INVESTOR PRESENTATION

JANUARY 2024

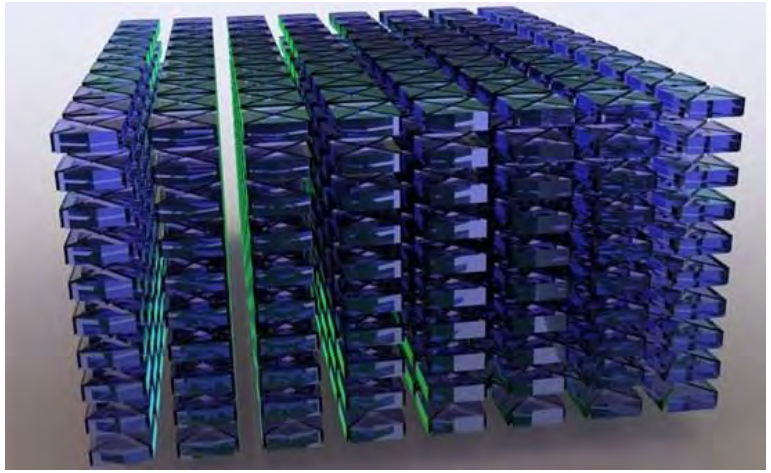
META delivers breakthrough performance to OEM customers across a range of applications by providing components and systems based on advanced materials, nanotechnology, and AI-enabled software.

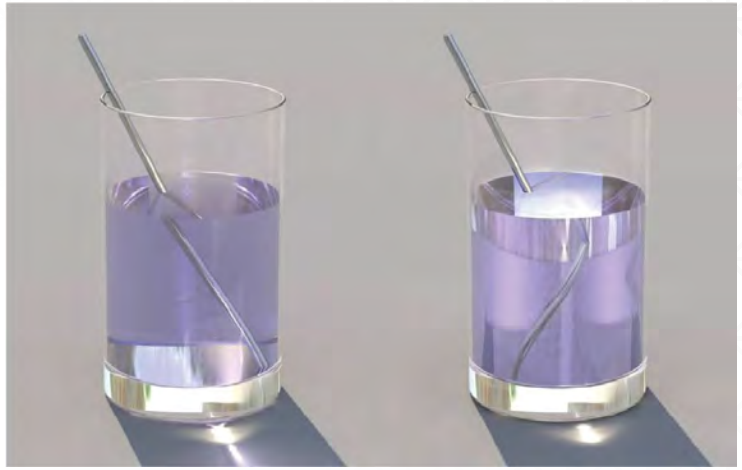
FORWARD LOOKING STATEMENTS

This presentation includes forward-looking information or statements 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 the Company, which may include, but are not limited to, statements with respect to the ability of the Company to continue to meet the Nasdaq requirements to maintain a Nasdaq listing, the business strategies, product development, restructuring plans and operational activities of the Company. Often but not always, forward-looking information can be identified by the use of words such as “pursuing”, “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 release may not occur and could differ materially as a result of known and unknown risk factors and uncertainties affecting the Company, the capabilities of our facilities thereof, research and development projects of the Company, the total available market and market potential of the products of the Company, the market position of the Company, the need to raise more capital and the ability to do so, the scalability of the Company’s production ability, capacity for new customer engagements, material selection programs timeframes, the ability to reduce production costs, enhance metamaterials manufacturing capabilities and extend market reach into new applications and industries, the ability to accelerate commercialization plans, the possibility of new customer contracts, the continued engagement of our employees, the technology industry, market strategic and operational activities, and management’s ability to manage and operate the business. More details about these and other risks that may impact the Company’s businesses are described under the heading “Forward-Looking Information” and under the heading “Risk Factors” in the Company’s Form 10-K filed with the SEC on March 23, 2023, in the Company’s Form 10-K/A filed with the SEC on March 24, 2023, in the Company’s Form 10-Q filed with the SEC on November 13, 2023, 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, except to the extent required by law.

WHAT ARE METAMATERIALS?

For example: QUANTUM™ stripe delivers full color, motion, and 3D stereoscopic depth with no inks or dyes, using nanoscale structures on an ultrathin metal foil





WHAT DOES META OFFER?

