

### Standards change speeds market penetration

AML3D Ltd (ASX:AL3) was established in 2014 to commercialise WAM® (Wire Additive Manufacturing), an additive manufacturing technology for the cost-effective production of large, high-performance metal components and structures. The company has reported lower levels of customer conversion in Q1FY22 because of the impact of COVID-constrained business development and order completions. AL3 has \$5.4m in cash and has been active in developing opportunities in the quarter despite these obvious constraints. The company has advanced connections with academia and will see commercial benefits in both machine sales and technology development from relationships with Deakin University, University of Queensland and RMIT. Boeing, BAe, Keppel and other significant entities are in the process of qualifying parts made using the WAM® process and we expect commercial results to follow. Agreed board retirements prior to the AGM leave AL3 considering roles for two new non-executive directors while manufacturing business momentum is rising in the defence aerospace and subsea oil and gas sectors. A recent ARCEMY® WAM® module sale to RMIT and research partnership with Deakin University broadens commercial opportunities in welding wire development and supply using boron nitride nanotubes to enhance aluminium composites.

### Business model

AML3D generates revenue from contract manufacturing of components using its WAM® process, sales of the ARCEMY® WAM® modules and licensing revenue from these sales after the first year. The company has a manufacturing facility in Adelaide, additional capacity under development in Singapore, and a strong level of interest in machine purchases due to the large scale possible using the WAM® technology.

### Commercial announcements

Since the September quarterly, AL3 has announced further purchase contracts to produce metal 3D printed parts for customers in the defence aerospace and energy markets. These are strategically important developments in the process of expanding certification of 3D manufactured parts in various roles – particularly in larger-scale applications suited to manufacture using the ARCEMY® modules. AL3 will manufacture a 500kg aluminium rocket nozzle and a titanium plunger for use in an oil and gas processing plant. This is believed to be the first 3D printed part of its kind. The orders were contracted shortly after the approval of the Additive Manufacturing Standard (API 20S) by the American Petroleum Institute (API).

### Board changes

Prior to the AGM, the Chairman, Steven Gerlach, and Non-Executive Director, Kevin Reid, announced they would retire from the board. Existing director Sean Ebert will act as Chairman while the board considers candidates for the vacancies, which are expected to be filled by March 2022. Following these changes, we expect the company will increase operational cadence, bringing a higher focus on speed and flexibility in addressing the potential of the WAM® process. All resolutions at the AGM were passed with more than 95% in favour.

### Base-case DCF valuation maintained at \$71m (\$0.475/share)

We have maintained our valuation range as current developments remain within the base-case parameters. As we see further developments in wire and orders from additional industrial sectors and clients, we expect to see valuation growth. AL3 remains undervalued relative to peers based on EV/Sales ratios.

#### Historical earnings and RaaS estimates (A\$m)

Year end	Sales Revenue	Gross Profit	EBITDA	NPAT	EPS (c)	EV/Sales (x)
06/20a	0.3	0.2	(3.2)	(3.2)	n.a.	46.6
06/21a	0.6	0.3	(5.1)	(5.5)	(3.8)	23.6
06/22e	3.7	1.2	(3.2)	(2.8)	(1.7)	5.2
06/23e	7.7	3.1	(1.4)	(1.6)	(1.0)	3.0

Source: Company data, RaaS estimates for FY22e and FY23e

### Additive Manufacturing

26<sup>th</sup> November 2021

#### Share Details

ASX code	AL3
Share price (25 Nov)	\$0.165
Market capitalisation	\$25.7M
Shares on issue	150.4M
Net cash 30-Sept 2021	\$5.4M
Free float	~54%

#### Share Performance (12 months)



#### Upside Case

- Strong customer interest leads to machine orders
- Current trial product deliveries convert to manufacturing contracts
- First-mover advantage is maintained through R&D and research partnerships

#### Downside Case

- Slow conversion of customers
- Further delays in expansion due to COVID
- Inquiry conversion rate reverts to COVID levels

#### Catalysts

- Sales of ARCEMY® modules
- Contract wins with Boeing and other clients
- Ongoing evidence of operational momentum
- Commercialisation of wire research

#### Board of Directors

Sean Ebert	Interim Chairman
Andrew Sales	Founder/MD/CEO
Leonard Piro	Non-Executive Director

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## Discussion of Announcements

During the September quarter AL3 confirmed an extension to the prototype body armour testing programme with Lightforce, development with Deakin University of a scandium/aluminium welding wire which removes the need for hardening heat treatment, and achieved DNV certification of the Panama chock delivered to Keppel Technology and Innovation in Singapore. In November we have seen several significant announcements: sale of an ARCEMY® module to RMIT; a contract to manufacture a 500kg aluminium rocket nozzle; manufacture of a titanium plunger for use in an oil and gas processing plant; successful testing of a 940kg high-pressure oil and gas piping component, verified by Lloyd's Register; approval of the Additive Manufacturing Standard (API 20S) by the American Petroleum Institute (API); and finally, the research partnership with Deakin University in wire development.

