



Titomic Appoints NASA Aerospace Technologist

- **Space Industry valued at US\$360 billion in 2018 growing to US\$558 billion by 2026**
- **Appointment of the global leader in transformational emerging technologies**
- **NASA Aerospace Technologist & Chief Engineer for Shields-1 CubeSat**
- **Revenue opportunities for Titomic TKF additive manufacturing in Space sector**

Melbourne, Australia, May 31st, 2019: Australian digital manufacturing solutions company Titomic Limited (ASX: TTT) (“Titomic” or “Company”) is today excited to announce the appointment of Mr. Nathanael Miller as Chief Technology Officer (CTO).

As Titomic’s Chief Technology Officer, Mr. Miller will leverage his extensive international experience and network to develop commercial opportunities with Industry, Governments, academia and research institutions for Titomic to lead the implementation of digital manufacturing platforms for various industries and the burgeoning commercial space sector.

Mr. Miller has 13 years NASA aerospace experience including most recently holding roles as Aerospace Technologist at NASA Langley Research Center’s Mechanical Systems Branch, NASA Lab 77 Founder, and Lead Mission Developer, Chief Engineer for the Shields-1 CubeSat, Sub-Systems Lead for Sub-System Lead IRVE-3 (Inflatable Reentry Vehicle Experiment). Outside of Developing NASA Langley’s small satellite portfolio, he also served industry as a Director on the Board of the Congress On the Future of Engineering Software (COFES).



Titomic is leading the way in advanced material sciences and digital manufacturing technologies for the future of the space industries. TKF’s patented processes provide commercially viable additive manufacturing (AM) solutions applicable to space and satellite systems with significant advantages over traditional metal manufacturing techniques.

Digital manufacturing solutions will create the core technology for the Internet of Manufacturing (IoM) to take manufacturing process to the next level. These digital platforms will increase the efficiency of pre-production design processes, feasibility assessments and costing analysis. Titomic’s digital manufacturing solutions will provide cloud-based, open Internet of Things (IoT) operating systems that will enable the connection of all Titomic’s TKF systems to utilise advanced analytics to harness the wealth of data generated by the advanced analytics. The TKF additive manufacturing solutions and digital manufacturing platforms will be an essential driving force to recognise a truly digital factory well ahead of the anticipated factory of the future boom set to occur over the next ten years.

Led by Mr. Miller, Titomic is well positioned to take advantage of a new rapidly growing commercial space industry which grew from an estimated USD\$175 billion in 2005 to USD\$360 billion in 2018¹. The sector is expected to surpass \$3 trillion by 2040² according to analysts at Bank of America Merrill Lynch.

Australia's committed defence investment in space-related projects alone is anticipated to be nearly AUD\$10 billion over the next 20 years³ and will provide opportunities for advanced technology such as Titomic's TKF systems to contribute across a wide range of manufacturing areas.

Titomic Kinetic Fusion systems are leading the way for advanced material science and digital technologies to combine for the future of additive manufacturing in the space industry. TKF's patented processes allow for the automated production of large-scale future space vehicles and satellites, which are challenging to produce using traditional metal manufacturing techniques.

In 2019 the rise of digital manufacturing platforms transcends the rules of production and product development, and in the process create new opportunities for Titomic additive manufacturing solutions. No other industry can inspire nations quite like space, where human ambition can set its sights on interplanetary missions, colonisation beyond Earth, and the possibility of finding new life.

Mr. Jeff Lang, Titomic Managing Director commented:

"Nathanael's many years of experience at NASA will provide Titomic a competitive advantage on future strategy on revenue opportunities in the fast-growing and fiercely competitive commercial space industry sector."

"As the Chief Technology Officer for Titomic, Nathanael will join our dynamic executive team to lead our efforts in building digital manufacturing platforms to create a sustainable and important capability for not only Titomic, but for Australian future sovereign capability."

Mr. Nathanael Miller, new Titomic Chief Technology Officer (CTO) commented:

"It is exciting time to join Titomic to lead the development of digital manufacturing platforms and drive strategic opportunities in the burgeoning space industry."

"I've seen 20 years of growth in robotic automation and engineering software industry and I've worked for more than a decade applying the best advanced technologies to ground, air and space systems. I can say, without hesitation, that Titomic's Kinetic Fusion process leverages these industry capabilities to deliver the best, and most practical, large-scale metal technology manufacturing in the additive manufacturing technology space available."

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1. <https://www.prnewswire.com/news-releases/global-space-industry-market-and-technology-forecast-to-2026-300678748.html>
2. https://www.industry.gov.au/sites/g/files/net3906/f/June%202018/document/pdf/review_of_australias_space_industry_capability_-_report_from_the_expert_reference_group.pdf
3. <https://www.uschamber.com/series/above-the-fold/the-space-economy-industry-takes>
4. https://www.business.act.gov.au/_data/assets/pdf_file/0005/791825/The-High-Growth-Potential-of-Australias-Space-Economy.pdf



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

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.