AUTHENTICATION: QUANTUM™, NANO™, LiveOptik®

Markets: banknotes, government documents & ID, retail brands

BATTERY MATERIALS: NCORE™ and NPORE®

Markets: consumer electronics, EVs, all Li-ion batteries

WIDE AREA MOTION IMAGERY (WAMI): VLEPSIS®

Markets: government defense/security, public safety, disaster recovery, smart cities

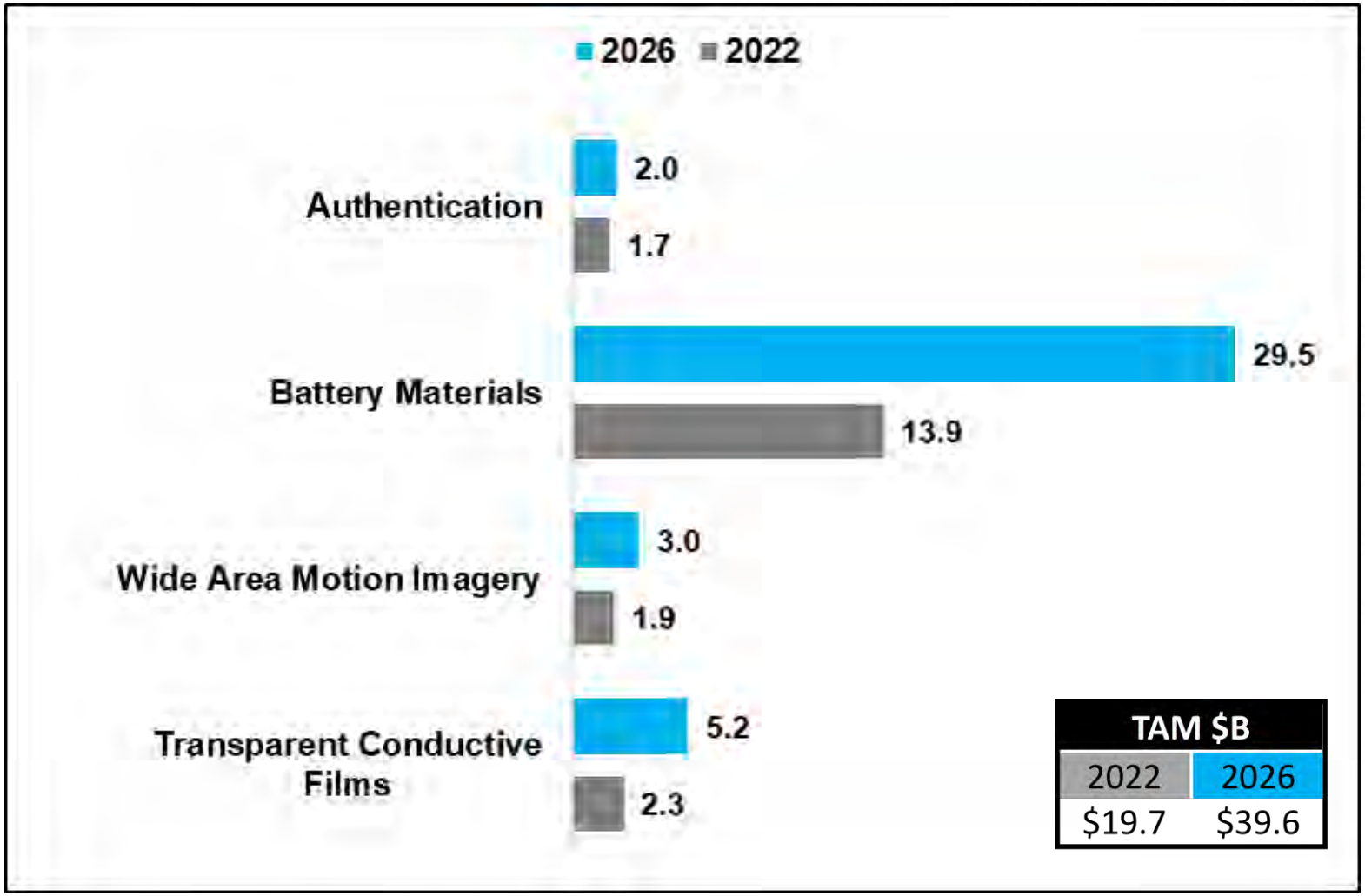
TRANSPARENT CONDUCTIVE FILMS: NANOWEB®

Markets: automotive, consumer electronics, telecommunications, aerospace and defense

