GESDA Solutions
The Open Quantum Institute
Conference on Quantum Technology for High-Energy Physics
G E N E V A, N O V E M B E R 2 0 2 2
The Open Quantum Institute
A few words about the Geneva Science and Diplomacy Anticipator

- Independent non-profit foundation
- Private-public partnership
- Created in 2019
- **Mission:** strengthen the impact and innovation capacity of the international community through *science and diplomacy anticipation*
- 5 platforms, 37 *scientific emerging topics*, 774 scientists from 70 countries, a *Diplomatic and an Impact forum*
Prepare the world for quantum
learn today to be ready for the future

The Open Quantum Institute is the “honest broker” between the
rescuers and developers’ community,
the quantum technology providers, national policymakers
and the UN 2030 Agenda.

By making state-of-the-art quantum technologies available to
everyone,
the Institute anticipates the readiness of all stakeholders
to be informed, embrace and use, once at maturity,
the full power of quantum technologies
for the *SDGs and other beneficial applications for humanity.

*https://sdgs.un.org/goals
The Open Quantum Institute (OQI)

**Diplomatic engagement**
- **A neutral forum** to anticipate future needs for multilateral governance and policy

**Key activities**
- Constant engagement with the diplomatic community - International Organizations and government representatives - as a condition to provide global inclusive access to OQI.
- Focus areas:
  - Mobility of scientists and developers
  - Intellectual property
  - Export control / responsible use of quantum technologies
  - Standardisation

**Inclusive R&D**
- A platform to facilitate the inclusivity of R&D on the applications of quantum computing for the UN Sustainable Development Goals

**Key activities**
- A pool of to state-of-the-art quantum computers
- Center of expertise for the SDG applications
- Match-making between scientists and field experts of our ecosystem

**Education**
- A toolkit to inform, embrace and use quantum computing once at maturity

**Key activities**
- Awareness building among diplomacy and the general public on how quantum capabilities will change our realities (transdisciplinary science diplomacy)
- Awareness building among quantum scientists on SDG-related needs for computational capability
- Development of framework curricula to engage and train future quantum R&D-ers, with a focus on the Global South

**What it does NOT do**
- Conduct R&D directly
- Build quantum hardware
- Provide funding directly
Permanent Missions from a number of countries have been actively helping to shape the multilateral relevance of the future Open Quantum Institute.

**Academic**
- CERN
- EPFL
- ETHZ
- Imperial College London
- Jülich Forschungszentrum
- National Institute for Theoretical and Computational Sciences (NITheCS)
- Quantum Delta NL
- Raman Research Institute
- University of Calgary
- University of Copenhagen
- University of Geneva
- University of KwaZulu-Natal

**Diplomacy**
- Australia
- Austria
- Brazil
- France
- Japan
- Malta
- Mexico
- Morocco
- Netherlands
- Pakistan
- Singapore
- Switzerland

**Impact**
- Alpine Quantum Technologies
- AWS
- IBM
- IQM Quantum Computers
- Microsoft
- Oxford Quantum Circuits
- PASQAL
- Strangeworks
- XPRIIZE
- SDG Lab
- Fondazione Compagnia di San Paolo
- National Institute for Theoretical and Computational Sciences (NITheCS)
Incubation of OQI in 2023-2024

Opportunities for collaboration
1. Contribute to the repository of SDG use cases
2. Take part in a R&D project
3. Provide technical or educational capability
4. Get involved in the governance and funding streams
Questions?

Marieke Hood
Executive Director Impact Translator

Campus Biotech, chemin des Mines 9, 1202 Geneva
www.gesda.global
marieke.hood@gesda.global
+41 79 635 26 90

Solution Idea
Quantum Revolution & Advanced AI
Open Quantum Institute

Providing global and inclusive access to state-of-the-art quantum technology