

Broad technical and business skills will be needed to scale quantum solutions

The people and skills required in quantum have been highlighted as an important factor in the development of the technology and business models.

With the sector exponential growth Ilana Wisby of Oxford Quantum Circuits highlighted that skills are a major issue for ventures which are scaling up.

Ilana Wisby, CEO of Oxford Quantum Circuits (OQC), is a deep tech entrepreneur and OQC was a spin out from Oxford University in 2017. Ilana shared her *insights and perspectives at the Quantum Future programme*. OQC is the Quantum Computing hardware solution from the Qubit and process infrastructure through to providing Quantum Computing as a cloud service. The business has gone from being an academic founded venture to a private cloud Quantum Computing solution which is being driven by a team of over 30 people. OQC has received £10M of seed and VC investment plus £1.8M of non-diluting government funding, this is another prime example of a scaling venture.

The approaches for people have ranged from summer schools for coding, like supported those by IBM programmes, internships, internal programmes and attracting people with broader skills.

When I visited Oxford Quantum Circuits at the Thames Valley Science Park I met some of the thirty plus team and they ranged from the couple of quantum scientists in with the Quantum Computer to the electronic engineers, network engineers, computer programmers, sales & marketing people, operations and finance people.

It is also important to ensure diversity in people and thinking as we develop this new technology which will impact the use of big data and AI as well as many industries. The diversity will need different technical reviews, neural diversity and different representatives of society as there will be new skills and ethical issues to address.

A good perspective that has been raised is that we have to be careful to not put people off by just labelling the sector as Quantum. Ventures and the sector need to understand the majority of people do not need specialist quantum science understanding, and they need to develop broader computing and business capabilities to scale.

Andrew Gaule is CEO of *Aimava* and has been working for 20 years with leading corporates and investors who are supporting strategic innovation with tech ventures that change business models. Andrew terms this the development of Innovative New Value Chains. He has worked in previous waves of tech and business models such as dot comm, IoT, Electric Vehicles, AI etc. From work Aimava has done in Quantum it is now reaching the stage of strategic venture investing.

Article by ANDREW GAULE