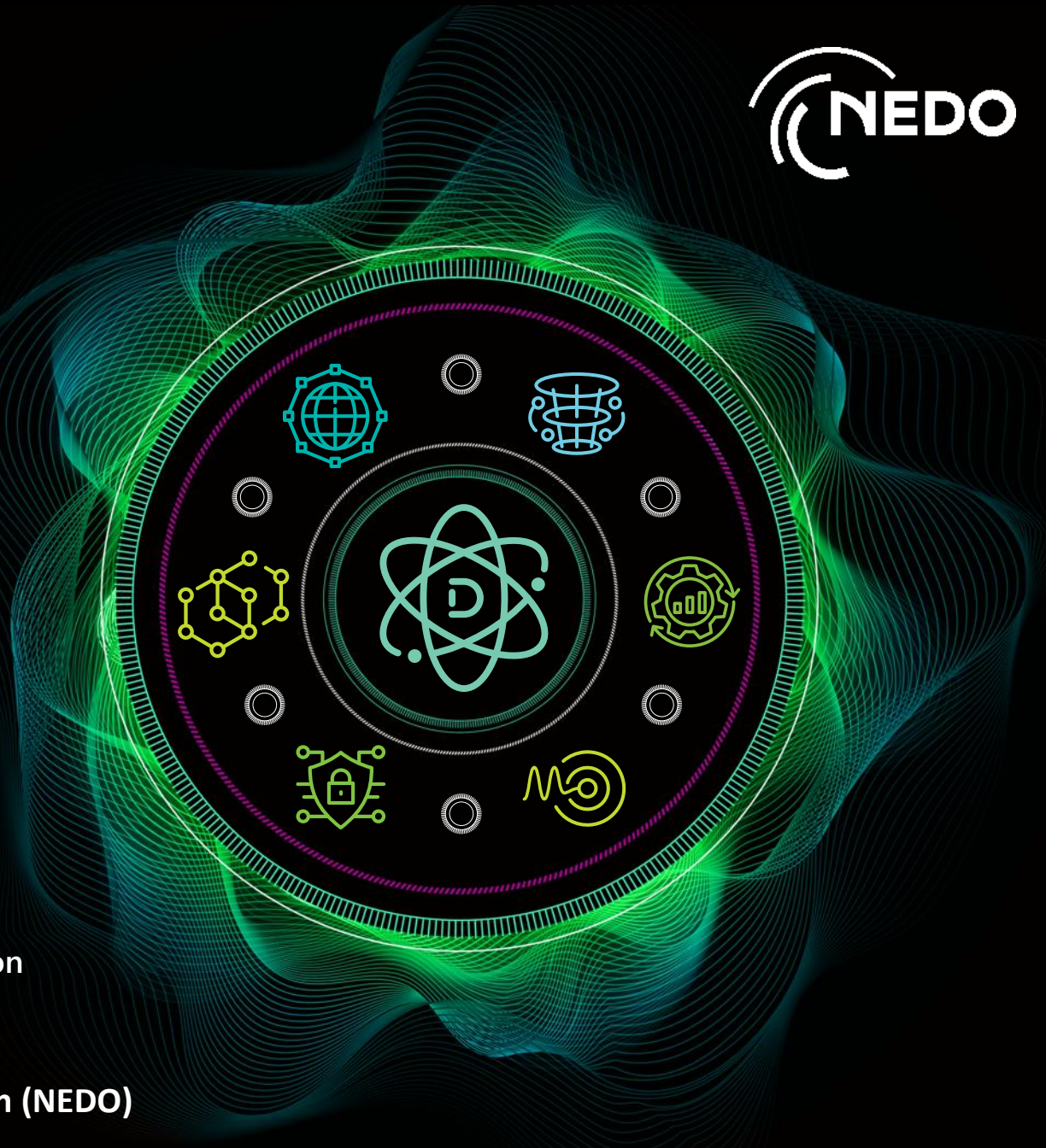
Quantum Computing Use Cases

"Democratization of knowledge" system

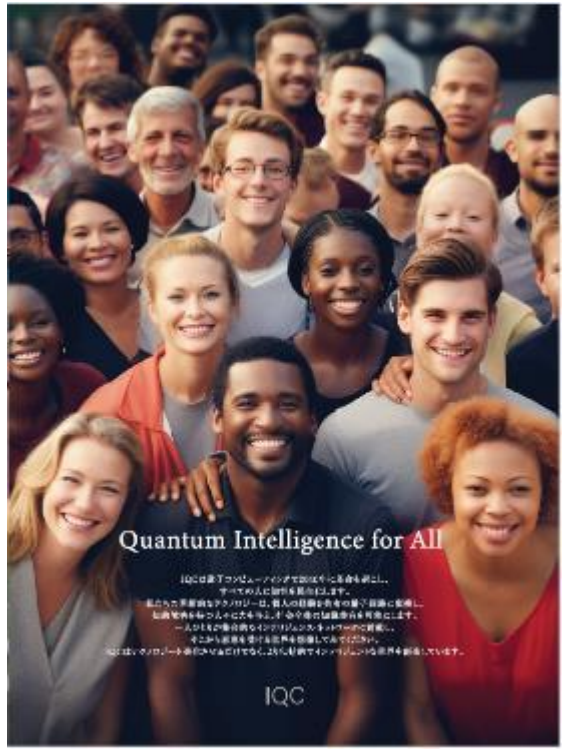


Promotion of SDGs with Quantum Technology

©2026 Q-STAR, Quantum STrategic industry Alliance for Revolution

New Energy and Industrial Technology Development Organization (NEDO)

「知の民主化」システム
"Democratization of knowledge" system



ユースケース概要 **Use Case Overview**	「知の民主化」をコンセプトに人類の英知を収集し、共有するシステム A system that collects and shares human wisdom based on the concept of "democratizing knowledge".
解決できる課題と効果 **Issues to be addressed and their effects**	成功・失敗の経験や知見などを次世代に効率的かつ幅広く伝承 Efficiently and broadly passing on experiences and insights of success and failure to the next generation.
量子技術の貢献 **Contributions of quantum technology**	膨大な記憶・経験の記録を量子状態を活用して保存し、量子通信で共有 Storing vast memories and experiences in quantum states and sharing them through quantum communication.

実現予想時期 **Expected realization period**	(Year)2050～
産業分類 **Industry classification**	情報・金融・その他サービス Information・Financial・Other services
関連するQRAMI階層 **Related QRAMI layers**	通信層 Communication layer
関連する量子技術 **Related quantum technologies**	量子通信・セキュリティ 量子コンピュータ Quantum Communication・Security Quantum Computer

新規性 **Novelty**	全く新しい Completely new
達成難易度 **Difficulty of achievement**	非常に困難 Very Difficult
社会貢献度 **Social contribution level**	社会全体に貢献 Contributions to society as a whole