Each of these represents another significant step toward general acceptance and use of additive manufacturing for production of large-scale parts and components – both new and as replacements. The most significant news is likely the API approval of the AM Standard. This is a major step in opening a global market to additively manufactured components. The Deakin partnership has the potential to open a new revenue source in the sale of high-tech welding wire and consumables with properties particularly relevant to additive manufacturing uses. Any commercial product will also enhance AL3's manufacturing production and module capabilities. AL3 continues internal R&D with the intention of launching an updated version of the ARCEMY® WAM® modules and WAMsoft operating software which will increase printing speed to 30kg/hour, add in-line finishing, and increase software design capacity via provision of improved hardness and strength estimating. AML3D is moving fast to commercialise additive manufacturing of large-scale components.

### **Exhibit 1: API Standard for the Petroleum and Natural Gas Industries**

#### **API Standard 20S, 1st Edition**

API published the 1st edition of Standard 20S, *Additively Manufactured Metallic Components for Use in the Petroleum and Natural Gas Industries*. This new standard provides requirements for qualification of the manufacturing process, production, marking and documentation of metallic components. It was developed to optimize component design to drastically reduce lead time and drive efficiency and improvement across all segments of the industry.

Source: <https://www.api.org/products-and-services/standards/important-standards-announcements>

## Valuation Details

We've used the discounted cashflow (DCF) methodology to value AML3D due to the company's early stage of development. Negative free cashflow was reported in 2021 and is expected in 2022 and 2023. We expect strong free cash generation thereafter. Using a WACC of 11.1% (Beta 1.5 vs measured Beta of 0.21, terminal growth rate of 2.2%) we derive an equity value of \$71m or \$0.475/share on the current issued capital of 150.4m shares. As we highlighted in our 13 October initiation report, **Additive manufacturing matures**, our base case is premised on announced agreements and customer interest levels with a conservative conversion rate of customer enquiries to manufacturing and machine sales. We have additionally modelled a better and worse profile of future sales based on estimates of market penetration over time. We feel there is considerable upside possible in this valuation with our high valuation at \$0.829/share. We expect machine sales to be biased to the end of FY22 given COVID-related slowdowns and accordingly leave our estimates unchanged following the Q1 report and AGM.

