

# THE QUANTUM QUARTERLY

## Q1 2022

Welcome to the Quantum  
Quarterly Review.

Here we cover the biggest  
commercial news in the  
Quantum Computing industry  
over the last 3 months.

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# Q1 2022 IN BRIEF

For the quantum technology space, the really big presents came after the holidays.

In a few short months, there have already been mergers, acquisitions, SPACs and public offerings. Large investment flows have also entered the quantum market. While full-stack companies and firms specializing in quantum hardware are getting most of the attention -- and a lot of the funds from investors, we are beginning to see that flow heading toward specialist quantum, such as quantum cybersecurity and sensors.

Putting our rose-colored glasses aside, this booming market has not pleased everyone. Several members of the community have expressed concern that this money and talent is being pulled away from badly needed basic research. Others worry the hype cycle is going to crash the entire market.

Speaking of research, institutions and organizations have announced major advances.

We'll look at the quarter's highlights next.



*Click this icon throughout this pres to see the full stories behind the brief*



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# THE BIG NEWS



## SANDBOX AQ LAUNCHES AS INDEPENDENT COMPANY



Sandbox AQ, an enterprise SaaS company delivering solutions that leverage quantum tech and AI, officially launched and announced its investors, board chair, partners, advisors and initial customers. AQ stands for AI and Quantum, two key tools Sandbox uses to address pressing global challenges.



## D-WAVE PREPARES TO RAISE \$340 MILLION THROUGH SPAC, APPROX \$1.6 BILLION VALUATION



D-Wave, a Vancouver-based pioneer in quantum computing, is preparing to go public through a special purpose acquisition company, or SPAC. The company has entered into a definitive transaction agreement with DPCM Capital, Inc. (NYSE: XPOA), a publicly traded special purpose acquisition company ("DPCM Capital"). The company will trade on the New York Stock Exchange (NYSE).



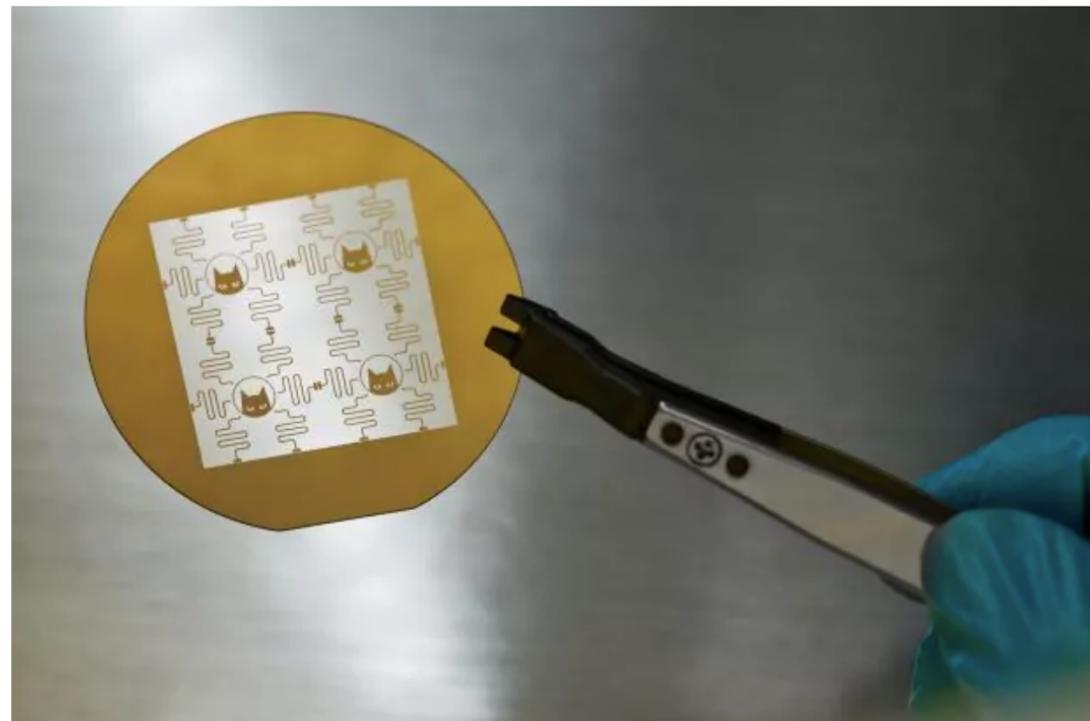
**RIGETTI COMPUTING SPAC  
OFFICIALLY CLOSES,  
GROSS PROCEEDS OVER  
\$261 MILLION**

