



**META**<sup>TM</sup>

**MASTERING LIGHT**  
**DRIVING INNOVATION**

CSE:MMAT

JAN 2021

# FORWARD-LOOKING STATEMENTS

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This presentation contains “forward-looking statements” under applicable securities laws with respect to Metamaterial Inc. (“Metamaterial” or “the Company”) including, without limitation, statements regarding adjusted, estimated, forecasted, pro-forma, projected or intended or anticipated future operations and/or financial performance, and all other statements that are not historical facts, statements regarding the Company’s priorities, the business strategies and operational activities of Metamaterial and its subsidiaries, the markets and industries in which the Company operates, including market opportunities for the Company’s products and technology, environmental benefits the Company’s development and production pipeline and revenue potential, and the growth and financial and operating performance of Metamaterial, its subsidiaries, and investments. Although the Company believes that the expectations reflected in such forward-

looking statements are reasonable, such statements involve risks and uncertainties and are based on information currently available to the Company. Actual results or events may differ materially from those expressed or implied by such forward-looking statements. Factors that could cause actual results or events to differ materially from current expectations, among other things, include research and development risk associated with the Company’s product roadmap, the Company’s ability to find investment partners and the timing and ability to get government approval for medical applications. These forward-looking statements reflect various assumptions made by the Company, are made as of the date hereof, and the Company assumes no obligation to update or revise them to reflect new events or circumstances, except as required by law.



‘Meta’ – from the  
Greek word to Go Beyond.

## At a Glance

**META™**

**Disruptive Platform Technology** – over \$60M invested over 10 years

**Extensive and rapidly growing Intellectual Property** – 28 Patent families (89 patents filed internationally)

**Purpose-built Proprietary Manufacturing** – 10,000 m<sup>2</sup> current nanopatterning capacity, growing to 1 million m<sup>2</sup>

**Balanced Revenue Model** – B2B product sales, Direct retail sales, and long-term OEM arrangements with potential licensing income

**Global Blue-Chip OEM Customers** sponsoring product development projects and/or becoming commercialization partners

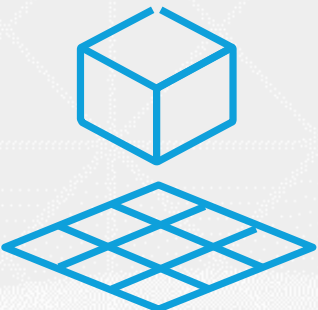
**Strong Market Pull** – growing unsolicited product and partnership inquiries from multiple industries to supplement on-going strategic and partnered outbound promotional efforts

**Significant Non-dilutive Government Funding** – access to multiple millions in government programs with additional funding available

**Headquarters: Halifax, Nova Scotia, Canada** – R&D Offices in Silicon Valley and London, UK

**Changing the way we use,  
interact and benefit from light  
and other forms of energy**

# WHO WE ARE



## Design & Nanofabrication Experts

Breakthrough performance across a wide range of applications, driven by customer requests



## Developed Platform

\$60M Invested Since 2011



## 3 Core Capabilities

Holography, Lithography & Wireless Sensing



## Large Patent Portfolio

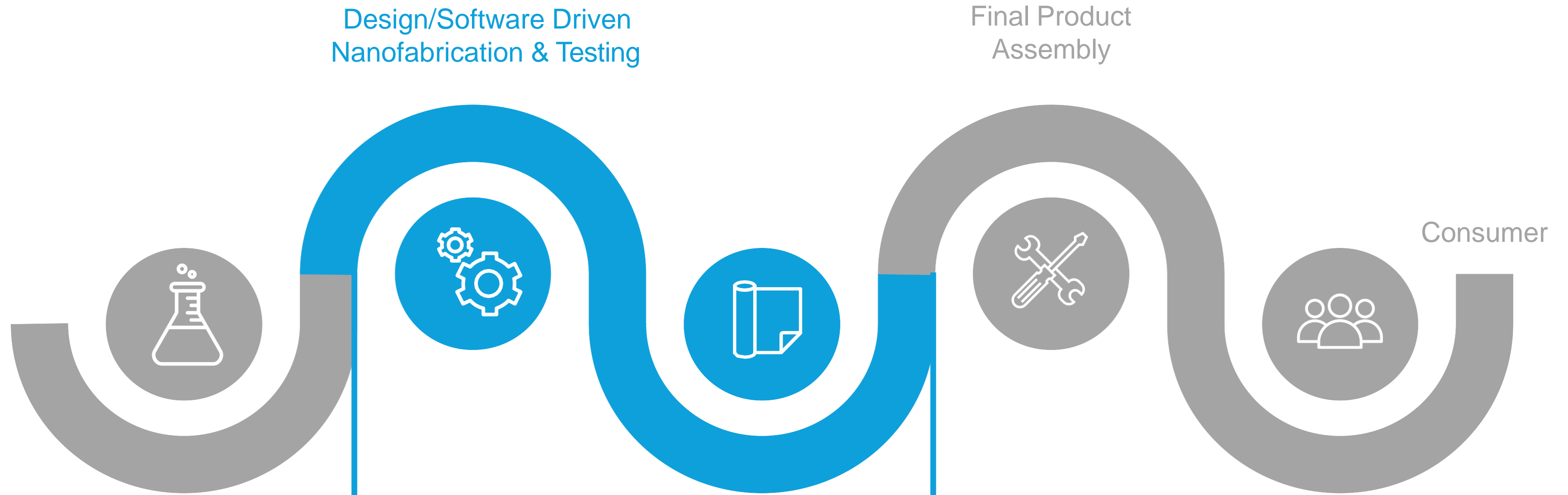
54 Granted Patents in 28 Patent Families.  
35 Patents Pending



## Strategic Partnerships

Relationships with Fortune500 Companies across multiple industries; Automotive, Consumer Electronics, Medical, & Aerospace