市場規模 **Market size**	見積困難 Difficult to estimate

詳細/Detail

ロードマップ/Roadmap

他者の経験の疑似体験サービス
A service that allows users to simulate the experiences of others

サービス内容 Service Detail	量子コンピュータの活用 Utilizing quantum computers	ビジネスインまでのロードマップ Roadmap to starting business
知の民主化をコンセプトに知を収集し、知を皆で共有するシステム	量子状態に個人を紐づけ、量子回路(知性)を配布	2040年 知性デジタル化が進む 2050年 量子状態に知性を紐づけ 2060年 量子回路にて配布
System for collecting and sharing knowledge based on the concept of the democratization of knowledge	Link individuals to quantum states and distribute quantum circuits (intelligence)	2040: Progress in digitization of intelligence 2050: Linkage of intelligence to quantum states 2060: Distribution in quantum circuits

More use cases are available on our website. We invite you to explore them.
https://www.quantum-computing-use-cases.nedo.go.jp/english/

More Use Cases

New Energy and Industrial Technology Development Organization (NEDO)
AI and Robotics Department (e-mail: quantum_ai@ml.nedo.go.jp)

This collection of use cases was obtained as a result of the work commissioned by the New Energy and Industrial Technology Development Organization (NEDO) "Cyber-Physical Development Business of Quantum/Classical Hybrid Technology/Study of Use Case of Quantum Technology" and the “Post-5G Information and Communications System Infrastructure Reinforcement R & D Project (Quantum Industrialization)/Comprehensive Study for Promoting the Industrialization of Quantum Computers ”.