

**CFOAM Limited**  
**ABN 46 611 576 777**  
Level 1, 33 Ord Street  
West Perth WA 6005  
Tel: +61 8 9420 9300



7 November 2016

**ASX Release – Company Presentation**

**ASX:CFO**

Attached is the Company Presentation for CFOAM Limited.

The presentation has been prepared to provide shareholders and investors with introductory information in regards to CFOAM Limited, the range of products manufactured by the Company, the general market landscape, and current potential business and marketing opportunities.



November 2016  
ASX: CFO

[www.cfoam.com](http://www.cfoam.com)

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‘A world leading and  
technologically  
disruptive material with  
a multitude of potential  
applications’

# Executive Summary

## Successful IPO

ASX listing achieved  
October 2016

~\$A80m

spent on the  
Research and  
Development of  
CFOAM®

## Best in class

technology  
disrupting existing,  
and new, markets

Current\* annualised  
CFOAM production

approx.

**12,000ft<sup>3</sup>** -

expected to grow  
materially and rapidly  
through 2017, and on.

## Highly Experienced

manufacturing  
and development  
team

## Multitude of business opportunities

already defined with  
markets identified

Pipeline of visible  
sales opportunities  
is greater than

**\$A100m**

**Strong  
operating  
margins** and  
cash flows from  
production



\*based on actual operating  
results achieved since  
functional control gained (Jul-  
2016) up to date of IPO

# Capital Structure

## ASX Ticker

Shares on Issue

Cash

Current Share Price

**Market Cap.**

## CFO

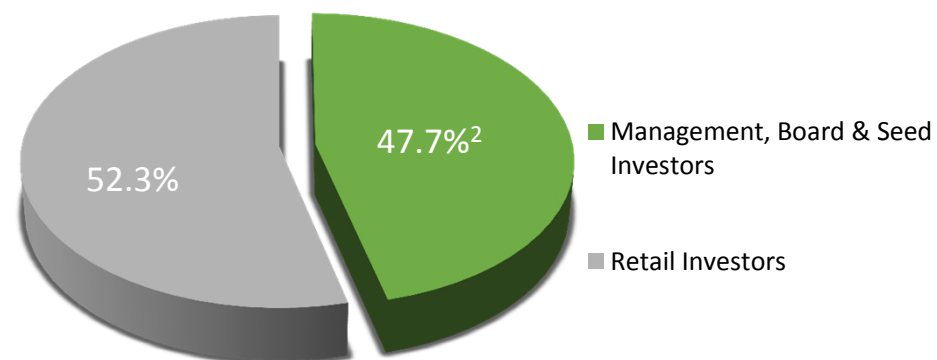
93.5m

\$5.25m

\$0.74<sup>1</sup>

**~\$69m**

## Shareholder Register



<sup>1</sup> As at 2 November 2016

<sup>2</sup> Board, Management and seed investors are escrowed 12-24 months from the date of IPO and/or issue date



# Board and Management

## Gary Steinepreis Non-Exec. Chairman

- Chartered Accountant with significant corporate deal experience over the last 20 years
- Gary is the managing director of Ascent Capital providing accounting, corporate and management advice to numerous listed and listed companies in the resources, technology and leisure industries.
- Gary is a director of a number of ASX listed companies.

## Mike Placha Managing Director

- 35+ Years in the global mining and manufacturing sector
- Previous VP of Signal Peak Energy responsible for design, construction and operations of a +\$200m underground coal mine
- Previous at Cyprus Minerals and EIMCO managing processing, manufacturing, marketing and business development
- Has lead and managed major projects in the US, Canada, Australia, China, Indonesia and Italy

## Toby Chandler Non Exec. Director

- Mr Chandler is the Chief Executive Officer of ASX listed Structural Monitoring Systems Ltd
- 20 years in senior executive roles in Australia, US and Europe
- Previously held senior executive Banking roles with Morgan Stanley, HSBC and Citigroup

