

ASX:3DA

**Investor Presentation March 2021** 

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# **Company Snapshot**

Amaero International Limited (ASX:3DA) ("Amaero", the "Company") is an Australian Company specialising in metal additive manufacturing (3D printing) for the defence, aerospace, and automotive sectors.

Amaero was established through the Monash University Centre for Additive Manufacturing, the the world's leading institute for metals additive manufacturing for the aviation and defense sectors.

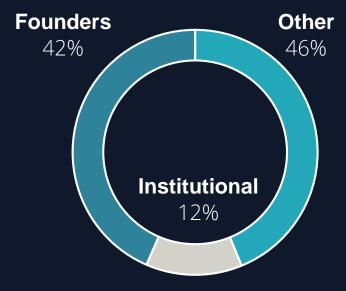
The Company has grown to become a leading provider of 3D printing services, machines & metal powders to some of the world's largest manufacturers in these sectors.

Amaero is currently Australia's largest metal 3D printing company (by volume of machines), with facilities in Melbourne, Adelaide & Los Angeles.



ASX Code	3DA
Shares on issue	201m
Share price (15 <sup>th</sup> March 2021)	\$0.64
Market Capitalisation	\$128m

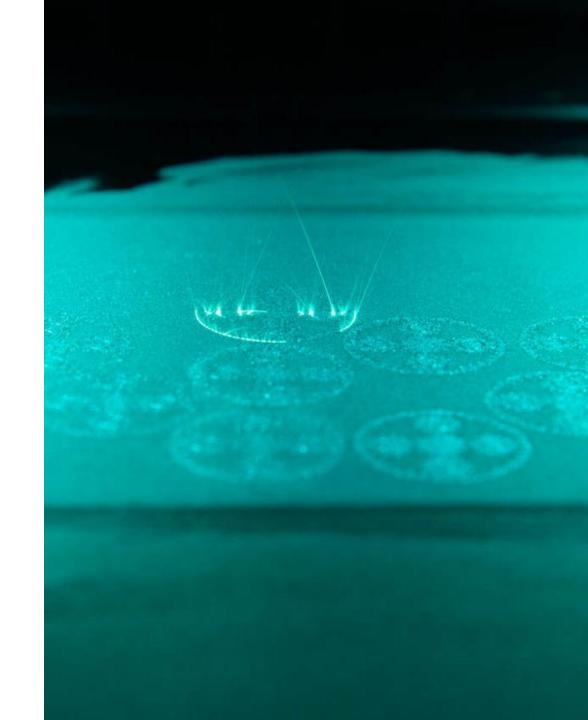
#### **Shareholder Breakdown**



# H1 FY2021 Highlights

#### Corporate

- Successfully raised \$9m via share placement to high quality domestic, international and sophisticated investors.
- Successfully completed a SPP raising \$4.825m which
  was partially underwritten up to \$1.5m by joint venture
  partner PPK Group Ltd (PPK).
- The Honourable Christopher Pyne appointed to the group's Advisory Board to advise on defence and geopolitical related defence projects and will work closely with Amaero's other international defence advisors, including the former Secretary of Defence of the United States
- Mr Ken Davis appointed to lead Company's North American operations, reporting to the Group CEO, he will work closely with other Amaero senior executives to develop and implement growth strategies.
- Amaero's senior employees and management opted to take 20% of their salary in equity from August 2020 due to Covid-19 and were issued 269,713 Shares in lieu of cash payments.



# H1 FY2021 Highlights

#### **Operations**

- Amaero subsidiary, Amaero Alloys Pty Ltd, entered a Joint Venture Research Agreement (JV) with PPK Group Ltd subsidiary, PPK Aust Pty Ltd, and Deakin University, to develop a super strength aluminium alloy.
- Purchase Order from Gilmour Space Technologies for the manufacture of two rocket motor components, with the opportunity to provide further 3D printed components, subject to the success of the initial project.
- Amaero subsidiary, Amaero Engineering Pty Ltd, entered a Teaming Agreement with MEMKO Aviation Aerospace Defence Pty Ltd to jointly market and provide their engineering and manufacturing services to third parties for projects in the fields of design, manufacturing and certification of products for aviation, defence and space applications.
- Amaero accepted a purchase order from the world's largest aerospace manufacturer, The Boeing Company, for the manufacture of evaluation parts.
- Amaero's El Segundo Facility and Adelaide Facility have been awarded AS9100 Aerospace Certification, as the Company continues to pursue high value contracts in the Aerospace industry.