# META is a Key Player in the Value Chain



Design/Software Driven  
Nanofabrication & Testing

Final Product  
Assembly

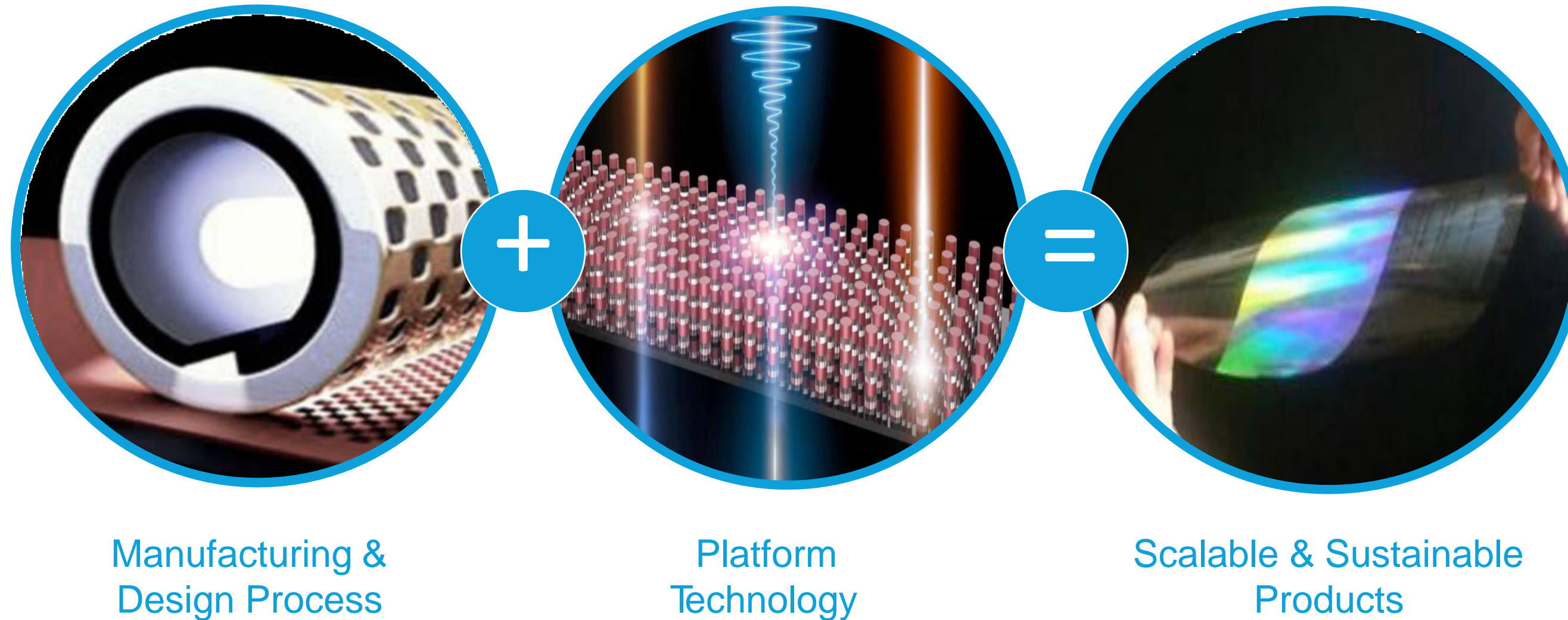
Consumer

Raw Materials

Large Area  
Nano-patterning

**META works with raw material vendors  
and Original Equipment Manufacturers.  
META has a library of proprietary  
materials**

