



# Titomic Limited

Industrial Scale Advanced Manufacturing

Investor Update

31 October 2018

ACN 602 793 644

## Current Titomic R&D Projects

### Powders R&D

In September 2018, Titomic completed a 6-month study of the metal powder available globally to determine the most suitable powders for TKF. Titomic received the Innovation Connection grant from Department of Industry, Innovation and Science to partner with Swinburne University to provide powder characterisation expertise for 100 powder samples out of 70 companies, to be tested for chemical and physical properties. This is the first comprehensive industry benchmarking for additive manufacturing (AM) metal powders and unprecedented steps have been taken to ensure materials used meet rigorous testing requirements. Titomic also reviewed the business practices of prospective global suppliers to ensure they share the same core values. The outcome of the project has provided Titomic with valuable market insights to secure a global metal powder supply chain for TKF systems.

### TKF deposition nozzles R&D

Titomic is currently optimising new designs of TKF deposition nozzles for Titomic systems to improve accuracy of part resolution built by the TKF process. A higher resolution of parts built by TKF systems will combine the fastest additive manufacturing process with improved tolerances to meet industry demands for advancements in metal 3D printing as a viable production process.

## Current external R&D project updates

Industries	Organisations	Project Progress
Government and R&D Organisations	SEAM w/ Swinburne University	Announced on 7th August 2018. Currently scoping project, to commence in 2019
	IMCRC w/ RMIT University & CSIRO	Announced 26 <sup>th</sup> October 2018. Commences in November 2018

### Standards R&D

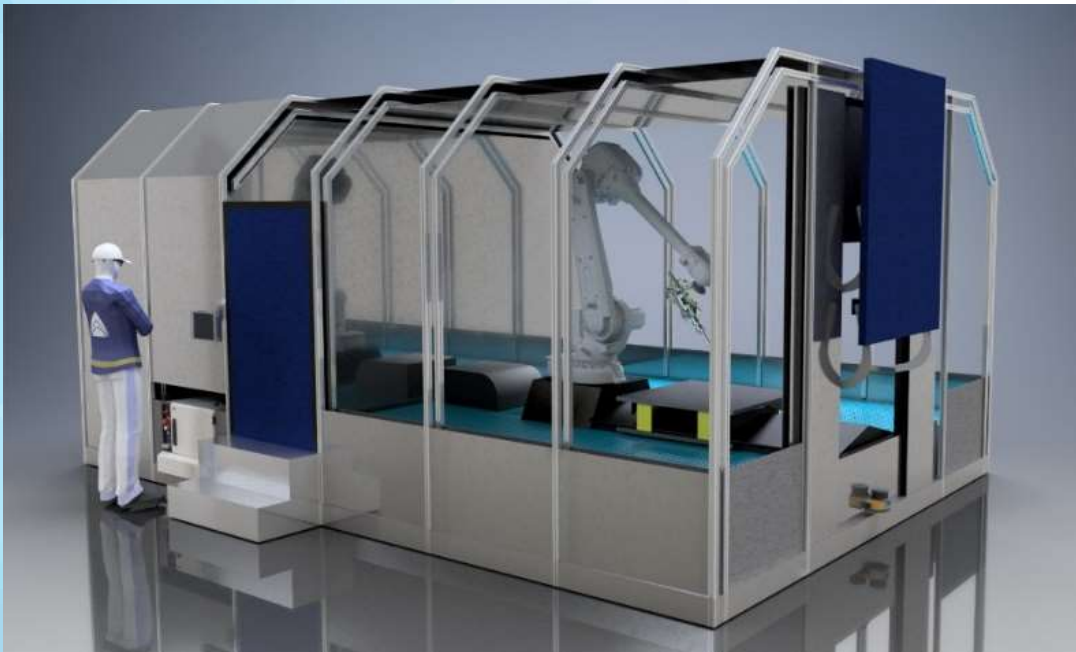
As part of Titomic's growth strategy, ongoing R&D is important to create a competitive advantage and maintain a strong IP portfolio to enable Titomic Kinetic Fusion™ (TKF) to be at the cutting-edge of industrial scale additive manufacturing technology. To ensure TKF applications are fit for commercial purpose, Titomic is creating new regulatory industry standards by undertaking significant R&D, both internally and with external industry and research partners.