**Exhibit 2: Financial Summary**

AML3D Ltd (ASX:AL3)						Share price (Date)		25/11/2021		A\$	0.165	
<b>Profit and Loss (A\$m)</b>						<b>Interim (A\$m)</b>						
<b>Y/E 30 June</b>	<b>FY19A</b>	<b>FY20A</b>	<b>FY21A</b>	<b>FY22F</b>	<b>FY23F</b>	<b>1H20 A</b>	<b>2H20 A</b>	<b>1H21 A</b>	<b>2H21 A</b>	<b>1H22 E</b>	<b>2H22 E</b>	
Sales Revenue	0.2	0.3	0.6	3.7	7.7	0.1	0.2	0.1	0.5	1.7	1.9	
Gross Profit	0.2	0.2	0.3	1.2	3.1	(1.8)	(1.3)	(2.1)	(3.3)	(1.6)	(1.5)	
EBITDA	(0.6)	(3.2)	(5.5)	(3.2)	(1.4)	(1.8)	(1.3)	(2.3)	(3.5)	(2.0)	(2.0)	
Depn	(0.1)	(0.1)	(0.4)	(0.8)	(0.7)	(1.8)	(1.3)	(2.2)	(3.5)	(1.4)	(1.4)	
Amort	0.0	0.0	0.0	(0.0)	(0.2)	-	-	-	-	-	-	
EBIT	(0.7)	(3.2)	(5.9)	(4.0)	(2.3)	(1.8)	(1.1)	(2.1)	(3.5)	(1.4)	(1.4)	
Interest	0.0	0.0	0.0	0.0	(0.0)	(1.24)	(1.10)	(1.47)	(2.17)	(0.86)	(0.83)	
Tax	0.0	0.0	0.0	1.2	0.7	(1.39)	(0.85)	(1.43)	(2.30)	(0.94)	(0.91)	
Minorities	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	
Equity accounted assoc	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	30.0	30.0	
NPAT pre significant item	(0.7)	(3.2)	(5.8)	(2.8)	(1.6)	(0.8)	(1.8)	(1.9)	(4.4)	(0.3)	(1.9)	
Significant items	0.0	0.1	0.2	0.0	0.0	(0.7)	(1.1)	0.4	(4.1)	0.4	(0.8)	
<b>NPAT (reported)</b>	<b>(0.7)</b>	<b>(3.1)</b>	<b>(5.7)</b>	<b>(2.8)</b>	<b>(1.6)</b>	<b>Divisions</b>						
<b>Cash flow (A\$m)</b>						<b>1H20 A</b>	<b>2H20 A</b>	<b>1H21 A</b>	<b>2H21 A</b>	<b>1H22 E</b>	<b>2H22 E</b>	
<b>Y/E 30 June</b>	<b>FY19A</b>	<b>FY20A</b>	<b>FY21A</b>	<b>FY22F</b>	<b>FY23F</b>	Contract Manufacturing	0.0	0.0	0.0	0.0	0.7	0.8
EBITDA	(0.6)	(3.2)	(5.5)	(3.2)	(1.4)	Machine Sales	0.0	0.0	0.0	0.0	0.7	0.7
Interest	0.0	0.0	0.0	0.0	(0.0)	Licence Income	0.0	0.0	0.0	0.0	0.3	0.4
Tax	0.0	0.0	0.0	0.0	0.0	COGS	0.0	0.0	0.0	0.0	(1.2)	(1.3)
Working capital changes	(0.3)	0.6	(0.9)	0.9	(0.7)	Employment	0.0	0.0	0.0	0.0	(1.6)	(1.6)
Operating cash flow	(0.9)	(2.6)	(6.3)	(2.2)	(2.2)	Technology, licence fees	0.0	0.0	0.0	0.0	0.0	0.0
Mtce capex	(0.2)	(0.8)	(0.3)	(0.4)	(0.4)	Other costs	0.0	0.0	(2.4)	(4.0)	(0.6)	(0.6)
Free cash flow	(1.1)	(3.4)	(6.6)	(2.6)	(2.6)	EBITDA	(1.8)	(1.3)	(2.1)	(3.3)	(1.6)	(1.5)
Growth capex	(0.0)	(0.0)	(2.3)	(1.4)	(1.4)	<b>Margins, Leverage, Returns</b>						
Acquisitions/Disposals	0.0	0.0	0.0	0.0	0.0	<b>FY19A</b>	<b>FY20A</b>	<b>FY21A</b>	<b>FY22F</b>	<b>FY23F</b>		
Other	0.0	(0.0)	0.0	0.0	0.0	EBITDA	n.a.	n.a.	n.a.	n.a.	n.a.	
Cash flow pre financing	(1.2)	(3.5)	(8.9)	(4.0)	(4.0)	EBIT	n.a.	n.a.	n.a.	n.a.	n.a.	
Equity	0.1	10.2	7.3	0.0	0.0	NPAT pre significant items	n.a.	n.a.	n.a.	n.a.	n.a.	
Debt	1.6	(0.1)	(0.1)	0.0	0.0	Net Debt (Cash)	(0.6)	7.8	6.7	2.7	(1.3)	
Dividends paid	0.0	0.0	0.0	0.0	0.0	Net debt/EBITDA (x)	(x)	n/a	n/a	n/a	n/a	
Net cash flow for year	0.5	6.7	(1.7)	(4.0)	(4.0)	ND/ND+Equity (%)	(%)	125%	(411%)	(140%)	(44%)	15.8%
<b>Balance sheet (A\$m)</b>						EBIT interest cover (x)	(x)	n/a	n/a	n/a	n/a	n/a
<b>Y/E 30 June</b>	<b>FY19A</b>	<b>FY20A</b>	<b>FY21A</b>	<b>FY22F</b>	<b>FY23F</b>	ROA	n.a.	n.a.	n.a.	n.a.	n.a.	
