

**Aurora Labs**<sup>TM</sup>

Corporate Update September 2018

ASX : A3D

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# CORPORATE SNAPSHOT

ASX:A3D

## Market Capitalisation and Enterprise Value<sup>1</sup>

Quoted Ordinary Shares on issue	no.	65,624,271
<b>Total Ordinary Shares on issue</b>	<b>no.</b>	<b>65,624,271</b>
Share price (20 Sep 18)	A\$/share	0.68
<b>Total Quoted Options on issue<sup>2</sup></b>	<b>no.</b>	<b>3,686,000</b>
Listed option price (20 Sep 18)	A\$/option	0.23
<b>Market Capitalisation</b>	<b>A\$m</b>	<b>44.6</b>
Cash (as at 30 June 18)	A\$m	3.8
<b>Enterprise Value</b>	<b>A\$m</b>	<b>40.8</b>

## Top Shareholders (20 Sep 2018)

Name	Share Held	% of Shares on Issue
David Budge Managing Director	23,946,785	36.5%
<b>Top 20 Shareholders</b>	<b>38,839,610</b>	<b>58.41%</b>

### Notes:

1. Excludes unquoted options and performance shares.
2. Listed options A3DO, Exercise Price \$1.00. Expiring 17/04/2020.

Source: As at 20 Sep 2018, Company Announcements.

