



NASDAQ:MMAT

JUNE 2021

Forward Looking Statements

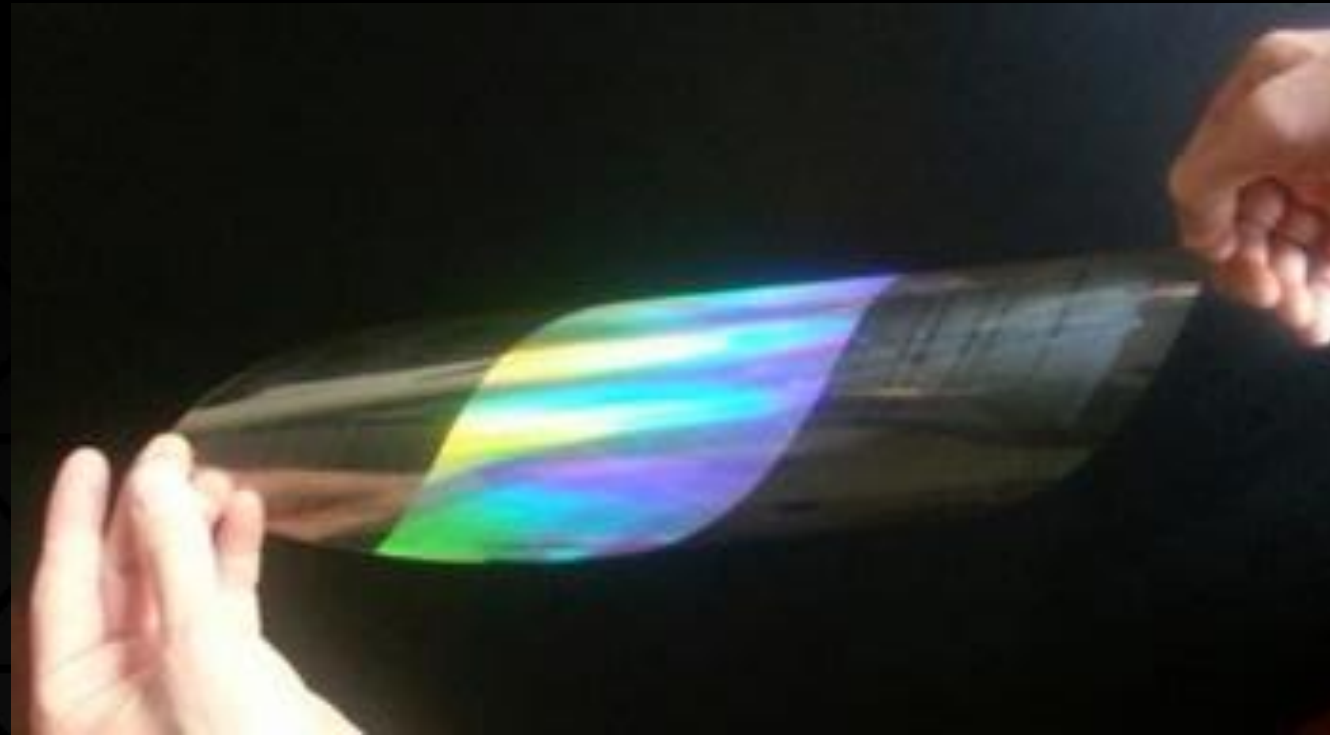


This presentation includes forward-looking information within the meaning of Canadian securities laws and within the meaning of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, regarding Meta Materials Inc. (the “Company”) and its business, which may include, but are not limited to, statements with respect to the business strategies, product development and operational activities of the Company. Often but not always, forward-looking information can be identified by the use of words such as “potential,” “predicts,” “projects,” “seeks,” “plans,” “expect”, “intends”, “anticipated”, “believes” or variations (including negative variations) of such words and phrases, or statements that certain actions, events or results “may”, “could”, “should,” “would” or “will” be taken, occur or be achieved. Such statements are based on the current expectations and views of future events of the management of the Company and are based on assumptions and subject to risks and uncertainties. Although the management of the Company believes that the assumptions underlying these statements are reasonable, they may prove to be incorrect. The forward-looking events and circumstances discussed in this presentation may not occur and could differ materially as a result of known and unknown risk factors and uncertainties affecting the Company, including risks related to the management and potential divestiture of the assets in the Company’s oil and gas business, the potential benefits of the Company being publicly listed on the Nasdaq Capital Market, the

potential benefits of the transaction with Torchlight Energy Resources Inc. to the Company’s stockholders, the research and development projects of the Company, the market potential of the Company’s products, the investment priorities and manufacturing plans of the Company, the scalability of the Company’s production ability, the technology industry, market strategic and operational activities, and management’s ability to manage and to operate the business. More details about these and other risks that may impact the Company’s businesses are described under the heading “Risk Factors” in the Company’s Form 10-Q filed with the SEC on May 14, 2021, in the Company’s Form 10-K filed with the SEC on March 18, 2021, and in subsequent filings made by Meta Materials with the SEC, which are available on SEC’s website at www.sec.gov. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Accordingly, readers should not place undue reliance on any forward-looking statements or information. No forward-looking statement can be guaranteed. Except as required by applicable securities laws, forward-looking statements speak only as of the date on which they are made and the Company does not undertake any obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, or otherwise.

