

Chile: The State of Quantum Computing August 2025



Executive Summary

Chile isn't rushing into the quantum age—it's stepping in with purpose. With a strong history in physics, a world-class astronomical community, and solid institutional credibility, Chile is **laying the groundwork** for a future in quantum technologies.

2025 marks a year of **steady progress**: research networks are developing, government efforts are becoming more official, and international partners are starting to take notice. For Chile, quantum isn't just a buzzword — it's a slow-moving but deliberate effort, in line with the country's strengths in **science, resilience, and collaboration**.



National Strategy & Infrastructure

While Chile has yet to release a national quantum strategy, its government remains active. The **Ministry of Science, Technology, Knowledge, and Innovation** has established exploratory task forces focused on:

- **Secure communications**
- **Quantum-enhanced climate modeling**
- **Advanced materials research**





Key infrastructure moves:

- The **National Center for Quantum Technologies (CNCT)**—founded in 2023 and hosted at the **University of Chile**—is the country's research and education hub
- **High-performance computing infrastructure** is expanding in **Santiago** and **Valparaíso**, including capabilities for quantum simulations and regional data-sharing

The strategic vision is forming—not loudly, but steadily.

Public / Private Collaboration & Academic Firepower

Chile's academic institutions are the country's quantum engine:

- The **University of Chile** and **Pontificia Universidad Católica** lead in **quantum optics, simulation, and cryptography**
- In 2024, **CNCT launched the Quantum Chile Fellowship**, offering PhD and postdoc funding—with a focus on **retaining talent** in-country



Private-sector traction is emerging, particularly in

- **Fintech**, where quantum encryption and fraud resistance are rising concerns
- **Mining and logistics**, where optimization and sensor networks are long-term strategic bets

While commercial engagement is still cautious, **curiosity is growing**.



International Relationships & Funding

Chile punches above its weight through **science diplomacy** and cross-border alliances.

Key relationships:

- Founding member of **LAQNet**, coordinating Latin American quantum strategy
- Collaborations with **MIT**, **ETH Zurich**, and **U.S. National Labs**
- Funding and technical support from **EU Horizon Europe** and **Canada's IDRC**



G7 Summit & Strategic Alignment



Chile may not be part of the G7, but its voice is heard in the broader dialogue on responsible tech.

In 2025, it:

Participated in the **Latin America–EU Science Summit**, advocating for **ethical quantum R&D frameworks**

Engaged in the **Global Partnership on AI and Emerging Technologies**, aligning its strategy with global best practices in **digital sovereignty, equity, and openness**

Opportunities and Challenges

Opportunities:

World-leading expertise in **astronomy and earth sciences**, ideal for **quantum sensing**

A stable democracy and **open science culture**—prime conditions for foreign collaboration Strong **regional credibility** as a voice of ethical, evidence-based innovation

Challenges:

No dedicated **national quantum funding** program

Brain drain continues to pull talent to Europe and North America

Private sector awareness of quantum remains low

The architecture is there. Now, it needs better scaffolding.





Outlook for 2025 & Beyond

Over the next 3–5 years, expect Chile to:

- Officially integrate **quantum into national science policy**
- Expand bilateral collaborations—especially with **Germany, Canada, and Brazil**
- Launch applied quantum pilots in **agriculture, mining, and secure data systems**

The ecosystem is still emerging, but **the intent is clear**.

Final Reflection

Chile's quantum journey isn't about fast pivots or billion-dollar headlines. It's about **precision, people, and purpose.**

With a deep bench of scientific talent, a culture that values open inquiry, and a diplomatic instinct for global alignment, Chile is setting the tone for **inclusive quantum development in Latin America.**

It may be early days, but the trajectory is undeniable: **Chile is becoming a trusted node in the quantum world—one quiet milestone at a time.**

