

#### ASX CODE: AL3

# CAPITAL STRUCTURE

Share Price (26.10.20)\$0.46Shares on Issue148mMarket Capitalisation\$68m

#### **MAJOR SHAREHOLDERS**

Andrew Sales26.9%Perennial Value Mgmt6.8%

#### **BOARD & MANAGEMENT**

Stephen Gerlach AM Non-Executive Chairman

Andrew Sales Managing Director

Sean Ebert Executive Director

Kevin Reid Non-Executive Director

Len Piro Non-Executive Director

Christine Manuel Company Secretary

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# SEPTEMBER QUARTERLY ACTIVITIES REPORT AND APPENDIX 4C

AML3D Limited (ASX: AL3) ("AML3D" or "the Company"), a leader in large scale 'Additive Metal Layering' 3D printing, is pleased to provide the Quarterly Activities Report and Appendix 4C for the September 2020 Quarter (Q1FY21).

AML3D is at an exciting juncture of its commercialisation pathway. Over the September quarter, AML3D continued to experience strong demand for its services, with numerous customers across various sectors engaging in late-stage performance testing. AML3D is confident that these programs will result in notable commercial manufacturing contracts in due course.

To accommodate the scale of the anticipated contracts, AML3D raised an additional \$7.0m via a Placement to institutional and sophisticated investors (ASX Release 5 October 2020). With ~A\$13m cash, the Company is well capitalised to accelerate commercialisation and establish itself as a global leader in the additive manufacturing sector.

## **KEY HIGHLIGHTS DURING THE QUARTER**

#### Lightforce next-gen body armour program

ASX Release 29 July 2020

Following excellent first stage project testing, AML3D entered into a development program with Lightforce Australia ("Lightforce") for the design and manufacture of next-generation, 'made-to-fit' titanium body armour.

AML3D's Wire Additive Manufacturing ("**WAM**<sup>®</sup>") technology is an ideal manufacturing method given its ability to rapidly produce bespoke, made-to-fit, body armour plates, a function not possible using traditional subtractive techniques (forging, casting and fabrication).

AML3D and Lightforce are endeavouring to develop a market-leading solution that delivers enhanced strength with reduced weight, resulting in the highest degree of protection for defence and law enforcement personnel.

This truly disruptive concept would be a world-first offering in an industry expected to exceed US3.0bn by 2025 (CAGR of 5.5%).<sup>1</sup>

The program with Lightforce is progressing as expected. AML3D will update the market on the progression through to the next stage of development.



### AML3D enters into global collaboration with AdditiveNow

ASX Release 24 August 2020

AML3D executed a Global Collaboration Agreement ("**GCA**") with AdditiveNow Pty Ltd ("**AdditiveNow**") to deliver end-to-end integrated additive manufacturing advisory and printing services to a broad range of global customers.

AdditiveNow is a joint venture between Worley Limited's data science, software and technology division 'Advisian Digital' and Aurora Labs Limited. The core focus of AdditiveNow is to deliver additive manufacturing, engineering expertise and bespoke 3D printed components for the energy, chemicals and resources industries.

AdditiveNow has provided direct access to a broad range of new potential customers to demonstrate the efficiency benefits of WAM over traditional manufacturing methods. AML3D will collaboratively provide metallurgy, design and WAM<sup>®</sup> advisory services to these customers, highlighting WAM<sup>®</sup>'s product performance and time and manufacturing efficiencies, with the mutual goal to reduce physical inventory and improve agility by manufacturing on demand. A mineral testing program has commenced, to provide valuable insight on material properties, performance in strength of WAM<sup>®</sup>.

AML3D is in advanced specification discussions with potential AdditiveNow customers.

#### **Prototype Lifting Device for Austal**

ASX Release 3 September 2020 & 25 September 2020

AML3D executed a contract with Austal Limited ("Austal") (ASX: ASB) to co-develop components for maritime defence applications after it was identified as a leading provider of pioneering Additive Manufacturing technologies and design solutions.

Austal's first project required AML3D to utilise its in-house Design for Additive Manufacturing ("**DfAM**") platform to optimise the design of an existing 'Davit Arm' lifting device. AML3D was tasked with delivering a lighter and ergonomically friendly solution with enhanced load-bearing capabilities. This next-generation lifting device is intended for installation onboard naval vessels constructed by Austal and will act as a showcase of AML3D's technology platforms.