## Share Price / Volume History (A\$; millions)



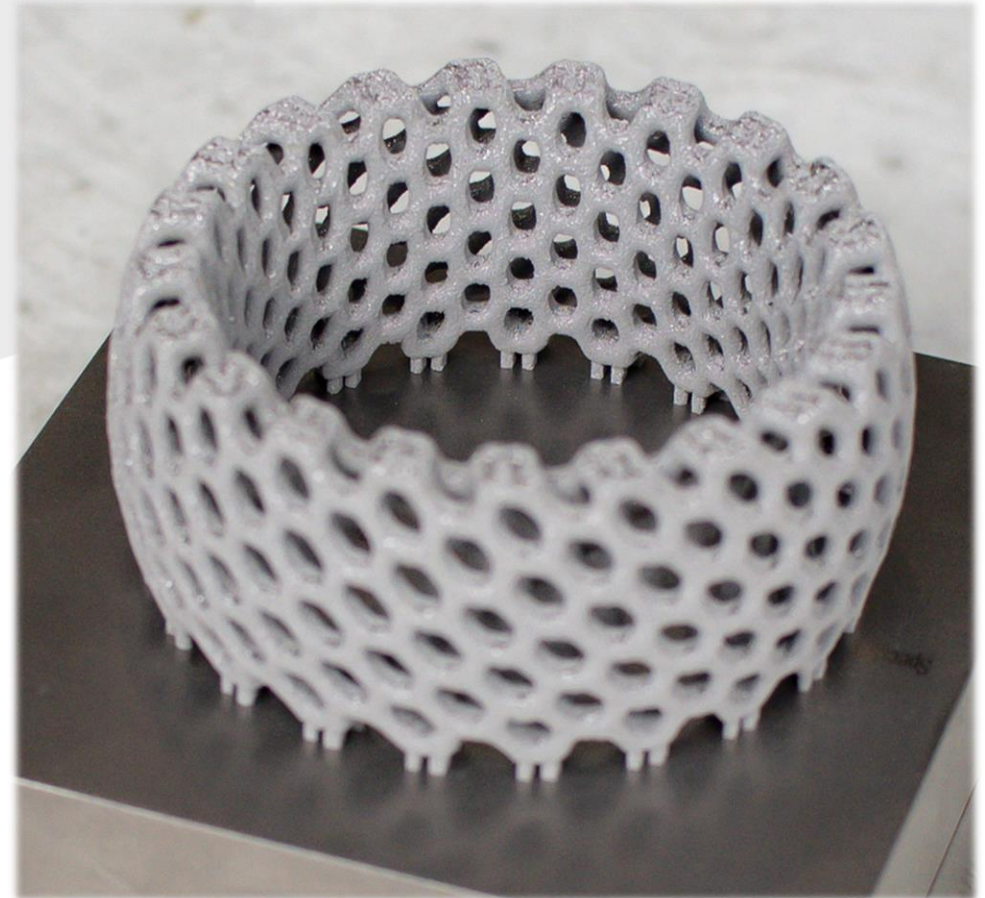
# SUMMARY

- Rapid, high quality 3D metal printers
- High quality, low cost metal powders
- Printers aiming to produce quality, fit for purpose parts with world recognised certification
- Digital design and engineering capabilities in conjunction with Global partner AdditiveNow™<sup>1</sup>
- To more effectively convey the purpose and advantage of our technology, A3D has changed terminology from the Large Format Technology (LFT) to Rapid Manufacturing Technology (RMT) and Medium Format Printer (MFP) to RMP1 (Rapid Manufacturing Printer).

## 1. ABOUT ADDITIVENOW

AdditiveNow Pty Ltd is a company to be established as an incorporated joint venture between Aurora Labs Limited and Advisian Digital, a division of the WorleyParsons Group of Companies.

[See more at the AdditiveNow website here.](#)



High complexity bracelet printed by  
Alpha RMT machine



# MARKET

- There is a massive market for replacement parts in Oil & Gas, Mining, Major Infrastructure
- These typically have long lead times and a high cost
- High speed, high quality 3D printing can reduce both cost and lead time for replacement parts
- Our ultimate market is the global metal manufacturing market which is expected to reach 4 Trillion dollars by 2020<sup>1</sup>
- As an example, Oil & Gas Major projects of 147b by 2019<sup>2</sup>

1. Research and Markets, Global Metal Manufacturing Market Briefing 2018 – ResearchAndMarkets.com, February 21, 2018, <https://www.businesswire.com/news/home/20180221005897/en/Global-Metal-Manufacturing-Market-Briefing-2018>

2. Source: Goldman Sachs, Top Projects 2018, April 9 2018



# PRINTING COMPLEX PARTS AT 8x MARKET SPEED<sup>1</sup>

- Aurora Labs' 3D metal printing Rapid Manufacturing Technology (RMT) can print complex parts
- Initial prints using RMT achieved a speed equivalent to 15.88 kg/day
- Speeds achieved are in excess of 8 x faster than market speed
- Now that the core technology has been proven the scalable nature of the RMT indicates the pathway to a target print speed of 1000kg/day is achievable



Alpha RMT machine now printing complex parts at market speed

***“The remarkable thing about this advancement in Aurora’s RMT is that all the core technology required to print at high speeds has been proven out. The tasks ahead of us, to reach printing complex parts rapidly, are standard engineering problems that are comparatively easy to solve.”***

*David Budge Managing Director*

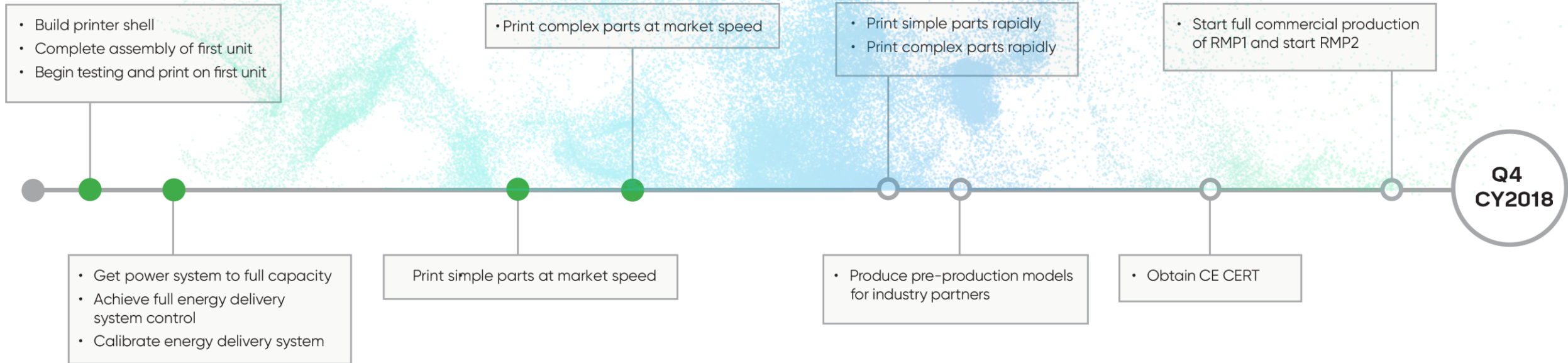
<sup>1</sup> Aurora Labs defines Market Speed as the standard speed of a comparable size machine that can print titanium (CP-Ti). Market research has shown this to be a rate of 81.7 g/hr (1.96 kg/day). The initial prints using the Alpha RMT achieved a speed equivalent to 662 g/h or 15.88 kg/day.