Solutions for everyday life

META[®]

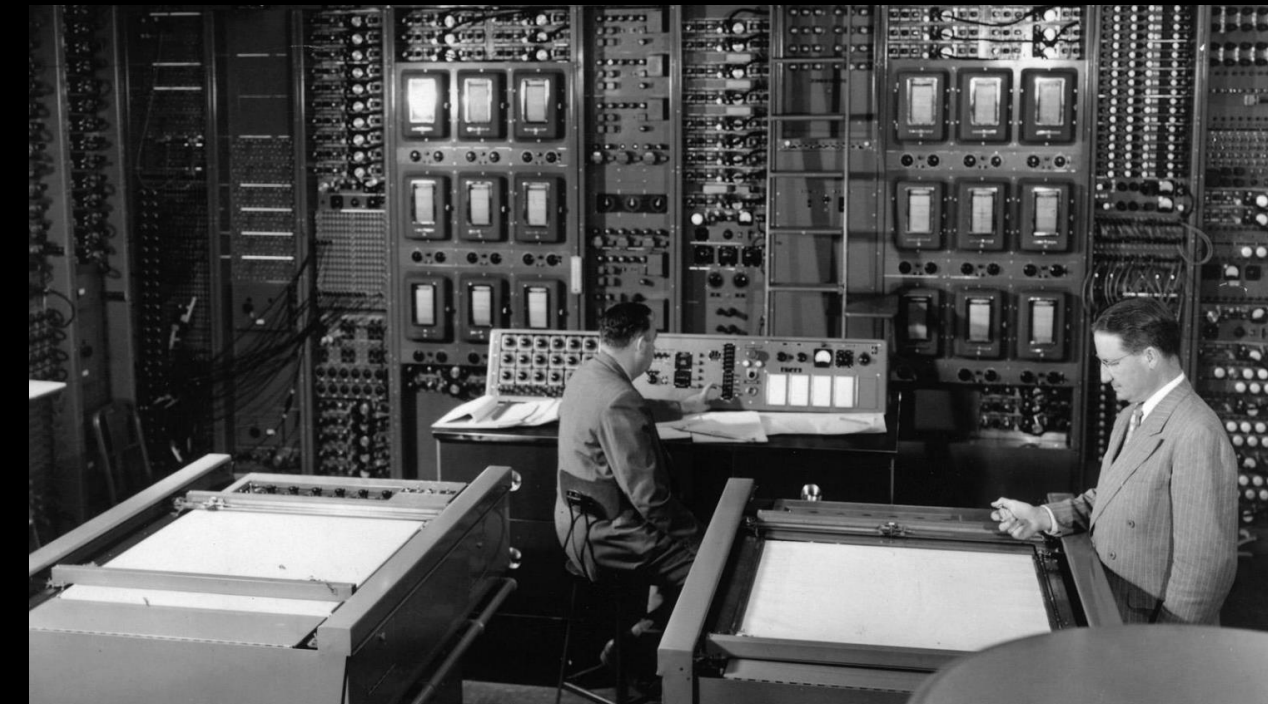


META delivers **breakthrough performance**, across a range of applications and industries, by designing, developing and manufacturing **sustainable, highly-functional materials**.

The Birth of the Digital Age

Almost every great advancement in technology can be attributed to a **breakthrough in material science**:
stone age => bronze age => iron age => => => silicon age

Electronics THEN...



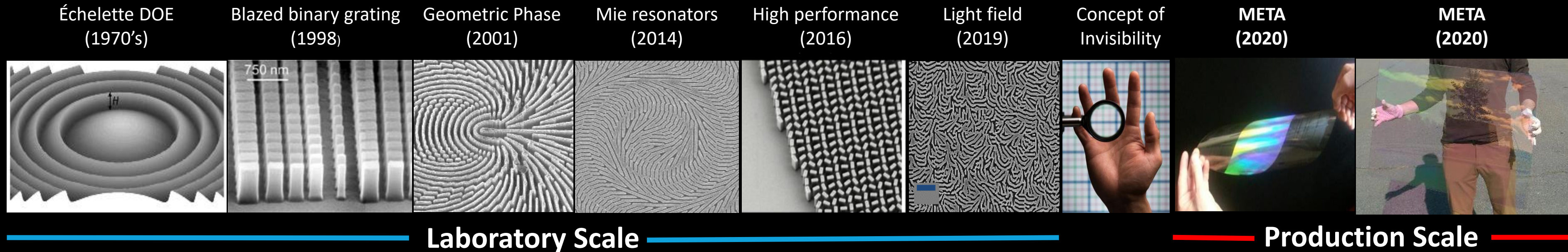
Electronics NOW...



