Archer Materials Limited (ACN: 123 993 233)
Lot Fourteen, Frome Road, Adelaide SA 5000

ASX Announcement (ASX: **AXE**) 23 November 2022

Chairman's 2022 AGM address

Good morning and welcome to the fifteenth Annual General Meeting of Archer Materials Limited. We are fortunate to be back in Sydney and able to hold the AGM in person. We have more registered shareholders in Sydney than in any other capital city, and the in-person Sydney AGM allows the Board and management to interact and talk with shareholders.

This year has seen volatility in world shares markets due to climbing inflation in the US, the war in Ukraine and declining Chinese economic growth. This has led to an approximate year to date decline of 30 – 35% of the NASDAQ and ASX All-Tech Index. Over the same period, US-listed quantum computing stocks have suffered substantial share price decreases of 50 – 70%. Archer has not been immune; unfortunately, our share price has decreased by about 40% this year. We are disappointed with the share price decrease, however we don't believe this is currently a true reflection of our announced progress and achievements. We have been working hard to progress our technologies and in delivering on our promises to shareholders.

Although our share price is not where we would like it to be or where we think it should be based on our success so far, the global demand for quantum computing continues to grow. We have often explained the benefit of quantum computers and their potential to change the world. The US continues to enact legislation to promote quantum computing, the latest Chinese government five-year plan commits considerable funds to quantum computing, and European governments and universities are spending considerable funds developing quantum technologies. The building blocks are in place for technology companies such as Archer to benefit substantially from the mainstream adoption of quantum computing.

Our quantum technology is unique in that it has the potential to allow for a qubit processor chip, our ^{12}CQ chip, to be onboarded to existing mobile devices such as laptops, mobile phones and cars. We are still in the early stages of research and development on the way to full quantum computing, and there is considerable work to be done and scientific challenges to be overcome. Inventing a device that is a world-first can sometimes be challenging but often rewarding. We are fortunate to have some of the most brilliant people in Australia working for Archer, using some of the best labs and facilities to develop our technologies.

The ^{12}CQ chip is based on the unique properties of a carbon nanomaterial which was co-invented and discovered by our CEO Dr Mohammad Choucair. Dr Choucair and his colleagues created nanospheres that have the potential to act as qubits. The early work done by the Archer team was done using "clumps" of nanosphere powders. Over the past 12 months, Mohammad and his team have successfully begun embedding and manipulating this qubit material in miniaturised devices that are found in your mobile devices.

Building something that has never been invented is not easy. However, based on the results to date, we are confident that we are on the right track with the development of the ^{12}CQ chip. To date, we have shown an ability to overcome hurdles and deliver on our ambitious goals. We want to remind shareholders and investors of the potential global opportunity our technologies represent, now and into the future, as we grow more broadly as a promising semiconductor company. I will let that sink in – we are building something the world has never seen before. When was the last time you, as an investor, invested in a company with a true world-first technology?

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Over the past year, we have made considerable progress in the development of our ^{12}CQ chip and the biochip. While the ^{12}CQ chip is an intense focus for us, the biochip, lab-on-a-chip, is gradually receiving the credit it deserves. The ingenuity of our team has allowed us to build out an early prototype biochip platform using devices like wettable graphene transistors. These devices, paired with specialist software developed by our team, have allowed Archer to build in-house systems to rapidly progress the development of the biochip. This approach has allowed us to achieve quicker success and more cost-effective development.

As a semiconductor company, we can't stand still. The ^{12}CQ chip development complements our lab-on-chip technology, they are both quantum technologies in their own right, one uses a quantum material for qubits, the other graphene, also a quantum material, for sensing. At Archer, we have two technologies that have the potential to change Archer as a company significantly.

The carbon nanosphere is the specialist material needed to make the ^{12}CQ chip work, the biochip relies on graphene. Just last month we announced that we had successfully fabricated a liquid gated graphene field effect transistor (gFET). The gFET device is the sensing component that will be used for digitising biologically relevant signals, like those from target analytes of viruses or bacteria, and it is a foundational feature of Archer's 'lab-on-a-chip' biochip technology.

Like the ^{12}CQ chip, we have made considerable progress with the biochip development this year. In addition to the design and fabrication of the gFET, during the year Dr Mohammad Choucair and his team have successfully:

- fabricated hair-thin microfluidic channels on a silicon wafer;
- fabricated component feature sizes reaching sub-10nm on a silicon wafer that would potentially allow for high performance sensing; and
- developed biochemical reactions with the potential for on-chip detection and quantification of specific DNA or RNA fragments relevant to viruses and bacteria.

We are reaching the stage with our ^{12}CQ chip and biochip technologies where we need to expand and scale to access people, laboratory facilities, semiconductor foundries and end users. We regularly engage with overseas partners but intend to increase the pace and scope of this engagement during the next 12 months.

Quantum computing is relatively new in Australia with Archer being the only ASX listed quantum computing company. Consequently, one major disadvantage with developing a world-first technology in Australia is that we spend considerable effort educating potential investors on "what is quantum computing". In contrast, US and European investors tend to focus more on "we understand quantum computing, we understand your technology, but we are more interested in how you will deploy your technology". In addition to accessing overseas people and facilities, to help better realise the value of our work for our existing shareholders, we plan to engage more actively with overseas-based investors.

As highlighted above, we have achieved a considerable amount during the past year and could not have done so without Dr Choucair and the team he has assembled. After last year's capital raising, we undertook a significant employment drive and have brought onboard talented and enthusiastic people. We were fortunate to have attracted such high-calibre people.

Dr Choucair and his team have achieved a great deal in the past 12 months, and I want to thank them for their dedication and ingenuity. I also want to thank our shareholders for their continued support and faith in the Company.

If we can continue our success and work hard and cost-effectively, then the share price should react accordingly.

Quantum computing worldwide is growing at a phenomenal rate. As the only ASX listed company developing unique quantum computing technology, we believe we are well placed to participate in the global quantum technology industry. We will now move to the formal part of the meeting.

About Archer

Archer is a technology company that operates within the semiconductor industry. The Company is developing and commercialising advanced semiconductor devices, including chips relevant to quantum computing and medical diagnostics.

The Board of Archer authorised this announcement to be given to ASX.

General Enquiries
Mr Greg English
Executive Chairman

Dr Mohammad Choucair
Chief Executive Officer
Tel: +61 8 8272 3288

Media Enquiries
Mr James Galvin
Communications Officer
Email: hello@archerx.com.au

For more information about Archer's activities, please visit our:

Website:
https://archerx.com.au/

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