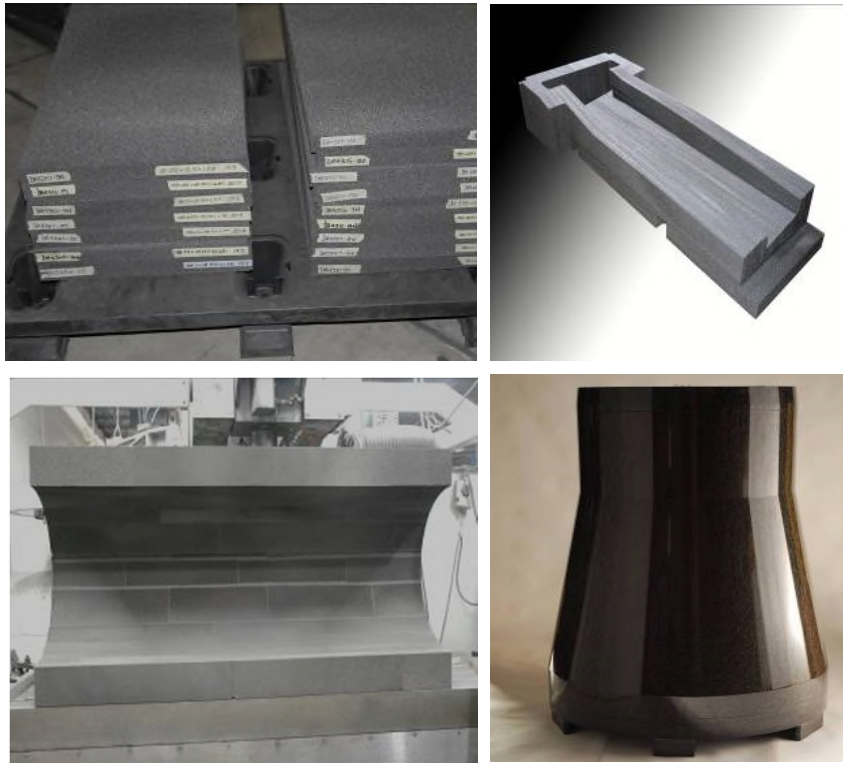
## Dan Placha Chief Operating Officer

- 30+ years in the engineering and construction sector
- Founded Sedgman's US operations (currently DRA Taggart), in 1993 grew the business to a peak of 1,000 employees and \$400m in annual revenue
- Current Chief Operating Officer of DRA, responsible for delivery of EPC projects and management of operations



# What is CFOAM<sup>®</sup>?

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‘CFOAM<sup>®</sup>  
Is the next generation  
carbon material  
produced from coal  
using a proprietary  
manufacturing process.  
The resulting material is  
virtually pure carbon,  
but in a hard, open cell  
rigid foam structure.’



# CFOAM Properties

## Low Coefficient of Thermal Expansion

CFOAM ideal for aerospace tooling applications using carbon fiber with a CTE at 5.0 ppm/°C

## Permeable

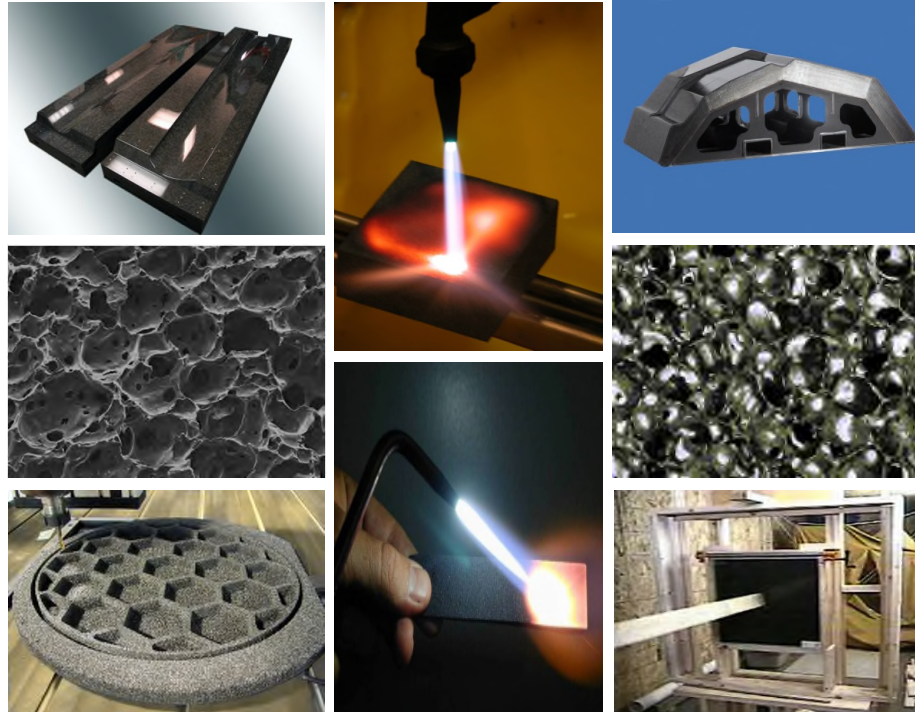
Open porosity up to 85%

## Machinable

CFOAM's uniform density results in consistent machining with reduced waste. CFOAM can be cut and machined into many shapes and configurations