In 1956, the **Nobel Prize in Physics** was awarded jointly to Shockley, Bardeen and Brattain for their development of the **transistor**, driven by the discovery of semiconducting materials and the means to manipulate their properties

Enabling the 21st Century “Age of Invisible Materials”

META[®]



What are Metamaterials?

- **Metamaterials** control on demand **unique functional properties** in absorption, emission, sensing, transmission, and guiding of light, sound, energy, and heat, as well as friction, strength, and electric energy
- Metamaterials are typically created by patterning **composite and nanomaterials** (e.g. metals, dielectrics etc.)
- Until recently, development has taken place only at the **laboratory scale** on **very small substrates**

The META Advantage

- **SPEED** - META uses **AI software** to design a library of patterns for different applications, it typically develops new custom solutions **within hours vs months**
- **SCALE** - META is one of the first companies to develop **proprietary roll-to-roll production equipment** to produce large area, high volume **nanocomposites**
- **COST** - Increasing the roll-to-roll web width and line speed should drive costs down to a **few \$/m²**

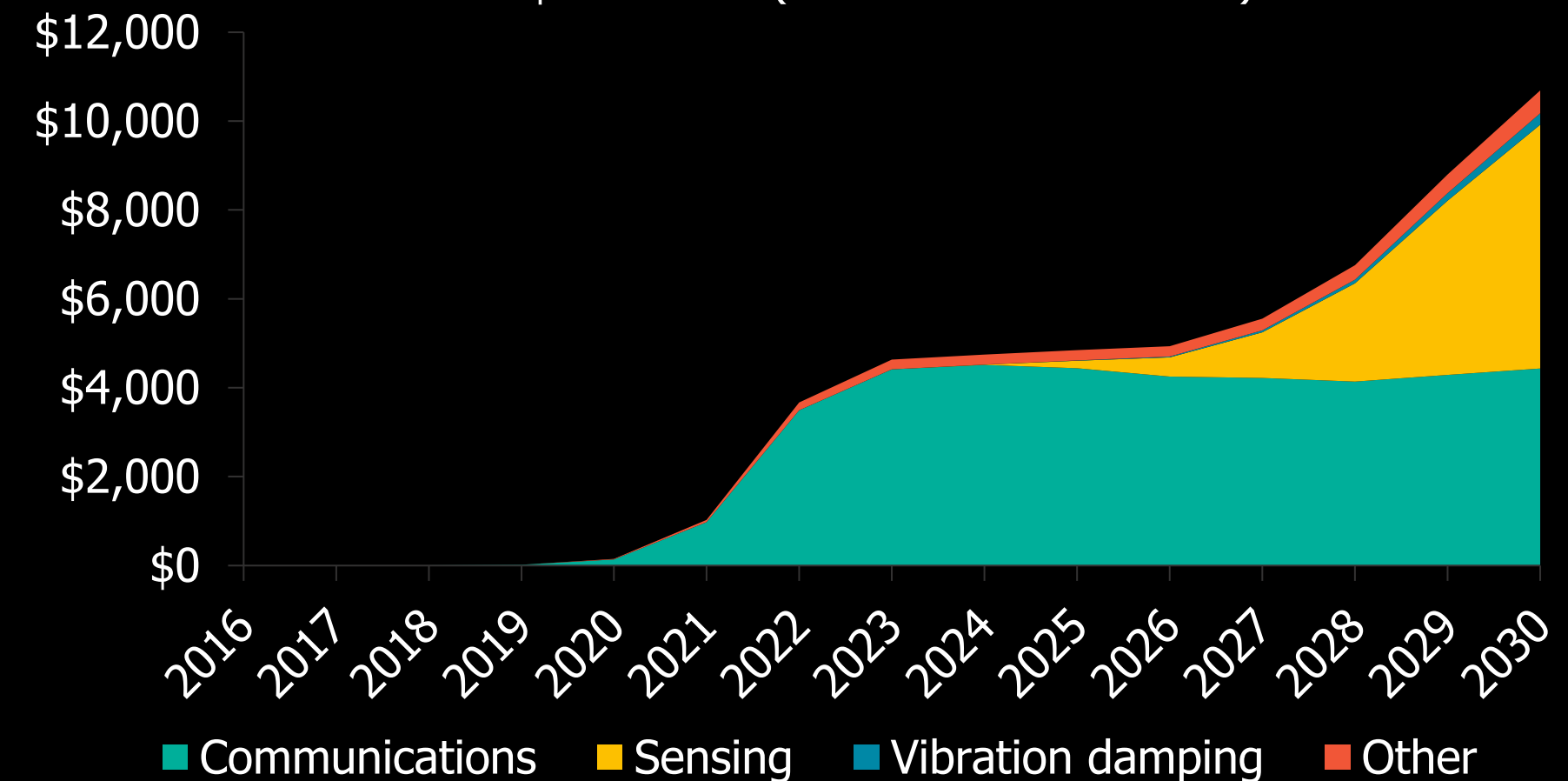
Market Opportunity Driven by Several Megatrends