**rigetti**

A special purpose acquisition company -- SPAC -- announced its combination with Rigetti on March 2, 2022, after a final vote of Supernova shareholders on February 28. The move should raise at least \$114.24 million from Supernova trust proceeds after giving effect to preliminary redemption elections, and \$147.51 million from a fully committed common stock private placement, or PIPE, resulting in expected total gross proceeds of at least \$261.75 million.



# ALICE&BOB RAISES €27 MILLION TO FUEL THE NEXT STAGE IN COMMERCIALIZING QUANTUM



French quantum computing startup, Alice&Bob, announced a major advance towards the first marketable quantum computer. In a major scientific advance, Alice&Bob has eliminated one of the main barriers to, and significantly reduced the complexity of, delivering a functional quantum computer – a goal that could now be within reach.



## CHINA'S TURINGQ COMPLETES THIRD ROUND OF FINANCING



TuringQ, a photonic quantum computing company based in China, announced it completed a third round of Pre-A+ financing. Chinese media also reported that Oriza Holdings led the round with co-investors including Wuxi Binhu State-owned Capital Investment Co., as well as other existing shareholders Legend Capital and Ambrum Capital.



## OQC'S 'LUCY' BECOMES FIRST EUROPEAN QUANTUM COMPUTER ON AMAZON BRAKET



Oxford Quantum Circuits (OQC), Europe's leading Quantum Computing as-a-Service company, debuted its latest system, Lucy, an 8-QPU quantum computer, on Amazon Braket. With a new quantum processor from OQC, AWS is expanding Amazon Braket to support a new quantum hardware for the first time since Braket's general availability in August 2020, expanding the service to the AWS Europe (London) Region, a significant milestone in providing customers access to a Europe-based quantum processor.



