

#### CYMAT

**Advanced Materials** 

January 2021

TSXv: CYM



# Forward Looking Statement

Certain statements in this disclosure may constitute "forward-looking" statements which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements.

When used in this disclosure, such statements use such words as "may", "would", "could", "will", "intend", "expect", "believe", "plan", "anticipate", "estimate", and other similar terminology. These statements reflect the Corporation's current expectations regarding future events and operating performance and speak only as of the date of this disclosure. Forward-looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements, including, but not limited to, the factors discussed below.

For example, disclosures may contain forward-looking statements pertaining to the following subject matter: capital expenditure programs; supply and demand for the Corporation's products and services and industry activity levels; commodity prices; income tax considerations; and, treatments under governmental regulatory regimes.

No securities commission or other similar regulatory authority has passed on the merits of the securities described herein. Nor has any securities commission or similar regulatory authority reviewed this presentation and any representation to the contrary is an offense.

All dollar figures are in Canadian currency unless otherwise stated.



### Overview

Cymat develops and markets Stabilized Aluminum Foam (SAF) – a unique, ultra-light, cellular metallic material with infinite commercial applications.

SAF has the ability to deliver superior, costeffective performance to industries with large production opportunities.



## Sectors



Architectural & Design
marketed under
the Alusion™ brand



Automotive, Military & Industrial Applications marketed under the SmartMetal™ brand



**Composite Panels** 



## Locations



#### Mississauga, Canada

Cymat operates in a 26,000 sq. ft. manufacturing facility located in Toronto's prime transportation hub. The plant has a \$50 million revenue capacity – revenue can increase significantly with minimal infrastructure changes.



Miranda de Ebro, Spain (near Madrid)
Cymat, together with joint venture partner
Alucoil S. A., have just completed
construction on a plant dedicated to the
production of composite panels.



#### Process

- SAF is produced by bubbling gas through a molten bath of alloyed aluminum infused with ceramic particles
- SAF can be produced in continuous flat panels and cast in near-net shapes
- Highly scalable low cost of production





### Material Characteristics

#### Resulting material exhibits unique characteristics:



Lightweight



Customizable density and dimension



High impact energy absorption – crash and blast



Thermal and acoustic insulation



Temperature and strain-rate insensitivity



Non-combustible



Recyclable





# Alusion<sup>TM</sup>

Architectural and Design

## Architectural and Design



Alusion<sup>™</sup> panels are primarily used in exterior façade and interior cladding applications.

Alusion<sup>™</sup> is now a globally recognized architectural material used in marquee buildings worldwide.

#### Unique Product Features



Stunning contemporary aesthetic (preferred choice of leading architects and designers)



Exceptional strength and rigidity (relative to its ultra-light weight)



Corrosion resistant



100% recyclable



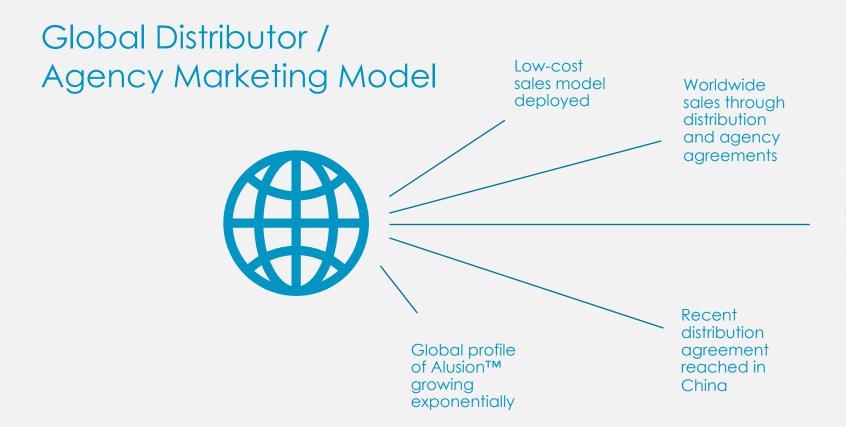
Available in a natural aluminum finish or unlimited designs and colour choices



### Established Global Sales Network







Well established distribution relationships covering North and South America, U.K., Europe, Korea and the Middle Fast