#### After balance date events

- Amaero accepted a purchase order from Nissan Casting Australia Pty Ltd for a 3D printed tool steel insert for die-casting auto components.
- Amaero accepted a purchase order from Raytheon Intelligence and Space (RI&S), a business of Raytheon Technologies, to produce 3D printed samples in new materials for evaluation.
- Amaero and Rio Tinto to collaborate on the development of the supply chain for Amaero's high performance, High Operating Temperature Aluminium Alloy, "Amaero HOT Al".



# **2021 Growth Strategy**

- New Project No.1 (Not Contracted) Proposed Australian Titanium Powder Manufacturing Facility to support US defence prime contractors.
- Middle Eastern Metal 3D printing Centre of Excellence,(Not Contracted) – Proposed Middle East 3D Printing Centre \$108m.
- Satellite project (Not Contracted)
- **Nissan Agreement** expanding on the PO received
- Fletcher Glass Update
- New Team Members
- New Board Members



# **Corporate Structure**

Amaero operates through two subsidiaries: Amaero Engineering Pty Ltd and AM Aero, Inc

### **Board of Directors**



**David Hanna** Chairman



**Stuart Douglas**Executive Director



Kathryn Presser
Non-Executive Director



**Barrie Finnin**Chief Executive Officer

Amaero International Ltd

**Board of Directors** 

**Management Team** 

Shared Group Services Financial Controller

Exec. Director Strategy & Growth

Legal

**AM Aero, Inc** 

**Amaero Engineering Pty Ltd** 

#### **Advisory Board**

Christopher Pyne Advisory Board Defence and Geopolitics

Former Secretary of Defense USA

Advisory Board Defence/Aviation

**David Wolf** 

Advisory Board Global Defence Offsets

# **Appendix - Amaero International**

With the expansion into Adelaide and Los Angeles in 2019, Amaero's headcount has more than doubled in the past 2 years to currently 20 people with further growth to come.



# **Delivering On Challenging Opportunities**

# **Through World-Leading Research and Technology**



#### **Aerospace**

- Amaero's world class enterprise in metal 3D printing is leveraged by its aerospace customers to accelerate project delivery and simultaneously improving safety, performance and enabling component weight reduction.
- The Company's commitment to providing aerospace customers with quality focused on safety, reliability and meeting regulatory compliance backed by AS 9100D certification.



#### **Defense**

 Six of the world's top ten defense primes have worked with Amaero on R&D and manufacturing projects focused on improving performance, weight reduction, reduced part count and increased durability.



### **Tooling**

- Amaero's team of specialists have extensive experience in tooling design and manufacturing solutions, prototypes and metal die casting.
- Specialising in high quality
  manufacture of precision tooling using
  metal 3D printing, including plastic
  injection moulding and metal die
  casting moulds for high volume
  manufacturing.



## **Business Model**

## Designed to generate transactional and recurring revenue

## 1 Design and Prototyping

Cost-plus basis

- Initial design and prototyping
- Qualification and design freeze
- Cost-plus basis

### **Contract Manufacturing**

Price per unit

• Manufacturing components to customer specifications

### **Tooling**

Price per unit

• Tools for plastic moulding / metal die casting / extrusion

## 2 Equipment sales

Cost plus mark up

- Sale of proprietary 3D Printers (best in class)
- Turnkey facility solutions

## Training, service and maintenance

Fee for service

- Post-sales support and maintenance
- Training plus University Certification

## 3 Commercialising metal alloys

Price per unit

- Rights to commercialise patented proprietary alloys developed by Monash University
- Strategic Alloys JV with PPK commercialising breakthrough high tech materials
- Intends to offer metals powders as consumables to 3D Printer customers
- Commissioning of proprietary powder plant



# **Amaero Today**

## **Australia's Largest**

- Australia's largest Metal 3D printing company (by volume of 3D printers)
- World's largest R&D team provided by research partner Monash University
- Several industry world firsts including the first jet engine, aerospike rocket engine, flying parts
- World's most capital efficient Selective Laser Melting (SLM) 3D printers
- World's safest metal 3D printing machines
- Soon to have the largest range of various sized 3D metal printers globally (Q4 2021)
- 6 of the top 10 Defence companies in the world are Amaero clients
- Amaero facilities in Melbourne, Adelaide and Los Angeles



# **Separating People and Powder**

**Printing and Metal Powder Handling Solutions Under Inert Atmosphere** 



#### **Powder Preparation**

- Powder Dryer
- Powder Decanter
- Powder Sieve
- Powder Vacuum
- Powder Silo

### **SLM Printing Machines**

- 3D Metal Printing
- Open Parameter Control
- Multiple Build Sizes and Laser Configurations
- Cartridge Configuration For Rapid Changeover and Safety

### **Powder Handling & Recovery**

- Powder Removal Glove Boxes
- Safe, Inert Powder Handling

# **Amaero Equipment**



Amaero SP800 World's largest Laser Powder bed machine coming Q4 2021



Safe powder handling equipment



## Some of our Clients

## Working with the world's foremost manufacturers

Amaero is proud to have provided 3D printing services to some of the world's largest companies, leading the way in developing a more efficient manufacturing process.

