# META's Platform Technology

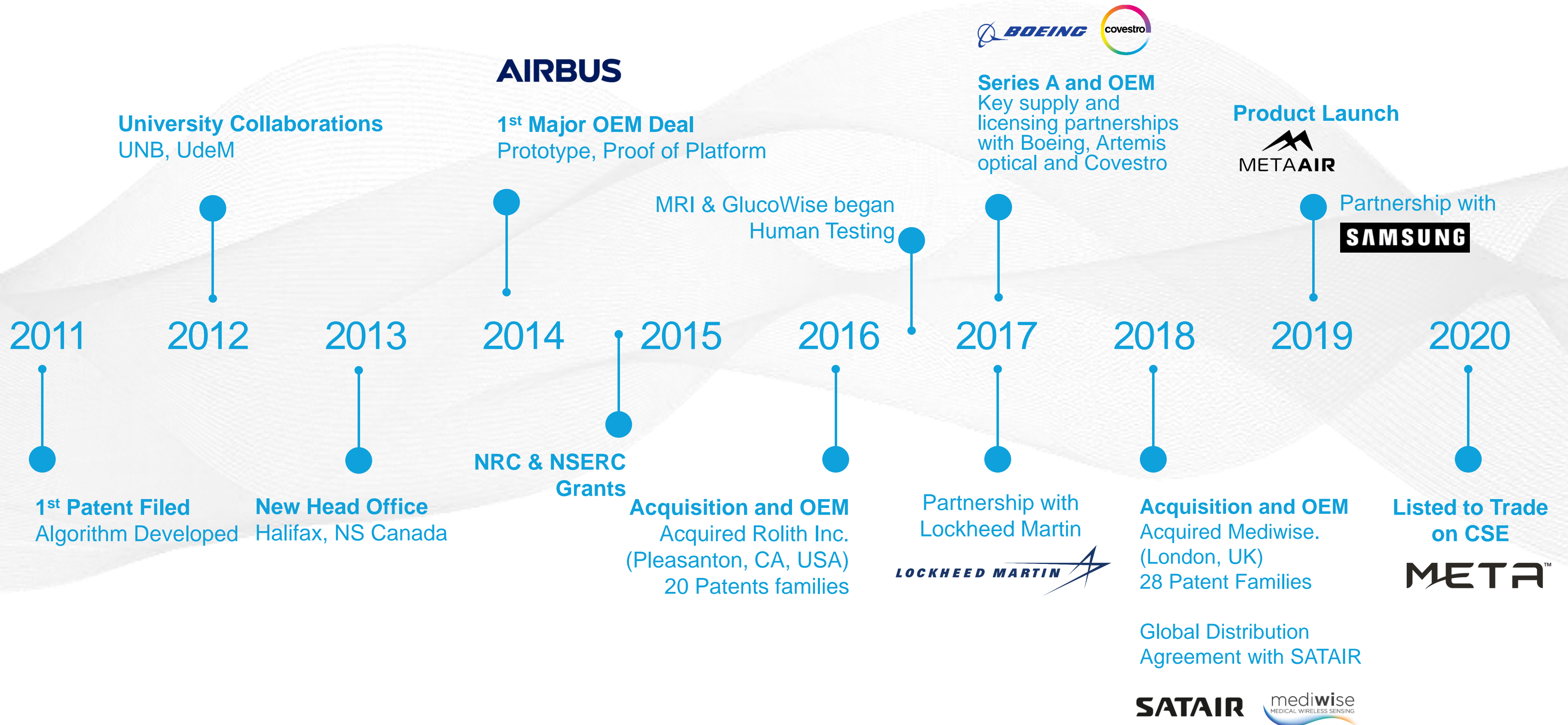


## Key Advantages vs. Competition:

- Lower Production Cost
- Flat & Scalable Manufacturing
- High Production Yield
- Precise Control
- Higher Performance
- Customizable Designs
- Production in Minutes vs. Competitors Taking Hours
- Sustainable Raw Materials

**A leader in metamaterials design and manufacturing moving the technology from R&D to commercialization**

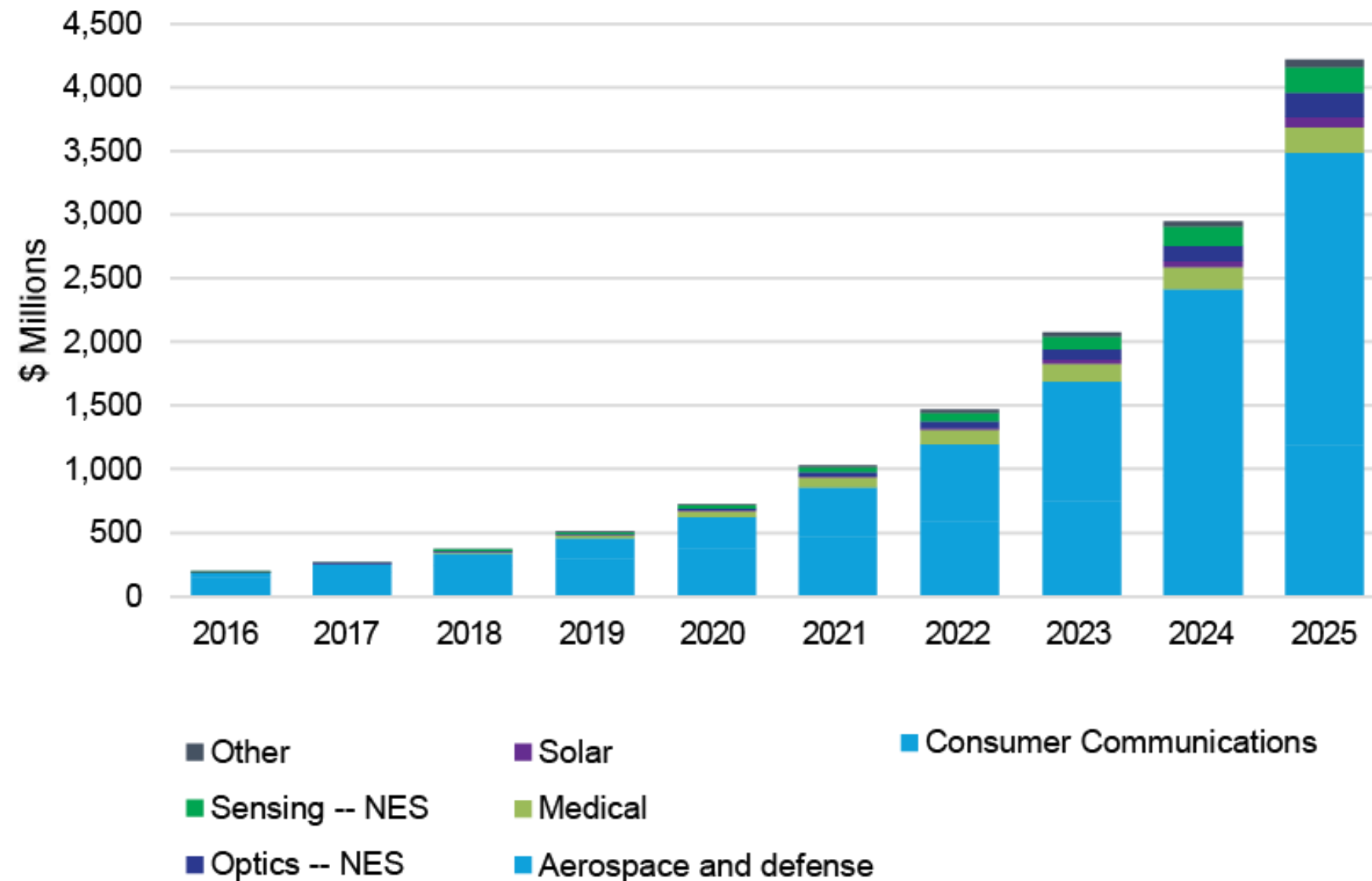
# COMPANY TIMELINE





# MARKET OPPORTUNITIES

Forecast of Revenues from Metamaterials by Application/End Segment (\$ Millions)



**\$4.1B**  
by 2025 Metamaterials Market (Emerging Market 43% CAGR)

“ Lux Research commented in their June 2019 Report, they expect the Metamaterials market to move towards \$10.9bn by 2030.

# BROAD AND GROWING TARGET APPLICATIONS



## Medical Devices

Non-invasive glucose monitoring, Vital sign monitoring, Faster MRI imaging, Zero-radiation Cancer and CNS early-stage screening.

