



AML3D®

# Investor Presentation

April 2022

# Disclaimer

AML3D Limited (“AML3D” or “the Company”) does not take responsibility for any information, statement or representation contained in this presentation or any omission from it. AML3D has not carried out an audit or verified any of the information contained herein. Any projections and forecasts contained in this presentation represent best estimates only and involve significant elements of subjective judgement and analysis which may or may not be accurate. No representation or warranty is given as to the achievement or reasonableness of any plans, future projections, management targets, prospects or returns and nothing in this presentation is or should be relied upon as a promise or representation as to the future.

AML3D disclaim all liability for any loss or damage of whatsoever kind (whether foreseeable or not) which may arise from any person acting on any information and opinions contained in this presentation, notwithstanding negligence, default or lack of care. No responsibility is accepted to inform the recipient of this presentation of any matter arising or coming to AML3D’s notice in relation to this opportunity. In providing this presentation, no obligation is undertaken to provide the recipient with access to any additional information.

The recipient should not rely on any material contained in this presentation as a statement or representation of fact. No recipient should expect AML3D to owe it any duties or responsibilities in connection with any transaction. To the maximum extent permitted by law, AML3D expressly disclaim any and all liability (including without limitation for negligence) for representations or warranties or in relation to the accuracy or completeness of the information, statements, opinions or matters – expressed or implied, contained in, arising out of, derived from or for omissions from this presentation or any other written or oral communications transmitted or made available including, without limitation, any historical financial information, any estimates or projections and any other financial information derived therefrom.

This presentation is not and does not constitute an offer to sell or the solicitation, invitation or recommendation to purchase any securities and neither this presentation nor anything contained in it forms the basis of any contract or commitment.

# Investment thesis

A technology enabled, disruptor of the metal manufacturing industry

- **Proprietary, Industry 4.0 Wire Additive Manufacturing technology**
- **Creates significant value to customers in industrial scale 3D printing**
- **Multiphase revenue growth strategy**
- **Well positioned in the fast growth additive manufacturing market**
- **Global market application**





## Agenda

- Introduction
- AML3D Technology Advantage
- Growth Strategy
- Leadership and Culture
- Summary





# Industrial scale 3D metal printing

Proprietary, Industry 4.0 Wire Additive  
Manufacturing technology for industrial  
scale 3D metal printing solutions

Marine industry: Panama chock





# Stronger cost-effective components

WAM® technology —  
up to 30% stronger than  
cast or forged parts\*

\* Independent NATA testing

Marine industry: propeller

Stronger properties to achieve  
lighter, more durable products that  
require less maintenance, and  
improve efficiencies

Radius 290 mm





# On-demand 3D metal printing

Proprietary ARCEMY® units  
enable cost and time effective  
in-house 3D metal printing

WAM® printing directly from AML3D or  
alternatively customers purchase ARCEMY® units  
for in-house use and print on-demand

ARCEMY® is a medium to large scale metal 3D printer

# Market opportunity

AML3D WAM® technology is market leading in the large-scale 3D metal printing sector

## Expected growth rates in Additive Manufacturing (AM) markets

- **3D Metal Printing:** CAGR of ~24% to \$738.8m by 2025 <sup>1</sup>
- **Metal AM:** CAGR of ~22% to US\$7.19b by 2025 <sup>2</sup>
- **Global AM:** CAGR of ~30% to US\$78b by 2028 <sup>3</sup>

## Expected growth across AML3D's primary markets

- **Aerospace & Defence:** CAGR ~20% to US\$13b by 2028 <sup>4</sup>
- **Oil & Gas:** CAGR ~20% to US\$48b by 2026 <sup>5</sup>
- **Marine Vessel Market:** CAGR ~1.5% to US\$188.6b by 2028 <sup>6</sup>

## Key Target Markets by Metals and Product Summary <sup>7</sup>

Industry	Product Focus	Market size by 2027 (US\$M)
Aerospace	Invar tooling	642
	Pump components	10,189
Oil & Gas	Fittings (hi-pressure fittings & flanges)	1,568
	Valve casings, pressure vessels and high pressure equipment (incl. subsea & wellhead equipment)	8,410
Marine	Bulk structures & components, propeller blades	7,384

<sup>1</sup> BIS research. Global Metal 3D Printing Market, Focus on Type, Application, and Country Level Analysis – Analysis & Forecast, 2019-2025

