Memorandum of Understanding on cooperation within the area of quantum science and technology between the United Kingdom and Denmark.

Introduction

1. Recognising that the United Kingdom and Denmark are both leaders in quantum sciences and technologies and have strong and diversified science, technology and innovation relations, with extensive collaborations between academia, industry and government.

Joint Statement

2. Recalling the Joint Statement on bilateral cooperation between the United Kingdom and Denmark signed in London by our foreign ministers in June 2023. A statement that sets out the ambition to strengthen our technological and diplomatic dialogue on foreign and security policy aspects of new and critical technologies. Prominent among these is quantum, where we share a vision for the responsible, democratic and secure development of the technologies that will help address the world's greatest challenges.

Potential of quantum technologies

3. Understanding that quantum science and technologies – applying quantum mechanics to explore new ways to enable enhanced collection, transmission, processing, and visualisation of information – could lead to the development of transformative technologies such as more powerful computers, more capable and secure communication networks, and more precise and accurate sensing and timing capabilities with application in sectors such as life science, logistics and energy.

Partnerships and collaboration

4. Recognising that, to support the growth of our quantum industries, fostering partnerships with key international allies and ensuring effective

collaboration between innovation ecosystems, academia, industry and government, is critical.

Harnessing societal benefits from quantum

5. Considering that, given the advanced state of areas such as green transition, logistics, life science and medical research ecosystems in the United Kingdom and Denmark, there could be particular interdisciplinary opportunities to harness the early benefits of quantum technologies in these sectors, including by leveraging best practices from the private sector.

Joint values and guiding principles for development of quantum technology

6. Acknowledging that cooperation between like-minded partners, grounded in shared principles such as freedom of inquiry, openness, transparency, honesty, equity, reciprocity, fair competition, objectivity, accountability, protection and enforcement of intellectual property, and democratic ideals, is vital in order to support a fair marketplace and combine the expertise and creativity of our countries.

Young industry, support, commercialisation

7. Recognising that the coming years will be critical for the young quantum industry, and that we intend to support initiatives and knowledge generation that serve to accelerate relevant breakthrough research and development, commercialisation activities and the overall growth of the quantum sector towards a trusted international marketplace and supply chain.

Strategies, commitment, funding, cooperation

8. Following the recent adoption of ambitious National Quantum Strategies by the United Kingdom and Denmark respectively, that underline the enhanced political commitment and funding opportunities in the area, we intend to pursue cooperation by:

Dialogue, fundamental research, academic collaboration

a. Promoting dialogue between the United Kingdom and Denmark at fundamental research level – to share best practices and identify future opportunities in academic research collaboration, including but not limited to quantum computing, networking and sensing;

Interactions, academia/private sector, funding opportunities

b. Facilitating interactions between academia and the private sector from both countries, by organising visits to each other's ecosystem, to understand research topics, help identify collaboration initiatives;

Education, exchange, talent and skills

c. Exploring educational initiatives and exchange opportunities, at research and apprentice level, to build the talent and skills base needed for a quantum-enabled economy;

NATO DIANA, quantum accelerator, security policy dialogue

d. Supporting the continued development of NATO's Defence Innovation Accelerator for the North Atlantic (DIANA) through the HQ in London as well as the first dedicated quantum accelerator in DIANA (Deep Tech Lab-Q) and associated test sites i.a. anchored at the Niels Bohr Institute in Copenhagen, and by continuing dialogue and cooperation between our respective security policy actors;

Bilateral/multilateral discussions, policy issues, governance

e. Fostering regular bilateral and multilateral opportunities to discuss policy issues such as growing a vibrant and trusted international supply chain, international governance principles and collaboration for the responsible use of quantum technology, research security, investment screening, standards and global supply chain mapping and resilience;

Use cases, infrastructure and testing, missions

f. Considering opportunities for shared access to capability and research infrastructure as well as for use case development and demonstration;

Commercialisation, innovation, use cases, scale up

g. Facilitating commercialisation efforts of promising innovation initiatives to accelerate the development of practical technology use cases and scale up opportunities;

Private funding, industry, institutional investors

h. Facilitating efforts to increase the level of private funding and investment in the quantum sector industry by engaging with industry consortia, foundations, institutional investors;

Annual government dialogue on progress and priorities

i. Ensuring an annual dialogue between relevant government authorities from the UK and Denmark to take stock of the implementation of the MoU and help set priorities for bilateral quantum cooperation in the future.

This cooperation is without prejudice to Denmark's obligations stemming from its EU membership and to the EU-UK agreements.

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