

# Quantum Support Action

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[OSA kickoff \(19.04.2018\)](#)

Europe is at the forefront of research in Quantum Technologies (QT), thanks to a major extent to the strong funding support for this field by the European Commission (EC)<sup>1</sup>, and to efficient coordination of all efforts in this area over the past two decades. Now, Quantum Technologies are entering a new phase, as some of these technologies have achieved not only validation in the laboratory but also demonstration in real life situations (e.g., in commercially available quantum key distribution systems<sup>2</sup>, in sensing applications for healthcare<sup>3</sup> or in first demonstrations of quantum computing for real-life problems<sup>4</sup>).

The immense potential of this interdisciplinary field has led the EC to announce, as part of the European Cloud Initiative<sup>5</sup>, the launch of a FET Flagship on Quantum Technologies (“Quantum Flagship”) in 2018. This is one of the most ambitious long-term initiatives of the EC, which is expected to be similar in size (1 billion Euro), timescale (10 years) and ambition to the two ongoing FET flagships, the Graphene Flagship and the Human Brain Project Flagship. FET Flagships are visionary, science-driven, large-scale research initiatives addressing grand scientific and technological challenges. They are long-term initiatives bringing together excellent research teams across various disciplines, sharing a unifying goal and an ambitious research roadmap on how to achieve it. Flagships aim to turn scientific advances into concrete innovation opportunities, growth and jobs, and contribute to addressing some of the major societal challenges Europe is facing<sup>6</sup>.

In the fall of 2016, the EC has appointed an independent High-Level Steering Committee (HLSC) to make recommendations on the Quantum Flagship’s setup. Based on the HLSC’s work<sup>7</sup> and building on previous coordination efforts, we propose the Quantum Coordination and Support Action (QSA) to make a significant contribution to ensuring the successful launch of the Quantum Flagship.

Though the QSA duration of 16 months is relatively short, this coordination action is an important and necessary preparatory step to make sure the full potential of the Quantum Flagship can be attained right from its first day. Many of the QSA’s activities will thus continue beyond its run-time and lay the basis for future actions driven by the Coordination and Support Action (CSA) which will start after this one as part of the Quantum Flagship.

<sup>1</sup> Commission Staff Working Document on Quantum Technologies, SWD(2016)107 of 19 April 2016  
<https://ec.europa.eu/digital-single-market/en/news/commission-staff-working-document-quantum-technologies>

<sup>2</sup> <http://www.idquantique.com/quantum-safe-crypto/>

<sup>3</sup> <https://www.nvision-imaging.com/>

<sup>4</sup> <https://www.volkswagen-media-services.com/en/detailpage/-/detail/Research-project-successful-Volkswagen-IT-experts-use-quantum-computing-for-traffic-flow-optimization/view/4753722>

<sup>5</sup> COM(2016)178, 19 April 2016:

<http://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-178-EN-F1-1.PDF>

<sup>6</sup> <http://ec.europa.eu/programmes/horizon2020/en/h2020-section/fet-flagships>

<sup>7</sup>

<https://ec.europa.eu/digital-single-market/en/news/quantum-flagship-high-level-expert-group-publish-es-final-report>

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