META'S TARGET MARKETS

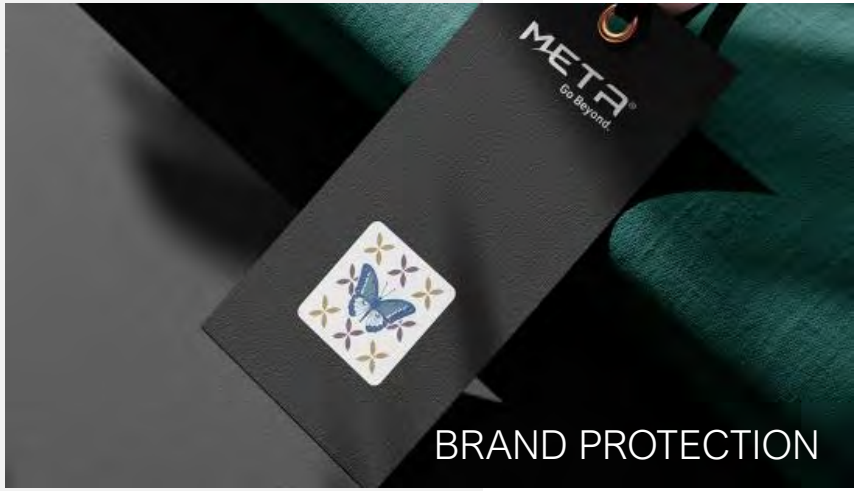
GROWTH IN ADDRESSABLE TARGET MARKETS*:

2022-2026, CAGR 19% (in $billions)



*Sources: Based on META's internal estimates using third-party sources such as IDTechEx, Statista, Verified Market Research, Yano Market Research, Lux Research

CORE LINE: AUTHENTICATION



CORE LINE: AUTHENTICATION

Total Addressable Market: $1.7B in 2022 → *$2.0B in 2026*

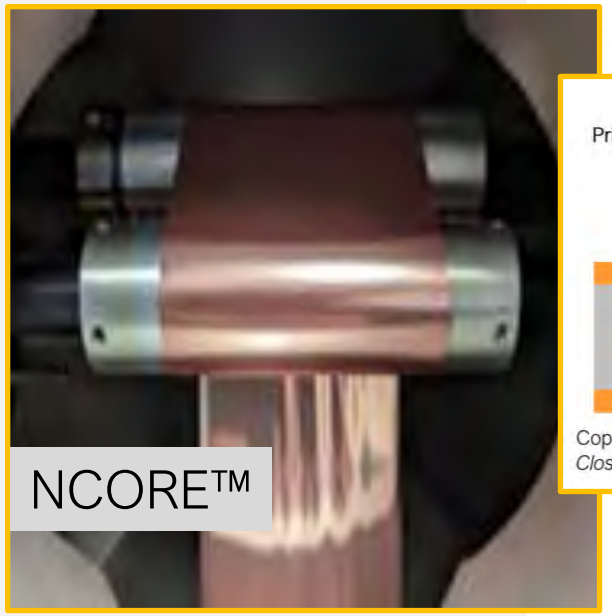
BANKNOTES:

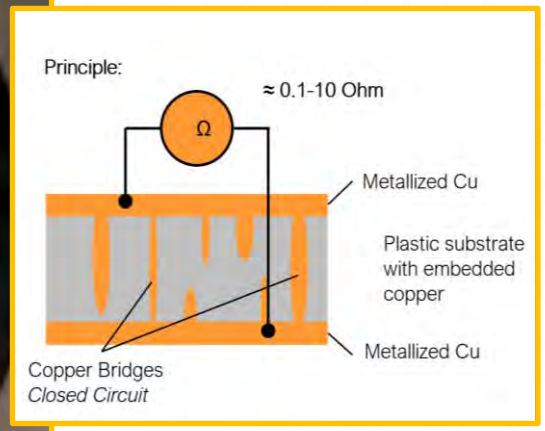
- Confidential G10 central bank customer:
  $41.5M, 5-Year development deal re: banknote security feature
- LumaChrome™: used as security feature on 7B+ banknotes, across 30+ denominations in the last 20+ years
- Introduced QUANTUM™ Stripe in late 2023