<sup>2</sup> TechNavio, Metal Additive Manufacturing Market by Application and Geography – Forecast and Analysis 2021-2025, 2021

<sup>3</sup> Market Research, Global Additive Manufacturing Market and Technology Forecast to 2028, released July 2020

<sup>4</sup> Fortune Business Insights, Aerospace & Defense Additive Manufacturing Market, 2022

<sup>5</sup> Oil and Gas Analytics Market Demand & Opportunity Outlook, 2022

<sup>6</sup> Fortune Business Insights 2021-2028, Report ID: FBI10269

<sup>7</sup> Smartech Analysis, 2019 Additive Manufacturing Market Outlook and Summary of Opportunities



# Multiple revenue streams

AML3D WAM® technology delivers high value manufacturing solutions

## Contract manufacturing

- Design, prototype, testing and manufacturing at scale, on a fee for service basis

## WAMSoft® licensing

- Annual licensing and service fee, including training, software updates and staffing



## ARCEMY® unit sales

- Provide cost and time effective in-house 3D metal printing at point of need

## Enterprise solutions

- Supply, support and servicing ARCEMY® units alongside training, design services and software licensing

# Customer conversion

Converting opportunity to revenue



## Engagement

Initial engagement through sales function, inbound approaches and targeted marketing



## Prototype

Design components that meet customers bespoke requirements and deliver improved 3D printed product



## Testing

Stringent and intensive testing of product to prove its strength, capability and certification



## Contract

Negotiate project T&C's to deliver material long-term contract



## Revenue

Sustainable and ongoing revenue generated



# Multiple markets

AML3D address multiple sophisticated and geographically diverse markets

- Numerous points of entry into market – end user, OEM
- Continue to develop Energy and Oil & Gas sectors as primary markets by leveraging proven technology and existing commercial relationships with major global customers and exploiting our unique certification and compliance to standards
- Progress negotiations and prototyping projects with customers to develop additional and geographically diverse markets across Marine, Aerospace & Defence and Space
- Develop enterprise level solutions for contract manufacturing customers, combining supply and support of 3D metal printers with training, design services and software licensing





AML3D TECHNOLOGY  
ADVANTAGE





# Wire Additive Manufacturing – WAM®

AML3D WAM® technology disrupts traditional industrial cast, forged and billet metals



## STRONGER

Higher quality components that are up to 30% stronger<sup>1,2</sup> than traditionally cast or forged parts



## FASTER

Up to 75% faster<sup>3</sup> than traditional forging and casting without tooling investments



## MORE EFFICIENT

Up to a 70% cost reduction<sup>4</sup> through weight, time and logistics efficiencies



## MORE PRODUCTIVE

50% more resistant to metal fatigue<sup>5</sup>, minimising downtime, maintenance and breakdowns



## CERTIFIED

A proven, certified<sup>6</sup> additive manufacturing process

<sup>1</sup> Independent Testing via NATA accredited lab Intertek show WAM® steel products stronger than forged.

<sup>2</sup> Independent Testing via NATA accredited lab Intertek show WAM® NiAlCu products have 28% higher ultimate tensile strength and 111% higher ductility than conventional forged components

<sup>3</sup> Cunningham et. al. Cost Modelling and Sensitivity Analysis of Wire and Arc Additive Manufacturing shows 69-79% cost reduction compared to Direct Metal Laser Sintering, <https://www.sciencedirect.com/science/article/pii/S2351978917303694>

<sup>4</sup> Demonstrator WAM® Propeller Project completed with 50kg deposition compared to traditional Subtractive Raw Material of 462kg to make 22kg finished part.

<sup>5</sup> AML3D internal testing results

<sup>6</sup> Certified through Lloyd's Register, with ISO9001:2015 QMS, AWS D.20 and BizSafe3 compliance.

# Improving environmental & sustainability outcomes

AML3D WAM® technology is more cost effective and sustainable

90%

## REDUCTION IN MANUFACTURING SPACE<sup>1</sup>

Produce higher quality industrial scale components using up to 90% less space than traditional forging factories

80%

## LESS WASTE<sup>2</sup>

Waste reduction compared to traditional manufacturing as offcuts are recycled and reused

~87%

## REDUCED EMISSIONS

Emissions are reduced by ~87%<sup>3</sup> during manufacture when compared with traditional method

<sup>1</sup> Largest ARCEMY® footprint is 10m L x 3.9m W, and is customisable. Compared to Australia's largest forging operation, Greg Sewell Forgings at 9,464m²