## Fire Resistance

CFOAM passes all key fire tests including radiant panel, smoke generator, toxicity, cone colorimeter, fire resistance and room corner tests



## Strong

Compressive Strength 7.58-22.1 MPa (1,100-3,200 psi). Can perform as stand alone material or bond with other materials

## Lightweight

CFOAM is lightweight with a density range of 0.32-0.48 g/cc (20-30 lbs/ft<sup>3</sup>)

## Multiple Market Applications

- Aerospace Tooling
- Energy Absorbing
- Defense

## Affordable

Investment in CFOAM production will result in commercial scale and will be economically manufactured. Price point is highly favourable relative to in-use incumbent materials

# Patents

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**27** global, multi-jurisdictional patents



Patents cover both manufacturing and end-use applications of various CFOAM products

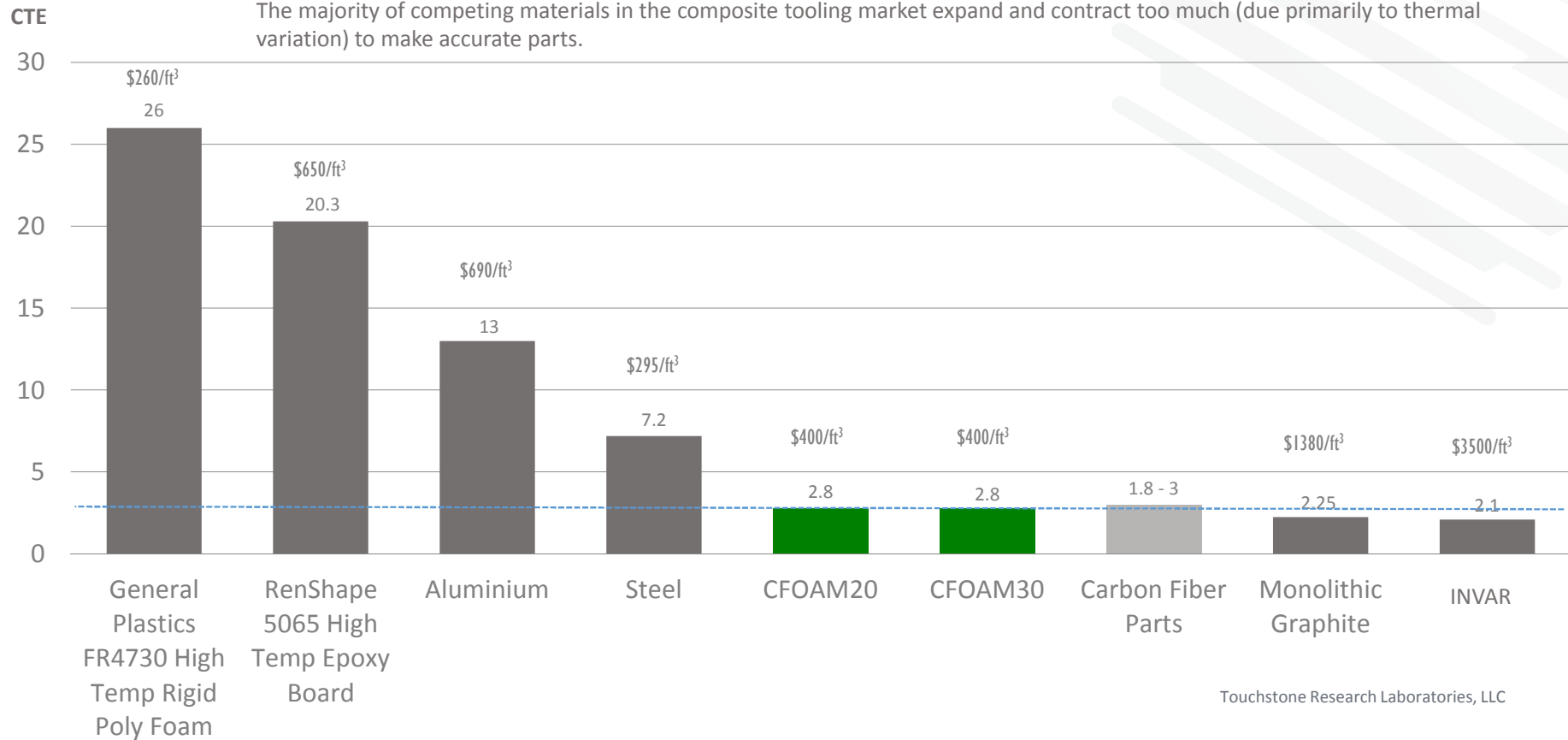


The patents provide the Company with significant barriers to entry for competition, both in the **US** and globally

# Market Product Comparison

## CFOAM Coefficient of Thermal Expansion Matches All In-Use Materials

The majority of competing materials in the composite tooling market expand and contract too much (due primarily to thermal variation) to make accurate parts.