# Digital Media Marketing





ArchDaily Alusion Products page:

https://www.archdaily.com/search/all?q=ALUSION%20Aluminum%20Foam









# Digital Media Marketing







#### ArchDaily – Web-based Architecture Platform

- Leading Internet-based source for builders, architects and designers seeking material ideas and design tools
- 13.5 million visitors per month
- Alusion<sup>™</sup> is one of the most visited products on the site
- ArchDaily users visited the product and application pages 229,664 times from December 15, 2019 to July 2020 – 1.9 times above the ArchDaily's average "page views benchmark"
- 20% of visitors access the Alusion<sup>™</sup> website for further details









#### Social Media

Alusion™ Presence on Social Media

 Fully active and updated weekly

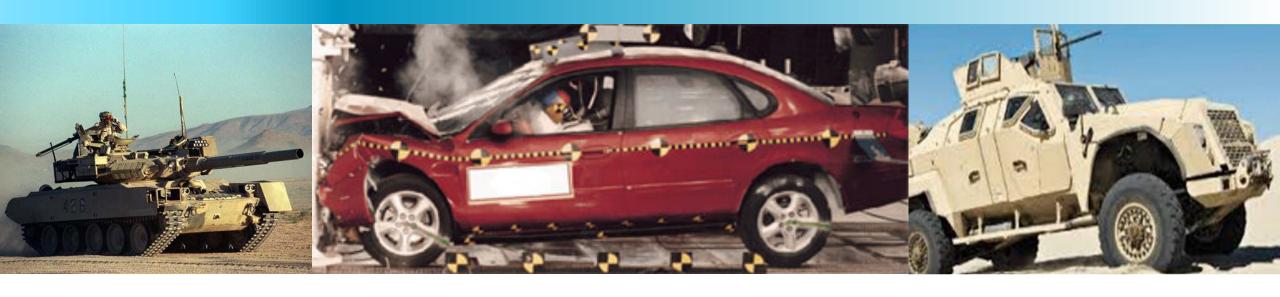


# Opportunities and Highlights



- Solid Q1 and Q2 (ending October 31, 2020), Alusion Plus to be launched Q4
- Expected continued growth with anticipation of record annual sales
- Strong global order flow and pipeline of major cladding projects into fiscal 2022.
- Robust growth from new distributor in China
  - Increased stocking orders
  - Highly confident of significant increase in order flow
  - Large project pipeline
- NEW Alusion™ Plus panels to be launched soon
  - based on new alloy that yields better strength and corrosion resistance





# SmartMetal™

Automotive – Military – Non-Lethal Bullets - Nuclear

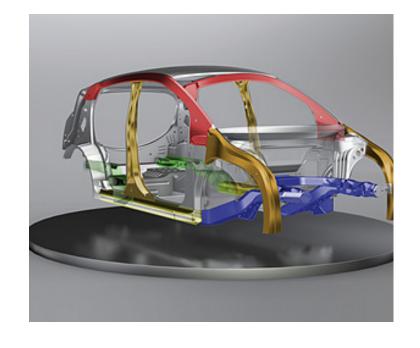


## SmartMetal<sup>™</sup> Automotive

# Automotive Industry has two competing requirements:

- Light weighting of vehicles (especially critical for the electric vehicle market)
- Enhanced crashworthiness and occupant protection
  - Traditionally, occupant protection directly correlated with increased mass of vehicle

SmartMetal<sup>™</sup> offers the ideal, cost-effective solution



# SmartMetal<sup>™</sup> Automotive Applications

Cymat's automotive strategy focuses on light-weighting and crash mitigation applications.

- Crash mitigation components
- Placement of SAF into vehicle body structures
- Replacement of solid aluminum castings with high density SAF castings
- Partnering with component designers/integrators
- Marketing primarily to Tier I and II parts suppliers



# SmartMetal<sup>™</sup> Automotive Highlights

- U.S. off-set crash requirements coming into effect this year
  - OEMs require stop-gap solutions for existing platforms
- Engaged in multi-year development initiative for off-set crash devices for various OEMs
- Pursuing opportunities with several Tier I/II parts suppliers to supply SmartMetal<sup>™</sup> for crash mitigation and light weighting components

- Developing high-density SAF castings to facilitate new family of applications
  - replacement of solid aluminum cast components for weight reduction
- Hiring new business development personnel to handle increased sector activity

Co-operation Agreement entered into with Tesseract Structural Innovation Inc. of Arkansas – an automotive design company specializing in energy absorbing components