The final design underwent stringent structural verification through Finite Element Analysis ("**FEA**"), resulting in AML3D receiving a purchase order to manufacture a prototype lifting device utilising WAM<sup>®</sup>.

The 2.7m length 'Davit Arm' prototype was manufactured and delivered on schedule and will now undergo rigorous destructive testing. These tests are designed to verify the prototype's performance and material behaviour under load.

The development contract with Austal presents a significant commercial opportunity for AML3D. Both parties anticipate that AML3D's innovative technologies may be applied to a broad range of applications in shipbuilding, many of which have been identified.



Figure 1 – Davit Arm Design



# AML3D to co-develop 'industrial internet of things' IIOT technology

ASX Release 8 September 2020

The Company entered into a Memorandum of Understanding ("**MoU**") with the Advanced Manufacturing Growth Centre ("**AMGC**") and Dematec Automation Pty Ltd ("**Dematec**") to co-develop industrial internet of things ("**IIOT**") solutions for AML3D's Adelaide Production printing modules and Arcemy<sup>®</sup> printing units.

AML3D is collaboratively developing a solution that will provide complete connectivity with all Arcemy<sup>®</sup> units deployed globally. This enhanced capability will enable AML3D's engineers and technicians to centralise control of deployed Arcemy<sup>®</sup> models via 'printing module dashboards', facilitating the 'local' manufacture of components.

The program also includes the development of Artificial Intelligence ("AI") technology that powers smarter machines capable of pre-empting and optimising the design and manufacture process. Al development is one of AML3D key development initiatives to ensure the Company's technology suite remains at the forefront of innovation.

AML3D intends to utilise these technologies to drive efficiencies internally, but more importantly, externally to deliver a fully integrated customer service solution, capable of:

- Centralised remote operation of Arcemy<sup>®</sup> units deployed globally based on customer location demand;
- Deployment of future 'virtual warehouse' of parts for customers; and
- Enabling AI interfaces as part of the AML3D product development roadmap to optimise the print process.

## AML3D Ships 3D Printed Propeller

#### ASX Release 24 September 2020

AML3D delivered a stainless-steel grade 316L propeller to 3D Printing Corporation ("**3DPC**") during the quarter. 3DPC is a Japanese based 3D printing consultancy firm, focused on unearthing innovative, industry 4.0 technologies capable of enhancing the manufacturing capabilities of their clients.

The propeller has been made available to 3DPC's marine clients as a 'showpiece' to demonstrate the advantages of WAM<sup>®</sup> over the traditional casting methods. 3DPC's clients are currently reviewing the component to verify WAM<sup>®</sup>'s ability to promptly manufacture complex, custom propellers with superior strength and shortened delivery times.

The relationship with 3DPC provides a significant opportunity to capitalise on the growing global market for propellers that is anticipated to reach ~US\$5.4bn by 2022<sup>2</sup> with considerable demand coming from the APAC region. Successful validation may lead to significant commercial contracts with various 3DPC clients. AML3D will update the market in due course on the progression of these opportunities.





Figure 2 – Showpiece propeller delivered to 3DPC

### **Technology Research Program with CSIRO**

AML3D has entered into a research program with Australia's national science agency, CSIRO to enhance AML3D's WAMSoft<sup>®</sup> platform using Distortion and Stress ('**DS**') Modelling for high value Safety Critical Components ('**SCC**'). This highly beneficial project will be funded equally by AML3D and an Australian Government grant.

Unlike fabricated components, AML3D's WAM<sup>®</sup> printed components do not typically undergo post-heattreatment to relieve internal stresses due to in-process techniques that reduce stress values. AML3D approached CSIRO to apply their patented C-THRU technology to the WAM<sup>®</sup> technology to improve AML3D's key process data analysis and assessment prior to printing components which will assist in assessing material parameters that affect residual stress just prior to printing.

C-THRU provides a pre-print visualisation of the thermal and stress evolution during the manufacturing process and upon completion. This novel capability provides a real-time critical insight into how various build configurations affect residual stress, including those occurring during build, machine interruption and postbuild. The breakthrough capabilities of C-THRU deliver highly valuable data, essential to forming a complete understanding of the final component prior to the manufacturing process.

The three stages of the collaborative project are:

- 1. Apply C-THRU to analyse how varying configurations affect structural integrity of WAM<sup>®</sup> components, made from Aluminium and Aerospace grade Titanium;
- 2. Verify that the implementation of C-THRU provides valuable insight to minimise post-built stresses and improve structural integrity; and
- 3. Integrate a new software version based on C-THRU into AML3D's WAMSoft<sup>®</sup> print workflow and production, pending licence agreement.