On 26<sup>th</sup> October 2018, Titomic signed a two-year \$2.6 million IMCRC R&D project, commencing on 1<sup>st</sup> November 2018, to enhance TKF as a transformational technology for the highest standards of aerospace and defence industries as outlined by *The Metallic Materials Properties Development and Standardization* (MMPDS), a widely accepted source for metallic material and recognised by the United States' FAA, Department of Defense and NASA.

## Systems R&D

On 7<sup>th</sup> August 2018, Titomic was announced as a partner to the \$4.9M Australian Research Council (ARC) Training Centre for Surface Engineered Additive Manufacturing (SEAM). This Training Centre will see the creation of a TKF R&D facility at Swinburne capable of incubating multiple AM projects. Titomic will also partner with Australian Nuclear Science and Technology Organisation (ANSTO), as well as Swinburne PhD students and post-doctorate researchers, to further the capabilities of the existing TKF systems. This will result in the creation of cutting-edge material advancements and commercial manufacturing systems that are based on Industry 4.0 to enhance TKF process as a viable commercial manufacturing integrated system.

## Equipment update



New multi-metal Kinetic Fusion system, TKF 1000, engineered for small scale production and R&D purposes for all industries, academia and research organisations. Currently work in progress, commissioning date to be confirmed.

## Current customer project updates

Industries	Companies	Project Progress
Sports	Major US Bike Brand	Phase 1 proof of concept completed. Phase 2 initiated fabricating of 5 frames and testing of frames to standards
Sports	Callaway Golf	Phase 1 proof of concept initiated.
Sports	Bike & component companies	Post Eurobike and Taichung bike shows, 7 companies' scope of work finalised, pending client agreement for proof of concept.
Consumer	European luxury luggage OEM	Scope of work finished, pending agreement for proof of concept
Aerospace	Aerospace OEM primes & suppliers	3 discussions in scope of work stage to move towards agreement for proof of concept.
Resources	Callidus	Phase 1 proof of concept completed, pending mechanical tests
Resources	Mining, Oil & Gas	3 current projects pending phase 1 proof of concept agreement
Defence	TAUV	Phase 1 proof of concept completed. Phase 2 outlining specific products initiated.
Defence	Defence OEM primes & suppliers	6 current projects pending phase 1 proof of concept agreement 2 current projects pending R&D agreement
Marine	Fincantieri	Phase 1 proof of concept completed, pending mechanical tests.
Marine	Marine OEM	Phase 1 proof of concept work in progress.
Automotive	OEMs	Phase 1 proof of concept work in progress.
Building	OEMs	Current project pending R&D agreement

## Other key announcements

### October 22<sup>nd</sup> 2018 – Appointment of Jeff Lang as Managing Director

Jeff Lang, Founding Director, who led the Company through IPO and establishment of the R&D Production Centre, was appointed as Managing Director, effective immediately.

### October 22<sup>nd</sup> 2018 – Titomic signs \$1.8 million Defence MoU with TAUV

Titomic signs 12-month, three-phase, exclusive defence program with TAUV Pty Ltd. to manufacture the next generation of soldier systems using TKF, including body armour, helmets, and ruggedised drones. Upon successful completion, TAUV will use TKF to manufacture products and pay royalties to Titomic.



## Events

### Land Forces

4-6<sup>th</sup> September 2018 - Titomic unveiled the world's first ruggedised TUAV at Land Forces, international defence exposition in Adelaide.