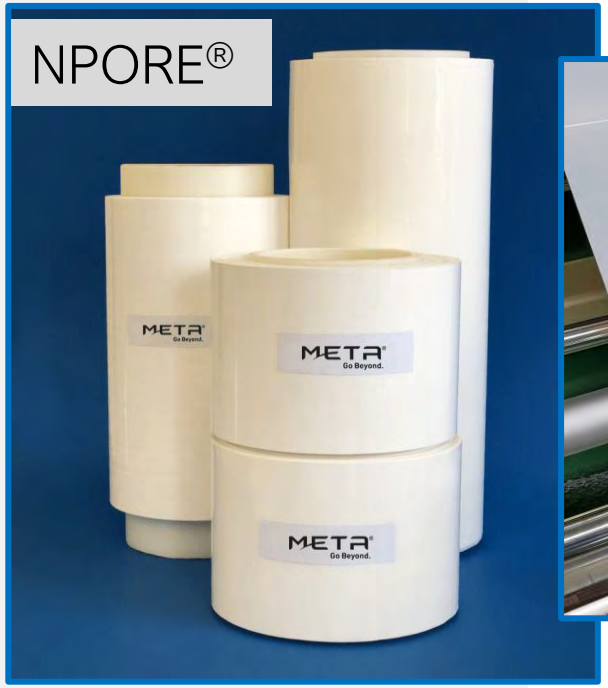
BRAND PROTECTION:

- Launched NANO™ protect in late 2023
- LiveOptik® delivers striking, multi-image, visual effects

CORE LINE: BATTERY MATERIALS







CORE LINE: BATTERY MATERIALS (NCORE)

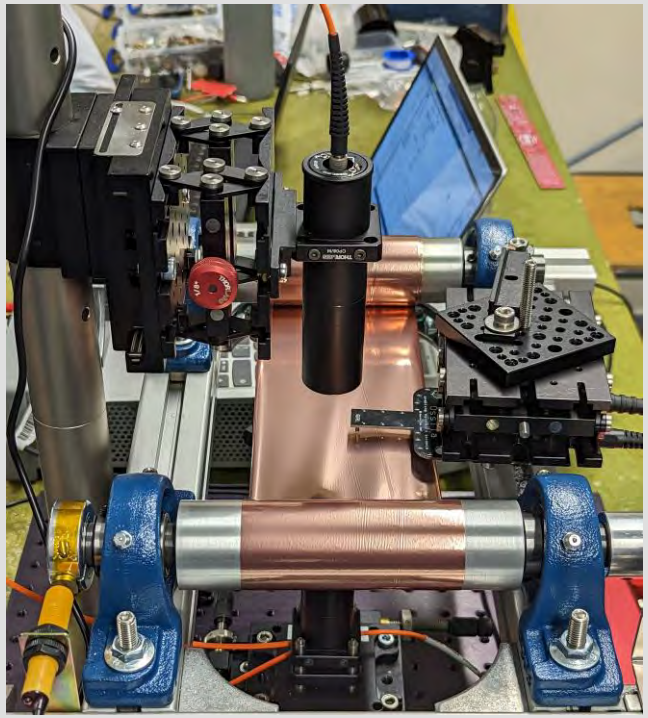
Total Addressable Market: $7.3B in 2022 → *$18.6B in 2026*

NCORE™ METAL-POLYMER COMPOSITE CURRENT COLLECTOR

- Replaces traditional metallic foil current collectors with a metal-polymer composite (Cu and Al), offering the world's 1st through-plastic-core conductivity.
- Ultra Lightweight and Thin: Reduced weight (-85% for current collector, -5% at cell level)
- Increased energy and power densities
- Added Safety: Fuse-like protection from thermal runaway, chemistry agnostic
- Scalable Manufacturing: Roll-to-roll manufacturing using proprietary PLASMAfusion®
- Costs: Comparable to metallic foil
- *APPLICATIONS: Higher energy density cells, mobile phone safety, next generation batteries, high-silicon anode manufacturing*

MITSUBISHI ELECTRIC
Changes for the Better

DuPont Teijin Films™
Innovation Partnerships Sustainability

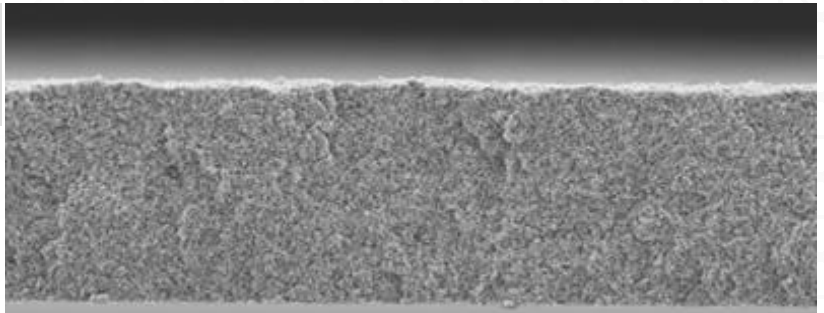


CORE LINE: BATTERY MATERIALS (NPORE®)

