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TURNING POINT

THE QUANTUM OPPORTUNITY

Many people consider quantum computing the next big thing. But France-headquartered Pasqal believes the quantum advantage is already here, and that businesses have no time to lose.

Discover six turning points in Pasqal's long journey from theory to practice.

LEAVING THE LAB

In 2001, physicist Georges-Olivier Reymond was the first to trap single atoms – the building blocks of a quantum computer – with optical tweezers. At the time, quantum computing still seemed a long way off.

It took nearly 20 years for Reymond and his former colleagues to be convinced that quantum technology was finally ready to leave the lab. In March 2019, they co-founded Pasqal.

BUILDING REAL SOLUTIONS

From the start, Pasqal wanted to solve real-world computational challenges. So when French electricity company EDF asked Pasqal to optimize the charging of the country's future fleet of 30 million electrical vehicles, the team rose to the challenge.

A look inside the core of Pasqal's neutral atom quantum processor.



GAINING TRACTION

Pasqal has gone on to develop quantum solutions for use cases that include optimizing air traffic routes, accelerating pharmaceutical development and assessing credit risks. Each of these computational challenges would have taken classical computers years, if not decades, to solve.

JOINING FORCES

For Pasqal, the quantum race is not a zero-sum game. In collaboration with IBM, Pasqal is creating a hybrid ecosystem of classical supercomputers and quantum computers, so customers don't have to bet on a single technology.



Fresnel, Pasqal's first commercial quantum computer.

REACHING NEW HEIGHTS

Pasqal secured Temasek as the lead investor for its €100 million Series B round in 2023, its largest round to date. In June 2024, it delivered its very first quantum processor to the French quantum center – the culmination of nearly six years of work.

FINDING THE PATH

Pasqal's agreement with gas giant Aramco to install Saudi Arabia's first quantum computer in 2025 is a strong signal to engage with quantum now, rather than wait.

As Pasqal develops more quantum power with fewer errors, the team is buoyed by the words of co-founder, Alain Aspect, who won the Nobel Prize for Physics in 2022. "Science demonstrates that there is no limitation. Innovation is finding the path," quotes Reymond.

Business is rarely a straight line.

