

IDC Survey Finds Optimism That Quantum Computing Will Result in Competitive Advantage

FRAMINGHAM, Mass., March 11, 2019 – A recent International Data Corporation ([IDC](#)) survey of IT and business personnel responsible for quantum computing adoption found that improved AI capabilities, accelerated business intelligence, and increased productivity and efficiency were the top expectations of organizations currently investing in cloud-based quantum computing technologies.

Initial survey findings indicate that while cloud-based quantum computing is a young market, and allocated funds for quantum computing initiatives are limited (0-2% of IT budgets), end-users are optimistic that early investment will result in a competitive advantage. The manufacturing, financial services, and security industries are currently leading the way by experimenting with more potential use cases, developing advanced prototypes, and being further along in their implementation status.

Complex technology, skillset limitations, lack of available resources, and cost deter some organizations from investing in quantum computing technology. These factors, combined with a large interdisciplinary interest, has forced quantum computing vendors to develop quantum computing technology that addresses multiple end-user needs and skill levels. The result has led to increased availability of cloud-based quantum computing technology that is more easily accessible and user friendly for new end users. Currently, the preferred types of quantum computing technologies employed across industries include quantum algorithms, cloud-based quantum computing, quantum networks, and hybrid quantum computing.

"Quantum computing is the future industry and infrastructure disruptor for organizations looking to use large amounts of data, artificial intelligence, and machine learning to

accelerate real-time business intelligence and innovate product development. Many organizations — from many industries — are already experimenting with its potential," said [Heather West](#), senior research analyst, Infrastructure Systems, Platforms, and Technology at IDC. "IDC's quantum computing survey provides insight into the demand-side of cloud-based quantum computing, including preferred technologies and end-user investment and implementation strategies. These insights should guide the product and service offerings being developed by quantum computing vendors, independent software vendors, and industry partners."

The IDC Special Study, [Quantum Computing Adoption Trends: 2020 Survey Findings](#) (IDC #US46049620), provides insights into near-term cloud-based quantum computing investment sentiments as well as end user cloud-based quantum computing adoption trends that will shape the future of the quantum computing industry. The study reports on findings from IDC's 2020 Quantum Computing End-User Perception and Adoption Trends Survey, which gathered insights from a multitude of sources, including surveys of 520 IT and business users worldwide and in-depth interviews with current quantum computing end-users.

The special study is part of IDC's Quantum Computing Special Report series, which also includes end-user insights from study of 2,700 European organizations, and secondary research focusing on quantum computing use cases. Additional findings can be found in the following IDC reports: [The Rise of Quantum Computing: A Qualitative Perspective](#) (IDC #US45652919), [European Quantum Computing End-User Sentiment: In Search of Business Impact](#) (IDC #EUR146014220) and [European Quantum Computing Use Cases Handbook, 2020](#) (IDC #EUR146014420).

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