Total Addressable Market: $6.6B in 2022 → *$10.9B in 2026*

NPORE® ALL-CERAMIC BATTERY SEPARATORS

- The world's 1st flexible, free-standing ceramic nanoporous membrane separator for lithium-ion batteries
- Ultra Thermal Stability
  - <1% heat shrinkage for increased battery safety
  - 5x higher thermal conductivity compared to plastic separators
  - Flame resistance
- Excellent Electrochemical Performance
  - Superior abuse resistance
  - Rapid wet out with battery electrolytes
  - 3x greater compression resistance compared to plastic separators
  - Excellent electrolyte conductivity
- *APPLICATIONS: All lithium-ion cells, especially aerospace, military, medical where heat tolerance is critical*



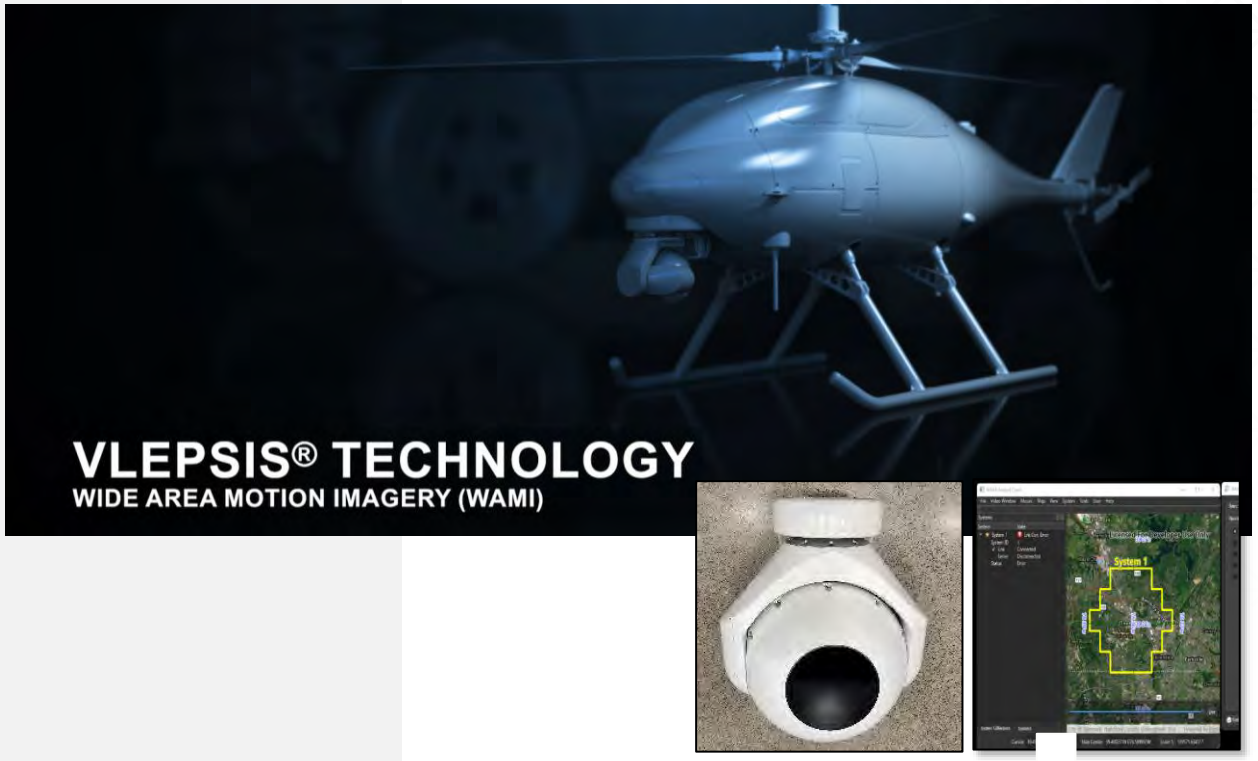
Freestanding, ceramic, nanoporous separator eliminates the plastic layer