- **5G Infrastructure:**
rollout requires new materials for transparent antennas and reflectors
- **Vehicle Electrification:**
seismic shift toward EV, ADAS (advanced driver assistance systems) and autonomous vehicles
- **Combined >\$3T in Other Verticals:**
Advanced Materials, IoT, Medical, Energy, Aerospace and Automotive markets
- **Scarcity, Control of Raw Materials:**
supply of rare earths and materials such as ITO (Indium Tin Oxide) highly concentrated in Asia
- **Metamaterial Device Market:**
expected to grow to \$10.7B SAM by 2030

Metamaterials Market Forecast

US\$ Millions (Source: LUX Research)



Transparent Passive 5G Reflector

META®

PROBLEM:

Highest-speed 5G signals need line of sight, requiring placement of many small cells

SOLUTION:

META's passive transparent window film reflects signal to cover dead zones

MEGA TREND:

Carriers are spending \$ Billions on Infrastructure



Invisible Antenna Enhances Indoor 5G and Digital TV Reception

META®

PROBLEM:

5G signals don't penetrate glass, buildings, requiring installation of internal networks

SOLUTION:

META's passive transparent window film passes through 5G and Digital TV signals



LIDAR Protection: De-Ice/De-Fog + EMI Shielding

META[®]

PROBLEM:

ADAS and Autonomous vehicles depend on an array of cameras and sensors to “see” and understand their surroundings

SOLUTION:

META NANOWEB[®] transparent conductive film provides deicing and defogging without blocking the camera/sensor functions

Nano-Heater to Protect Sensors Transparent to RADAR and LIDAR Simultaneously



COMPETITIVE ADVANTAGES

- META's lithography capability enables fabrication of sensors & antennas completely **invisible** to the human eye
- META's touch sensors and transparent 5G antennas can be integrated into smartphone displays, on windows of vehicles or buildings and home appliances
- NANOWEB® is **flexible** - unlike the incumbent ITO (Indium Tin Oxide) technology – enabling sensors on **foldable phones**
- META's antennas can operate from low to high frequencies (3G, 5G/6G and beyond) and provide communication systems for conventional, EV and autonomous vehicles

— 200 μm

META Transparent 5G Antenna



Solar Energy – Lighter Weight, Higher Efficiency

META[®]



Ultra-Thin, Light and Flexible

- Ideal for the transportation industry
- Adds onboard power, charging



Increases Solar Cell Efficiency

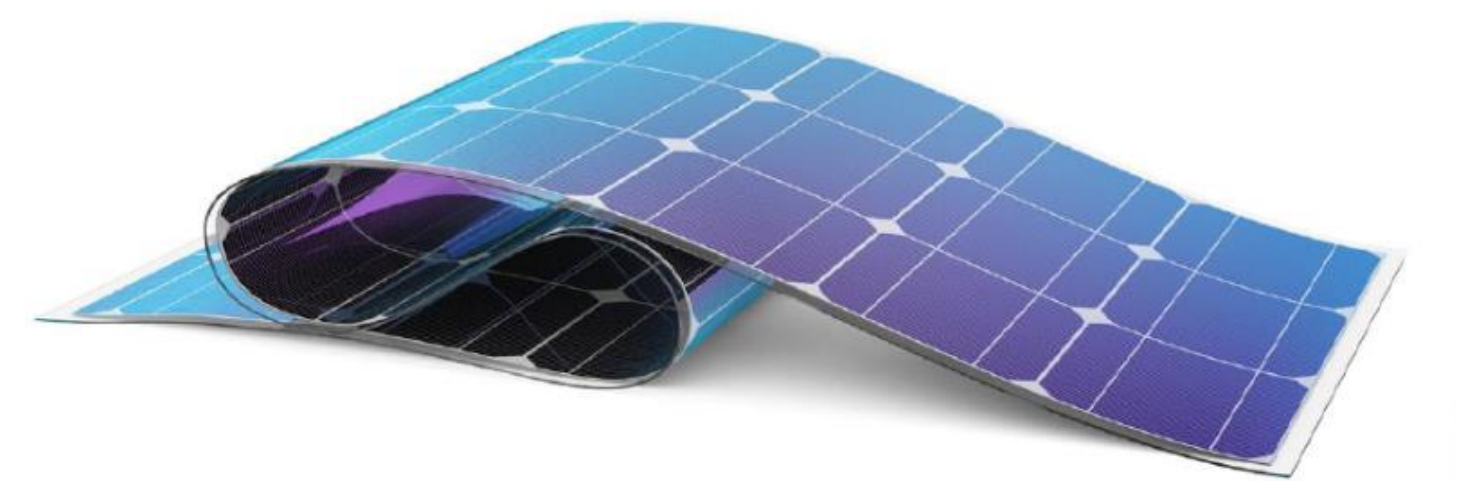
- Traps light that would otherwise be reflected, increases absorption

