

## Session Outcome Document

### Summary of Session:

**Making the most of quantum computers,  
inclusively and openly, to accelerate the SDGs and beyond**

**Geneva Science and Diplomacy Anticipator GESDA**

**16 March 2023 11h-11:45h**

<https://www.itu.int/net4/wsis/forum/2023/Agenda/Session/205>

### Key Issues discussed (5- 8 bullet points)

- Quantum Tech will create profound changes to society, changing entire industries and sectors. The session's panelists converged around the need to **anticipate** these developments to understand its **multi-faceted impacts**, e.g. social, ethical, developmental and to socialize its potential benefits changing the current paradigm.
- The quantum pursuit and related investments are fractured. Scattered technology and policy approaches have led to a focus on a few technologies, in a handful of countries, and in the hands of a limited number of incumbents, all this among geopolitical tensions.
- The Geneva Science and Diplomacy Anticipator Foundation (**GESDA**) Diplomacy Forum Chair, underscored that humanity must use the upcoming 10 years (i.e. the timeframe by which quantum computers will mature for real-life applications) to prepare for **equal** and **inclusive use** of this powerful technological capability, and with a view to prevent the enlargement of the **digital divide**. This is also where multilateral actors come into play and can contribute considerably through **anticipatory science diplomacy** efforts.
- Fellow diplomatic representatives, delved into the contours of a **global governance initiative** to address these issues, **GESDA's Open Quantum Institute (OQI)**, a proposal developed by leaders in science, diplomacy, business and civil society, an initiative that their countries have actively supported.
- The OQI is envisioned to act as an "honest broker" between the R&D, the quantum technology providers and the SDG's and the post-**2030 Agenda**. The main driver would be to **anticipate**

the readiness of **all** stakeholders to embrace the power of quantum computing once at full maturity.

- Concrete **examples** for the SDG agenda were offered, referring to the production of fertilizers, a very important industry, and how the inclusive use of quantum technologies to produce better and more **sustainable fertilizers** will avoid counter-productive competition. On the other hand, it was underlined that developing economies must engage in **quantum technologies uses-cases development** at an earlier stage, bringing all of society to the conversation and changing the current paradigm of concentration of power.
- Views from the business sector reflected on the responsible development of the technology, and how it is in the industry sector best interest to meaningfully engage in **multi-actor initiatives** like the **OQI**, to jointly identify positive and inclusive governance frameworks. Academic and civil society representatives concurred around the value of inclusive and action-oriented dialogue, to ensure quantum technologies benefit a majority of present and future generations.

**Towards WSIS+20 and WSIS beyond 2025, please share your views on the emerging trends, challenges, achievements, and opportunities in the implementation of the WSIS Action Lines to date (5-8 bullets)**

- WSIS Action Lines must respond to the rapid pace of technological development and promote the importance of working together with policy-makers, scientists, industry and civil society partners to align the development of emerging technologies, including quantum technologies to real-life and impactful uses cases, contributing to tackling major humanity's challenges and preventing the widening of the digital divide.
- The WSIS Action Lines would also benefit from including **Anticipatory Science Diplomacy** approaches that are transversal to all emerging technologies, including digital. The anticipatory dimension embeds the **inter-generational** "lens", framing **sustainability** also from the perspective of young people and future generations for **longer-term positive impact**. GESDA Open Quantum Institute's proposal, aims to ensure that emerging technologies such as quantum computing are further advanced and used in **alignment** with the **SDGs** in this critical decade of action, as well as beyond 2030.

**Tangible outcomes (such as key achievements, announcements, launches, agreements, and commitments (3-5 bullet points))**

- The panel generated an interactive exchange on matters such as the development of disruptive technologies as a reflection of society's values.
- It stimulated the debate around uses cases of quantum technologies for food-security, sustainable energy-transition, dual-use nature of the technology (cryptography, standards, etc.), the digital divide, the concept of openness, the transparent development of roadmaps and governance frameworks, the accountable application of the resources, the need to educate the scientists developing the quantum algorithms and all stakeholders to better understand societal needs and positive impact approaches.
- GESDA's Open Quantum Institute (OQI) was perceived as an important initiative in ensuring quantum technologies leaves no one behind.

**Actionable plan (2-5 points)**

- To continue collaborating in the OQI's multistakeholder platform to include all voices and perspectives as we aim to anticipate scientific and technological developments and its implications, including for better global governance and the acceleration of the SDGs.
- To expand the network of collaboration to underrepresented regions, backgrounds, sectors, intergenerational views, etc. and keep reporting on its progress.

**Suggestions for thematic aspects that might be included in the WSIS Forum 2024 (WSIS+20 Forum High-Level Event) (one paragraph)**

- To address the rapid pace of scientific and technological breakthroughs and its impacts on human beings, society and the planet, through **anticipatory science diplomacy approaches**, enabling more accurate and fit-for-purpose decision-making and policy development.