## Consumer Electronics

Augmented Reality, Displays & Touch Screens, Transparent Antennas & EMI Shielding

## Automotive

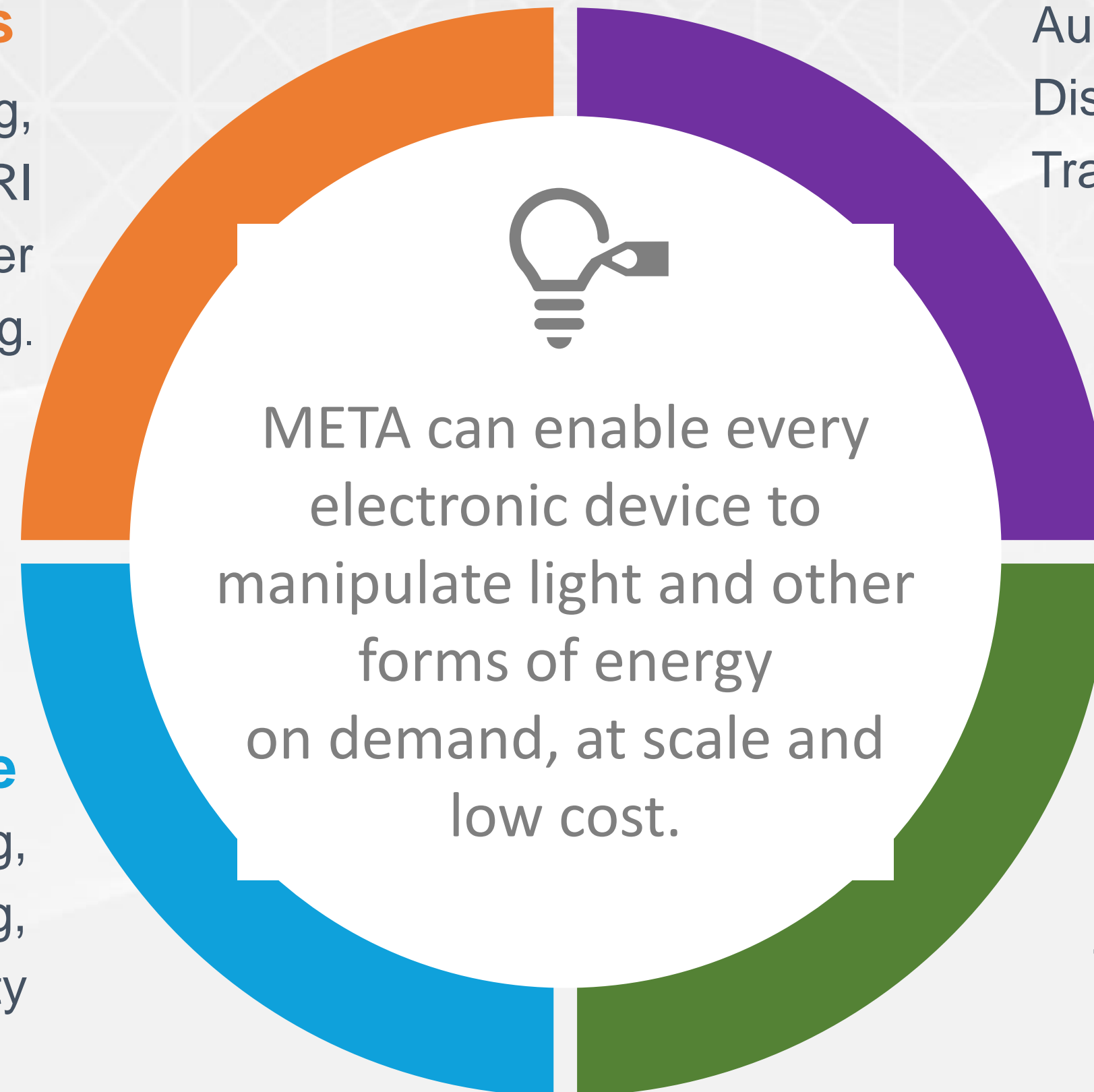
Head-up Displays, 5G and LiDAR enhancements, Passenger Biosensors, De-icing and De-fogging, Light management

## Energy

Next Generation Solar Cells  
Thermal Management

## Aerospace/Defense

De-icing and De-fogging, Transparent EMI Shielding, Laser Protection, Security



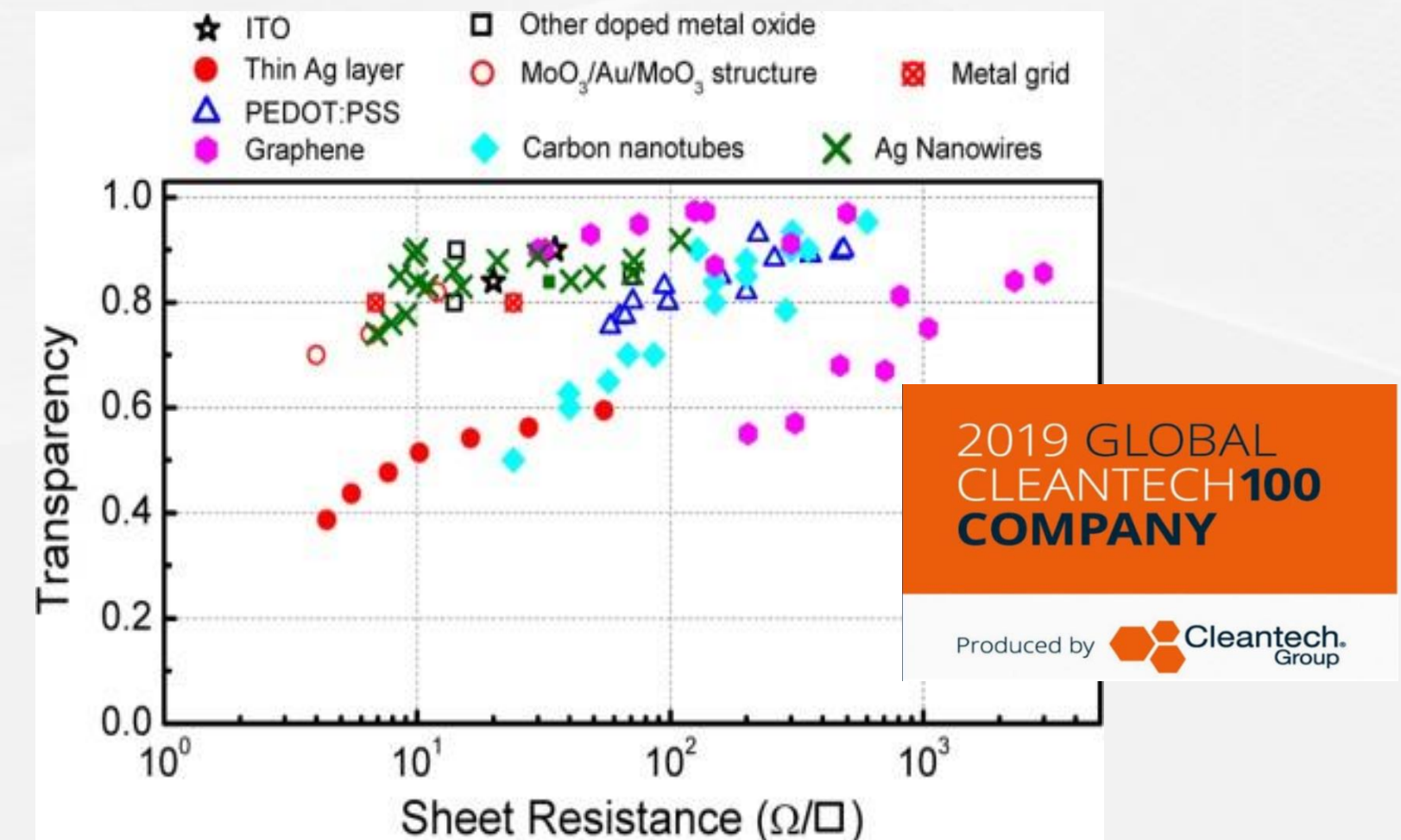
# META Delivers On Performance, Cost & Sustainability