Over \$5Bn of Total Addressable Market



Angular Absorption

- Captures sunlight from all angles
- Eliminates costly tracking systems



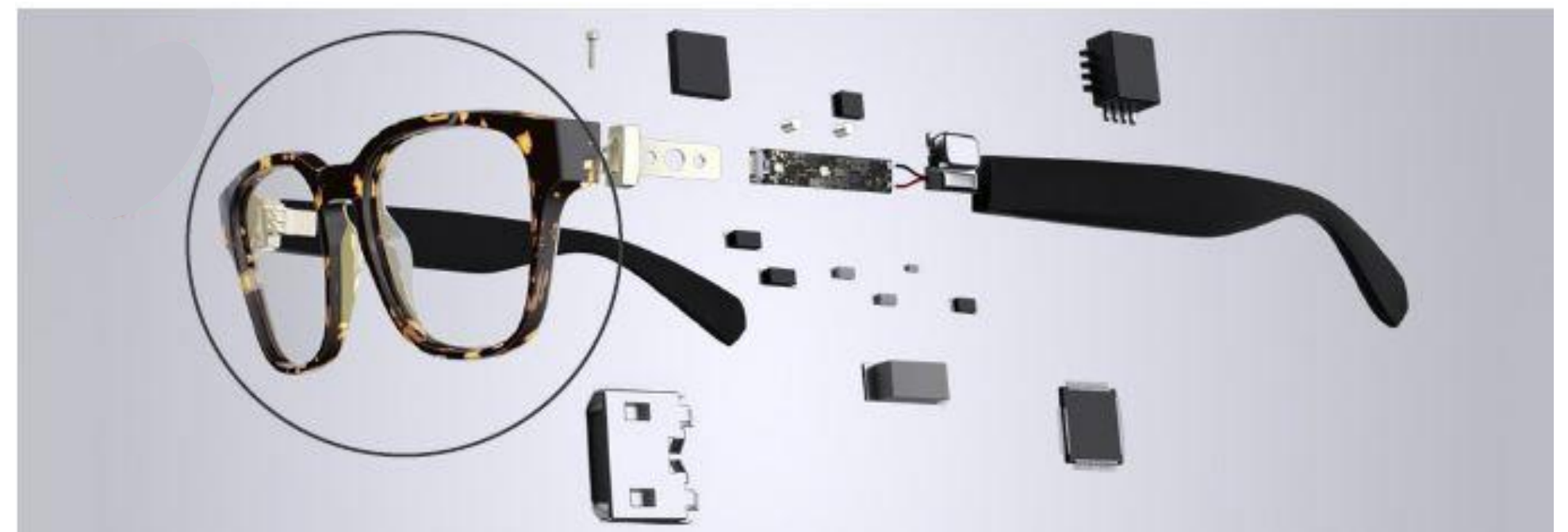
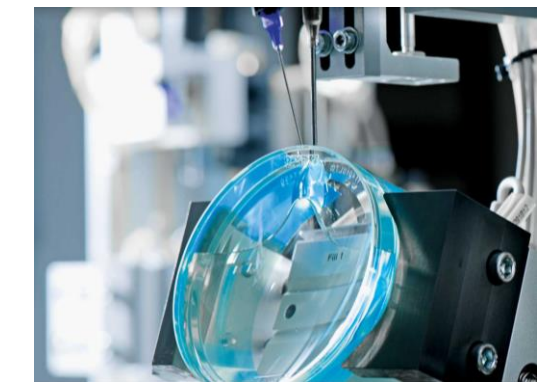
Scalable

- Can be sized for small or large areas
- Applied to flat or curved surfaces

ARfusion™ Integrates AR with Prescription Lenses



- **ARfusion™** integrates optical elements for AR (augmented reality) combined with lens casting technology developed by Interglass Technology AG
- META acquired assets & IP of Swiss lens manufacturer Interglass, 35 patents, trademarks and trade secrets, proprietary software and designs
- High volume fully automated lens casting, workstations, tools, test equipment, and technical data
- Proprietary specialty materials/foils supply in cooperation with **Covestro AG**
- Just-in-time production of prescription lenses and embedded elements such as optical combiners, waveguides, and eye tracking sensors
- **Highly Sustainable Process:**
 - ⚡ Less energy (10 sec vs 50 hours curing time)
 - 💧 Zero water usage
 - ⚙️ Less material usage



\$1.5B
**Augmented
Reality Eyewear
Market**

Source: BCC Research

Medical Applications: Mid- to Long-Term (2-7yrs) Potential



Functional metamaterials for Health and Wellness market – Licensing/Project Financing opportunities

