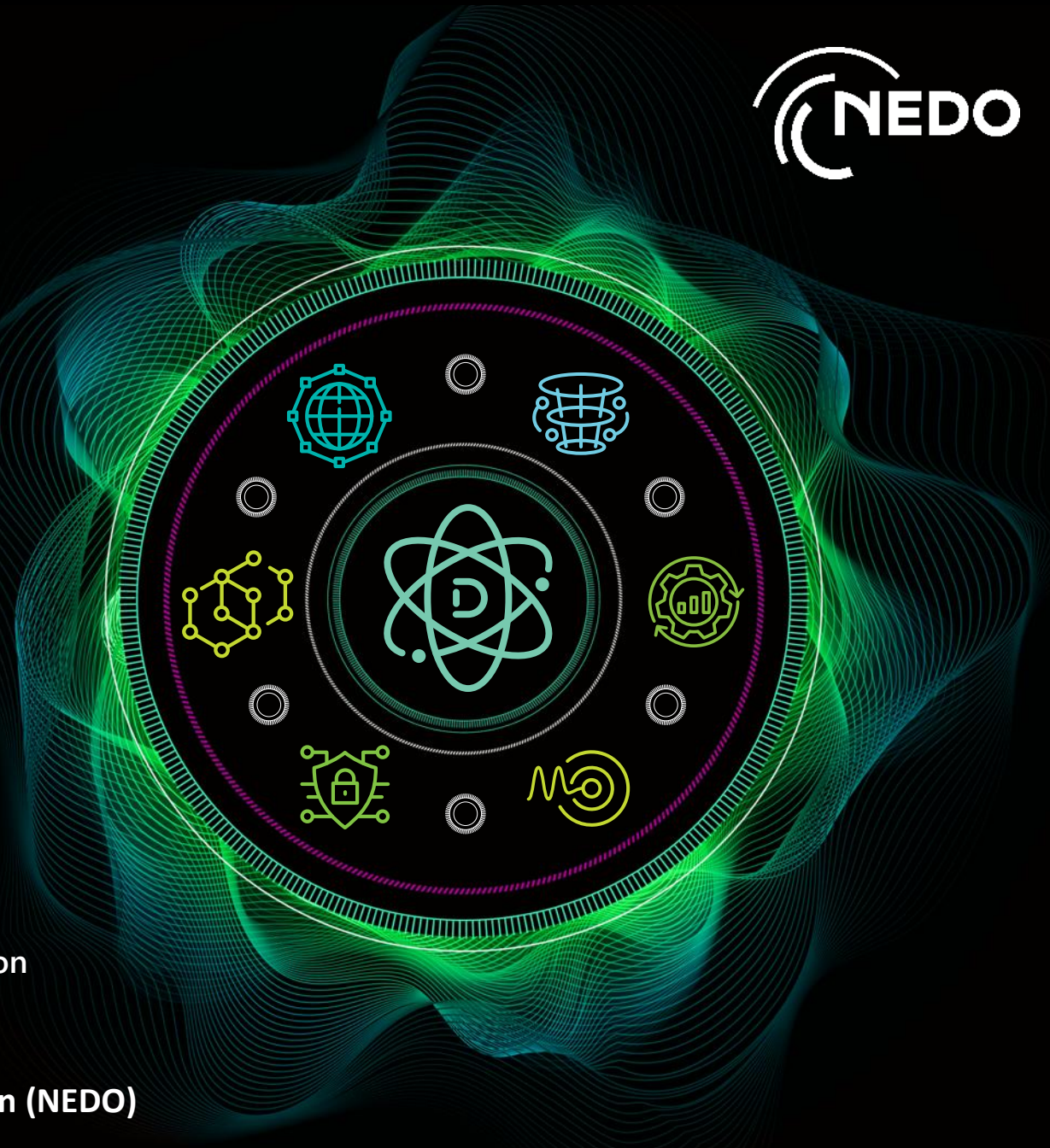
Quantum Computing Use Cases

# Weather control solutions



Promotion of SDGs with Quantum Technology

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New Energy and Industrial Technology Development Organization (NEDO)

# 気象制御ソリューション
# Weather control solutions




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|---|---|
| **ユースケース概要**<br>**Use Case Overview** | 気象予測を超えて、気象を人の手で制御することにより災害を防止<br>Preventing disasters by controlling the weather through human intervention, beyond just forecasting. |
| **解決できる課題と効果**<br>**Issues to be addressed and their effects** | 大災害の未然防止による生態系のバランス維持<br>Maintaining the balance of ecosystems through the prevention of major disasters. |
| **量子技術の貢献**<br>**Contributions of quantum technology** | バタフライエフェクトなどの予測困難な現象のシミュレーション<br>Simulation of unpredictable phenomena such as the butterfly effect. |

| | |
|---|---|
| **実現予想時期**<br>**Expected realization period** | (Year)2050～ |
| **産業分類**<br>**Industry classification** | 情報・金融・その他サービス<br>Information・Financial・Other services |
| **関連するQRAMI階層**<br>**Related QRAMI layers** | 事業層<br>Business layer |
| **関連する量子技術**<br>**Related quantum technologies** | 量子コンピュータ(FTQC)<br>Quantum Computer(FTQC) |

| | |
|---|---|
| **新規性**<br>**Novelty** | 大きな革新<br>Significant innovation |
| **達成難易度**<br>**Difficulty of achievement** | 非常に困難<br>Very Difficult |
| **社会貢献度**<br>**Social contribution level** | 社会全体に貢献<br>Contributions to society as a whole |
| **市場規模**<br>**Market size** | 1,000億～1兆円<br>100B～1T¥ |

詳細/Detail

ロードマップ/Roadmap

# 気象制御ソリューション
# Weather control solutions

| サービス内容<br>Service Detail | 量子コンピュータの活用<br>Utilizing quantum computers | ビジネスインまでのロードマップ<br>Roadmap to starting business |
|---|---|---|
| 気候の大災害を予測し、気象に介入することで、災害を防ぎ、生態学的ニーズのバランスをとる | バタフライエフェクト効果を計算 | 2030年 気候予測ｼﾐｭﾚｰｼｮﾝ高度化<br>2040年 バタフライエフェクト解明<br>2050年 風力発電などを活用した気候の制御 |
| Predict major climate disasters and intervene in weather patterns to prevent catastrophes while balancing ecological needs | Calculate Butterfly Effect | 2030: Advancement of climate forecasting and simulation<br>2040: Elucidation of Butterfly Effect<br>2050: Control of climate using wind power and other technologies |

**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 ”.**