

# Commission Expert Group on Quantum Flagship High Level Steering Committee

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## Summary of Results

Meeting of the High Level Steering Committee in Berlin, Thursday 10 November 2016

17.11.2016

### Participants:

Prof. Dr. Jürgen Mlynek, <i>Chairman</i>	Dr. Michael Bolle, <i>IM</i>
Prof. Dr. Rainer Blatt, <i>Academic Member (AM)</i>	Dr. Fabio Cavaliere, <i>IM</i>
Prof. Dr. Vladimir Buzek, <i>AM</i>	Dr. Guido Chiaretti, <i>IM</i>
Prof. Dr. Tommaso Calarco, <i>AM</i>	Dr. Daniel Dolfi, <i>IM</i>
Prof. Dr. Per Delsing, <i>AM</i>	Dr. Graeme Malcolm, <i>IM</i>
Prof. Dr. Elisabeth Giacobino, <i>AM</i>	Dr. Inigo Artundo Martinez, <i>IM</i>
Prof. Dr. hab. Marek Kus, <i>AM</i>	Dr. Markus Matthes, <i>IM</i>
Prof. Dr. Eugene Simon Polzik, <i>AM</i>	Dr. Gregoire Ribordy, <i>IM</i>
Dr. Maria Luisa Rastello, <i>AM</i>	Prof. Dr. Maria Chiara Carrozza, <i>Observer</i>
Prof. Dr. ir. Wim Van Saarloos, <i>AM</i>	Dr. Gustav Kalbe, <i>European Commission (EC)</i>
Prof. Dr. Lluís Torner, <i>AM</i>	Beatrice Marquez-Garrido, <i>EC</i>
Jaya Baloo, <i>Industry Member (IM)</i>	Matyas Kovacs, <i>Assistant to the Chairman</i>
Dr. Paolo Bianco, <i>IM</i>	Dr. Marco Wedel, <i>Assistant to the Chairman</i>

### Agenda:

1. Mutual introduction of the Academic and Industry Members
2. Feedback and new insights from the Workshop
3. Feedback to the Position Paper on the QT Flagship
4. Content and structure of the Intermediate Report of the QT Flagship (to be submitted until January 2017)
5. Next steps for the QT Flagship – key documents and upcoming meetings
6. Appointing the Editorial Subcommittee of the HLSC

### Summary of Key Results:

- 1.) Mutual introduction of the Academic and Industry Members
  - The 10 November meeting was the first common session of the HLSC with both the Academic and the Industry Members present, thus the Chairman lead a round of introduction of both parties
- 2.) Feedback and new insights from the Workshop
  - The QT Workshop and the ideas presented about the QT Flagship were discussed and perceived profoundly positively by the HLSC

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- A broad range of the QT community attended the Workshop: academia, institutional and independent researchers, business interests, political decision-makers and field-related experts
- The HLSC welcomed the meeting as an important step in forging an alliance with the QT community, with which the HLSC will seek to keep open forms of consultation in the future

### 3.) Feedback to the Position Paper of the QT Flagship

- Generally positive feedback to the main outline of the Position Paper as input to the Intermediate Report; details and suggestions to be discussed under the next agenda point