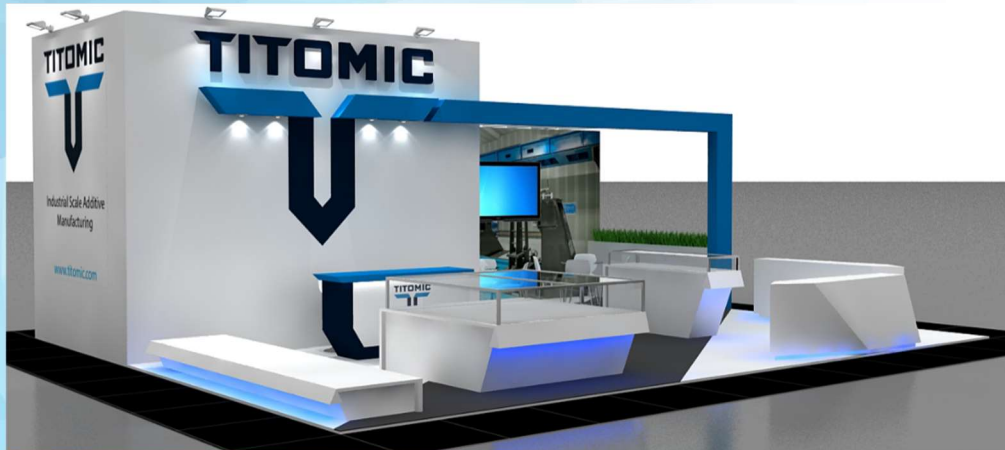
From left: Nathan Kalisch, CEO of TAUV Pty Ltd, Steven Marshall, Premier of SA, Jeff Lang, MD of Titomic Limited

### ITA USA

7-10<sup>th</sup> October 2018 - Titomic visited International Titanium Association in US to establish a network of industry partners in the Titanium market.

## Formnext

13-16<sup>th</sup> November 2018 – Titomic will be exhibiting at Formnext in Frankfurt, international Additive Manufacturing conference and showcasing the next generation of manufacturing technologies.



## R&D Production Centre



Representatives from CSIRO and Titomic with The Hon. Linda Dessau AC, Governor of Victoria.

Launched in May this year, Titomic continues to accrue and establish owned Science Technology Engineering Mathematics (STEM) capabilities such as in-house robotics programmers, machinists and R&D engineers to develop a self-sustained R&D Production Centre.

## Australia Head Office



To accommodate a growing production and R&D staff at Titomic's R&D Production Centre, Titomic has expanded to a second location located in Notting Hill, Victoria, Australia.

### About Titomic

Titomic (ASX:TTT) is headquartered in Melbourne, Australia. The company overcomes limitations of previous additive manufacturing (3D printing) for metals to manufacture complex parts without shape or size constraints. Titomic offers design and manufacturing methods to enable speed-to-market, superior products at lower production costs and using less resources for a more sustainable future. Titomic additive manufacturing machines that can customise build size to customer requirements offer additive manufacturing advantages at industrial scale. Multiple robots can be utilised to build larger parts, competing with traditional manufacturing solutions for industries such as aerospace and defence, sporting goods, medical, automotive, industrial equipment, construction and marine. Other benefits of the Titomic Kinetic Fusion technology include:

- Joining dissimilar metals and composites for engineered properties in a structure
- Stronger structures without welding, folding or bending
- Reduced time to market; no tooling, industry-leading production speeds

Clients will be offered a licence to manufacture via the Titomic Kinetic Fusion technology. Titomic's revenue model will also provide clients with R&D prototyping services, Titomic equipment sales, powder and consumables supply, equipment service and maintenance.

### Forward Looking Statements

Certain statements made in this release are forward-looking statements and are based on Titomic's current expectations, estimates and projections. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "guidance" and similar expressions are intended to identify forward-looking statements. Although Titomic believes the forward-looking statements are based on reasonable assumptions, they are subject to certain risks and uncertainties, some of which are beyond Titomic's control, including those risks or uncertainties inherent in the process of both developing and commercialising technology. As a result, actual results could materially differ from those expressed or forecasted in the forward-looking statements. The forward-looking statements made in this release relate only to events as of the date on which the statements are made. Titomic will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this release except as required by law or by any appropriate regulatory authority.



