

European policy

Gustav KALBE

European Commission

Biography

Dr. Gustav Kalbe is German, born in Belgium. From 1986 to 1990 he studied Applied Physics at the Université Catholique de Louvain, Belgium. In 1991 he studied Applied Optics at the Imperial College of Science in London. In 1995 he completed his studies and earned a PhD in Physics, Molecular Spectroscopy, at the Université Catholique de Louvain, Belgium.

He started his professional career as a project manager in photonic networks at the incumbent telecom operator in Belgium. He was R&D manager when he left the company.

In 1998 he joined the Directorate General Information Society & Media of the European Commission where he started working as Project Officer managing research projects of the European Framework Programs for Research. Over the years he had several assignments in quantum technologies, photonics, and cybersecurity.

In 2014 Gustav Kalbe became Head of Unit for Administration & Finance in the European Commission, in Directorate General Communications Networks, Content and Technology.

In 2016 he was appointed Head of Unit of the newly created High Performance Computing and Quantum Technology unit in Directorate General Communications Networks, Content and Technology.

In 2018 he became responsible for the establishment and operation of the European High Performance Computing Joint Undertaking. He occupied the post of Interim Executive Director of the Joint Undertaking until its autonomy by the end of 2020.

In January 2021, he was appointed Deputy to the Director of DG Connect C “Digital Excellence and Science Infrastructure”.

Since May 2022 Gustav is the Acting Director of DG Connect C “Digital

Excellence and Science Infrastructure”.

Abstract

I will introduce the European activities and policy approach in Quantum Technologies, starting with the Quantum Technologies Flagship and some of its successes during its ramp-up phase (2018-2021). I will then present the vision and avenues for Europe’s digital transformation by 2030, as proposed in 2021 by the European Commission in the Europe’s Digital Decade, pursuing the ambition to reach a first European computer with quantum acceleration by 2025. Following this vision, the European policy approach to quantum has naturally transitioned towards higher technical maturity with the deployment of quantum-based infrastructures. In this context, first I will introduce the pilot lines (factories) for advanced quantum chip production (so-called “fabs”) as one of the new instruments of the European Chips Act, then I will present the European Quantum Communication Infrastructure (EuroQCI) Initiative aiming at building a secure quantum communication infrastructure that will span the whole EU. Finally, I will present the European High-Performance Computing Joint Undertaking (EuroHPC JU) and its roadmap to quantum computing deployment including the recent selection of six sites that will host the first European quantum computers, with a view on the Japan-EU Digital Partnership established in Spring 2022.