Establishing the UK National Quantum Computing Centre (NQCC)
The UK National Quantum Technologies Programme (NQTP)

• In 2014 the UK government launched a National Quantum Technologies Programme with £270m funding over five years

• NQTP is organised around four academic research hubs
  – Quantum computing; Communications; Sensors and Metrology; Imaging

• The vision is to turn the UK’s strengths in quantum science into a strength in quantum technologies, making the UK an attractive place to research, invest and innovate
NQTP Phase 2 investment – 2019 onwards

• Renewal and refresh of the four QT Research Hubs

• Increasing emphasis on industry-led activity to drive innovation and commercialisation

• Widening the awareness, understanding and uptake of quantum technologies in government, industry and academia

• Delivering skilled people: investment in research and training across the full range of quantum technologies
UK National Quantum Computing Centre (NQCC)

• “The primary purpose of the NQCC is to place the UK at the forefront of quantum computing, where government, academia and industry work collaboratively to develop this strategically important technology” – November 2018 Budget Announcement

• £94M investment to establish NQCC over the next four years

• NQCC will build on strengths established through the first phase of the National Quantum Technologies Programme (NQTP) translating research into innovation
Objectives for the NQCC include:

- Solving key challenges in scaling Quantum Computing systems, through developing demonstrators and prototypes at scale
  - NQCC will focus more on QC engineering not fundamental science

- Developing software and algorithms for these systems that will demonstrate the potential of QC technology for academic and industrial challenges

- Catalysing the growth of a vibrant UK industrial QC sector

- NQCC should provide training with access to prototype quantum computing systems
Some key programme decisions made to date

- The NQCC will be a UKRI National Centre
- Its primary location will be in a purpose-built building, collocated with other government agencies and high tech industry on the Harwell Science and Technology Campus near Oxford
- The Centre will also build on existing capabilities around the UK to enable it to deliver its vision through partnerships, contracts and collaboration
- An Interim Leadership Team is currently (late 2019) being appointed. A Permanent Leadership Team will be recruited in late 2020 / early 2021
Introducing the National Quantum Computing Centre
Approximate timescales


- 2020 – 2022. Build the NQCC. Develop networks of partnerships and a customer base. Establish user requirements and develop research plans. Recruit PLT, research and support staff

- 2022 - 2025. Use the NQCC. Build hardware and software demonstrators for industry use-cases. Solve problems in scaling QC. Help grow a vibrant QC tech sector in the UK
Further information

• Further information can be found at http://uknqt.epsrc.ac.uk/about/nqcc/

• Frequently Asked Questions about the NQCC can be found at http://uknqt.epsrc.ac.uk/files/faq/

• Questions not covered can be submitted via https://www.smartsurvey.co.uk/s/NQCCquestions/