Welcome to the Workshop

Advancing capacity building
Developing educational tools to enable everyone around the world to contribute to the development of quantum computing and make the most of the technology.

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Agenda

1. **Round of introduction**

2. **Education at OQI: what have we achieved so far**

3. **Practical engagement with OQI and the community**
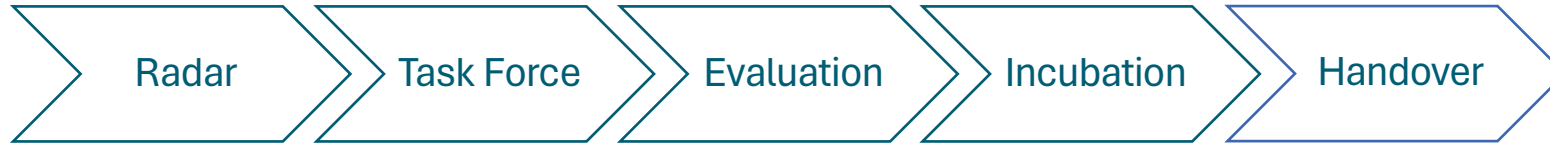
4. **Conclusions & Next Steps**

Round of introductions

**Education at OQI
What we achieved so far**

What we have achieved so far

From science to a science diplomacy instrument: OQI timeline

Radar → Task Force → Evaluation → Incubation → Handover

Incubation of the OQI in 2023 allowed for:

- ✓ Proof of concept and realizability of the OQI activities, as envisaged by the task force who conceive it
- ✓ Strong traction and engagement of a growing OQI community
- ✓ Securing of the governance structure and funding for the 3 years pilot (incl. donations of resources and capacity by spearheading partners)

Specifically, for OQI's third A "Advancing Capacity Building"

- ✓ **Hackathon pilot, in partnership with NYUAD (**OQI prize winners returned on experience - showcased at 2023 GESDA Summit)
- ✓ **Repository of vetted educational offerings** → to be featured on the OQI website
- ✓ **Quantum geopolitics online simulation game** (role play - MVP mode)

Target group1: Youth in underserved geographies

Engaging researchers and developer in quantum-underserved geographies

Building on an initial partnership with NYUAD, capacity building tools to efficiently train young scientists from quantum-underserved geographies to use quantum devices and explore applications of quantum computing tackling their local challenges.

Next steps:
- Amplify hackathon in other regions (e.g. Africa, Latin America)
- "Hackathon in a box"

Tools developed

Target group 2: Diplomats

Equipping diplomats with quantum know-how

In collaboration with INGSA, resources for diplomats to build a robust understanding of the level of maturity of quantum computing, its real- world impact and the state-of-play of its governance.

Next steps:
Amplify the online game and beta testing

Objectives for the pilot phase of OQI (2024-2026)

OQI
Open Quantum
Institute

Radar → Task Force → Evaluation → Incubation → Handover → **Pilot**

Objectives assigned by CERN Council

☐ "**Develop educational tools**, targeting in particular users from underserved regions. Specific deliverables include the **development of best practices** on how to involve players from underserved regions in the use of quantum computing and the **compilation of an initial inventory of OQI training instruments**."

Objectives of today

➤ Discuss how we will practically achieve effective contribution to the **educational consortium to share tools and best practices**, (incl. involving players from underserved region in the use of quantum computing)

Practical engagement (discussion)

Educational consortium

Key Objective
- Share tools and best practices (incl. involving players from underserved region in the use of quantum computing)

Deliverables
- List of members of the consortium
- Role & responsibilities of members of the consortium
- Outcomes expected out of the consortium
- Run x workshops in 2024 ?

Repository of resources

Key Objectives

o Collate expert contributions to the development of a **s**elf-education + AI powered recommendation system

o Mechanisms for the vetting of the resources in the repository, mechanisms for the dissemination and adoption of tools by target groups

Deliverables

o Search engine on the OQI website

o Updated list of vetted resources

Other deliverables for the pilot phase

Cross-overs with other A's

Accelerating applications for humanity

Access for All

Activating multilateral governance for the SDGs

Other metrics of success for the pilot

Engagement Mechanisms

For new candidate partners/ members, submit your manifestation of interest on oqi.cern

Tier	Objective	Eligibility Criteria
PARTNER	Co-shape and co-create OQI's unique value proposition	**OQI partners are institutions that benefit from peer recognition for their scientific or in the impact expertise.** Partners … • either have served as OQIs spearheading partners during its incubation phase or have consistently engaged resources to OQI's work as OQI members for at least a year • commit to co-shape the OQI's unique value propositions for the three years of the pilot throughout the 4A's • are vetted by the OQI Advisory Committee • abide to OQIs values and openness principles
MEMBER	Contribute continuously to at least one of OQI's 4 A's	**OQI members are institutions that benefit from peer recognition for their scientific or in the impact expertise.** Members … • have disclosed their governance structure • commit to actively contribute on at least one of the 4A's assiduously for at least one year • have appointed at least one expert from their institution as focal point of contact for OQI and contributor to its working groups • abide to OQIs values • have submitted a complete membership form with supporting documentation and are vetted by the OQI Management Team • qualify for partner level after having demonstrated their commitment for at least one year
FRIEND	Stay informed and be potentially solicited for consultations	**OQI Friends are individuals** (such as experts from the private or public sector, countries, citizens) who are committed to open science, inclusivity and CERN's values and associate themselves with the OQI. Friends socialize the OQI in their communities.

Conclusions and next steps

Next steps

- Educational Consortium
   → Workshops ?

- For candidate partners/ members, submit your manifestation of interest on oqi.cern

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