Announcement of a Memorandum of Understanding between the National Quantum Computing Centre and the National Physical Laboratory

Release date 30 January 2023, Oxfordshire, UK – The National Quantum Computing Centre (NQCC) and National Physical Laboratory (NPL) today announced the signing of a memorandum of understanding that reflects their commitment to collaborate in the field of quantum computing.

Quantum computing has the potential to speed up the discovery of new materials and medicines, offer new designs for batteries in electric vehicles, and lead to the more efficient use of transport networks through improved traffic routing. In the UK the National Quantum Technologies Programme (NQTP), a £1bn partnership between industry, academia and Government is delivering ground-breaking products
and services for the new quantum era since 2014. Both NPL and the NQCC are key partners in the NQTP, which supports ideas, innovation and investment to secure UK advantage and opportunities in the globally competitive quantum landscape.

Both organisations commit to working collaboratively to accelerate the development of quantum computing for the benefit of the UK. Over the next five years, the institutes plan to explore future collaborations to:

- Enable the independent testing, benchmarking and validation of quantum computing technologies
- Explore the co-ordinated development and delivery of technical roadmaps related to quantum computing
- Enable the exchange of knowledge and expertise related to the research on quantum computing
- Support the development of industry standards for quantum computing
- Support UK efforts in training and developing talent to contribute to a skilled and diverse workforce in quantum computing.

Aligned with the shared vision of the MOU, the NQCC and NPL endeavour to support the UK’s efforts in delivering positive societal impact and significant economic growth through quantum computing.

NQCC Director, Dr Michael Cuthbert said, “Through this MOU we are bringing our shared expertise in quantum computing hardware, software and applications together to support the development of industry standards. Our early focus is on testing, benchmarking and validation of quantum computing technologies and marks an important step, shaping our collaboration, towards our shared goal of making the UK a quantum-ready economy.”

“Signing this MoU will accelerate the close collaboration between NPL and NQCC. We will ensure that metrology, measurement standards and independent test and validation can enable strategic advantage from quantum computing under the leadership of NQCC, engaging with the many academic and industry organisations contributing to this national effort”, Dr Peter Thompson, CEO of NPL commented.
Notes to editors:

About National Quantum Computing Centre (NQCC)

The NQCC is a new research institution, funded through UK Research and Innovation, which is dedicated to accelerating the development of quantum computing by addressing the challenges of scaling emerging technologies. The centre will work with businesses, the government, and the research community to deliver quantum computing capabilities for the UK and support the growth of the emerging industry. The NQCC’s programme is being delivered jointly by the research councils, EPSRC and STFC.

The centre will be headquartered in a purpose-built facility on STFC’s Rutherford Appleton Laboratory site at the Harwell Campus in Oxfordshire, which is due for completion in 2023.

The NQCC is part of the National Quantum Technologies Programme, which involves the delivery of £1 billion of public and private sector investment over 10 years (2014-2024), to develop and deliver quantum technologies across the areas of sensing, timing, imaging, communications and computing.

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About National Physical Laboratory (NPL)

NPL, the UK’s National Metrology Institute, is delivering a wide-ranging programme across all aspects of quantum technology, building the capability to test and characterise new components and products being developed by UK industry and creating new measurement standards. Working around the UK with a large number of industrial and academic partners, the expertise of NPL is being applied in support of the national effort in quantum technologies, overcoming barriers to innovation and accelerating the route to commercialisation.

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