Applying the highly valuable C-THRU data will enable AML3D to enhance WAMsoft<sup>®</sup> through additional software addition, facilitating the manufacture of completely optimised engineered components. These components will have a high degree of data-driven certification, which is especially essential for high level 'safety-critical components' often required for aerospace and defence applications.

Permanently integrating new software based on C-THRU into the Company's WAMsoft<sup>®</sup> workflow and production processes will provide AML3D with a world-leading capability. This technology will provide further the ability to validate components, which is anticipated to accelerate the initial customer component testing phase for highly critical components in the aerospace and defence sectors.

Funding of the research project is supported by a grant from the Australian Government's Department of Industry, Science, Energy and Resources, through the Innovation Connections scheme of the Entrepreneurs' Programme.

#### Spare Parts 3D

AML designed and delivered an Air Piston prototype to Spare Parts 3D in France during the quarter. This prototype was a demonstration piece designed to showcase AML3D's capability. Feedback from end user testing has been positive and discussions are ongoing.

#### Arcemy® 3D Printing Module - ST Engineering, Singapore

Since delivering and commissioning AML3D's first proprietary Arcemy<sup>®</sup> 3D printing module to a customer, ST Engineering Electronics Ltd ("**ST Engineering**") in June 2020, several test parts have been printed in the last quarter. These parts have been produced as part of the ongoing training of ST Engineering personnel to build their in-house capabilities. Under the right to use with an option buy arrangement with ST Engineering, AML3D retains the right to use 50% of the Arcemy<sup>®</sup> 3D printing module's capacity for AML3D's customers.

As one of Asia's leading defence and engineering groups, ST Engineering provides AML3D with a strong foundation to establish and grow operations within the Indo-Pacific region.

#### **Adelaide Head Office and Production Facility**

During the quarter, the Company's transition into the new Head Office and production facility based at Edinburgh Parks, South Australia was completed. Installation and commissioning of 4 new production cells is progressing and enhancements are being incorporated into the setup to improve operational accuracy and safety. AML3D anticipates that these additional production cells will be operational during the December 2020 Quarter.

The capability and capacity of the AML3D team was expanded during the quarter through the recruitment of additional experienced marketing and production staff in the Adelaide facility.



### Subsequent Event – AML3D raises \$7.0m

ASX Release 5 October 2020

On 5 October, the Company raised \$7.0 million (before costs) via the issue of ~15.5 million new ordinary shares (\$0.45 issue price). The Placement was heavily bid, supported by a range of new and existing institutional, family office, sophisticated and professional investors.

The funds raised from the Placement will ensure that AML3D is well capitalised to accelerate and execute upon the new, large-scale customer opportunities that have presented themselves, without detracting from the key initiatives detailed in the prospectus.

### Financial

Pursuant to Listing Rule 4.7C2, the Company confirms that during the period since listing on the ASX on 20 April 2020, its expenditure incurred is in line with the Use of Funds as set out in its Prospectus, with a summary as shown in the table below:

Use of Funds under Prospectus		Funds allocated under the prospectus	Funds expended to 30 September
			2020
Singapore Bureau establishment	1	4,270,000	171,971
Relocation and expansion of Adelaide facility	2	2,840,000	1,713,806
Development of integrated machinery	3	400,000	-
Intellectual property protection	4	400,000	53,865
Unallocated working capital - Adelaide		950,000	950,000
Unallocated working capital - Singapore		1,100,000	-
Expenses of the offer		1,100,000	1,110,198
Total		11,060,000	3,999,840

- 1. **Singapore Bureau Establishment:** AML3D is continuing to assess location options in Singapore. During the quarter, significant expenditure has been incurred in ordering equipment for the Singapore facility, as well as wages and support charges incurred as the Company works towards cementing its presence in Singapore.
- 2. **Relocation and Expansion of Adelaide Facility:** Relocation of the Adelaide manufacturing facility from Salisbury to Edinburgh Parks was completed in July 2020. Since that date, the Company has continued to set up the new facility and install the new production cells. This will continue in coming quarters as additional equipment with longer lead times arrives.
- 3. **Development of Integrated Machining**: The initial research, planning and development phase was initiated during the period including selection of research partners and the associated contractual agreements. The program is anticipated to commence in Q1FY21 with expenditure to be incurred in line with the Company's internal program schedule.
- 4. **Intellectual Property Protection:** The examination phase for the current patent including extending the international registration of the current patent lodged in the United States, Australia, NZ, India, Malaysia, and Singapore, with registrations lodged in Japan and South Korea during the period.