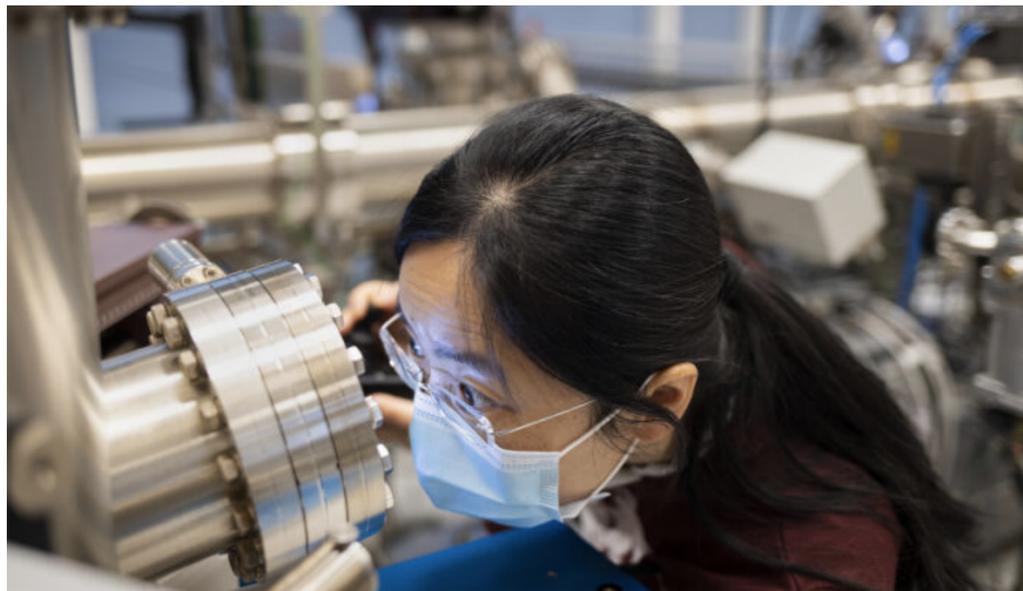
## **RESEARCH: INTEL PRESENTS 14 QUANTUM COMPUTING PAPERS AT APS MEETING**



Intel researchers and collaborators presented 14 papers focused on quantum computing at the American Physical Society's (APS) March Meeting. Intel highlights will include an invited presentation on the development of a first-of-a-kind cryogenic wafer prober. The company also presented the prober, which can perform device characterization at 1K to enable rapid and statistically significant data collection of both traditional transistor and quantum dot metrics.



## RESEARCH: MICROSOFT TEAM REPORTS SCALABLE TOPOLOGICAL QUBITS ADVANCES



Microsoft's Azure Quantum scientists report in a company blog post that they demonstrated the elusive building blocks for a topological qubit, which Microsoft has pursued as a promising path to developing a scalable quantum computer and one that could launch a new generation of computing capabilities for Azure customers. They are labelling this a key scientific breakthrough.



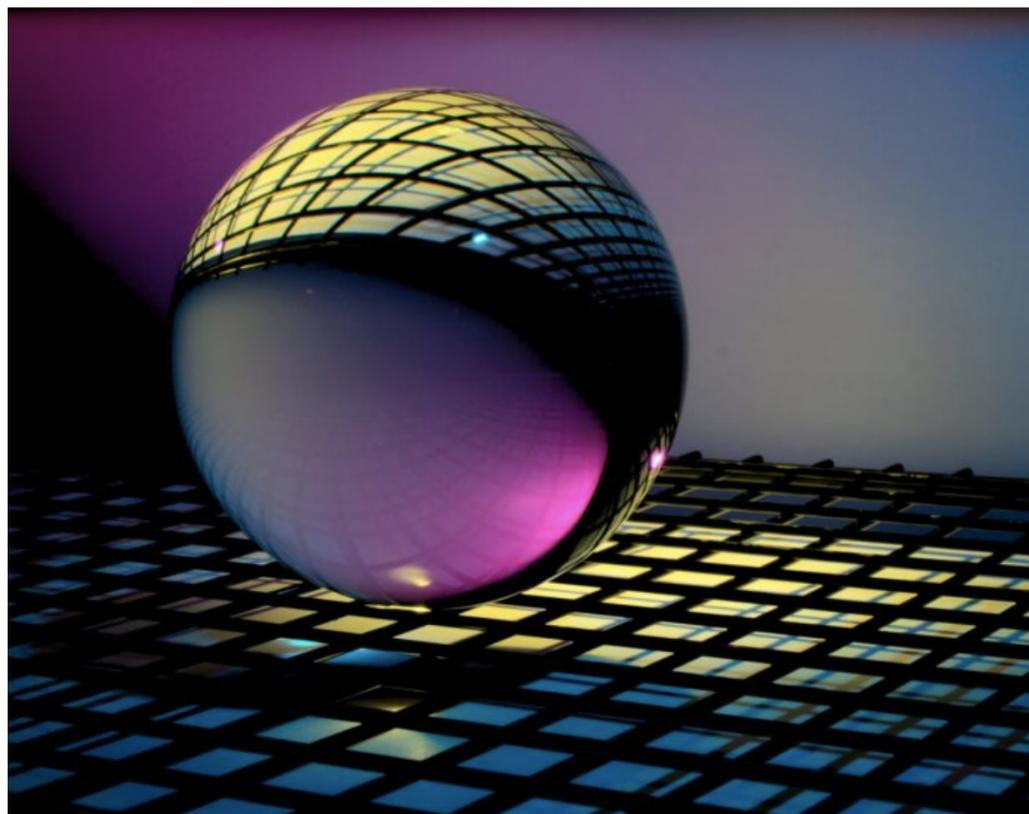
## RESEARCH: ERROR- MITIGATION TECHNIQUES PUMP UP THE QUANTUM VOLUME



Boosting quantum volume may not be a job just for hardware makers, according to researchers from the Unitary Fund. Quantum algorithm developers can play a role, too. In a study, the team said that they experimentally demonstrated that error mitigation improves the effective quantum volume of several different quantum computers.