<sup>2</sup> Internal data sourced from Panama Chock project for Keppel Technology & Innovation; and, Williams et al., 2016 "Wire + arc Additive Manufacturing"

<sup>3</sup> Moller et. al. Sustainable production of Aircraft Systems: Carbon Footprint and Cost Potential of Additive Manufacturing in Aircraft Systems, 2019





## GROWTH STRATEGY

# Growth drivers

Generating value over three time horizons



## Immediate

- Develop contract manufacturing opportunities with major global customers in the Energy and Oil & Gas sectors
- Sales of ARCEMY® units
- WAMSoft® license, servicing and training fees



## Medium

- Entry into the US and European markets via partnerships and joint ventures
- Target Marine, Aerospace & Defence and Space sectors for additional contract manufacturing opportunities
- Implementing enterprise level solutions across all target sectors



## Longer-term

- Commercialising R&D projects to deliver branded wire feedstocks, unique alloys, next generation software and 3D metal printing processes



# Immediate value drivers

Over \$2 million of FY2022 revenues from contracts in hand

## Oil & Gas industry

### Repeat orders

- From existing customers such as ThyssenKrupp

### Orders from new North American customers

- Schlumberger – high value contract with potential repeat orders
- World's first 3D printed pure titanium plunger for Baker Hughes

### World's largest 3D printed subsea high pressure Oil & Gas component

- Tested successfully and verified by Lloyd's Register

### Component Supply Agreement

- To supply O&G components to WA based AdditiveNow and OSOS Alliance clients as needed over the next 3 years
- Tenders in for several high value projects

## ARCEMY® unit sales

May/June 2022

- up to 3-4 unit sales

March 2022

- ST Engineering, Singapore

November 2021

- Royal Melbourne Institute of Technology

October 2021

- University of Queensland



# Medium term value drivers

## Marine, Oil & Gas, Defence, Aerospace and Space



### Oil & Gas

- Repeat parts manufacturing contract for Thyssenkrupp
- Several high-volume component manufacturing contracts under negotiation



### Defence

- Contract to print a 500kg aluminium nozzle in four sections
- Trials of next generation titanium body armour with defence company Lightforce Australia Pty. Evaluating high volume repeatability program. Lightforce developing final product to market.
- AML in-house program for high performance ballistic resistance components – recent successful test results of +90%. AML IP/product.



### Aerospace / Space

- North American Aerospace contract to metal print specialised, high strength alloy prototype
- Ongoing discussions with major aerospace company Boeing (US)



### Marine

- A 150 ton, WAM® printed, Panama Chock receives DNV verification, creating marine opportunities
- Joint research programs with BAE Systems on advanced shipbuilding technologies

# Longer-term value drivers – R&D

Investing in new products, processes and markets

## Adding value to grow technology margins

- Develop the next generation of WAM® technology
- Higher quality through improved process measurement, monitoring and adjustment
- Partnership with BAE Systems and Flinders University

BAE SYSTEMS



## Potential for AML3D branded wire feedstock sales

- Create high strength, lightweight, corrosion resistant components
- Applications across automotive, marine, mining, oil & gas
- Potential endpoint of Deakin University Aluminium-Scandium alloy project



## Access new maintenance and repair markets

- Create feedstock that doesn't need post processing treatments
- Allows direct application to industrial machinery and vehicles for maintenance and repair
- Potential endpoint of Deakin University Aluminium-Scandium alloy project





# Longer-term value drivers – R&D

Investing in new products, processes and markets

## New stronger, lighter, thermal and radiation resistant alloys

- Proof of concept for integrating Boron Nitride Nanotubes (BNNT) into Aluminium
- Opportunity to create new class of product across space, aerospace, marine, defence, and transport
- BNNT partnership with Deakin University

## Creating integrated printing and final machining solutions

- 5x faster, twin wire printing to improve machine productivity to 30kg/hr
- Combining Arcemy®, WAM® and final machining and strength prediction software for higher quality one-stop production
- Next-Generation Hybrid Printing project with the CSIRO

## IP/Patent updates

- EU and USA patent examinations are in process, with the WAM® process patent expected to be awarded by end of CY2022

## Third-party initiatives

- Third-party wire additive manufacturing R&D initiatives supported by ARCMEY® unit sales to RMIT and Queensland University





# SUMMARY

Facility Open Day & Tour



# AML3D – Creating shareholder value

Disruptive technology with multi-phase strategic growth plan

## **Proven, certified, patented technology**

delivering better industrial scale metal components in a time and cost-effective manner