Cash	1.2	8.2	7.3	3.2	(0.8)	ROE	n.a.	n.a.	n.a.	n.a.	n.a.	
Accounts receivable	0.3	0.7	0.5	0.3	0.6	ROIC	n.a.	n.a.	n.a.	n.a.	n.a.	
Inventory	0.0	0.1	2.0	0.6	1.2	<b>NTA (per share)</b>	n/a	0.07	0.08	0.05	0.03	
Other current assets	0.0	0.2	0.2	0.2	0.2	<b>Working capital</b>	0.2	0.0	1.7	0.7	1.4	
<b>Total current assets</b>	<b>1.5</b>	<b>9.3</b>	<b>10.0</b>	<b>4.4</b>	<b>1.2</b>	<b>WC/Sales (%)</b>	105%	17%	259%	20%	18%	
PPE	0.3	1.5	3.3	2.9	2.6	<b>Revenue growth</b>	(35%)	45%	121%	475%	110%	
Intangibles and Goodwill	0.0	0.0	0.1	1.4	2.7	<b>EBIT growth pa</b>	n/a	n/a	n/a	n/a	n/a	
Investments	0.0	0.0	0.0	0.0	0.0	<b>Pricing</b>						
Deferred tax asset	0.0	0.0	0.0	1.2	1.9	<b>FY19A</b>	<b>FY20A</b>	<b>FY21A</b>	<b>FY22F</b>	<b>FY23F</b>		
Other non current assets	0.0	0.0	0.0	0.1	0.1	No of shares (y/e)	(m)	132	148	150	150	150
<b>Total non current assets</b>	<b>0.4</b>	<b>1.6</b>	<b>3.4</b>	<b>5.6</b>	<b>7.3</b>	Weighted Av Dil Shares	(m)	132	148	148	165	165
<b>Total Assets</b>	<b>1.8</b>	<b>10.9</b>	<b>13.4</b>	<b>9.9</b>	<b>8.5</b>	EPS Reported	cps	0.0	0.0	(3.4)	(1.7)	(1.0)
Accounts payable	0.1	0.8	0.9	0.2	0.4	EPS Normalised/Diluted	cps	0.0	0.0	(3.6)	(1.7)	(1.0)
Short term debt	1.8	0.1	0.2	0.2	0.2	EPS growth (norm/dil)	n.a.	n.a.	n.a.	-54%	-42%	
Tax payable	0.0	0.0	0.0	0.0	0.0	DPS	cps	-	-	-	-	-
Other current liabilities	0.1	0.0	0.5	0.5	0.5	DPS Growth	n.a.	n.a.	n.a.	n.a.	n.a.	
<b>Total current liabilities</b>	<b>1.9</b>	<b>0.9</b>	<b>1.5</b>	<b>0.8</b>	<b>1.0</b>	Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	
Long term debt	0.0	0.3	0.4	0.4	0.4	Dividend imputation	30	30	30	30	30	
Other non current liabs	0.0	0.0	0.0	0.0	0.0	PE (x)	n.a.	n.a.	-4.8	-9.8	-16.7	
<b>Total long term liabilities</b>	<b>0.0</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	PE market	17.8	17.8	17.8	17.8	17.8	
<b>Total Liabilities</b>	<b>1.9</b>	<b>1.2</b>	<b>1.9</b>	<b>1.2</b>	<b>1.4</b>	Premium/(discount)	n.a.	n.a.	(127%)	(155%)	(194%)	
<b>Net Assets</b>	<b>(0.1)</b>	<b>9.7</b>	<b>11.5</b>	<b>8.7</b>	<b>7.1</b>	EV/EBITDA	-34.5	-5.2	-3.3	-7.0	-18.3	
Share capital	1.1	14.0	21.3	21.3	21.3	FCF/Share	cps	-0.6	-1.2	-4.0	-1.2	-1.1
Accumulated profits/losse	0.0	(4.3)	(9.8)	(12.6)	(14.2)	Price/FCF share	-29.5	-14.0	-4.2	-13.9	-14.5	
Reserves	(1.2)	0.0	0.0	0.0	0.0	Free Cash flow Yield	(3.4%)	(7.1%)	(24.1%)	(7.2%)	(6.9%)	
Minorities	0.0	0.0	0.0	0.0	0.0							
<b>Total Shareholder func</b>	<b>(0.1)</b>	<b>9.7</b>	<b>11.5</b>	<b>8.7</b>	<b>7.1</b>							

Source: Company data, RaaS estimates



# FINANCIAL SERVICES GUIDE

**RaaS Advisory Pty Ltd**

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**Corporate Authorised Representative, number 1248415**

**of**

**BR SECURITIES AUSTRALIA PTY LTD**

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**Effective Date: 6<sup>th</sup> May 2021**

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