NPORE® separator prevents thermal runaway in a nail penetration test

Demonstrated production scale at high speed on 1.5 m-wide line

- Joint development agreement with leading global battery OEM

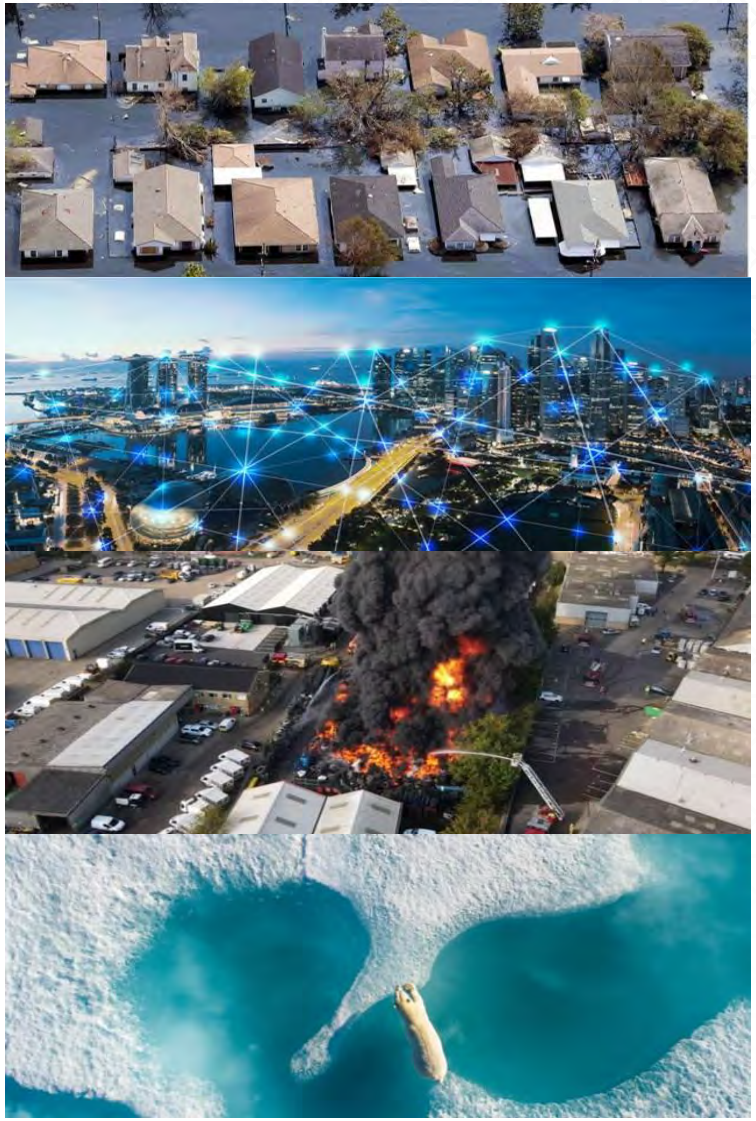
CORE LINE: WIDE AREA MOTION IMAGERY



CORE LINE: WAMI (VLEPSIS®)

MARKET*	SEGMENT	MARKET ($Billions)	GROWTH (%)
Defense EO/IR ISR	Services***	7.3	5
	Sensors**	1.9	7
Commercial EO/IR ISR	Local Law***	0.7	8
	Public Safety***	0.6	5

