

# Commission Expert Group on Quantum Flagship High Level Steering Committee

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## Summary of Results

Meeting of High Level Steering Committee in Brussels, Tuesday 20 September 2016

12.10.2016

### Participants:

Prof. Dr. Jürgen Mlynek, <i>Chair</i>	Prof. Ian Walmsley, <i>AM</i>
Prof. Dr. Rainer Blatt, <i>Academic Member (AM)</i>	Prof. Maria Chiara Carrozza, <i>Observer</i>
Prof. Dr. Vladimir Buzek, <i>AM</i>	Thomas Skordas, <i>European Commission (EC)</i>
Prof. Dr. Tommaso Calarco, <i>AM</i>	Gustav Kalbe, <i>EC</i>
Prof. Per Delsing, <i>AM</i>	Beatrice Marquez-Garrido, <i>EC</i>
Prof. Elisabeth Giacobino, <i>AM</i>	Andrea Feltrin, <i>EC</i>
Prof. Dr. hab. Marek Kus, <i>AM</i>	Jean-Francois Buggenhout, <i>EC</i>
Prof. Eugene Simon Polzik, <i>AM</i>	Agnes Martin, <i>EC</i>
Dr. Maria Luisa Rastello, <i>AM</i>	Aymard de Touzalin, <i>EC</i>
Prof. Dr. ir. Wim Van Saarloos, <i>AM</i>	Dr. Marco Wedel, <i>Assistant to Prof. Mlynek</i>
Prof. Dr. Lluís Torner, <i>AM</i>	

### Agenda

1. Purpose and Objectives of the High Level Group
2. Defining the Strategic Research Agenda
3. Governance Structure and Implementation Models
4. Next Steps

### Summary of Key-Results

Regarding 1.)

- Steering Committee assists the Commission in the launch of the Quantum Flagship
- Advise the Commission on:
  - Strategic Research Agenda: Detailed Agenda for H2020 ramp-up phase (as of 2018), and long-term Roadmap post H2020
  - Implementation Model: Concrete implementation approach
  - Governance Model: Internal Governance of the Flagship, and external relations with Member States, the Commission, national Funding Agencies, Institutions (scientific and business) and Initiatives
- Flagship no mere research initiative, but designed from the outset with the aim to convert scientific advances into industrial innovation, thereby requiring industry participation from the beginning
- Expert group will represent science (12 people) and industry (12 people)

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- Industrial representatives are not appointed as of yet (response to “Call for Expression of Interest” currently 42)
- Transparent, inclusive and broad method with respect to input generated from the Quantum Technology Community
  - Consolidate contributions from the wider group of relevant stakeholders from academia, industry and Member States
- First indications with main orientations (intermediate report) of the High Steering Committee to be given by the end of 2016 (December)
- Final Report (covering all aspects of the Flagship) to be delivered by summer 2017

Regarding 2.)

- Strategic Research Agenda 1<sup>st</sup> Priority (Research Topics, Milestones, Timeline)
- Innovative Spirit: Place Europe at the forefront of 2<sup>nd</sup> QTech-Revolution (in particular considering post H2020 period)
- Attractive to Stakeholders (include Entrepreneurs / SME / Business)
- Possible areas to be included: Communication, Simulation, Sensing/Metrology, Computing, Software/Algorithms
- But: Research Agenda needs common denominator; and a clear EU added value, building on top of existing national research initiatives and their strategic research priorities (complementary but not overlap)
- Good approximation of Scientific Basis for Research Agenda compiled in Quantum Manifesto and Quantum Road Map (->The QUTE-EUROPE Coordination Action)
- Need for industrial perspective (How to create added value? Is industry aware of Quantum-potential?)
- Address technology readiness levels
- Consider various approaches to the QUTE-Flagship (e.g. “Man-on-the-Moon” vs. imminent applications)
- Take into account Education, Young-Researchers, Interdisciplinarity, Entrepreneurial-Spirit

Regarding 3.)

- Governance Structure depends on clear and explicit Strategic Research Agenda (Define objectives, decide operation)
- Goal to create a simple and efficient organisational structure
- Establish differentiation between Funding Agencies vs. Flagship Initiative
- Take into account experiences of the existing Flagship-Initiatives (e.g. Graphene-Flagship) – input provided by Aymard de Touzalin (The Flagship Concept) and by Maria Chiara Carrozza (FET Flagship interim evaluation panel: lessons learned)
- Governance Structure: Projects; scientific board; separation of science, day-to-day management, and strategic decision-making; include a scientific advisory board
- Possible sub-division into Pillars/Hubs in accordance with Strategic Research Agenda, while maintaining a flexible pan-European organization (e.g. UK National Quantum Technologies Programme, Euramet)
- Listening to input from industry/business (not yet present at High Level Steering Committee) essential before decisions on governance structure and implementation mechanisms can be made

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Regarding 4.)

- Meeting today was first exchange of ideas among participants. Decisions are to be taken later on, once the full membership of the High Level Steering Committee is in place (industry representatives)
- Completion of High Level Steering Committee (industry representatives)
- Clarification and Consolidation with respect to Flagship-recommendations
  - 1<sup>st</sup> Research Agenda -> 2<sup>nd</sup> Governance Structure -> 3<sup>rd</sup> Implementation Model
- Circulation of relevant Presentations and Documents (in particular Quantum Manifesto and Quantum Road Map)
- Consultation with Community, in particular business and industry
  - Workshop with all relevant Stakeholders based on QUROPE-Community
- Workshop and next meeting of High Level Steering Committee in Berlin, 10 November 2016

*Tab. 1: Summary of Main Action Points agreed and Next Steps*

1	The High Level Steering Committee (HLSC) decided: The next meeting of the HLSC will take place 10 November 2016 in Berlin.
2	The HLSC decided: A participatory, non-discriminatory consultation-phase with the community, including business and industry, shall be enabled.
3	The HLSC agreed: A community-wide workshop shall be organized in conjunction with its next meeting in November 10th in Berlin, preceded by an open online consultation, to provide the broadest possible range of stakeholders from industry and from academia with an opportunity to give input into the HLSC discussions
4	The HLSC asked T. Calarco to take care of the corresponding organization, while consulting with the HLSC itself on the workshop content and agenda. T Calarco accepted.

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Postscript:

After the meeting, T. Calarco received an offer of support for the organization of the Nov. 10th workshop and online consultation from four colleagues chosen by the QUTEv EUROPE Virtual Institutes and Flagship Working Group: Frank Wilhelmv Match (University of Saarland), Rob Thew (University of Geneva), Thomas Strohm (Bosch) and Thierry Debuisschert (Thales), who will serve as organizing committee for the workshop itself and are preparing a draft agenda for it, in agreement with the HLSC.