Indium is a key component of ITO (Indium Tin Oxide). It is a scarce metal and very difficult to extract. ITO accounts for >75% of the \$7.6B 2025E global market for transparent conductive films (source BCC Research). META developed NanoWeb® the world's most transparent and conductive-combined metal mesh product, delivering across the board significant reductions in:



**META's products have been demonstrated to offer 10-20x thinner materials with up to 40x performance improvements**



Source: Internal META estimates

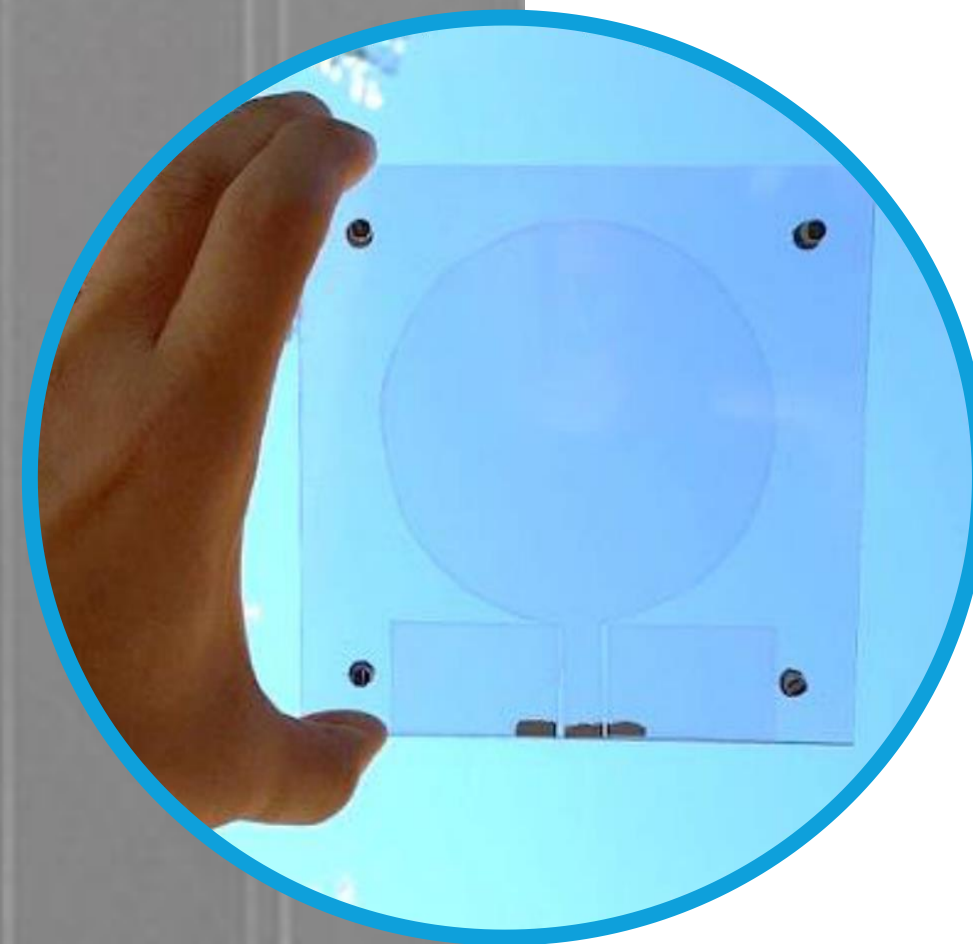
# Transparent Sensors

In 2019, META partnered with Samsung's Advanced Institute of Technology team, to develop transparent fingerprint sensors suitable for next generation smartphones and tablets.

"Transparent fingerprint sensors were fabricated to have lower resistance and higher transmittance compared to the conventional sensors."

"Fingerprint sensors made with RML can have lower sheet resistance and higher visible light transmittance than the sensors made of conventional transparent conductor materials, such as ITO and silver nanowires"

Source: Conference of the Next Generation Lithography 2019 (public information) Hyun-Joon Kim-Lee1.