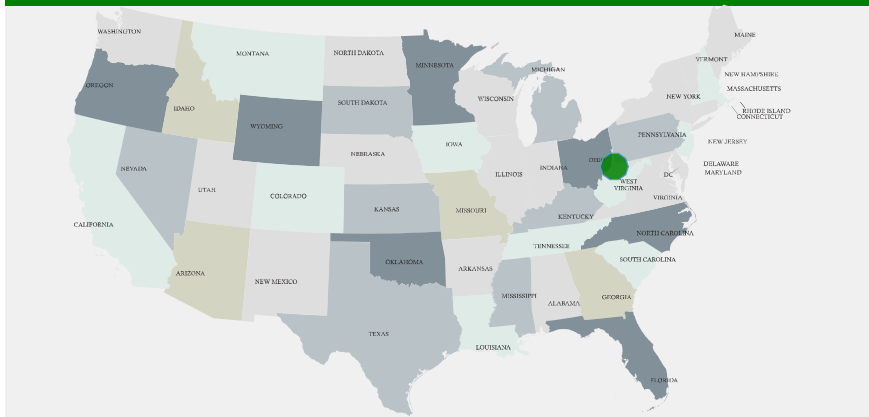
Touchstone Research Laboratories, LLC



# The Operational Business Platform



Existing facility located in Triadelphia, West Virginia, USA

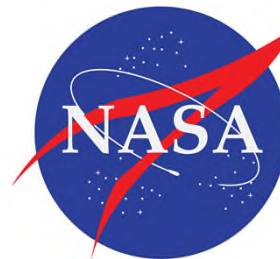


- 20 years of US Government funded research (more than US\$60m spent to date)
- 100% owned IP for CFOAM<sup>®</sup> manufacturing and end-use applications
- Tier-1 aerospace customer acceptance and growing market segment
- Significant technical and cost advantages over materials currently in use for the tooling manufacturing process, and multiple potential applications in an array of diverse industries
- Opportunity to improve efficiencies, increase production and widen margins within current operations due to material excess capacity in capital stock
- Increasing use of carbon fiber in the aerospace and defense sector is a key driver for initial CFOAM<sup>®</sup> mold tooling demand
- Readily available feedstock source
- Numerous applications outside of the aerospace and defense sector
- Very strong current operating production margins with demonstrated potential to significantly scale revenues and margins over the next 0-5 years

# Current Key Customers

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**NORTHROP GRUMMAN**



# Market Opportunities

## Energy Absorbing Applications

- Estimated market of US\$2.3BN annually\*
- CFOAM® has undergone extensive testing and validation by the US Army, US Navy, Lockheed Martin, Southwest Research and the Army Research Laboratory.
- Expected significant progress with such contracts over the coming quarters

## Defense Applications

- Extensive research of CFOAM® has been conducted through the US Government's SBIR program.
- Current discussions and programs with:
  - Huntington Ingalls
  - Missile Defense Agency
  - US Navy
  - Northrop Grumman



## Heat Dissipation and Conductivity Applications

- Automotive Exhaust System Heat Exchanger
- LED Thermal Management
- Molten Salt Thermal Energy Systems

## Aerospace Composite Tooling

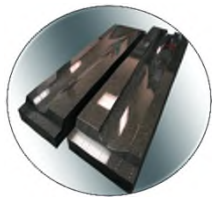
- The aerospace tooling market is currently estimated at ~US\$1.4B annually and is expecting it to grow to over US\$3.0B by 2032 with the rapid rise in carbon fiber components used in aerospace manufacture\*
- Current opportunities include Northrop Grumman long range strike bomber, Boeing, Airbus and private aviation aircraft

## High Temperature Applications

- Estimated market of US\$900m annually \*
- CFOAM® currently installed on a number of rockets and satellites