**Current TAM ***Future TAM

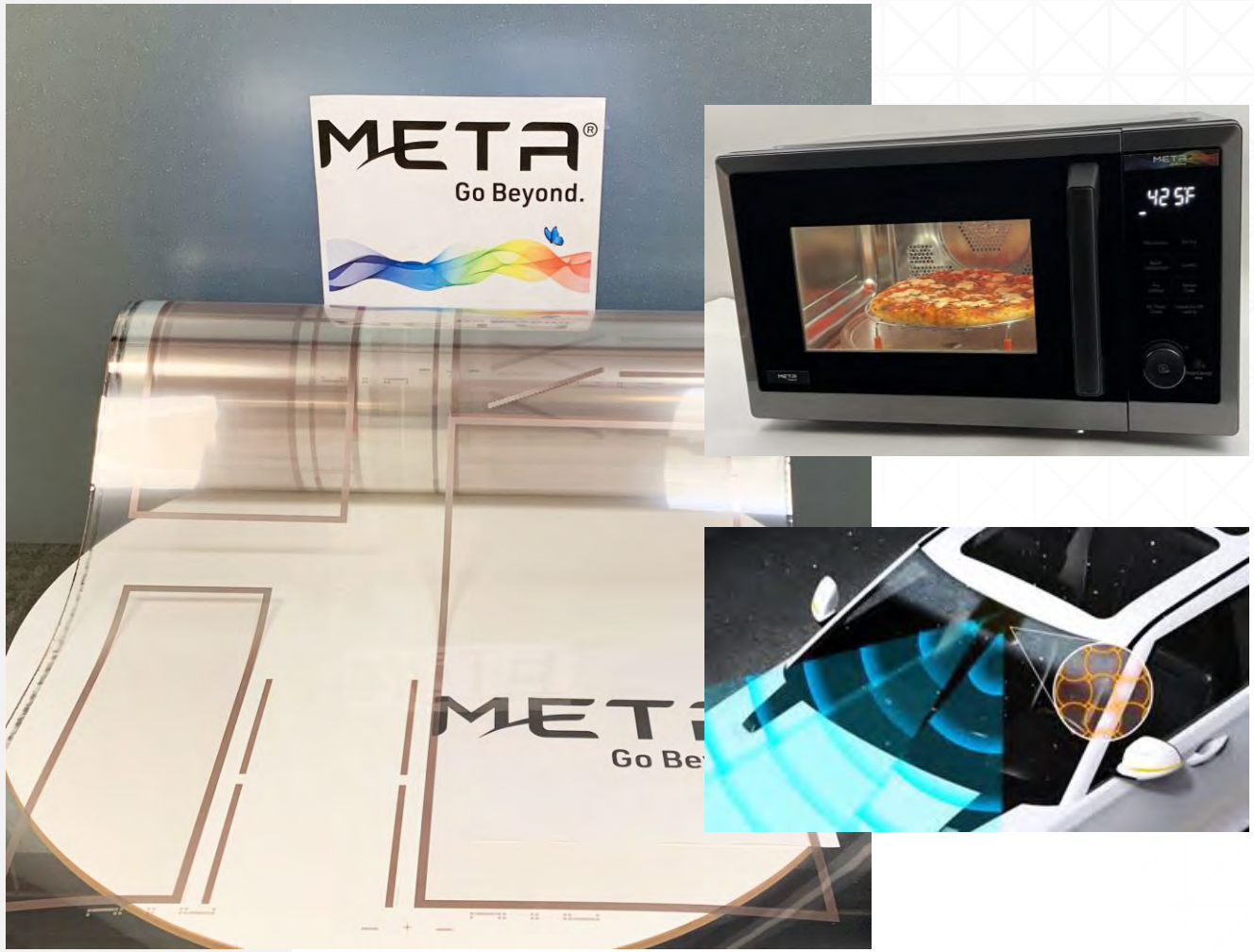


VLEPSIS® MULTI-GIGAPIXEL EO-WAMI SENSOR PACKAGE

- Outpaces competitors in both performance and cost.
- Coverage of 10s to 100 km^2 with resolution to discern vehicles and people-sized objects
- Track and monitor 50+ simultaneous live video streams with AI-based multi-object tracking and DVR-like analytical capability
- Proprietary hardware and AI software support automation for independent and simultaneous users; machine learning
- Weighing less than 20 kg, payload is small, light, and sufficiently low-powered for helicopters, fixed wing aircraft, and Group 3 UAS platforms
- Ground control and processing system
- (OPTIONS): VTOL UAS platform, air to ground data link, high-res. EO-IR skyball, integration with other data sources, custom analytic software
- *APPLICATIONS: government defense/security, public safety, disaster recovery, smart cities*

*Data from: Global Airborne Intelligence Surveillance; Airborne ISR Market Size, Share, Industry Report 2023-28

CORE LINE: TRANSPARENT CONDUCTIVE FILMS



CORE LINE: TRANSPARENT CONDUCTIVE FILMS (NANOWEB®)

Total Addressable Market: $2.3B in 2022 → *$5.2B in 2026*

FIRST CONVECTION MICROWAVE WITH TRANSPARENT WINDOW

- Test deployed with leading microwave manufacturer (actual META product photo in prior page)
- META's transparent mesh design with the right specifications (EMI shielding > 40dB, low absorption <2%)
- IP on multi-layer mesh
- Know-how on integration and multi-layer glass optimization
- Proper grounding

AUTOMOTIVE – TRANSPARENT HEATERS FOR ADAS SENSORS

- Working with OEMs for camera/lidar and radar versions

5G REFLECTORS FOR NETWORKS/COMMUNICATION

- Samples meet/exceed specs
- Testing done with network signal propagation

COMMERCIALIZATION UNDERWAY

- Outsourced High-Volume Manufacturing
- Collaboration with Panasonic Industry for 60cm-wide capacity