# **Industry Comparison**

	AMAERO ADDITIVE MANUFACTURING	Desktop Metal <sup>*</sup>
Stock Exchange Code	ASX:3DA	NYSE: DM
Listing date	December 2019	August 2020
<b>Current Market Capitalisation</b>	A\$128m	US\$4.73b (Approx. A\$6.12b)
IPO Capital Raised	A\$8m	US\$300m (Approx. A\$388m)
Expected to be cashflow positive	XXXX	2023
Capital Raised to Date	A\$28m	US\$575m (Approx. A\$788m)
Ability to service Aerospace sector	Yes	No
Ability to service majority of Defence sector	Yes	No
Ability to service High impact tooling sector	Yes	No

Strategic Alloys - Joint Venture

# **Investment Highlights**

- A total of \$13.825m raised through a share placement of \$9m to high-quality domestic and international institutional and sophisticated investors, and a \$4.825m Share Purchase Plan.
- Amaero accepted a purchase order from the world's largest aerospace manufacturer, The Boeing Company, for the manufacture of evaluation parts.
- Amaero accepted a purchase order from Raytheon Intelligence and Space (RI&S), a business of Raytheon Technologies, to produce 3D printed samples in new materials for evaluation.
- Amaero and Rio Tinto to collaborate on the development of the supply chain for Amaero's high performance, High Operating Temperature Aluminium Alloy, "Amaero HOT AI".
- Commencement of qualification statement of work, Amaero establishing a new factory 2 Kilometres from largest aerospace manufacturer to support the manufacture of satellite parts, with from this customer at their request.
- Purchase order accepted from Nissan Casting Australia Pty Ltd for the supply of tool steel inserts for die-casting engine components.
- Tooling Agreement with Fletcher Insulation, Australia's leading insulation company, for the development of an additive manufacturing application, to provide a superior tooling solution to Fletcher and their global manufacturing network.
- **Joint Venture Research Agreement (JV) to develop a super strength aluminium alloy**, with PPK Group Limited subsidiary, PPK Aust Pty Ltd, and Deakin University.
- Teaming Agreement with MEMKO Aviation Aerospace Defence Pty Ltd to jointly market and provide their engineering and manufacturing services to third parties for projects in the fields of design, manufacturing and certification of products for aviation, defence and space applications.
- **Purchase Order from Gilmour Space Technologies** for the manufacture of two rocket motor components, with the opportunity to provide further 3D printed components, subject to the success of the initial project.

# **Investment Highlights**

- International Patent Application in final stage for Amaero's high performance titanium alloy, which is 30% stronger & 5-7 times the fatigue life of Ti-6Al-4V (the premium Titanium for aerospace & defense).
- Second International Patent Application in final stage for Amaero's high performance High Operating Temperature (HOT) Aluminium alloy, with twice the operating temperature of the leading aerospace alloy.
- Successful completion, approval and certification of Amaero's AS9100 certification audits for the Company's Melbourne, Los Angeles & Adelaide facilities.
- **Expanded machine offering** with the launch of the SP260, the SP400 and additional powder handling ancillary equipment, complementing Amaero's existing machine offering, which includes the SP500 and SP100.
- New Project No.1 (Not Contracted) Proposed Australian Titanium Powder Manufacturing Facility to support US defence prime contractors.
- Middle Eastern Metal 3D printing Centre of Excellence,(Not Contracted) – Proposed Middle East 3D Printing Centre \$108m.



