

CEN-CENELEC Focus Group on Quantum Technologies

Terms of Reference (ToR)

I. Title

CEN-CENELEC Focus Group on Quantum Technologies (FGQT)

II. Status

The group is a focus group as defined in CEN-CENELEC Internal Regulations Part 2¹ and reports to the CEN and CENELEC Technical Boards (BTs). It will gather relevant stakeholders interested in standardization in the field of Quantum Technologies (QT). This focus group is considered officially as a short-term group.

III. Scope

The purpose of the FGQT is to ensure interaction, such as workshops, between all relevant European stakeholders interested in potential standardization in the field of QT to map ongoing standardization activities, define needs and opportunities and recommend further action to ensure that standards support the deployment of QT in industry.

The FGQT does not develop standardization deliverables.

IV. Setting-up and lifetime

The FGQT is set-up by the CEN and CENELEC BTs. The lifetime of the FGQT is determined to be 3 years. After this period, the lifetime can be reviewed and extended once by 2 years.

V. Chair, vice-chair and secretariat

The candidate for the chair of the FGQT is proposed by the CEN or CENELEC member holding the secretariat of the FGQT. The chair is appointed by the CEN and CENELEC BTs for 3 years with a maximum extension of 2 years.

The candidate for the vice-chair of the FGQT is proposed by the CEN or CENELEC member holding the secretariat of the FGQT. The vice-chair is appointed by the CEN and CENELEC BTs for 3 years with a maximum extension of 2 years.

The secretariat of the FGQT is provided by a member of CEN or CENELEC, as agreed by the CEN and CENELEC BTs.

VI. Membership

As defined in CEN-CENELEC Internal Regulations part 2 the membership of the FGQT is decided by the CEN and CENELEC BTs and is generally composed of all or part of the following, having an interest in the subject:

- Representatives (SDO² representatives and Delegates nominated³ by NSBs⁴ or NCs⁵) of the NSBs/NCs;

¹ <https://boss.cen.eu/reference%20material/RefDocs/Pages/default.aspx>

² SDO Standards Developing Organisation

- Representatives of the CEN-CENELEC Management Centre (CCMC) and ETSI Secretariat;
- Representatives of relevant Technical Bodies in CEN, CENELEC and/or ETSI;
- Relevant European Commission DGs and the EFTA Secretariat;
- Quantum Flagship, founded by European Commission;
- Euramet European Metrology Network for Quantum Technologies (EMN-Q).

Additional participants may be invited as observers to contribute to the work, including relevant European associations, research projects, national authorities or companies. This has to be agreed firstly by the FGQT and secondly by the CEN and CENELEC BTs.

VII. Reporting line and frequency

The FGQT reports regularly to CEN and CENELEC BTs. It reports at least once a year by correspondence or, when a decision is expected from the CEN and CENELEC BTs, at their meeting.

VIII. Objectives

The task of the FGQT will be the analysis of existing activities and needs for standardization, leading to the preparation and elaboration of new standardization activities. Therefore the main objectives of the FGQT are as follows:

- The works starts with state-of-the-art analysis. The FGQT should prepare an overview for the stakeholder community on suitable standards already publicly available (from the International Standards Organizations ISO, IEC and/or ITU, from CEN, CENELEC, ETSI or other sources) or in preparation, to meet specific needs for products and services in a particular field or subject. It should also make clear what standardization initiatives are already ongoing, what are their scopes; how they relate to each other; what parties participate; and why do specific parties participate⁶;
- The FGQT is aiming to ask CEN-CENELEC, a national member of CEN-CENELEC, or a member of this focus group to organize a series of workshops to establish an active dialogue between the stakeholders (academy, industry, EC organizations, SDOs) and discuss the needs and challenges for bringing inventions to the market;
- The FGQT should identify and give consideration to any relevant specific issues linked to European legislation and innovation/research projects impacting the field of QT;
- The FGQT should identify and give due consideration to any relevant specific issues linked to European legislation;
- The FGQT should consider and consult stakeholders on any strategic issues concerning standardization within the Group's overall remit and advise the CEN and CENELEC BTs accordingly;

³ Experts should be nominated by the NSBs/NCs, but not delegated. A head of delegation is therefore not necessary.

⁴ NSB National Standardization Body

⁵ NC National Committee

⁶ The state-of-the-art analysis includes desk study, interviews with European and international experts, and participation in selected ongoing initiatives.

- Where no suitable standard exist, the FGQT should describe best ways to provide them in preference internationally but if necessary in Europe and make recommendations to the CEN and CENELEC BTs or other SDOs accordingly;
- As quantum technologies have different areas of application, the FGQT will develop a roadmap for potential standardization of issues relevant to QT. This roadmap should be made widely available (i.e. Technical Report). This will focus on use case development around specific quantum technologies, identification of relevant functional roles in those use cases (e.g. quantum-computing service provider, quantum-networking equipment vendor, quantum component vendor, quantum-computing service user), and associated value propositions;
- The FGQT should liaise with the QT Flagship and identify potential synergies. Industry reach-out will bring together industry parties who recognize themselves in the use cases and functional roles described in the objectives above. It is with these parties that a critical mass of participants can be formed for specific standardization initiatives;
- The FGQT should promote an increased European participation in the ISO and IEC technical committees, which already address QT, by encouraging the delegation of the relevant experts to these committees.

The Focus Group will propose a High-Level Expert Group⁷, to be appointed by the European Commission, which will include experts in Quantum Technologies and standardization. The Expert Group will act as the focal point for the European Commission's ambitions on standardization in the field of Quantum Technologies.

IX. Working methods

As far as possible, the FGQT works electronically, through e-mail, electronic platforms telephone conferences and web conferences. Collaborative authoring may be used. However, some physical meetings shall be held as required.

The FGQT uses the electronic platform of CEN or CENELEC, depending on who is holding the secretariat. All documents provided by the FGQT to FGQT members (during plenary meetings or provided by sub-groups) are available to all members through this platform.

For particular topics, the FGQT may agree to set up specific temporarily working groups to consider and report back. The FGQT may organize open stakeholder consultative meetings when required. One champion (editor) per each temporary sub group should be nominated

The FGQT shall work by consensus. It will function under the umbrellas of the CEN and CENELEC BTs in terms of the follow-up of activities and approval of reports. Recommendations by the FGQT are non-binding for participants' organizations. Any difficulties shall be brought to the attention of CCMC.

The FGQT may choose to make some documents publicly available. This shall be approved in each case separately by the CEN and CENELEC BTs.

X. Revision of Terms of Reference

Any updates to these Terms of Reference shall be approved by the CEN-CENELEC BTs.

⁷ The High Level Expert Group may be appointed by the unit of the European Commission responsible for the implementation of Quantum Technologies Flagship, using already established structures.