

The EMN quantum

The second quantum revolution is underway and the deployment of Quantum Technologies (QT) keeps pace with it. This technological paradigm-switch creates opportunities and challenges for industry, innovation and society. Several large companies, as well as start-ups, have started to develop and engineer quantum devices or begun to integrate them into their products: the commercial success of QT, together with progress in research and development, relies on certification and reliability built upon internationally agreed standards and metrological traceability.

A group of European National Metrology Institutes (NMIs) and Delegated Institutes (DIs) have recently created a European Metrology Network for Quantum Technologies (EMN-Q) under the auspices of EURAMET. The objective of the EMN-Q is to co-ordinate the activities of the European NMIs and Dis to ensure their efficient support for European competitiveness in quantum technologies. A special focus of the EMN-Q will be to develop new measurement capabilities and dedicated services to serve the rapidly-growing needs of industry and research institutions in this field.

Industry, governmental agencies, academic sectors or any other type of stakeholder are welcome to contact the EMN-Q and discuss their metrology needs. These can relate not only to quantum characteristics of quantum devices, but also to metrology of key enabling technologies, metrology that can improve the supply chain of industrial quantum devices or other industrial needs connected with quantum technologies.

EMN-Q aims to become is to become the central contact point to stakeholders interested in metrology for quantum technologies by:

- contributing to standardisation & certification of quantum technologies;
- promoting the take-up of metrology in the development of these technologies;
- supporting industrial needs in synergy with the technological objectives of the EC Quantum Flagship and national quantum technology programs; and
- promoting the use of quantum measurement techniques where advantageous for “classical” technical areas.

In this talk, I will provide a short overview of the EMN-Q organization, and I will report on its Strategic Research Agenda.