CO-DEVELOPMENT PARTNER

**SAMSUNG**

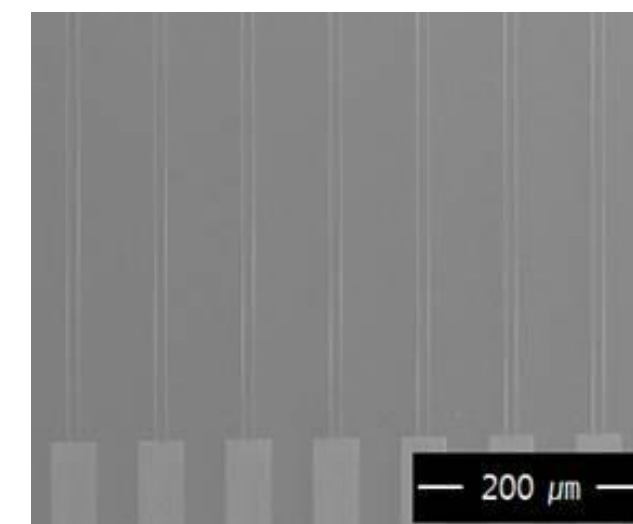
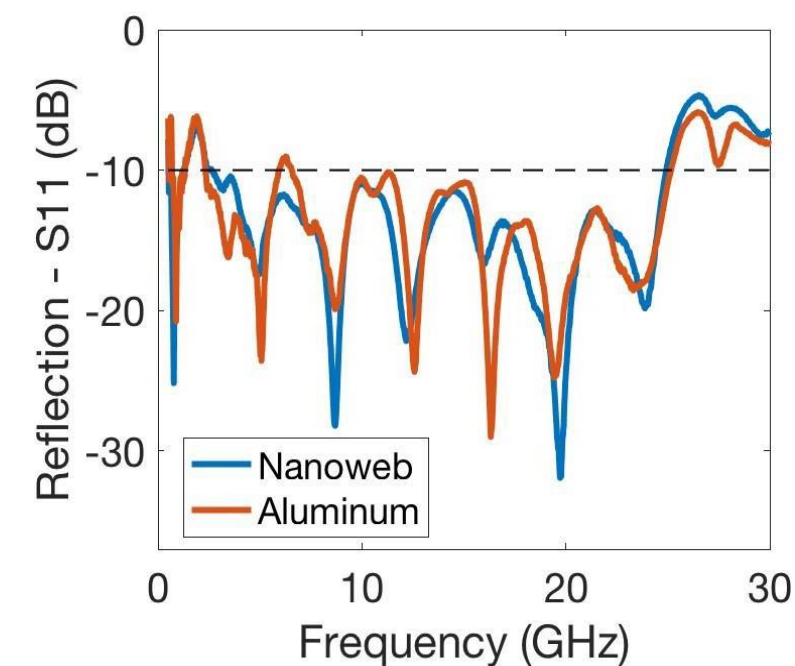
— 200 μm

## COMPETITIVE ADVANTAGE

META's lithography capability enables fabrication of sensors & antennas completely invisible to the human eye.

META's touch sensors and transparent antennas can be integrated into smartphone displays, on windows of vehicles or buildings and home appliances.

META's antennas can operate from low to high frequencies (2G, 3G, 5G and beyond) and provide communication systems for conventional, EV and autonomous vehicles.



Source: Internal META estimates

# Solving Global Challenges Together With OEM Partners And Customers

# META™

Selected Target Partners and Customers in Automotive, Medical, Aerospace & Defense, Consumer Electronics and Energy



Innovate UK



Atlantic Canada Opportunities Agency



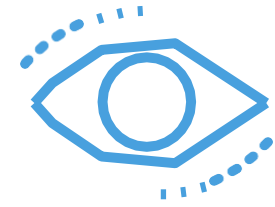
Sustainable Development Technology Canada



# Product Roadmap – NearTerm



Focus on Aerospace & Defence and Consumer Electronics /IOT markets



## Augmented Reality

Optical components for Augmented Reality systems & head-up displays

**PARTNERS:** Leading AR companies, Top Automotive OEMs, Tier 1 Automotive suppliers

**CAPEX INVESTMENT / SOURCE:** Existing In-house, new roll-to-roll capacity to be installed in 2021

**PRODUCTION CAPACITY:** Very High volumes

REVENUE POTENTIAL\*

**\$50.0M/yr**

1,000,000 units @ \$50 / Unit



## Optical Filters and Laser Protection

metaVISION™ Advanced Optical Components

**PARTNERS:** OEM eyewear manufacturers, Law enforcement agencies, Commercial optical component marketplace

**CAPEX INVESTMENT / SOURCE:** Existing In-house

**PRODUCTION CAPACITY :** High volumes

REVENUE POTENTIAL\*

**\$20.0M/yr**

200,000 units @ \$100 / Unit

metaAIR® eyewear laser protection

**PARTNERS:** Satair, Airbus, Covestro, RCMP, Lufthansa Technik

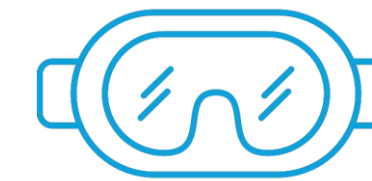
**CAPEX INVESTMENT / SOURCE:** Existing In-house

**PRODUCTION CAPACITY:** High volumes

REVENUE POTENTIAL\*

**\$38.4M/yr**

48,000 units @ \$800 / Unit



## Transparent Heaters

NanoWeb® film-based heating/defogging

**PARTNER:** Eyewear OEMs, Government Agencies, Headgear OEMs

**CAPEX INVESTMENT / SOURCE:** In progress (installation Q4 2020)

**PRODUCTION CAPACITY:** Low volumes until 2021

REVENUE POTENTIAL\*

**\$10.0M**

25,000 units @ \$400 / Unit



## Transparent Antennas

NanoWeb® film-based antennas casted into glass for 5G comms

**PARTNERS:** Tier 1 Glass OEMs and TelCo

**CAPEX INVESTMENT / SOURCE:** In progress (installation Q4 2020)

**PRODUCTION CAPACITY:** Low volumes until 2021

REVENUE POTENTIAL\*

**\$3.0M/yr**

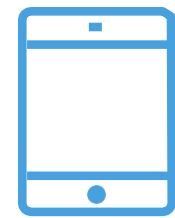
100,000 units @ \$30 / Unit

\*Internal META estimates based on META's forecasted annual manufacturing capacity (5days, 2 shifts) and avg. selling price per unit (pricing may vary depending on volume orders)

# Product Roadmap – Mid Term to Long Term 1/2



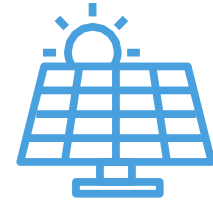
NanoWeb® product line expansion towards Automotive, 5G and Energy applications