Ability to leverage established relationships and contracts to **drive long-term revenues** from primary Oil & Gas market

New contracts in Marine, Aerospace & Defence and Space add **new revenue streams** and geographic markets

**Increasing sales** of ARCEMY® units create pathway to initiate enterprise level solutions with global customers

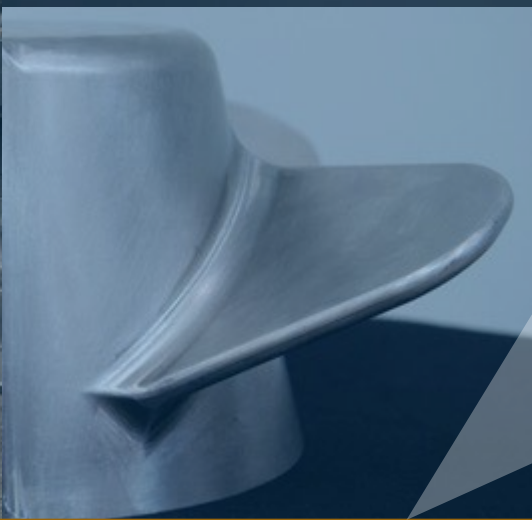
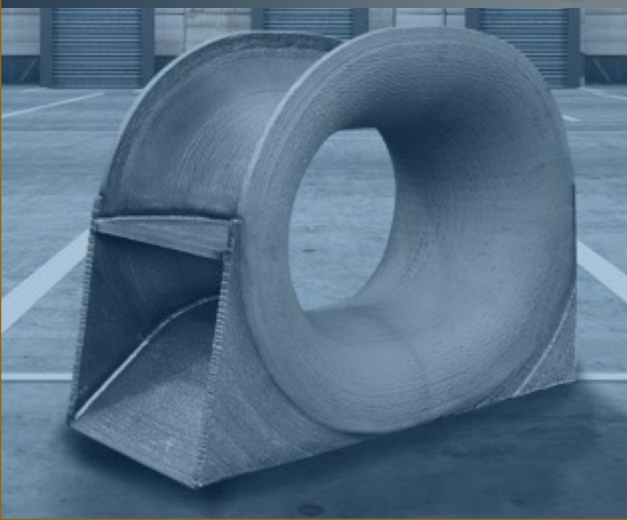
Qualified and capable leadership team **driving new business, innovation and better ESG outcomes** for customers







THANK YOU





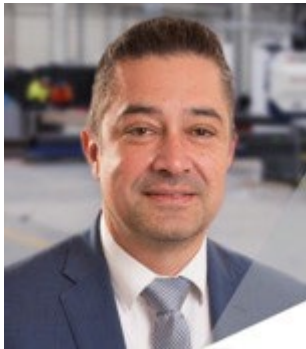


## APPENDIX



# Board and key management

## Leadership with a broad and global skill set



**Sean Ebert**  
*Non-Executive Chairman  
(Interim)*

Sean has over 25 years of executive and board level experience within the engineering sectors of oil and gas, mining and resources and emerging technologies in Australia and internationally.



**Leonard Piro**  
*Non-Executive Director*

Former Deputy Chief Executive of the SA Department of Trade and Economic Development, Executive Director Manufacturing and Chief Executive Automotive Industry Transformation Taskforce.



**Andrew Sales**  
*Managing Director*

A Chartered Engineer and a renowned expert in welding technology with 30 years of global experience. Andrew held varying roles in upper management within the oil & gas, resources and mining, and advanced manufacturing sectors.



**Christine Manuel**  
*Company Secretary*

Christine held Company Secretary and executive roles in a range of entities over more than 20 years. Christine was formerly Company Secretary of Santos Group and People's Choice Credit Union.



**Hamish McEwin**  
*CFO*

A leader with 25 years of accounting, finance, and senior management roles. Hamish specialises in driving operational transformation and nurturing talent across manufacturing, import/export, and distribution sectors.





# Culture aligned with sustainable returns

AML3D values drive innovation and desire to exceed customer expectations



## Vision

Utilise new technologies to pioneer and lead metal additive manufacturing globally



## Mission

Enable clients to become globally competitive by helping them establish Industry 4.0 capability through our additive manufacturing solutions using IoT Technology



## Values

- Integrity
- Collaborative
- Can Do
- Team Focused
- Creative