Creating a quantum community in Latin America

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Abstract: Emerging technologies develop at a different pace in the various regions around the world. This year, Quantum Latino was born to raise awareness and promote quantum technologies to build a connected quantum community in Latin America. © 2021 The Author(s)

1. The global quantum ecosystem

The global quantum ecosystem has been boosted very rapidly in the last years, thanks to the injection of public funding in several nations around the world [1]. The same has been true in the private sector, with industry players such as IBM and Google, amongst others, focusing more and more on quantum technologies, and an amazing and ever-growing landscape of newly created start-ups worldwide [see Fig.1].
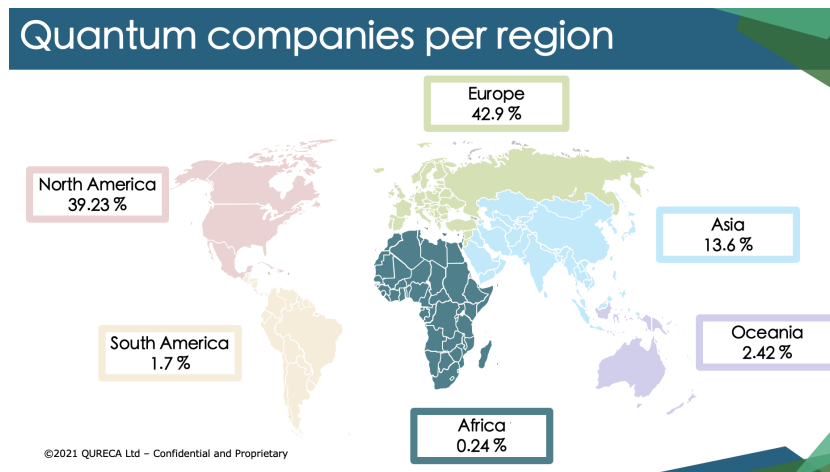

Fig. 1. Global distribution of quantum start-ups.

One message is clear, some regions are under-represented. In our current connected society, some regions are still behind when it comes to developing emerging technologies. Regarding quantum technologies, the creation of new companies is directly linked to the amount of public and private funding available. Specifically, Latin America and Africa are typically under-served regions. A larger segment of the authorship and development of quantum is based in North America, Europe, and Asia. However, this is the right time to think strategically and bring more opportunities to the underrepresented regions [2, 3].

2. An opportunity for Latin America

QURECA (Quantum Resources and Careers) [4] is a company established with the aim to create a common language and bring value to the emerging market of quantum technologies. One of its goals is to bring the quantum stakeholders together to boost the quantum ecosystem worldwide.

Following a number of discussions over the last years with key quantum players in Latin America, QURECA identified the need to educate the wider quantum community about the progress accomplished in the region, as well as to connect the different stakeholders. Finally, in collaboration with Quantum-South [5] and the Unconventional Computing Lab [6], 'Quantum Latino 2021' [7] – the first large scale quantum event in Latin America – was held online on 9th-11th June 2021.

This 3-day event brought together researchers, entrepreneurs, start-ups, and industry collaborators, to participate, learn, exchange ideas, and connect with each other, seeking to expand the emerging quantum community in Latin-America where a strong research capability and abundance of resourceful talent will help develop a quantum rich infrastructure. Furthermore, there was a parallel outreach event organised with the aim to promote physics, optics, and photonics as the key elements in the development of quantum technologies, making their concepts more familiar to children and the public.

Working with key industry players, the impact of Quantum Latino has been and will continue to be fundamental in helping achieve this rapid growth that quantum is experiencing, and in bringing an opportunity to Latin America to overcome the challenges and be a key player in the quantum ecosystem.

References

1. A. Venegas-Gomez, *The Quantum Ecosystem and Its Future Workforce: A journey through the funding, the hype, the opportunities, and the risks related to the emerging field of quantum technologies* (PhotonicsViews 17 (6), 34-38, Nov 2020, https://doi.org/10.1002/phvs.202000044).
2. https://www.weforum.org/agenda/2019/08/africa-ready-to-take-quantum-leap-ibm-q
3. Atos and SENAI CIMATEC launch Center of Excellence in Quantum Computing in Brazil, https://atos.net/wp-content/uploads/2021/05/PR-Atos-and-SENAI-CIMATEC-launch-Center-of-Excellence-in-Quantum-Computing-in-Brazil.pdf
4. QURECA website: https://www.qureca.com
5. Quantum South website: https://quantum-south.com
6. The Unconventional Lab website: https://unconventionalcomputing.org
7. Quantum Latino website: https://quantum-latino.com