Further information refer to announcement: [Aurora Labs Reaches Ability to Print Complex Parts at Market Speed](#)

VIDEO SHOWING COMPLEX PARTS PRINTED AT MARKET SPEED

[https://auroralabs3d.com/#!/media/videos/20180918\\_01](https://auroralabs3d.com/#!/media/videos/20180918_01)

# RAPID MANUFACTURING TECHNOLOGY DEVELOPMENT TIMELINE



● Completed



# JOINT VENTURE: ADDITIVENOW™

Aurora is close to finalising contracts which will result in a joint venture to be called AdditiveNow.

AdditiveNow™<sup>1</sup> will focus specifically on:

- Licensing and distribution of Aurora's 3D metal parts printers
- Design and certification
- Creation of a Print Bureau using Aurora Labs' technology
- Explore option for bulk powder production

AdditiveNow™ plans to introduce 3D printing to major infrastructure, mining and other resource companies globally and to provide those companies with a competitive advantage over the general market through expert use of key technologies.

<sup>1</sup> [AdditiveNow](https://additivenow.com) – <https://additivenow.com>



Complex de Laval Rocket Motor Nozzle  
Cross Section printed with Alpha RMT  
printer

# POWDER PRODUCTION

Aurora's powder production prototype has been completed and testing has commenced.

- Aurora has successfully produced its first laboratory test scale powder demonstrating a very tight size distribution
- The prototype Powder Production Unit (PPU) is intended to demonstrate the technology for producing very high quality powders at lower cost than existing processes
- Following successful testing, Aurora aims to build a full sized PPU capable of producing up to 5 tonnes per day of powder
- International powdered metals markets, e.g. metal injection moulding (MIM) powders, that this system would sell into are sized in the billions of dollars<sup>1</sup>