CORE LINE: TRANSPARENT CONDUCTIVE FILMS (NANOWEB®)

Competitive advantages move the needle

CATEGORY	APPLICATION	ALTERNATIVE TCF SOLUTION	LIMITATION OF CURRENT SOLUTION	COMPETITIVE ADVANTAGE VS. OTHER MESH ALTERNATIVES
AUTOMOTIVE	WINDSHIELD CAMERA HEATER	NO SOLUTION	NO SOLUTION	UNIFORM HEATING FOR TRAPEZOID SHAPED WINDOW
	LIDAR HEATER	ITO AND CNT	LIMITED HEATING POWER LIMITED TRANSPARENCY (<95%)	HIGH HEATING POWER (FASTER DE-ICE) HIGHER TRANSPARENCY (99%)
	RADAR HEATER	VISIBLE WIRES	NON-UNIFORM HEATING	RADAR COMPATIBILITY WITH UNIFORM HEATING
	TRANSPARENT ANTENNAS	VISIBLE WIRES AND HYBRID	TRANSPARENCY AND EFFICIENCY	HIGH EFFICIENCY AND TRANSMISSION
CONSUMER ELECTRONICS	EMI SHIELDING	NO SOLUTION	NO SOLUTION	HIGHLY TRANSPARENT AND LOW ABSORPTION (LEAKAGE WELL BELOW FDA REQUIREMENT)
TELECOMS	TRANSPARENT PASSIVE REFLECTORS	NO TRANSPARENT SOLUTION	TRANSPARENCY AND EFFICIENCY	HIGHLY EFFICIENT BEAM REDIRECTING AND SIGNAL ENHANCEMENT

SELECT FINANCIALS Q4 2023

META - Q4:23 Preliminary Highlights ($MM)

	Q4:23	Q3:23	Q4:22
Revenue	$2.2	$2.2	$1.4
Y/Y % change	*55%*		
Q/Q % change	*2%*		
Operating Expenses	$16.1	$16.3	$24.8
Y/Y % change	*-35%*		
Q/Q % change	*-1%*		
Operating Loss	$14.9	$14.9	$24.0
Y/Y % change	*-38%*		
Q/Q % change	*0%*		
Cash and Equivalents	$10.3	$10.2	

Non-Cash and One-Time Items

	Q4:23
Depreciation and Amortization	$3.4
Stock-Based Compensation	$0.5
Restructuring	$1.6
Long-term asset impairment	TBD
Total	**$5.5**

Shares Outstanding (post-split) 5.64MM*

*Effective January 29, 2024, META effected a one-for-one hundred reverse split of its issued and outstanding Common Stock. Shares outstanding gives effect to the reverse stock split (subject to adjustment for fractional shares).

META expects to release fourth quarter and full year 2023 results in mid-to-late March. The preliminary estimated financial information has been prepared by, and is the responsibility of, the Company's management. KPMG LLP, the Company's independent registered public accounting firm, has not audited, reviewed, compiled or performed any procedures with respect to the preliminary estimated financial information provided above.

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 on the SEC EDGAR website at www.sec.gov

KEY TAKEAWAYS

1. Focus on core verticals driving revenue.
2. Large and growing total addressable markets.
3. Improve operating efficiency and cash management.
4. Accelerate time-to-market commercialization.
5. Build on partnerships for other technologies.

BOARD OF DIRECTORS

Jack Harding, Chair

Allison Christilaw, Director

Steen Karsbo, Director

Ken Hannah, Director

Vyomesh Joshi, Director

Philippe Morali, Director

SENIOR LEADERSHIP

Uzi Sasson
President and CEO

Dan Eaton
Chief Legal Officer/
General Counsel

Alan Newman
Chief Product Officer

B.J. Shin
Chairman & EVP Korea

Ben Sloan
Global Head of
Business Dev, Energy

David Chester
VP Systems Engineering

Rob Stone
VP, Corporate Dev &
Communications

Dmitry Yarmolich
VP & Managing Dir
Plasma Tech

Anna Bradshaw
Director of Organizational
Development

Panos Kosmas
VP BioMed Engineering

Ragip Pala
Dir Metamaterials R & I

Grant Whitcombe
Global Head of Business Dev

Media and Investor Contact:
Rob Stone
VP, Corporate Development and Communications
Meta Materials Inc.
media@metamaterial.com
ir@metamaterial.com