## RESEARCH: QUANTINUUM H1 BESTS CLASSICAL SYSTEM IN TEST



A research team ran a collaborative, mathematical game on different technologies to evaluate 1) whether the systems demonstrated quantum mechanical properties and 2) how often the machines delivered the correct results. The team then compared the results to those generated by a classical computer. Of the technologies tested, only the Quantinuum System Model H1-1, Powered by Honeywell[1], outperformed the classical results.

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# CAPITAL MARKETS

**\$0.7BN**

of new private capital flowing into  
Quantum Technology companies in Q1  
22

**18**

New disclosed private funding rounds in  
Q1 22

# FUNDRAISES IN THE QUARTER

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Companies	Date	Country	City	Total \$M
 Pixel Photonics	2022-03-28	Germany	Münster	1,609,500
 QunaSys	2022-03-27	Japan	Tokyo	10,000,000
 Sandbox AQ	2022-03-21	United States	Palo Alto	100,000,000
 Alice&Bob	2022-03-09	France	Paris	29,700,000
 Zero Point Motion	2022-03-07	United Kingdom	London	3,405,600
 TuringQ	2022-02-26	China	Shanghai	40,480,000
 QuantrolOx	2022-02-23	United Kingdom	Oxford	1,876,000
 Super.Tech	2022-02-23	United States	Chicago	1,650,000
 Classiq	2022-02-14	Israel	Tel Aviv-Yafo	33,000,000

Companies	Date	Country	City	Total \$M
 D-Wave Systems	2022-02-07	Canada	Burnaby	340,000,000
 Nord Quantique	2022-02-06	Canada	Shebrooke	7,742,000
 Algorithmiq	2022-02-04	Finland	Turku	4,000,000
 QSpace Technologies	2022-01-28	Russia	Moscow	900,000
 PQShield	2022-01-26	United Kingdom	Oxford	20,000,000
 HQS Quantum Simulations	2022-01-25	Germany	Karlsruhe	13,539,180
 AegiQ	2022-01-20	United Kingdom	Sheffield	4,743,865
 Atom Computing	2022-01-20	United States	Berkeley	60,000,000
 Terra Quantum	2022-01-20	Switzerland	Rorschach	60,000,000

**D-Wave precise amount to be finalized**

**SandboxAQ funding "well into 9 figures"**

Extracts from our intelligence platform

Notes: All fundraises shown in \$m and converted at spot rate on the day of announcement \*Total \$m is latest round