## Displays

Optical components for large area displays (smartphones, tablets, TV screens)

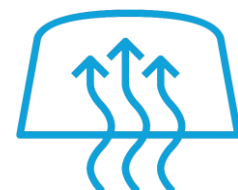
**PARTNERS:**  
TelCo OEMs, Automotive OEMs, Tier 1 projector OEMs



## Solar

Coating that improves solar panel efficiency, Transparent conducting electrodes, ITO replacement

**PARTNERS:**  
ENEL Green Power, Solar OEM manufacturers, Lockheed and other Aerospace OEMs



## Transparent Heaters

Transparent conducting film, ITO replacement (heating/defogging)

**PARTNERS:**  
Tier 1 glass OEMs, Automotive OEMs, TelCo OEMs



## Transparent EMI Shielding

NanoWeb film-based protection against electromagnetic interference

**PARTNERS:**  
Consumer Electronics OEMs, Aerospace OEMs, Automotive OEMs, Tier 1 Suppliers



## Touch Sensor for Flexible Displays

NanoWeb placed below the screen to provide Touch functions

**PARTNER:**  
TelCo OEMs



## Energy Harvesting

NanoWeb films as insulators & electrodes

**PARTNER:**  
Energy OEMs

MARKET POTENTIAL

**\$14.2B**

by 2025 (CAGR 9.2%)

MARKET POTENTIAL

**\$7.6B**

by 2025 (CAGR 9.2%)

According to BCC Research, the global market for transparent conductive films and technologies should grow from **\$4.9 billion in 2020 to \$7.6 billion by 2025** with a compound annual growth rate (CAGR) of 9.2% for the period of 2020-2025.

# Product Roadmap – Mid Term to Long Term 2/2

Expansion towards Medical Applications – Licensing/Project Financing opportunities



## MRI Medical Imaging

MRI Imaging with metamaterial film

### COMMERCIALIZATION

Requires \$2M Investment to Commercialize (possible market entry by 2021)

### MARKET POTENTIAL

**\$2.5B**

50,000 MRI's @ \$50k / Unit



## Non-invasive Glucometer

Dual Sensor mm-wave technology with metamaterial film

### COMMERCIALIZATION

Requires large investment and possible partner for trials and commercialization.

### MARKET POTENTIAL

**\$15B**

500,000,000 users, 9.6% CAGR



## Early Stage Cancer Breast Screening

Radio-wave Imaging for breast screening with metamaterial film

### COMMERCIALIZATION

Requires large investment and possible partner for trials and commercialization.

### MARKET POTENTIAL

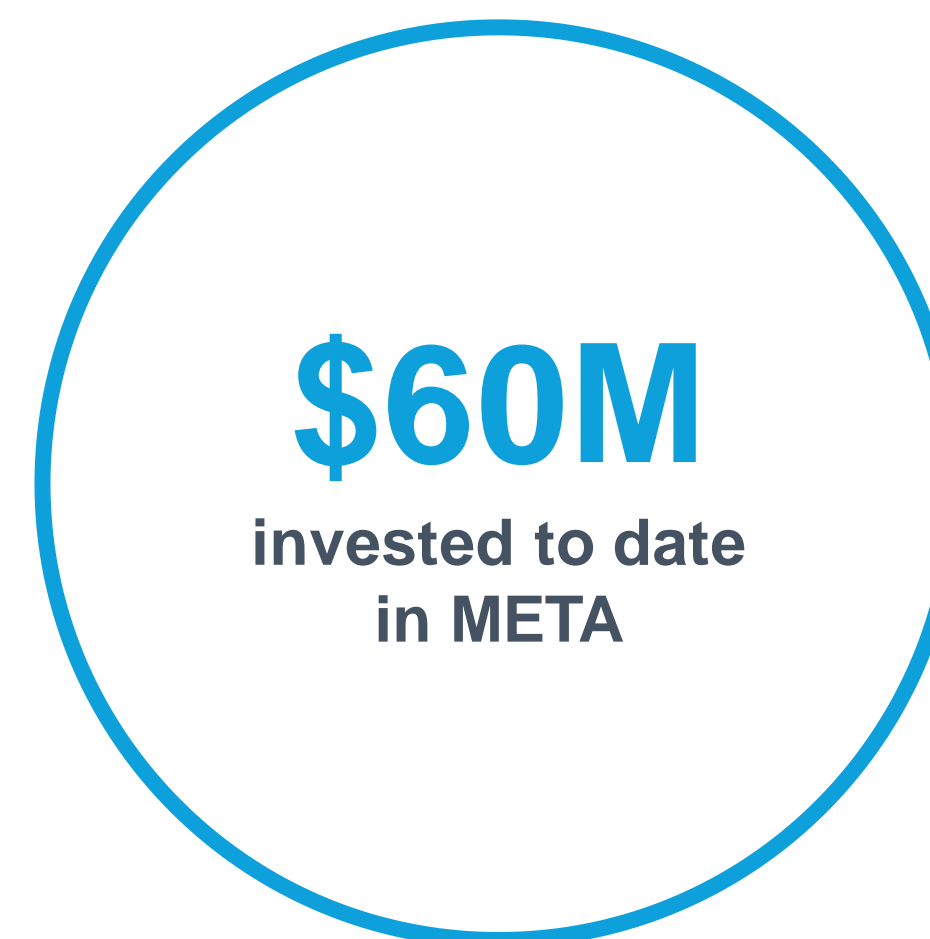
**\$4.6B**

250,000,000 women / year, 8.0% CAGR



# Capitalization

Decription	As of 01/08/2021
Common Shares Issued & Outstanding	83,597,092
Stock options (“ESOP”)	12,586,936
Deferred Share Units (“DSU”)	1,872,750
Warrants	1,651,352
Broker Warrants	52,861
Unsecured Convertible Debentures	4,428,571
Unsecured Convertible Promissory Notes	2,840,044
Secured Debenture	7,142,857
<b>Total Shares Issued &amp; Outstanding Fully Diluted</b>	<b>114,172,463</b>