Image Enhancement

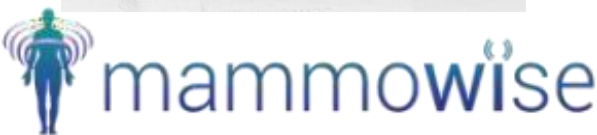
Sensor enhancement



MRI Medical Imaging

MRI Imaging with metamaterial film

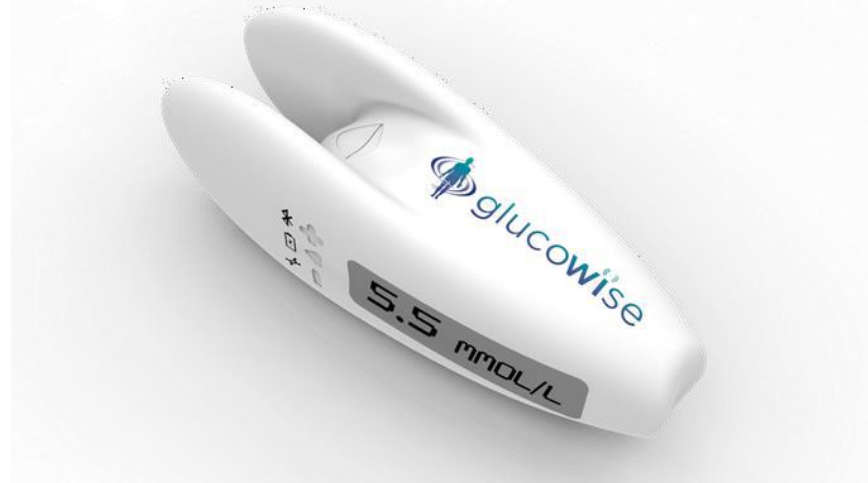
MARKET POTENTIAL*
\$2.0+B



Early-Stage Breast Cancer Screening

Radio-wave Imaging for breast screening with metamaterial film

MARKET POTENTIAL*
\$4.0+B



Non-Invasive Glucometer

Dual Sensor mm-wave technology with metamaterial film (www.gluco-wise.com)

MARKET POTENTIAL*
\$15.0+B



Molecular Biosensor

Daily use Bio-photonic sensor with sensitivity and performance enhanced using nanomaterial to meet rising demand for point of care testing.

MARKET POTENTIAL*
\$10.0+B

*Source: Internal META estimates

Solving Global Challenges Together With OEM Partners And Customers



Select Targeted Co-Development Partners and Customers in Automotive, Medical, Aerospace & Defense, Consumer Electronics and Energy



Advanced Materials Competitive Landscape

META[®]

