

Short Communication

Quantum Technology Summit 2021

Valerie Keller

Senior Lecturer, Physical Sciences Division, University of Chicago, USA, *E-mail: vkeller@uchicago.edu*

As we know, <u>Quantum technology</u> is emerging and growing rapidly like never before. It will be the global market leader in the near future because the world-changing technology enables mankind a much faster and an exponential rate of speed to compute the data transmits the data as well as protect the data. Thus many governments, industries are funding and promoting the technology very rapidly and very soon it will be the largest investing technology in the world.

For data and number point of view, It is shown in the "IDQ" reports, the <u>quantum technology</u> global market will hit the mark of \$13B by 2023 with the highest rate of CAGR OF 26 to 30%.

We saw the <u>quantum computer</u> credibility and ability to go through a tremendous amount of calculation power and thus we are in the midst of a "<u>quantum Supremacy Race</u>", in the result, we will get the industry growing as never before. The emerging part of the quantum computer is that it could totally transform the commerce industry, intelligence department and it has the potential to change completely the way we see the military affairs and strategic balance of power.

Advances in <u>quantum computer architecture</u> style, faulttolerant algorithms and new fabrication technologies are currently reworking this "holy grail" technology into a sensible program poised to surpass ancient computation in some applications



According to the "Quantum Computing Market & Technologies – 2018-2024" report, the global market will grow at a CAGR of 24.6% throughout 2018-2024. During 2017 Quantum Computing technologies performance has increased at an impressive rate; we forecast that 2020-2020 will experience a surge of breakthroughs. The "Quantum Computing Supremacy Race", one that will result in ground-breaking computing power that surpasses the performance of digital supercomputers. Then you know that something big is stirring throughout the quantum world. In a way that was unheard of five years ago, quantum physicists are now partnering with corporate tech giants, to develop quantum computing capabilities and technologies as the foundation of a second information age. Advances in quantum computer design, fault-tolerant algorithms and new fabrication technologies are now transforming this "holy grail" technology into a realistic program poised to surpass traditional computation in some applications. With these new developments, the key question that companies are asking is not whether there will be a quantum computer, but who will build it and benefit from it.

According to the new market research report on the by Type Application of physics like (Optical communication & laser processing), Vertical (Commercial, Telecom, Research, Defense, Medical, Automotive, Electronics, & Industrial), & Geography -Global Forecast to 2022", this market is expected to be valued at USD 15.38 Billion by 2022, at a CAGR of 5.2% between 2017 and 2022. The major factors driving the growth of physics include increasing demand from the healthcare sector, environmental sector, financial sector and shift towards production of Nano and micro devices, and enhanced performance over the traditional material processing techniques.

Atomic Physics systems has been increasing due to the developing necessities of the industries as wells as the substantial demand. Atomic Physics market is estimated to reach USD 5.60 Billion by 2020, rising at a CAGR of 6.0% through the calculation period of 2015 to 2020. North America probably has the largest share, in the upcoming years; the atomic physics market is expected to see the maximum growth rate in the Asia-Pacific region, with accent on India, China and Japan. Some of the key players in the global atomic physics market comprise Agilent Technologies (U.S.), PerkinElmer (U.S.), Thermo Fisher Scientific (U.S.) and Bruker Corporation (U.S.).

As shown in the graph and according to market research, the investments are getting bigger and bigger day by day and just reached 1.5 billion\$ in 2020. So it is estimated that the amount should and will get bigger by the year 2020 and 2021 and reach \$5B.