## Selected Financial Highlights – Q3:20 (CAD)



	Q3:20	Q3:19	2019		September 2020
Product Sales	\$ -	\$ 627	\$ 31,426	Cash and cash equivalents	\$ 3,208,911
Development Revenue	\$ 263,014	\$ 215,873	\$ 1,163,632	Inventory	\$ 615,225
<b>Total Revenue</b>	<b>\$ 263,014</b>	<b>\$ 216,500</b>	<b>\$ 1,195,058</b>	<b>Total current assets</b>	<b>\$ 4,953,689</b>
<b>Gross Profit</b>	<b>\$ 261,774</b>	<b>\$ 216,255</b>	<b>\$ 1,182,920</b>	Intangible assets, net	\$ 5,796,302
Operating Expenses	\$ 3,198,122	\$ 3,139,943	\$ 11,698,899	Property and equipment, net	\$ 3,065,960
Government assistance	\$ (147,069)	\$ (45,671)	\$ (1,000,433)	<b>Total assets</b>	<b>\$ 13,815,951</b>
Other expense (income)	\$ 962,599	\$ 416,097	\$ 1,687,076	Deferred revenue, current	\$ 1,900,357
<b>Net Loss</b>	<b>\$ (3,707,717)</b>	<b>\$ (3,249,213)</b>	<b>\$ (11,083,258)</b>	Payables, debt, debentures, other	\$ 2,296,754
				<b>Total current Liabilities</b>	<b>\$ 4,197,111</b>
				Deferred revenue	\$ 2,527,044
				Long-term debt, other	\$ 11,650,232
				<b>Total non-current liabilities</b>	<b>\$ 14,177,276</b>
				<b>Shareholders' Deficiency</b>	<b>\$ (4,558,436)</b>

This information should be read in conjunction with the complete financial statements and the associated management discussion and analysis, available on the Investors section of our website at [www.metamaterial.com](http://www.metamaterial.com), as well as under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com)

# Executive Team



## **George Palikaris, Ph. D.**

Founder, President and CEO  
10 years in leadership positions of high-tech startups. Goldman Sachs and EY awards for entrepreneurship



## **Kenneth Rice, MBA, JD, LLM**

Chief Financial Officer & EVP  
30+ years experience, public and private company CFO, in-house counsel, operations, and corporate development executive in technology and life sciences



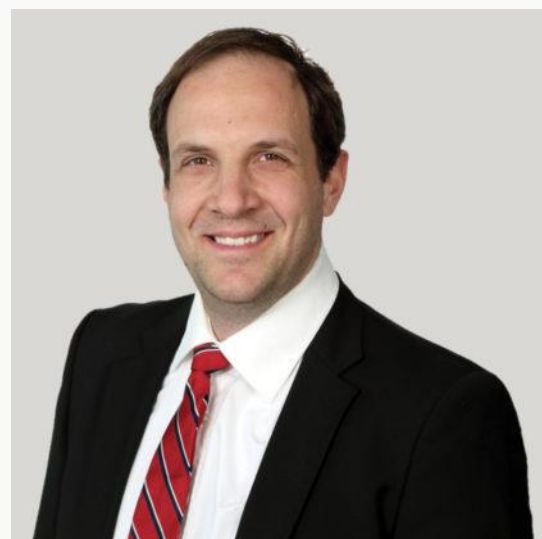
## **Jonathan Waldern, Ph. D.**

Chief Technical Officer  
25 years experience in commercialization of holographic and lithographic/nanomaterials for photonic applications



## **Gardner Wade**

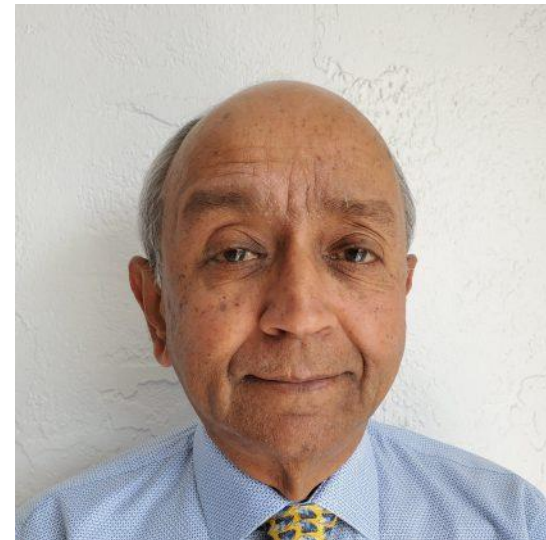
Chief Product Officer  
20+ years in managing development engineering of high definition optical eyewear for global brands in military, flight and performance sports applications



## **Themos Kallos, Ph. D.**

Co-Founder, Chief Science Officer  
10 years experience in applied physics  
28 filed patents and 50 publications

# Board of Directors



## **Ram Ramkumar, B Tech, MBA**

Chairman

10 years private investor in technology  
35+ years on boards of numerous  
TSX- and NASDAQ-listed companies



## **Allison Christilaw, MBA, ICD.D**

Director

20+ years Strategy Expert, Governance,  
HR, Management Consulting.  
Sold her business to Deloitte Canada



## **George Palikaras, Ph. D.**

Founder, President and CEO

10 years in leadership positions of  
high-tech startups. Goldman Sachs  
and EY awards for entrepreneurship



## **Steen Karsbo**

Director

Close to 40 years of experience in aviation  
industry management and consulting.  
Various senior management positions for  
Satair, an Airbus company



## **Maurice Guitton**

Director

Aerospace industry veteran,  
inventor and entrepreneur  
40+ years experience in  
composite advanced materials



## **Eric Leslie**

Director

28 years experience in management  
consulting, venture advisory, and as an  
officer and or director of numerous  
public and private companies



**METAL**<sup>TM</sup>

**ROB STONE**

Communications

C: 617-901-4011

E: [rob.stone@metamaterial.com](mailto:rob.stone@metamaterial.com)

**MARK KOMONOSKI**

Director IR & Capital Markets

C: 403.470.8384

O: 877.255.8483

E: [mark@metamaterial.com](mailto:mark@metamaterial.com)