August 31, 2020

Fellow Shareholders,



Metamaterial Inc. 1 Research Drive Dartmouth / Nova Scotia B2Y 4M9 / Canada

metamaterial.com

META is reaching for the stars. We are working to enable the <u>Breakthrough Initiatives Starshot</u> mission to Alpha Centauri. The Starshot project aims to demonstrate proof of concept for ultra-fast light-driven nanocrafts attached to lightsails that can be accelerated by laser radiation pressure from an Earth-based source to ~20% of the speed of light. META is working on the design and development of ultra-lightweight high reflectivity and low absorptivity nano-structured materials for the lightsail.

META[™] is from the Greek word, meaning to "go beyond." We are mastering light and driving innovation. We look forward to providing shareholders with timely and detailed updates as we make progress on an expanding number of opportunities.

Our Mission: META develops technologies that **enable breakthrough performance** for a wide range of applications for our world class OEM partners via large scale production of nanostructured materials. Our approach is **software and Al-driven**, allowing us to design and develop new structured materials and functional prototypes much faster than traditional chemical synthesis. We supply key materials and components based on **three core technologies**: holography, lithography, and wireless sensing.

Application Examples:

- Holography: HOEs (holographic optical elements). Holography is a key enabling technology for AR (augmented reality) applications, such as smart glasses and AR automotive HUD displays.
- Lithography: NanoWeb[®] is a transparent conductive film, incorporating an invisible, sub-micron metal mesh, produced by Rolling Mask Lithography (RML[®]), which can be used for de-icing/de-fogging of automotive glass, headlights, and sensors.
- Wireless Sensing: META is developing GlucoWise[®], a non-invasive, pain-free device for monitoring of blood glucose without the need to pierce the user's skin.

Intellectual Property: In 2020 to date, META has been granted **11 new patents**. Since the Q1 report, we were granted a new patent in Japan, related to enhancing solar cell efficiency. We also filed a new patent family related to boosting the signal of MRI (magnetic resonance imaging) for faster medical imaging. META has a total of **52 granted and 37 pending patent applications**, including 26 in the United States and 63 in 18 other countries around the world. META's portfolio comprises 28 patent families, 19 of which are granted.

Route to Market: The breakthrough applications we are enabling require multi-year development cycles and longterm integration with the product plans of our customers. We help support our 27-person application development team, which includes 13 Ph.D. scientists, through a combination of development revenue from our corporate partners, along with government and other third-party funded programs. Our corporate partners, some of whom have also invested in META, include world-class companies, such as Airbus, Lockheed Martin, and Samsung. We have received non-dilutive research funding from the Atlantic Canada Opportunities Agency (a Canadian Government agency responsible for promoting economic growth in the Atlantic Provinces), **Sustainable Development Technology Canada** (SDTC), an arm's length foundation to "demonstrate new technologies to promote sustainable development," and **Innovate UK** (part of UK Research and Innovation), a non-departmental public body funded by a grant-in-aid from the UK government. These arrangements are typically structured over periods of six months to five years, often in multiple phases, with revenue recognized upon delivery of associated milestones and deliverables.

Key Performance Indicators (KPIs): Since inception, META has been awarded **more than 25 funded R&D projects** with **17 corporate partners**. In 2020 YTD, we have:

- **16 active programs**, of which 7 are in holography and 9 in lithography.
- In all of 2019, we **delivered on 14 projects**, one in holography and thirteen in lithography.
- We have engaged with a strong pipeline of customer opportunities, **25** in holography, and **28** in lithography. Of these, 7 proposals are currently under evaluation or negotiation.

Manufacturing Scale-Up: We have signed a <u>ten-year and eight months lease</u> for a **53,000 square foot facility**, which will host holography and lithography R&D labs and the next phase of META's volume manufacturing. META expects to open the facility before the end of 2020, following leasehold improvements, for which the landlord is providing a CAD \$500,000 loan.

META <u>has announced</u> the acquisition from North, Inc. (now Google) their first-of-a-kind, roll-to-roll holographic manufacturing technology originally developed by Intel for the <u>Vaunt AR glasses</u>. Digi-Capital projects the global virtual and augmented reality market will grow from <u>over \$13 billion this year to more than \$67 billion by 2024</u>. The new capability includes a pilot and a production line, which is capable of 100,000+ units per month. The modular nature of the pilot and production lines would allow it to be used for AR (augmented reality) and other holographic applications, such as automotive HUD displays, laser glare protection optical filters, diffractive optics, and other photonic applications. Capacity could be increased to 200,000 units per month with the addition of a second, eight-hour shift.

Financial Results: META is an early growth stage, platform company, moving toward volume production of products and components for applications in multiple end markets. In Q2:20, development revenue was approximately \$290K, compared to about \$257K in Q2:19. For the first half of 2020, development revenue totaled approximately \$885K, vs. about \$448K in H1:2019, and \$1.2MM in full-year 2019. Over the next 12-18 months, we expect development programs to account for the majority of our revenue. We target continued growth in the number of corporate development programs as a precursor to future product sales. Please visit the Investors section of our website for our complete interim statements and MD&A.

Conclusion: META is executing complex engineering challenges to develop breakthrough applications ranging from interstellar space exploration to the world's first truly non-invasive blood glucose monitoring system. Our corporate-funded development project pipeline is strong. Our medical wireless sensing applications have tremendous potential, and we are seeking strategic partners to help bring them to market.

We very much appreciate your continued support.

Sincerely

George Palikaras, Ph.D., President & CEO / Founder