Pursuant to Listing Rule 4.7C3, the Company confirms that related party payments of \$33,000 as included in section 6.1 of the Appendix 4C were for Executive Director fees paid to Mr Sean Ebert during the quarter. These additional payments were made for assistance provided to the Managing Director, Andrew Sales in regards to Business Development, Investor Relations and Human Resource initiatives. The services were provided during a period where the core technical team was focussed on commissioning of manufacturing facilities and product development.

This announcement has been authorised for release by the Board of AML3D.

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#### **Duncan Gordon**

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#### About AML3D Limited

AML3D Limited is an Australian public company incorporated on 14 November 2014 and currently operates out of its Adelaide Manufacturing Centre. The Company specialises in providing commercial large-scale "Additive Metal Layering" 3D printing services to Defence, Maritime, Automotive and Resources customers. The Company has commercialised its technology under the trademark WAM<sup>®</sup> and proprietary software WAMSoft<sup>®</sup> which combines metallurgical science and engineering design to fully automate the 3D printing process utilising advanced robotics technology.

# **Appendix 4C**

# Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity		
AML3D Limited		
ABN Quarter ended ("current quarter")		
55 602 857 983	30 September 2020	

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	77	77
1.2	Payments for		
	(a) research and development	(3)	(3)
	(b) product manufacturing and operating costs	(150)	(150)
	(c) advertising and marketing	(110)	(110)
	(d) leased assets	-	-
	(e) staff costs	(647)	(647)
	(f) administration and corporate costs	(323)	(323)
1.3	Dividends received (see note 3)		
1.4	Interest received	9	9
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	107	107
1.8	Other – GST Refunds received	297	297
1.9	Net cash from / (used in) operating activities	(743)	(743)
2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) entities	-	-
	(b) businesses	-	-
	(c) property, plant and equipment	(1,053)	(1,053)
	(d) investments	-	-
	(e) intellectual property	-	-
	(f) other non-current assets	-	-

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities	-	
	(b) businesses	-	
	(c) property, plant and equipment	-	
	(d) investments	-	
	(e) intellectual property	-	
	(f) other non-current assets	-	
2.3	Cash flows from loans to other entities	-	
2.4	Dividends received (see note 3)	-	
2.5	Other (provide details if material)	-	
2.6	Net cash from / (used in) investing activities	(1,053)	(1,053

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	- -
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid	-	-
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	-	-
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	8,259	8,259
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(743)	(743)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,053)	(1,053)

Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	6,643	6,463

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	6,643	6,643
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	6,643	6,643

6.	Payments to related parties of the entity and their associates
6.1	Aggregate amount of payments to related parties and their associates included in item 1

Aggregate amount of payments to related parties and their

Current quarter \$A'000	
	33
	-

Associates included in item 2 Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of,

and an explanation for, such payments

6.2

7.	<b>Financing facilities</b> Note: the term "facility' includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at qu	arter end	-
7.6	Include in the box below a description of eac rate, maturity date and whether it is secured facilities have been entered into or are propo include a note providing details of those facil	or unsecured. If any add osed to be entered into af	tional financing
N/A			
Q	Estimated each available for future or	arating activition	¢ \ 2000

Estimated cash available for future operating activities	\$A'000
Net cash from / (used in) operating activities (Item 1.9)	(743)
Cash and cash equivalents at quarter end (Item 4.6)	6,463
Unused finance facilities available at quarter end (Item 7.5)	-
Total available funding (Item 8.2 + Item 8.3)	6,463
Estimated quarters of funding available (Item 8.4 divided by Item 8.1)	9
	Net cash from / (used in) operating activities (Item 1.9) Cash and cash equivalents at quarter end (Item 4.6) Unused finance facilities available at quarter end (Item 7.5) Total available funding (Item 8.2 + Item 8.3) Estimated quarters of funding available (Item 8.4 divided by

- 8.6 If Item 8.5 is less than 2 quarters, please provide answers to the following questions:
  - 1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

### **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 27 October 2020

#### Authorised by: By the Board (Name of body or officer authorising release – see note 4)

#### Notes

- 1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
- 2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
- 4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
- 5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.