# Co-Operation Agreement



- SmartMetal<sup>™</sup> used extensively in Tesseract products due to the material's salient properties of high energy absorption, strength and lightness
- Tesseract fully developed, tested and currently markets (patents-pending) the Uniform Deceleration Unit (UDU)
  - Unique structure allows it to absorb an enormous amount of kinetic energy during a crash
  - Reduces crash forces that subsequently reduce impact shocks and prevent

- intrusion of vehicle components into the passenger space
- Fits into the wheel well of virtually any light vehicle (cars, trucks, minivans, SUVs and crossovers)
- Engaging in extensive joint marketing efforts with Tesseract

Tesseract won this year's prestigious "Conventional Mobility Technology Innovations" Award in the 12<sup>th</sup> Annual Global Automotive and Mobility Challenge sponsored by The Society of Automotive Engineers



# Co-Operation Agreement

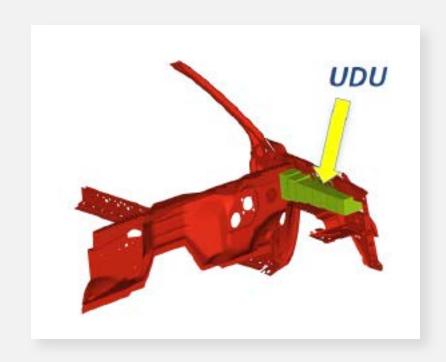


#### Overlap UDU Solution

Uniform Deceleration Unit (UDU)

- Lightweight Metal Composite
- Easily integrated
- Absorbs >50% of crash energy

A UDU absorbs more energy than any other approach per unit of added weight





# Co-Operation Agreement



#### **SOL UDU Components**

Fully assembled UDU



Skin structure with different material thicknesses



Skin structure with composite aluminium foam installed



Fully assembled UDU segments

# SmartMetal<sup>™</sup> Military

Military across the globe need vehicles that are:

- Lighter
- More maneuverable
- Most importantly far less lethal for its occupants
- IED (land mines) threats are driving blast mitigation requirements for these vehicles

SmartMetal<sup>™</sup> is a proven, cost-effective solution to counteract the devastating effects of IEDs

- SmartMetal<sup>™</sup> ideally suited to low-slung, high-mobility vehicles
- SmartMetal<sup>™</sup> also optimal as a component in Multi-threat composite systems



# SmartMetal<sup>™</sup> Military "Partners"

- Direct relationships with virtually all major N.A. military OEMs
  - Cymat works through agents in all other jurisdictions
- Long established relationship with Asian OEM STEHL (STK)
- Underbelly blast kit design finalized for "The Bronco" troop carrier
- Purchase Order from Singaporean military for 100 kits expected in early 2021



- Global rollout based on the successful delivery and execution of initial order
- \$50 million opportunity worldwide in this vehicle class

# SmartMetal<sup>™</sup> Military | Non-Lethal Bullets

- Non-lethal bullet with SmartMetal<sup>™</sup> core developed by Nobel Sport (Paris, France) a global leader in law enforcement and military munition products (www.nobelsport.fr/?lg=en)
- Testing by the French Armed Forces completed on 40,000 SAF core bullets

#### The French Armed Forces have now certified the bullets for active use.

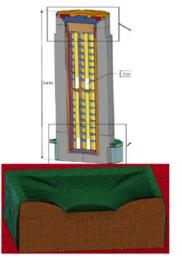
- Nobel Sports expects its first commercial order from the French Military shortly
- Will begin aggressively marketing bullets to its other military/police clients
  - Nobel Sport's international distribution plan anticipates sales of 500,000 units annually



## SmartMetal<sup>™</sup> Nuclear

- Principle application is failsafe energy absorption transportation systems for spent rods
- Numerous completed projects in France establishing Cymat as the ideal solution in this area
  - 58 French nuclear power generation sites with older infrastructure an ongoing renovations
- Cymat currently working with major French nuclear contractor (Nuvea) that markets the product under its own brand

- Aluminum foam mattress
- Protection against catastrophic failure of nuclear casks



- Cymat works directly with contractors in other markets for specific opportunities that arise
- New orders in hand with numerous quotes pending



## Joint Venture





#### "Next Generation" All-Metal Composite Panel with no adhesives

- Established partnership with Alucoil S.A., a Spanish-based global supplier of architectural aluminum composite panels marketed under the Larson brand
  - Alucoil panel sales exceed \$500M annually
  - Panels relevant to construction, marine, rail, aviation and elevator industries





