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## Business

# QuantX secures \$1m in funding for atomic clock for satellites

The SA company behind some of the world's most precise clocks has secured \$1m to fast-track a new atomic clock designed for space.

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The Australian Business Network



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## Business

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Adelaide technology company QuantX Labs has secured \$1m in funding to accelerate development of a new atomic clock designed to provide the most precise timing for satellites in space.

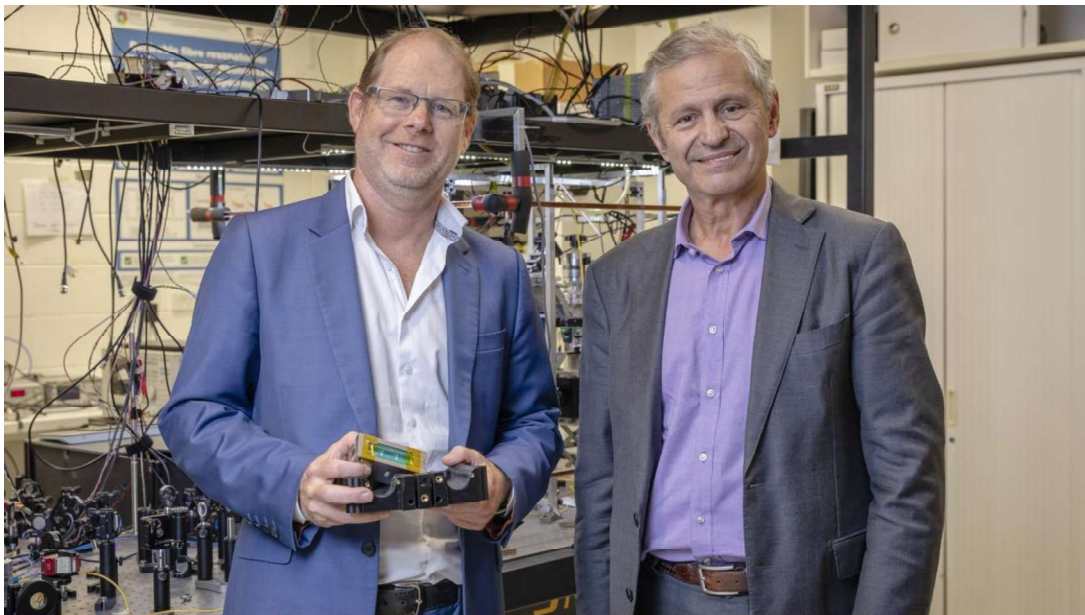
The funding, from the SmartSat Cooperative Research Centre (CRC), will go towards commercialisation of the compact space clock, which is being developed in partnership with the University of Adelaide.

High precision timing is critical to global navigation satellite systems (GNSS), such as GPS, and QuantX's clock is designed to be cheaper, smaller and more precise than those currently used in GNSS satellites.

The system uses high-precision lasers to interrogate rubidium vapour held in glass cells.

QuantX founder and managing director Andre Luiten said the funding boost would enable the company to proceed with trials of the clock in space within the next two years.

“This funding will help us build momentum in our atomic clock development,” he said.



QuantX founder and managing director Andre Luiten with SmartSat CRC chief executive Professor Andy Koronios. Picture: Supplied by SmartSat CRC

“Access to sovereign satellite-based timing and positioning information is vital for the smooth operation and security of numerous Australian businesses as well as the defence forces.

“This latest funding builds on SmartSat’s ongoing support, having supported the

research and development through the Aurora Space Cluster, as well as facilitating connections with industry and government partners to help us bring the space clock to market.”

The technology behind the optical clock was created in the Precision Measurement Group at the University of Adelaide, and developed into a product in collaboration with QuantX and the SmartSat CRC Aurora Space Cluster incubator.

SmartSat CRC chief executive Professor Andy Koronios said the “truly transformational” space clock would play a vital role in building a sovereign satellite navigation capability for Australia.

“This is not just a ‘me too’ capability,” he said.

“This technology already matches the performance of the very best space clocks and is on track to improve performance by an order of magnitude, while at the same time significantly reducing its size, weight and power consumption.

“In just a few years QuantX have transformed an idea to a product – from research to break-through technology.”

Last year [QuantX and BAE Systems Australia were awarded a \\$4.8m](#) contract to further develop the company’s flagship CryoClock product for inclusion in the Jindalee over-the-horizon surveillance network.

The ultra-precision sapphire clock is 1000 times more precise than other commercial time pieces and, when combined with radar, is able to zero in on aircraft and ships with extreme accuracy thousands of kilometres offshore.

According to QuantX, CryoClock is so precise it loses just one second over 40 million years and its accuracy enables it to give GPS co-ordinates of unparalleled precision.

QuantX, which relocated to the Lot Fourteen innovation precinct last year, expects to double its headcount to 30 over the next 12 months.

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