## Contact

## For further information, please contact:

#### **Barrie Finnin**

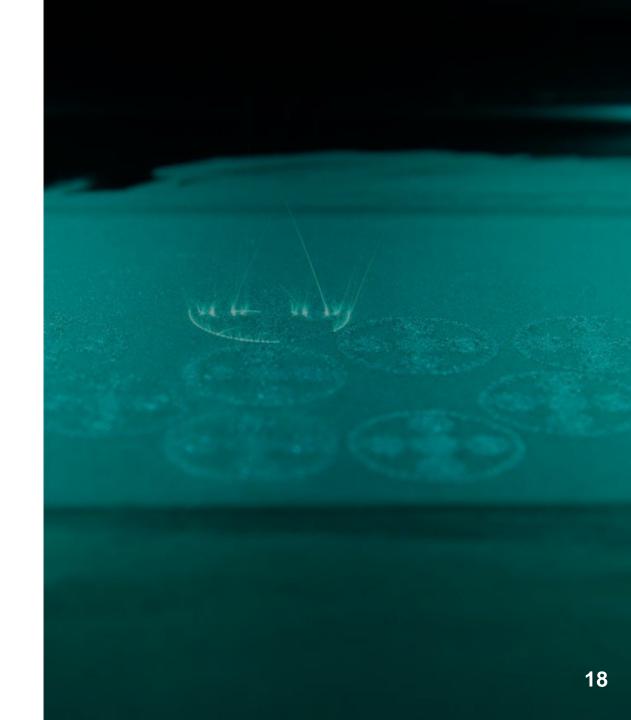
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# **Appendix - Board and Senior Management**



**David Hanna** 

#### Chairman

- Director of Business Strategy for Monash University since 2012, where he leads a small team that provides strategic support and financial advice in relation to the University's major investment decisions.
- 15 years in a variety of senior management positions in the Victorian Government, focused mainly around economic development policy, international policy and operations and innovation policy.
- Formerly worked for Commonwealth Government, including three years on the personal staff of then Prime Minister, Bob Hawke.



**Stuart Douglas** 

#### **Executive Director**

- Executive Director since May 2019, providing strategic and operational advice to management and preparing the Company for capital raisings and scaling its operations in preparation for its anticipated IPO.
- Stuart has successfully taken 3 startups through to ASX listing in the past 3 years. He implemented a similar strategy for Titomic Limited (ASX:TTT), which was the No. 1 new listed entity of 2017/18 on ASX and one broker deal of the year. He is co-founder of Innovyz, one of Australia's leading commercialisation firms which has assisted more than 70 early stage innovations to commercialise.



Kathryn Presser Non-Executive Director

- Kathryn has previously served as CFO and Company Secretary for Beach Energy Limited (formerly Beach Petroleum Limited) (ASX:BPT), assisting the company from a junior explorer through numerous capital raisings as the CFO and then scaling for growth to become an ASX100 company.
- She holds extensive experience in governance, risk and financial reporting and management and she also serves as Chair of the Audit & Risk Committee to oversee the financial elements of the business as well as providing direction to the Company Secretary.



Barrie Finnin
Chief Executive Officer

- Barrie is an experienced executive who has created a number of spin-off ventures, co-operative research centres and start-ups and has worked in many different roles including CEO, Director and General Management.
- Senior management level for the CSIRO for more than 12 years and has been involved in the manufacturing industry for over 25 years.

# **Appendix - Amaero USA – Senior Management**



#### **Ken Davis, VP North American Operations**

- Ken brings to Amaero a deep knowledge of additive manufacturing and strong relationships with key customers
- Previously Director of Additive Manufacturing and site leader of CalRAM, the worlds only NADCAP approved site for AM using LPBF & EBPBF.
- Ken's knowledge of qualification processes for AM and Aluminium powder metallurgy will enable rapid qualification acceptance by BDS



#### Darryl Cummins, Manager - Digital Manufacturing

- Over 20 years' experience in 3D printing systems and additive manufacturing, working with various materials from plastics to metals.
- Worked with a variety of companies including Intel, Facebook and Stratasys and has been exposed to automotive applications of AM at BMW, Sauber Racing and Faraday Future.
- Received Underwriters Laboratories "UL" certification for additive manufacturing in 2017.
- Prior to joining Amaero, Darryl worked with Additive Industries, he installed, commissioned and upgraded AM systems at SpaceX.



#### Shon Dionne, Sales Engineer, AM Machines & Tooling

- Over 20 years' experience in the automotive component manufacturing sector working for a number of manufacturers of automotive components including MVP Plastics, Blue Water Automotive Systems, Blackhawk Automotive Plastics, Progressive Moulded Products, A. Raymond and Huron Plastics.
- During his career, Shon has engaged many of the OEMs and tier 1's in the automotive sector including Takata, Magna, Ford, Chrysler, General Motors, Lear and Tesla.
- His expertise includes business development, design of injection moulding manufacturing processes, project management and tooling design for injection moulding



### Dr. James Sears, Technology Fellow, Quality Systems & Additive Manufacturing

- Jim has had leadership and engineering roles in GE Research, Carpenter Technology Corporation and Lockheed Martin.
- He has over 30 years experience in Titanium Atomization and AM fabrication
- At Amaero, Jim is responsible for the quality systems, powder production development and metal 3D printing processes