### 4.) Content and structure of the Intermediate Report of the QT Flagship

- Strategic Research Agenda
  - » The majority of the Members agreed to focus on all four QT pillars as cornerstones in the flagship strategy (Simulation; Communication; Computing; Metrology and Sensing)
  - » By setting the main goals, the Flagship shouldn't be afraid to compete internationally, also in already established fields where Europe will have to face a strong competition
  - » Financial differentiation between the size and scope of the four pillars is possible
  - » Europe's world leading academia is an asset to be capitalized on in all stages and beyond the project cycle, while also fostering the culture of funding, innovation and startups
  - » Inclusiveness should be rooted in excellence, which does not automatically imply the broadest possible reach
  - » The goal setting of the flagship still needs to be discussed for scope and aim (selected few vs. many smaller goals, man-on-the-moon vs. evolutionary advances)
  - » Breakthroughs will result in transformative and disruptive technologies; for this, high-risk/high-reward projects should also be supported
  - » National activities and national commitments have to become part of the agenda
- Implementation
  - » Study the lessons of the Human Brain Project and Graphene Flagship to implement their best practices with sufficient flexibility
  - » Translate the diversity of project sizes into milestones, follow up on them with appropriate key performance indicators and benchmarks
  - » Registering and maintaining intellectual property and patent rights should be in focus
  - » The QT Flagship could be brought into spotlight and kept there through a stream of successes
- Governance
  - » General agreement on the main outline of the governance detailed in the Position Paper and the principles presented subsequently during the Workshop
  - » As already raised by AMs during the first meeting of the HLSC, the IMs also emphasized the need to create simple and clear organizational structures
  - » The governance has to be effective and as compact as possible on all levels, from stakeholder representation to the scientific, advisory, supervisory and executive boards, including efficient feedback loops
  - » A continuous consultative forum for the QT community has to be provided
  - » Flexibility and agility is needed to follow changes in the European and global research, market and political agenda
  - » The final Strategic Research Agenda should be reflected in the governance structures

### 5.) Next steps for the QT Flagship – key documents and upcoming meetings

- The Chairman asked the Members to provide written feedback to the Position Paper (PP). The current

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draft and the feedback to the PP will serve as the basis for the 10-page Intermediate Report, to be submitted by January 2017

- The Chairman will present the progress made in the QT Flagship at the Board of Founders meeting in Brussels on 25 January 2017. He encouraged both AMs and IMs to join him on this mission
- The next meeting of the HLSC will take place on 16 February 2017 in Malta, under the Maltese presidency of the Council of the European Union
- Final Report of the HLSC to be submitted by Summer 2017
- Flagship start and ramp-up phase
  - » Early-phase timeline of the QT Flagship: proposal calls going out in Autumn 2017; the ramp-up phase officially starts in 2018; first projects with actual financing may start in January 2019
  - » The ramp-up phase should be the main period of establishing consortium setups; the HLSC should set out recommendations on the size and number of these consortia
  - » The late start raises the need for coordination and cooperation between academia and industries before and during the ramp-up phase to get projects ready to kick off right in the beginning of the approx. 7-8-year full project phase

#### 6.) Appointing the Editorial Subcommittee of the HLSC

- The Chairman proposed to set up an Editorial Subcommittee (ES) within the HLSC, with 3-3 Academic and Industry Members. The mission of the ES is to help compiling the aforementioned key documents of the QT Flagship. The Chairman proposed three AMs, and asked the Industry side to delegate the corresponding number of Members from various fields and company sizes they represent. After a brief discussion, four IMs were nominated, an extension which the HLSC accepted.

The following Members have been appointed to form the ES, to be headed by the Chairman, with unanimous consent:

- Prof. Dr. Jürgen Mlynek
- Prof. Dr. Tommaso Calarco
- Prof. Dr. Elisabeth Giacobino
- Prof. Dr. Eugene Simon Polzik
- Dr. Paolo Bianco
- Dr. Michael Bolle
- Dr. Daniel Dolfi
- Dr. Gregorie Ribordy

### Summary of Main Action Points:

1	The HLSC agreed: besides the input gathered at the 10 November meeting, all Members of the HLSC may provide their feedback to the Position Paper within the next 14 days in written form.
2	The HLSC acknowledged: the Intermediate Report of the QT Flagship will be submitted in January 2017; the Chairman, accompanied possibly by the Editorial Subcommittee and other Academic and Industry Members of the HLSC, will present the report to the Board of Founders in Brussels in the end of January 2017.
3	The HLSC decided: the next committee meeting will take place on 16 February 2017 in Malta.
4	The HLSC appointed the Editorial Subcommittee, headed by the Chairman, formed with 3 Academic and 4 Industry Members, to help compiling the key documents of the QT Flagship.

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