1 METAMATERIALS COMPANIES				
Emerging, Disruptive performance, Low cost, High margins				

2 CHEMICAL & SPECIALTY MATERIALS				
Incumbent, Bulk materials, Incremental performance, Commoditized				

3 CARBON NANOMATERIALS				
Early stage, Difficult to scale, Low performance, Very expensive				

4 SEMICONDUCTOR MATERIALS				
Incumbent, Process slow and expensive to scale, Rare earth price exposure				

5 ITO AND SPECIALTY COATINGS				
Precious metal price exposure, Average performance				

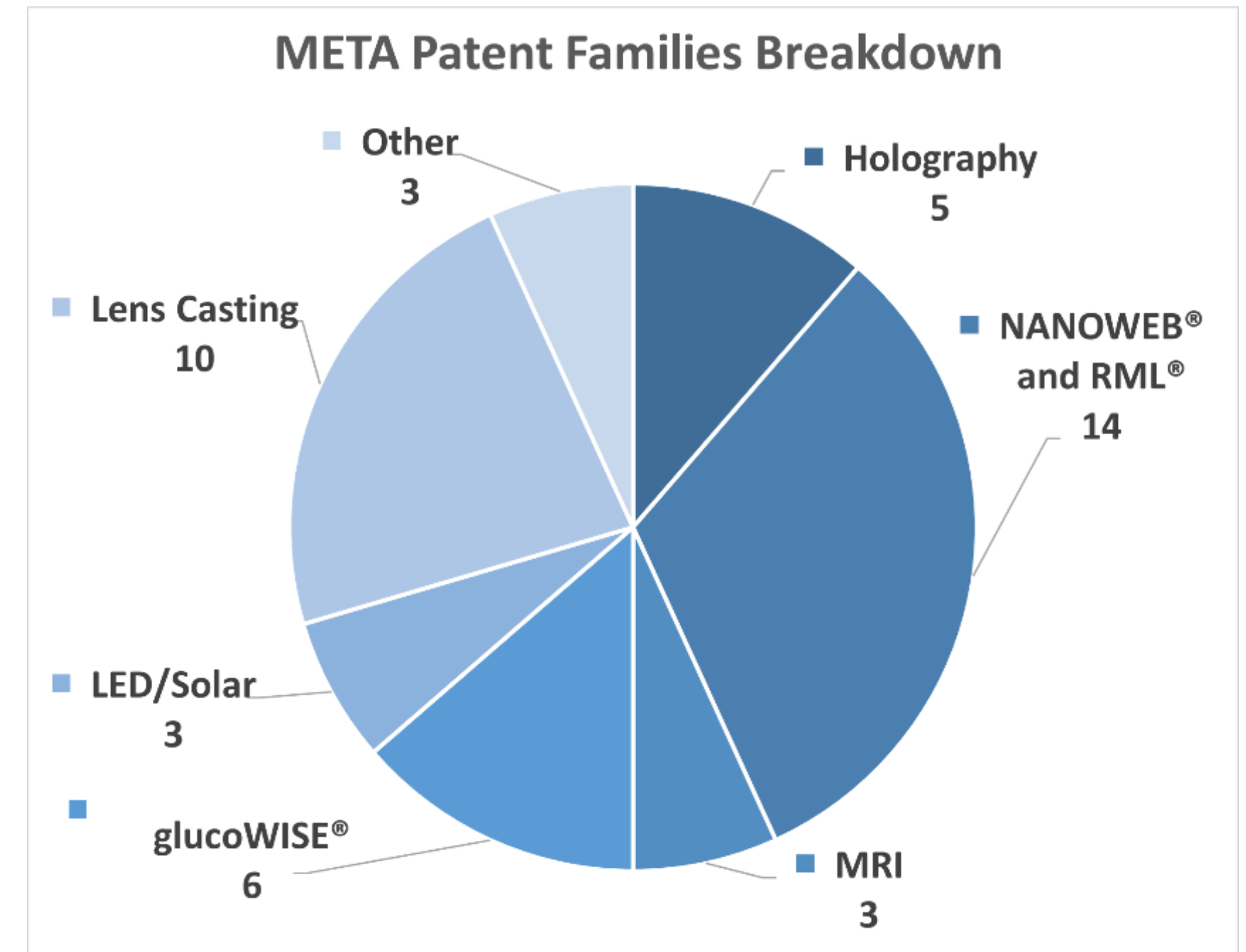
Existing META relationships

Source: LUX Research and Internal META estimates

Intellectual Property & Know-How



- META has 140 filed patents (76 granted) across 44 patent families (28 granted)
- 5 registered trademarks
- Proprietary, custom manufacturing processes and trade secrets, developed over 10 years with multi-million \$ investment
- Processes and methods were patented early, providing multi-year competitive advantage



Executive Team



George Palikaras, Ph. D.

President and CEO, Founder
12 years in leadership positions of high-tech startups. Goldman Sachs (10KSB), MIT Enterprise and EY awards for entrepreneurship, Stanford, Harvard, INSEAD Exec Ed. 50+ patents, 3 industry awards.



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 Technology Officer
25 years experience in commercialization of holographic and lithographic/nanomaterials for photonic applications, inventor and visionary with 140+ patents



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.

Chief Science Officer, Co-Founder
10 years experience in applied physics, intellectual property development in metamaterial applications, 40+ filed patents and 50+ publications



Scott Richards

Chief Marketing Officer
20+ years in management consulting and marketing services, CEO, CMO, COO, strategic planning, and M&A, in Canada, the Caribbean, the UAE, and the U.S.

Investment Priorities 2021-2022



**Initial roll-to-roll production equipment:
operational year-end 2021 to mid-2022**

1. Acquire and launch Pilot Scale roll-to-roll functional film production capability, estimated \$10M CAPEX
2. Customer Center including META's pilot line, to license, train and sell duplicates internationally
3. Healthcare and Wellness applications led by current customer engagements, estimated spending \$3M
4. Applied R&D, increased headcount, estimated spending \$3M



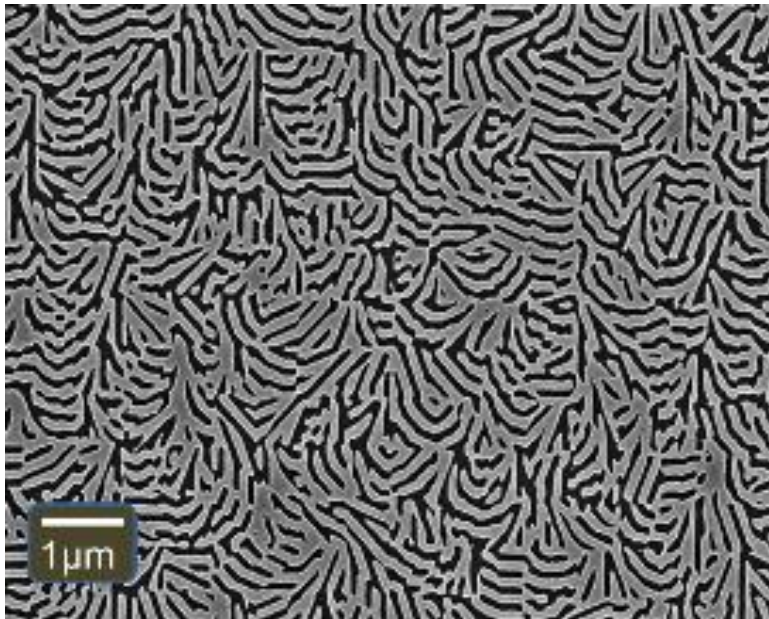
**Expansion equipment and clean room labs:
operational 4Q21 to 2Q22**