## Appendix 4C

### Quarterly Report for Entities Subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of Entity**

Titomic Limited

**ABN**

77 602 793 644

**Quarter Ended ("Current Quarter")**

30<sup>th</sup> September 2018

Consolidated Statement of Cash Flows	Current Quarter \$A'000	Year-to-Date (3 months) \$A'000
<b>1. Cash flows from Operating Activities</b>		
1.1 Receipts from customers	116	116
1.2 Payments for:		
(a) research and development	(173)	(173)
(b) product manufacturing and operating costs	(250)	(250)
(c) advertising and marketing	(149)	(149)
(d) leased assets	-	-
(e) staff costs	(508)	(508)
(f) administration and corporate costs	(367)	(178)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	57	57
1.5 Interest and other costs of finance paid	(1)	(1)
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	351	-
1.8 Other (GST refunds)	-	161
<b>1.9 Net Cash From / (Used In) Operating Activities</b>	<b>(924)</b>	<b>(924)</b>



<b>Consolidated Statement of Cash Flows</b> <i>(Continued...)</i>		<b>Current Quarter</b> <b>\$A'000</b>	<b>Year-to-Date</b> <b>(3 months)</b> <b>\$A'000</b>
<b>2. Cash Flows from Investing Activities</b>			
2.1	Payments to acquire:		
	(a) property, plant and equipment	(339)	(339)
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) other non-current assets	-	-
2.2	Proceeds from disposal of:		
	(a) property, plant and equipment	-	-
	(b) businesses (see item 10)	-	-
	(c) investments	-	-
	(d) intellectual property	-	-
	(e) 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)	-	-
<b>2.6</b>	<b>Net Cash From / (Used In) Investing Activities</b>	<b>(339)</b>	<b>(339)</b>

<b>3. Cash flows from Financing Activities</b>			
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
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)	-	-
<b>3.10</b>	<b>Net Cash From / (Used In) Financing Activities</b>	<b>-</b>	<b>-</b>

<b>4. Net Increase / (Decrease) in Cash and Cash Equivalents for the Period</b>		
4.1	Cash and cash equivalents at beginning of quarter/year to date	10,347
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(924)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(339)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-
4.5	Effect of movement in exchange rates on cash held	-
<b>4.6</b>	<b>Cash and Cash Equivalents at End of Quarter</b>	<b>9,084</b>

<b>5. Reconciliation of Cash and Cash Equivalents</b>	<b>Current Quarter \$A'000</b>	<b>Previous Quarter \$A'000</b>
at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts		
5.1 Bank balances	9,084	10,347
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>9,084</b>	<b>10,347</b>

<b>6. Payments to Directors of the Entity and their Associates</b>	<b>Current Quarter \$A'000</b>
6.1 Aggregate amount of payments to these parties included in item 1.2	133
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	
Salaries, director's fees and consulting fees at normal commercial rates.	
Amounts exclude GST where applicable.	

7. Payments to Related Entities of the Entity and Their Associates	Current Quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	-
Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	
-	

8. Financing Facilities Available <i>Add notes as necessary for an understanding of the position</i>	Total Facility Amount at Quarter End \$A'000	Amount Drawn at Quarter End \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		
-		

9. Estimated Cash Outflows for Next Quarter	\$A'000
9.1 Research and development	271
9.2 Product manufacturing and operating costs	108
9.3 Advertising and marketing	102
9.4 Leased assets	70
9.5 Staff costs	933
9.6 Administration and corporate costs	165
9.7 Other (capital & equipment purchases)	1,327
<b>9.8 Total estimated cash outflows</b>	<b>2,977</b>

10.	Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1	Name of entity	-	-
10.2	Place of incorporation or registration	-	-
10.3	Consideration for acquisition or disposal	-	-
10.4	Total net assets	-	-
10.5	Nature of business	-	-

### **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.

Sign here:   
Company Secretary & CFO  
Print name: Peter Vaughan

Date: 31<sup>st</sup> October 2018

### **Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly 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 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.