

Argentina's Rapid Rise: Establishing a Superpower in South America

August 2025



Executive Summary

National Strategy & Infrastructure

Argentina's National Quantum Technology Roadmap, published in 2023 by the Ministry of Science, Technology, and Innovation, extended the country's agenda until 2030. **Roadmap for National Quantum Technology.** It has a pragmatic and sovereignty-minded focus:

- Create in-house quantum software and hardware capabilities.
Quantum hardware and software developed at home
- Increase technical training programs and PhD pipelines
- Utilize quantum in energy systems, cybersecurity, and climate modeling.

Infrastructure is already taking shape:

- The **Centro de Tecnologías Cuánticas (CTC)** at **Universidad de Buenos Aires**, backed by **CONICET** and **ANPCyT**
- Quantum-ready **supercomputing clusters** in Bariloche and Buenos Aires
- A national **quantum key distribution (QKD)** pilot in partnership with telecom providers and **INVAP**

This isn't a placeholder plan. It's groundwork—quietly strategic.





Public / Private Collaboration & Academic Firepower

Argentina's academic power remains its most valuable asset. Institutions like:

- **Instituto Balseiro, ITBA, and Universidad Nacional de Córdoba** are actively researching ion traps, superconducting qubits, and quantum metrology
- **CONICET** funds over 60 full-time researchers and postdocs in quantum science

While public-private collaboration is still in early phases, it's picking up speed:



- **INVAP**, the state tech giant known for satellites and nuclear reactors, is now exploring **quantum sensing** and **secure comms**
- Pilot projects are appearing in **defense**, **logistics**, and **energy**

The momentum is subtle—but it's moving.

International Relationships & Funding

Argentina understands its strength lies in partnerships that reflect **technical collaboration without political compromise.**

- A core member of **LAQNet**, working with Mexico, Brazil, and Chile
- Active scientific exchanges with **Spain, Germany, and Canada**
- Submitted a formal request to join **EuroQCI's satellite initiative** as a non-member contributor



Funding (2024–2026):

- \$12M USD from national R&D efforts
- New regional education and simulation research funding via **CAF (Development Bank of Latin America)**

Argentina may be resource-constrained—but its scientific diplomacy is rich and strategic.





G7 Summit & Strategic Alignment

While not a G7 member, Argentina was present at the **2025 Global Partnership on Emerging Technologies** and invited as an observer to G7's **Science Ministerial**.

Its contributions focused on:

- **Ethical access to quantum** across the Global South
- **Open-source research models**
- Emphasis on **equitable deployment of emerging tech**

Argentina continues to **punch above its fiscal weight** in global policy spaces.

Opportunities and Challenges

Opportunities:

Longstanding depth in **quantum optics** and **information theory**

Governmental openness to **quantum tools in inflation modeling, climate, and grid optimization**

Natural positioning for partnerships in **space-based sensing and data systems**

Challenges:

Chronic underfunding of labs and hardware infrastructure

Currency instability and import hurdles

The startup ecosystem around quantum is still underdeveloped



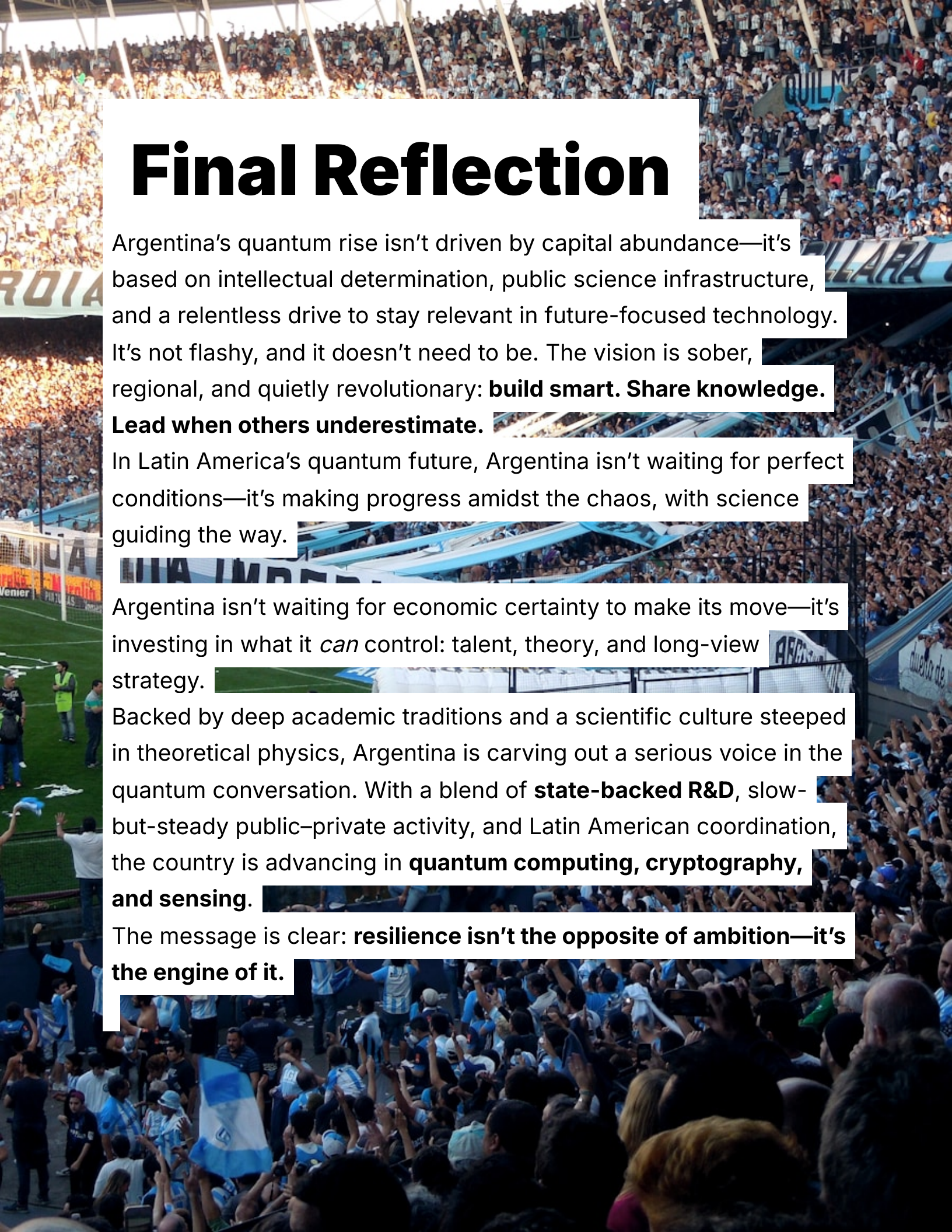


Outlook for 2025 & Beyond

Expect Argentina to:

- Launch its first **national QKD pilot**
- **Deepen cooperation** with European and Latin American partners
- Scale **quantum education** and simulation access across Spanish-speaking countries
- Accelerate **dual-use quantum sensing applications** through **INVAP**

The momentum is regional, the ambition is sovereign, and the talent is here to stay—if it can be retained.



Final Reflection

Argentina's quantum rise isn't driven by capital abundance—it's based on intellectual determination, public science infrastructure, and a relentless drive to stay relevant in future-focused technology. It's not flashy, and it doesn't need to be. The vision is sober, regional, and quietly revolutionary: **build smart. Share knowledge. Lead when others underestimate.**

In Latin America's quantum future, Argentina isn't waiting for perfect conditions—it's making progress amidst the chaos, with science guiding the way.

Argentina isn't waiting for economic certainty to make its move—it's investing in what it *can* control: talent, theory, and long-view strategy.

Backed by deep academic traditions and a scientific culture steeped in theoretical physics, Argentina is carving out a serious voice in the quantum conversation. With a blend of **state-backed R&D**, slow-but-steady public-private activity, and Latin American coordination, the country is advancing in **quantum computing, cryptography, and sensing.**

The message is clear: **resilience isn't the opposite of ambition—it's the engine of it.**