### Joint Venture





#### "Next Generation" All-Metal Composite Panel with no adhesives

- JV to produce aluminum composite panels with metallurgically-bonded aluminum foam cores
  - The only all metal panel using no glues, resins or adhesives
  - Provides superior strength and highest fire rating

- Panel's core consists of a state-of-the-art aluminum alloy foam to provide superior brazing characteristics developed by Cymat
  - Considerable assistance provided by Rio Tinto Alcan in alloy development
- 3 years of brazing R&D resulting in a breakthrough proprietary technology
- Commercial-scale plant with expected capacity of 500K m<sup>2</sup> recently completed in Spain



## Joint Venture – Next Steps





## Final product trials to be completed in early 2021

- Delays from original timeline related to extreme COVID-19 conditions and associated economic fallout in Spain
- Cymat performing inhouse brazing trials in Hungary in the interim to facilitate Spanish trials

## Commercial ramp-up anticipated for late 2021

- Initial SAF substrate panels to be provided from Cymat's Toronto facility
- Alucoil to move forward with product certifications and customer trials

## JV output to be purchased by Alucoil

- Alucoil to use its global distribution network to market finished panels
- Low cost/risk business model for Cymat



## Management

#### Michael Liik

CEO & Chairman. Mr. Liik is a founder of Cymat with a successful record of leading both early-stage and high-growth Canadian public companies. His unique background combines considerable operational leadership experience with expertise in private equity. As a co-founder and Managing Partner of Fraser Mackenzie Merchant Capital, Mr. Liik also oversees private equity and debt funds. He is a Professional Engineer and an MBA, with both designations obtained from the University of Toronto.

#### Darryl Kleebaum

CFO. Mr. Kleebaum joined the Cymat management team in 2011 He possesses over 25 years of progressive accounting experience and has an extensive understanding of the operating environment of small cap, publicly-traded companies. Mr. Kleebaum is a Chartered Professional Accountant with a Bachelor of Business Administration from Wilfrid Laurier University

#### Norbert Babcsan

CTO. Dr. Babcsan, who joined the Cymat team in 2018, is an internationally renowned expert in the field of metal foams. For over two decades, Dr. Babscan has extensively researched the properties and manufacturing techniques of metal foams. He is the author of five related patents and holds a PhD from the University of Miskolc, Hungary.

#### Jim Johnson

VP Operations and Business Development, SmartMetal™. Mr. Johnson, who joined Cymat in 2009, heads overall manufacturing operations as well as technical engineering and business development for SmartMetal™. He has over 30 years of progressive experience in metals manufacturing, engineering and operations management. Mr. Johnson is a Professional Engineer and a graduate of McMaster University's Mechanical Engineering and Management Program.

#### Angie Deyannis

VP Business Development, Alusion™. Ms. Deyannis is responsible for global architectural specifications, sales, distribution and technical services for Alusion™. Ms. Deyannis joined Cymat in 2011 and brings over 20 years of experience in business development and project management in the architectural specifications, design and construction industry.



### Board of Directors

Michael Executive Chairman Liik Director, President, Braxton Management Partners. Mr. Gill is Jon Gill President of Braxton Management Partners Inc., a management consulting company. He was formerly operating partner with HSD Capital, a merchant bank and CEO of Super Electric Corporation, a private branded consumer products company operating in North America and Asia. Mr. Gill is the Chair of Cymat's audit committee. Martin Director, VP External Affairs, Woodbridge Group. Mr. Mazza is currently Vice President External Affairs for The Woodbridge Mazza Group, a private Canadian auto parts company addressing world automotive markets.



### Share Structure

Price (Dec. 31, 2020) 52 Week High/Low Shares Issued & Outstanding Options/Warrants Total Shares, Warrants and Options Market Capitalization Insider Ownership (fully diluted)

\$0.20

43.2 M

9.7 M

53 M

\$10 M

25.6%



Chart source: Stockcharts.com



### Contact Information

#### Cymat Technologies Ltd.

6320-2 Danville Road Mississauga, Ontario Canada L5T 2L7

Michael Liik CEO <u>liik@cymat.com</u> (416) 704 – 6217

#### **Investor Cubed Inc.**

67-1401 Yonge St Toronto, ON M5E 1J8

Neil Simon CEO nsimon@investor3.ca 647-258-3310 Investor/General inquiries

info@cymat.com

www.cymat.com