<sup>1</sup>Technavio – Global Metal Powders Market 2016-2021, Pg. 28



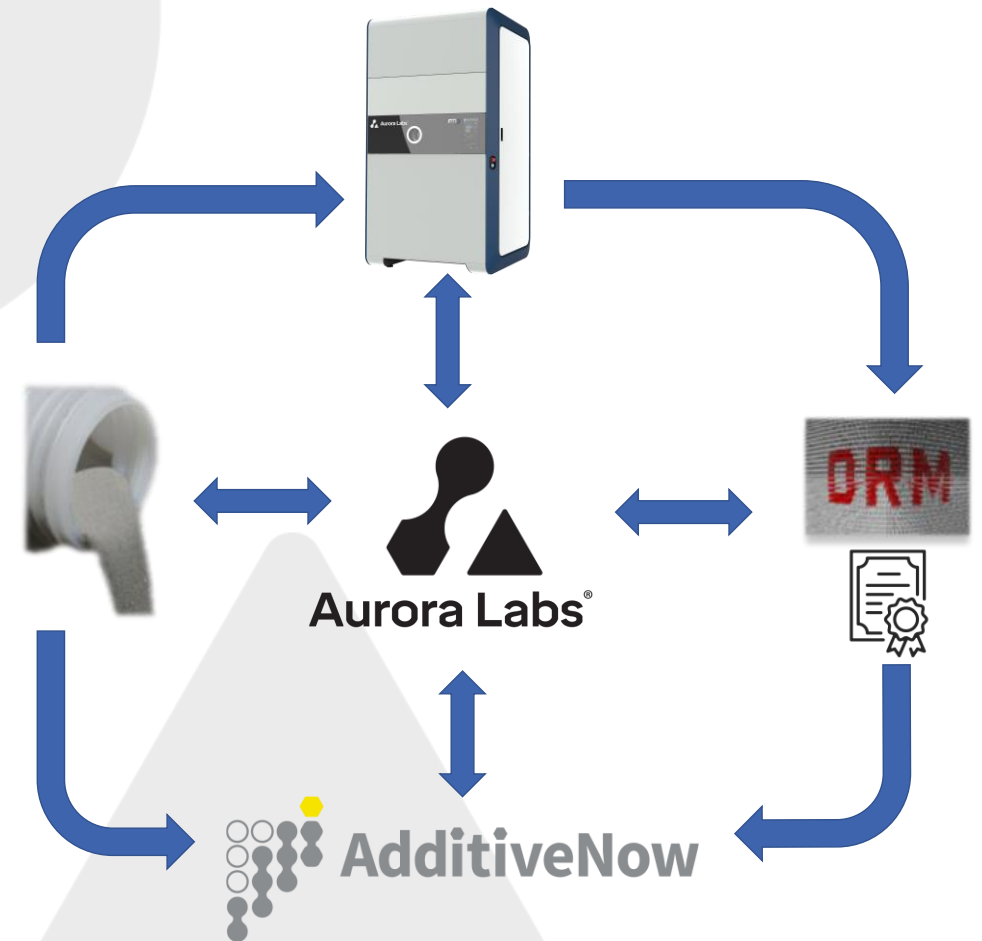
# A COMPLETE PRINTING ECOSYSTEM

**Printers** – RMT's rapid speed moves the goal post on what is printable economically

**Powders** – Provides control of consumables and caps cost of production








**DRM and Certification** – Provide control of production and ability to ensure compliance with standards and parts being fit for purpose

**AdditiveNow™** – Provides a clear path for inventory integration to assess suitability to 3D print as well as engineering services to optimize designs and digitise entire inventories. It may also provide agile manufacturing for this process as proof of concept



# RELATIVE MARKET VALUATIONS

- Aurora is currently valued at a fraction of competing 3D printing companies
- Strong recent activity in the sector such as Desktop Metal raising a further US\$65m in venture funding from Ford raises funding to US\$277m from investors such as, GE Ventures, BMW iVentures, Lowe's, Techtronic Industries amongst others, at an estimated valuation of >US\$1 billion (March 2018)<sup>1</sup>
- No equivalent competitor with similar technical specifications to Aurora's RMT technology (under development)

Company	 Aurora Labs™		 CONCEPTLASER <small>a GE Additive company</small>	 ArcamEBM <small>A GE Additive Company</small>	 Desktop Metal		
Listed or Private	Public	Public	Private	Delisted <sup>3</sup>	Private	Private	Public
Listing Location	ASX	ASX	n/a	n/a	n/a	n/a	NYSE
Stock Ticker	A3D	TTT	n/a	ARCM	n/a	n/a	DDD
<b>Market Cap (A\$m)</b>	<b>44</b>	<b>208</b>	<b>998<sup>2</sup></b>	<b>1,142<sup>4</sup></b>	<b>&gt;1,250<sup>5</sup></b>	<b>2,345<sup>6</sup></b>	<b>3,007</b>
Stage of Development	Small commercial production (SFP) Development stage (RMT)	R&D Pre-revenue Commercial development	Commercial production	Commercial production	Pre commercial production	Commercial production	Large scale commercial production

**Notes:**

1. The Wall Street Journal, Yuliya Chernova, March 19 2018.
  2. Based on GE's acquisition of 75% of company for US\$599m.
  3. Delisted on 26 Jan 2018 after GE acquired 95% of voting stock.
  4. Based on GE's acquisition of 75% of company for US\$685m.
  5. Based on private valuation as per Pitchbook website.
  6. <https://www.bizjournals.com/sanjose/news/2017/12/20/carbon-3d-printing-funding-valuation-adidas.html>
- Source: Based on company data as at 20 September 2018.