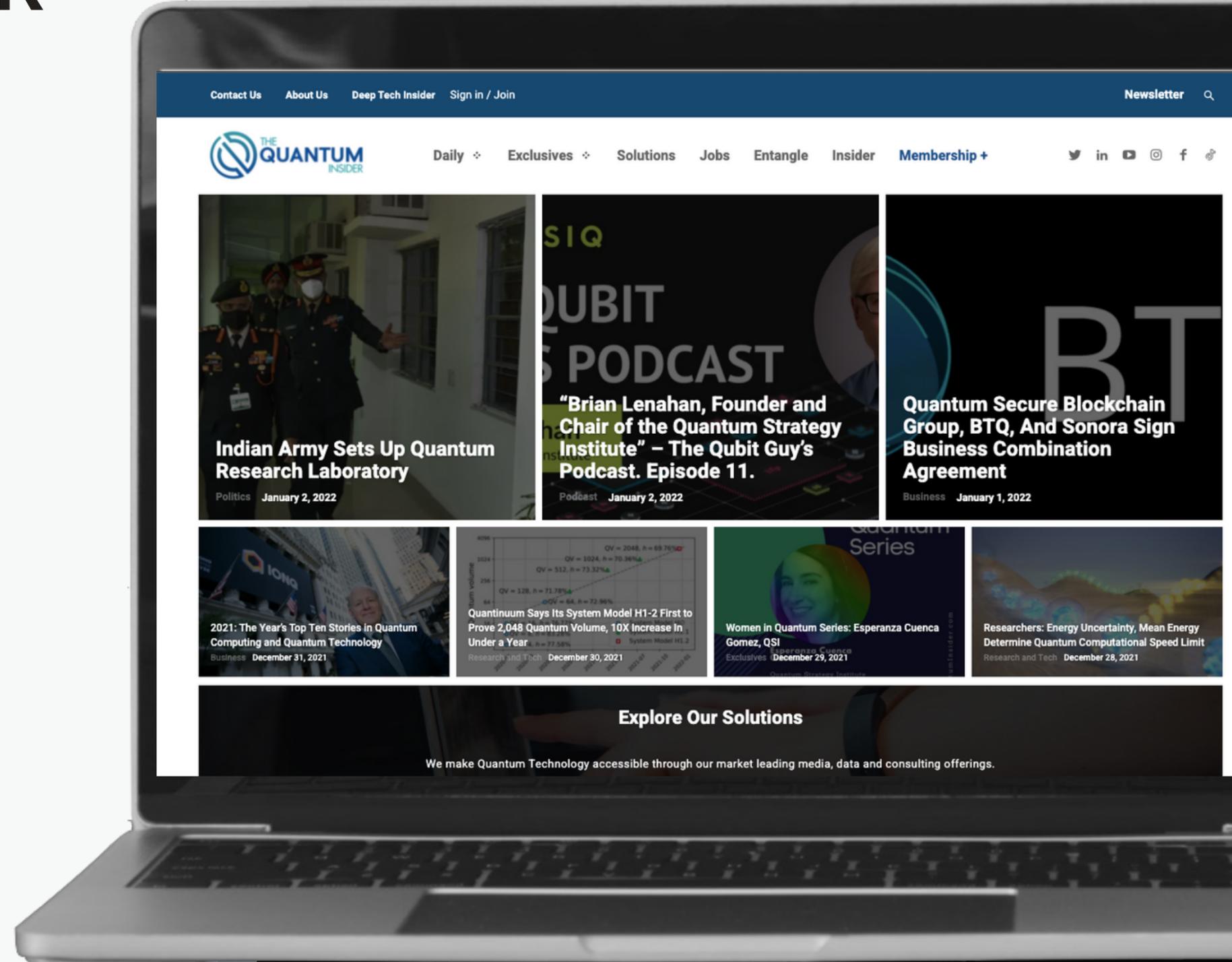
ABOUT TQD



# THE QUANTUM INSIDER

IS THE LEADING PROVIDER OF MARKET INTELLIGENCE DEDICATED TO QUANTUM TECHNOLOGY

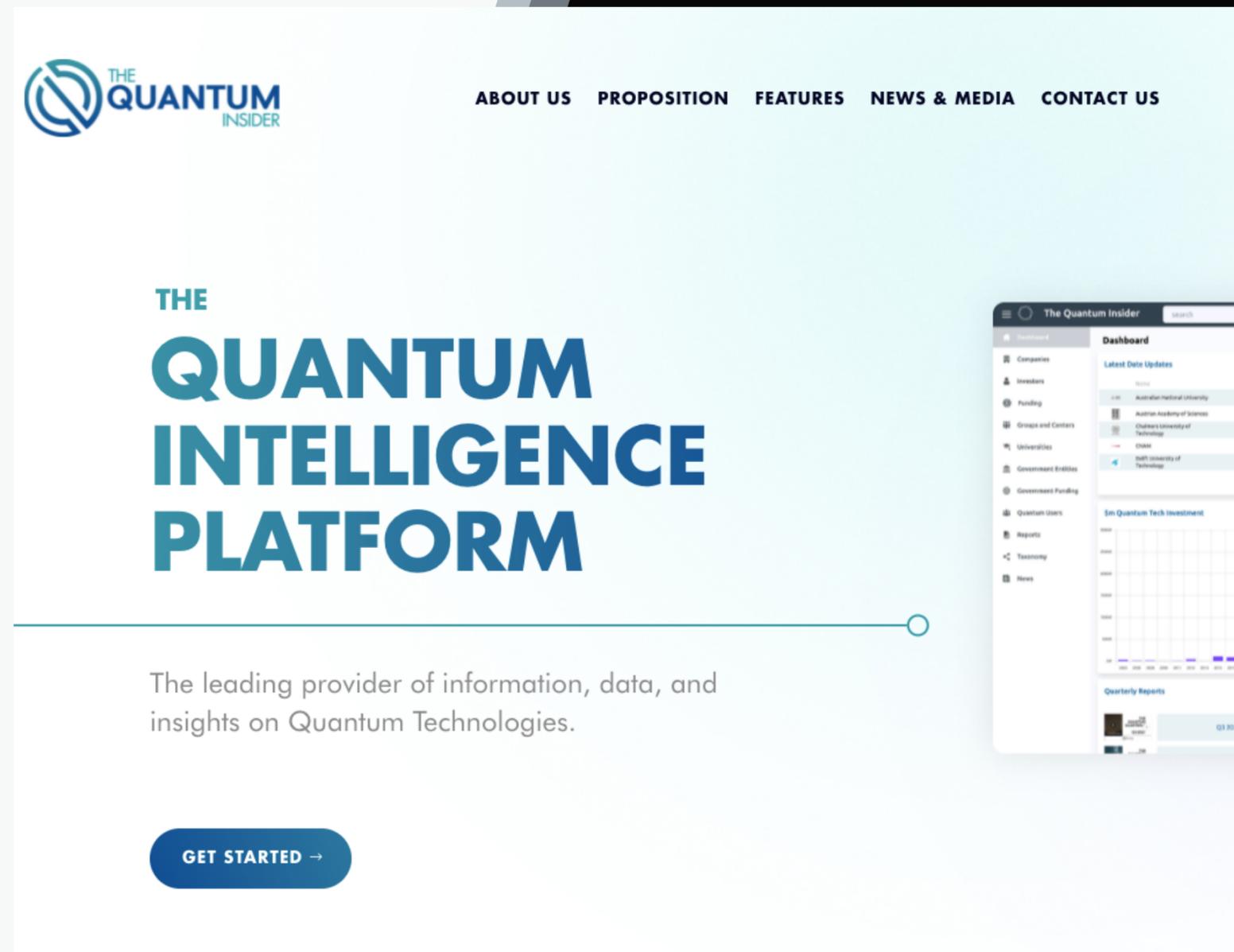
- Leading provider of content and information on the Quantum Computing industry
- Focus on the commercial applications of the technology
- News, analysis, exclusive interviews, long-form reviews and data (see next page)



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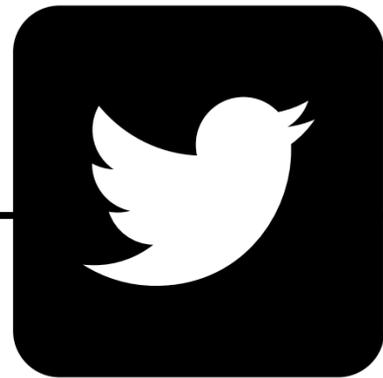
## PRICE UPON REQUEST

- For Advertisers: Appear on our industry leading dataset being used daily by our community.
- For Companies: Map your market and competitors.
- For Investors: Complete industry map with key insights and subsectors profiling the various QC stakeholders and their technological developments all the way to capital market players and the investments they make.





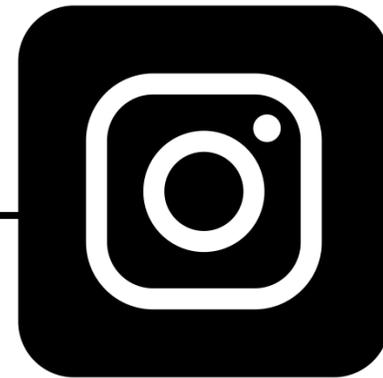
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