## PsiQuantum - 2016

Redpoint Ventures focuses on investing in innovative companies that have the capacity to disrupt the market. Because of our focus on disruption, investing in PsiQuantum is a worthwhile decision that will likely see a return on investment in the range of 2000-3000%. PsiQuantum's quantum computers will likely revolutionize many different industries such as digital security, data science and molecular research.

Current computational solutions are limited by their fundamental construction, with calculations being performed on individual bits. Given that these bits can only exist in two discrete states, simple arithmetics can be performed, but more complex systems cannot effectively be run. As an example - the field of molecular science would greatly benefit from the ability to run simulations of individual chemical reactions. While it would take classical computers tens of thousands of years to run a single simulation quantum computers are able to solve them with ease<sup>1</sup>.

PsiQuantum's co-founders Jeremy O'Brien and Terry Rudolph are driven to achieve their goal of creating a quantum computer with one million qubits that are still simple to build. Jeremy is a Co-Chair at the Council on the Future of Computing and the Royal Academy of Engineering Chair in Emerging Technologies<sup>2</sup>. Terry Rudolph, professor of quantum physics at Imperial College London, has published over 150 articles relating to the field of quantum physics<sup>3</sup>. The two co-founders possess an unmistakable drive and are likely to help further disrupt other industries.

PsiQuantum plans to develop a quantum computer containing a minimum of one million qubits that can be built using tools traditionally used for building classical computers. If they succeed they will be able to produce quantum computers for a fraction of the current price and at a much more industrial rate. Their process focuses on minimizing quantum error and decreasing associated costs.

Companies such as Google or IBM also focus on building quantum computers but being larger corporations they are less likely to try innovative ideas. These companies also focus on a much smaller marker, building larger, more complex and more costly quantum computers for a relatively small niche<sup>4</sup>.

Overall, PsiQuantum is likely to achieve great success in disrupting many unrelated industries with their innovative ideas. The founders are ideal for their job, being passionate about quantum physics, with backgrounds in public speaking and researching theory respectively. Normalizing quantum computers will improve countless processes that are currently limited by classical computers, and the ability to produce quantum computers at a higher rate and lower price will be invaluable in dominating the market.

<sup>&</sup>lt;sup>1</sup> "Google performed the first quantum simulation of a chemical reaction." https://www.newscientist.com/article/2253089-google-performed-the-first-quantum-simulation-of-a-chemic al-reaction/. Accessed 9 Feb. 2021.

<sup>&</sup>lt;sup>2</sup> "Jeremy O'Brien - CEO - PsiQuantum Corp. | LinkedIn." https://www.linkedin.com/in/jeremy-o-brien-39482631. Accessed 9 Feb. 2021.

<sup>&</sup>lt;sup>3</sup> "Terry Rudolph - Google Scholar." <a href="http://scholar.google.com/citations?user=Y8cRR70AAAAJ&hl=en">http://scholar.google.com/citations?user=Y8cRR70AAAAJ&hl=en</a>. Accessed 9 Feb. 2021.

<sup>&</sup>lt;sup>4</sup> "IBM Quantum Computing." <a href="https://www.ibm.com/quantum-computing/">https://www.ibm.com/quantum-computing/</a>. Accessed 9 Feb. 2021.