

# **Completion of Prototypes for TAUV Phase II Defence Project**

- World-first ultralight Titanium Additive Manufactured (AM) Solider System products
- R&D to commercial readiness of Defence Products manufactured using TKF
- Titomic Bureau delivers ISO-9001 accredited opportunities in \$9.8B<sup>1</sup> Solider Systems

**Melbourne, Australia, June 20<sup>th</sup>, 2019**: Australian digital manufacturing solutions company Titomic Limited (ASX: TTT) ("Titomic" or "Company") is pleased to provide an update to prior market announcements<sup>1</sup> regarding completion of TAUV Solider System \$300,000 Phase II Project Agreement.

The Phase II Project Agreement between TAUV and Titomic required Titomic to deliver 5 prototype defense Soldier System products, which are classified as being any equipment which is intended to be personally carried, worn or deployed, used by military or civil security personnel and which enhance the individual and unit collective safety, lethality, mobility and connectivity.

Titomic has now delivered the 5 Solider System products manufactured using the Titomic Kinetic Fusion (TKF) AM process (TKF AM) to TAUV for further testing and assessment under TAUV's Soldier System exclusivity thereby successfully demonstrated the unique capability of the TKF AM process to manufacture Soldier Systems products.

Titomic's exclusively licensed IP from the CSRIO enables complex-shaped Titanium products to be manufactured with improved performance characteristics encompassing the advantages of sovereign industrial capability in comparison to traditionally manufacturing processes. Titomic's TKF AM process has achieved significant performance improvements for TAUV creating new game-changing manufacturing capabilities for the defence industry.

TAUV, in partnership with Titomic utilising its unique TKF AM manufacturing capability, is fasttracking immediate commercial opportunities for the global \$9.8B<sup>2</sup> Solider Systems market with key industry partners.

Titomic's delivery of these initial 5 TAUV solider system products in less than 6 months is substantially faster than the defence industry R&D standard of 18-24 months. The TKF accelerated timeframes, from prototype to production, creates global revenue opportunities for digital manufacturing across various industries with reduced cost with increased process efficiencies from our ISO-9001 accredited Titomic Melbourne TKF Bureau.

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Mr. Jeff Lang, Titomic Managing Director commented:

"The successful delivery of the TAUV prototypes in just a matter of months further demonstrates the superior economics of TKF metal AM to compete, not only with other additive manufacturing companies, but with traditional methods like investment casting, metal injection moulding and CNC.

The TAUV project is a world first for additive manufactured Titanium defence products and realises Titomic Kinetic Fusion viability for commercial mass production and revenue opportunities. This is a significant milestone for Titomic's commercial revenue opportunities."

Mr. Nathan Kalisch, TAUV CEO commented:

*"Initial testing of TAUV's high performance soldier system products manufactured by Titomic appear to have superior performance capabilities which we were seeking to achieve during this project utilising Titomic's TKF additive manufacturing process.* 

If all of the results continue to progress positively, these TKF produced products will provide TAUV with a significant market advantage over our competitors who are manufacturing using traditional methods. Titomic's TKF process enhances our offering to defence and law enforcement agencies through improved strength, functionality and capability.

We have been impressed by Titomic's very fast concept R&D feasibility process to bring our concept ideas to a commercial realisation."

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Contacts:

Peter Vaughan Company Secretary & CFO +61(0)3 9558 8822 investors@titomic.com

1 ASX Announcement 22<sup>nd</sup> October 2018 Titomic signs \$1.8million Defence MoU with TAUV https://www.asx.com.au/asxpdf/20181022/pdf/43zgqpbwnvr4zd.pdf

ASX Announcement 7<sup>th</sup> December 2018 Titomic Commences Phase II Defence Program with TAUV https://www.asx.com.au/asxpdf/20181207/pdf/4411rsy9c00p7d.pdf

2 Research and Markets: Soldier Systems Market Size (https://www.researchandmarkets.com/research/fvpwlk/14\_billion?w=5)

3 The Statistics Portal: Estimated worldwide production value for unmanned aerial vehicles (military drones) https://www.statista.com/statistics/428935/global-production-value-forecast-for-unmanned-aerial-systems-or-drones//

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## APPENDIX 1 - Titanium Unmanned Aerial Vehicle (UAV) / Drones



UAV / Drone - Prototype 1



UAV / Drone - Prototype 2

Video of successful test flight of UAV / Drone - Prototype 2: https://youtu.be/DSv3T0pdCPE

As previously shown, one of the prototyped products produced by Titomic's TKF AM process was a Titanium solider enabled UAV. Titanium TKF UAV / Drones are lighter than conventionally produced UAV / Drones which provide improved ruggedisation and strength characteristics allowing them to be more appropriately fortified for live combat situations offering both durability and protection for soldiers.

Drones are a common type of unmanned aerial vehicle often directed from remote control and with the use of Titanium, Titomic has demonstrated how the new TKF manufacturing technology can integrate materials historically known to be challenging due to affordability, fabrication, and size limitation issues. The unmanned Aerial Vehicle (UAV) market was estimated to be valued at US\$545 million in 2018<sup>3</sup>



### About Titomic Limited:

Titomic (ASX:TTT) is headquartered in Melbourne, Australia. Titomic is positioned to change the value proposition of Titanium, to unlock new applications and open opportunities that are now technically and economically viable with its proprietary Titomic Kinetic Fusion™ (TKF) technology platform.

TKF overcomes the limitations of additive manufacturing (3D printing) for metals to manufacture complex parts without shape or size constraints. TKF offers production run capability to organisations, which enables speed-to-market, superior products with lower production inputs using fewer resources for a more sustainable future.

Titomic's TKF enables first mover advantage in industrial scale manufacturing for sectors such as aerospace, defence, resources (oil & gas, mining, rail, chemical & industrial equipment), marine, construction, automotive, medical and consumer & sporting goods.

For more information, visit: www.titomic.com



#### About TAUV Proprietary Ltd (TAUV):

TAUV is an Australian company specialising in the integration of electronical technologies into personnel solder protection to develop intelligent platforms for advanced soldier systems to improve soldier safety and performance whilst enabling advanced tactical systems to ensure optimal operational advantage. These UAV and soldier system capabilities can also be applied to develop super lightweight protection and airborne assets for defence, law enforcement and civil industry. Force Ordnance, a part of the Lightforce Group, purchased a 50% stake in TAUV during 2018.

For more information on TAUV, visit www.tauv.systems

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#### 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 required by law or by any appropriate regulatoryauthority.

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