# AURORA LABS NEXT STEPS

- Finalise development of the RMT by;
  - Printing simple parts rapidly
  - Printing complex parts rapidly
- Produce first pre-production model of RMP1 for supply to industry partner
- Produce commercial quantities of powder
- Commence commercial manufacture of pre-production RMP1 units
- Advance cooperation with industry partners





# KEY PERSONNEL

## **David Budge** Founder, Managing Director

Mr Budge has extensive industry experience in robotics, robotic welding, surfacing engineering, product development and manufacturing processes. He has become recognised for his experience in solving difficult fabrication and surface engineering problems for clients. He is the primary inventor of the large majority of Aurora's inventions that are the subject of its patent applications and continues to be its largest shareholder to date.

## **Nathan Henry** Business Development and Marketing Director

Mr Henry has held senior management roles for over the last 25 years. He has been involved across all levels of strategic planning, divisional financial reporting and senior corporate accountability up to board level. His roles have covered the full spectrum of responsibility including product, process and business model development, new business development, technology implementation and roll out through distributed networks, market research and writing of business plans. Mr Henry is responsible for developing the strategy and processes required for branding and marketing Aurora's products and services.

## **Steven Daw** General Manager

A high performing Global Executive with over 20 years' experience in delivering results for multi-disciplinary engineering businesses. This has included manufacturing, maintenance, asset management and services businesses. Delivering products and services to the Resources, Oil & Gas, Transport, Utilities, Infrastructure, Telecommunications and Construction industries. Mr Daw possesses excellent strategic insight, adopts a collaborative leadership approach and is noted for analytical and forecasting strengths that ensure products and services are optimally positioned for success in highly competitive market environments.

## **Paul Kristensen** Non-Executive Chairman

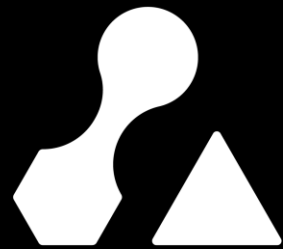
Mr Kristensen is a veteran angel investor and serial entrepreneur with a passion for turning exceptional technology into great business. Based on initial expertise gained during a career in nuclear science R&D, he combines vision and enthusiasm with innovative strategy development and in-depth corporate and commercial knowledge, acquired over subsequent decades of activity as a technology investor and serial entrepreneur. Mr Kristensen is a highly experienced company chair and director who has taken IP-based companies to IPOs both in Australia and on overseas stock exchanges.

## **Mel Ashton** Non-Executive Director

Mr Ashton holds a Bachelor of Commerce degree from the University of Western Australia, and is a Fellow of Chartered Accountants Australia and New Zealand. He has over 35 years' corporate experience and today leverages his strategic approach and business network in his role as a specialist in Corporate Restructuring and Finance and as a Professional Company Director. Mr Ashton has held many non-executive roles with large private, ASX listed and not for profit companies.

## **Mathew Whyte** Non-Executive Director and Company Secretary

Mr Whyte is a professional executive with over 25 years' experience in corporate administration and financial management of small to medium ASX listed entities. He has specific and hands-on Board, Company Secretarial and CFO experience for WA based ASX listed Mining, Mining Services, Biotech, Oleochemical and Renewable fuel generation industries with overseas operations experience in Africa, South East Asia, North America and United Kingdom. Mr Whyte is a CPA since 1985 and Fellow of Governance Institute of Australia since 1995.



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[auroralabs3d.com](http://auroralabs3d.com)