# Market Opportunities



## AEROSPACE TOOLING

Description	CFOAM is used to make specialized tools for forming composites
Market	<ul style="list-style-type: none"> <li>Manufacturing and Industry</li> </ul>
Market size	<ul style="list-style-type: none"> <li><b>\$1.4bn per annum*</b></li> </ul>
Benefit over competition	<ul style="list-style-type: none"> <li>Very low CTE – equivalent to incumbent materials' lowest CTE</li> <li>Very low cost (10-30%) relative to INVAR, monolithic graphite</li> <li>Highly machinable and repairable – unlike INVAR tool</li> <li>Lightweight (only 6% of the equivalent volume INVAR weight)</li> </ul>
Market growth opportunities	<ul style="list-style-type: none"> <li>Expand beyond current customers</li> <li>License CFOAM production to 3<sup>rd</sup> party tooling manufactures</li> </ul>



\*Management estimates based on market research

[www.cfoam.com](http://www.cfoam.com)

# Market Opportunities



## Energy Absorbing



Description	Leading insulating properties with the further ability to withstand very high temperatures and significant impactive and tensile force
Market	<ul style="list-style-type: none"> <li>Defense and aerospace applications ranging from rocket cone nozzles, takeoff/landing pads for “VTOL” aircraft to high temperature industrial furnaces.</li> </ul>
Market size	<ul style="list-style-type: none"> <li>\$2-3Bn*</li> </ul>
Benefit over competition	<ul style="list-style-type: none"> <li>Undergone significant testing by the US Army and other high profile participants in the defense and aerospace sector</li> </ul>
Market growth opportunities	<ul style="list-style-type: none"> <li>Numerous partnering opportunities with other market players</li> <li>Potential licensing opportunities</li> <li>Significant applications within the US defense sector currently being explored</li> </ul>

\*Management estimates based on market research

# Market Opportunities



## Battery Market



Description	A variation of CFOAM can function as an alternative to current solutions in the battery market
Market	<ul style="list-style-type: none"> <li>The global lithium ion battery market is growing at a dramatic pace, with North America and China leading the way</li> <li>Significant investments are occurring in the automobile and industrial sectors</li> </ul>
Market size	<ul style="list-style-type: none"> <li>~\$22bn*</li> </ul>
Benefits over competition	<ul style="list-style-type: none"> <li>Higher surface area</li> <li>Very inexpensive precursor</li> <li>Very inexpensive process</li> </ul>
Market growth opportunities	<ul style="list-style-type: none"> <li>The global EV market is growing significantly</li> <li>Progress within battery market could open enormous opportunities in the renewable energy sector</li> </ul>

# Market Opportunities-Additional



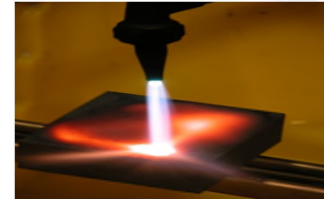
**Heat exchangers** – has primary material application potential in the avionics, automotive and space industry due to low weight and very high conductivity. Industry has a demonstrated insensitivity to cost. The market size is significant and the industry is looking for lighter-weight, low maintenance materials. **Estimated market size: \$12bn per annum\***



**Thermal protection and the aerospace market** – applications include rocket nozzles and high precision mirrors for telescopes. This market could provide a licensing opportunity. **Estimated market size: ~\$10bn per annum\***



**Blast Protection**—CFOAM®'s low weight and performance metrics would be highly attractive properties relative to incumbent materials. R&D for proof of concept is expensive and time-consuming, but there should be few barriers to adoption once a material is shown to be superior to the incumbents. **Estimated market size: \$5-10bn per annum\***



**Housing and Mass Transit Sectors** – CFOAM® has potential to penetrate a wide variety of applications in the housing and commercial mass transit sectors. CFOAM®'s fire resistant characteristics makes it an excellent material for cores used in to increase fire resistance ratings of doors, floors or walls. CFOAM's fire resistance and low flame smoke toxicity make it an ideal candidate for lightweight floor panels in mass transit cars.



**Gun barrel heat dispersion** – used as heat sinks to cool the barrel preventing distortion and improving accuracy. The United States firearms market has been growing. Although CFOAM is more expensive than the incumbent materials, it is lower in weight and has improved thermal conductivity.



# Thank You

Feel Free to contact us for  
more details

[www.cfoam.com](http://www.cfoam.com)

Mike Placha

Managing Director

Tel: +1 412 296 1473

Email: [mplacha@cfoam.com](mailto:mplacha@cfoam.com)

Toby Chandler

Non-Executive Director

Tel: +61 (0) 450 400 153

Email: [tchandler@cfoam.com](mailto:tchandler@cfoam.com)