Scalable Revenue and Business Model



Design, Test Samples



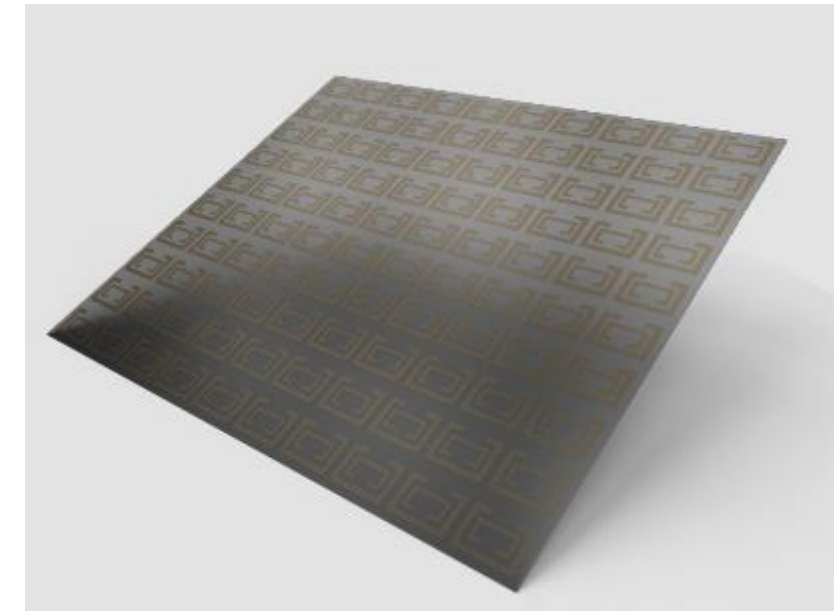
Wafer Scale Validation



R2R Licensed Pilot Line



Multiple Revenue Streams



Design Verification

- Produce samples to customer spec
- Test samples
- Scope proposal for Phase 2 NRE (Funded R&D)

Performance Validation

- Complete Phase 2 NRE
- Produce Beta lot for customer use
- Pilot scale production contract and scope

Production at Scale

- Cost model validation with customer
- Produce pilot scale lot for customer use
- Commercial scale license and material supply agreement

Revenue Streams

1. License Fee
2. Master-Supply
3. Royalties
4. Equipment Supply
5. Raw Material Supply Agreement
6. Service NRE contract (META owns IP)

Selected Financial Highlights – Q1:21 (CAD)



	Q1:2021	Q1:2020		3/31/ 2021
Product Sales	\$ 27,955	\$ 2,615	Cash and cash equivalents	\$ 15,187,356
Development Revenue	\$ 728,189	\$ 594,960	Inventory	\$ 429,026
Total Revenue	\$ 756,144	\$ 597,575	Total current assets	\$ 17,798,494
Gross Profit	\$ 755,636	\$ 596,454	Intangible assets, net	\$ 5,657,677
Operating Expenses	\$ 5,196,861	\$ 3,355,970	Property and equipment, net	\$ 4,954,788
Government assistance	\$ (323,074)	\$ (45,671)	Total assets	\$ 29,965,954
Other expense (income)*	\$ 51,017,750	\$ 2,742,939	Deferred revenue, current	\$ 2,442,747
Net Loss	\$ (55,079,277)	\$ (5,392,355)	Payables, debt, debentures, other	\$ 19,724,647
Net Loss per Share	\$ (0.60)	\$ (0.12)	Total current liabilities	\$ 22,167,394
Weighted Average Shares	91,277,328	46,587,115	Deferred revenue	\$ 875,868
			Long-term debt, other	\$ 6,645,012
			Total non-current liabilities	\$ 7,520,880
			Shareholders' equity	\$ 277,680

*Q1:2021 includes a \$50.1MM (55c per share) one-time, non-cash realized loss on FVTPL liabilities.

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, as well as under the Company's profile on SEDAR at www.sedar.com

Leading the NEXT AGE of “invisible” highly functional metamaterials



Growth



NASDAQ’s first ever metamaterials company – 1st mover advantage

Access to **Non-dilutive government funding** provides significant match of equity and/or debt financing

Global Partnerships



OEM and Fortune 500 companies, from diverse industries provide **direction, funding and ready outlets** for our novel products with multiple potential revenue streams

Established & De-risked Tech Platform



Proprietary Manufacturing & Design Platform



Software driven simulation tools

Scalable & Sustainable Products



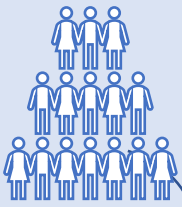
Broad and Growing IP Estate



IP

Team

Multinational Subject Matter Experts





META[®]

Go Beyond.

Mark Komonoski
Investor Relations

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