



Titomic Updated Corporate & Investor Presentation – Mar 2019

Melbourne, Australia, 19 March, 2019: Australian metals and materials manufacturing company Titomic Limited (ASX: TTT) ("Titomic" or "Company") is pleased to provide its updated Corporate Video and Quarterly Investor Update Presentation for March 2019 (attached).

The Corporate Video is available at: <https://www.titomic.com/investor-update-march-2019>

The Company will be performing in-person quarterly update roadshows to investors going forward.

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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, sale & leasing of systems 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.

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Titomic Limited [ASX:TTT]

Titomic Kinetic Fusion™

Digital manufacturing solutions for metal industries

Investor Update Roadshow

March 2019

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Titomic Kinetic Fusion Overview

A new process that overcomes the limitations of metal additive manufacturing, to produce complex parts faster, larger & smarter

Titomic Kinetic Fusion

- Patented process developed with the CSIRO
- Metal powders accelerated at supersonic speeds fuse on impact to form structures



Key TKF differentiators

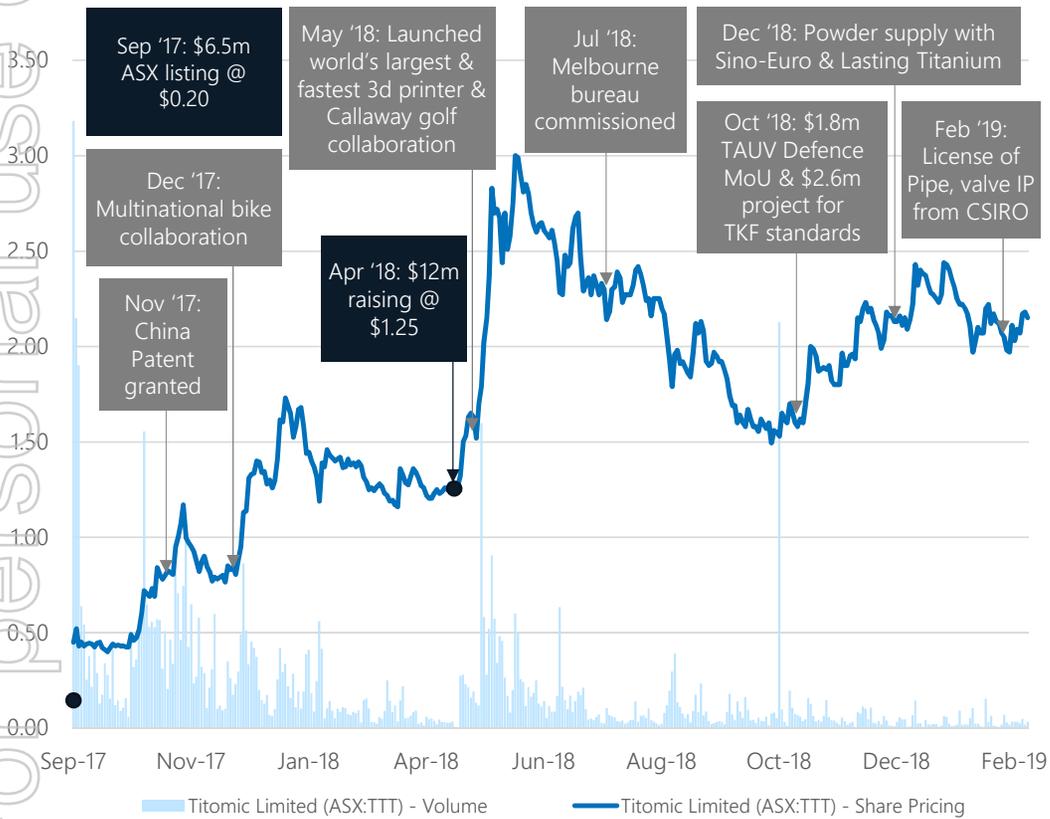
High speed: Automated, rapid production cuts production from days to hours Vs other 3D metal printing and traditional metal fabrication

Any size: Metal is not melted, there is no oxidation, thermal distortion and no need for an inert environment, hence no size constraints

Superior material properties: Dissimilar metals can be fused for improved properties - metals, composites (ceramics) to create superalloys & hybrids

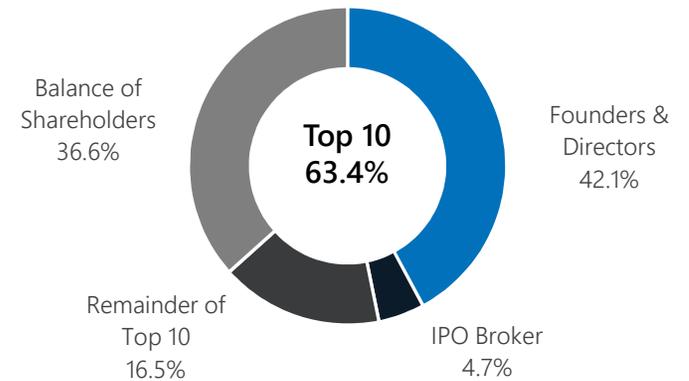
Company Performance & Structure

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Capital Structure (as at 11 March 2019)	
Shares on Issue	122,098,217
Performance Shares*	20,000,000
Director Performance Shares	140,123
Unlisted Options	2,105,000
Market Capitalisation (7 March 2019)	\$246.6M
Cash Balance (31 December 2018)	\$6.73M

All Shareholders (as at 11 March 2019)



* **Class A 10,000,000 performance shares:** Share price must be more than 150% of IPO price and quarterly revenues must be at least \$1m for two consecutive quarters, within 3 years of IPO.
Class B 10,000,000 performance shares: Market Cap > \$100m, quarterly revenue must be at least \$2m for two consecutive quarters, must have issued at least 30 product licences, within 3 years of IPO.

Investment Highlights

Proven: Commercialised IP places Titomic at an industry advantage

Production Ready: Significant funds, resources into infrastructure & processes

Significant inbound demand: Many major, global companies seeking TKF

Transformative: Alters economics of metal manufacturing unlocking new applications

Efficient: across the manufacturing industry with Titomic capturing value throughout

Business model optionality: Reduces sales friction driving new opportunities

Recurring revenue potential: Multiple streams available at healthy margins

High Upside: Repeat production runs, consumables sales & export markets

Knowhow: Team with deep domain knowledge & industry pedigree



TITOMIC

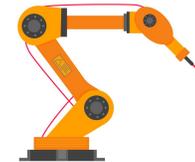
Company Snapshot



Meeting global demand: Scale to meet significant global demand for Titanium products from industries



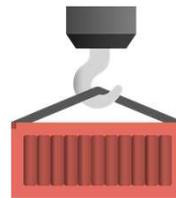
Value proposition: The only viable process to manufacture with Titanium effectively and economically



Global IP: Patented Titomic Kinetic Fusion™ to create complex metal parts with no size constraints, fast



Business model: “Try before you buy” adoption with production runs and TKF system leases



Investment to date: \$20m into commercialisation of TKF, systems, supply chain & standards development



Diverse revenue streams: Multiple transaction and recurring revenue streams with high margin potential

Intellectual Property Position

Patent portfolio covers TKF and incorporates new IP exclusively licensed from CSIRO

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	Titomic Kinetic Fusion process	Pipe Manufacturing & Continuous Pipe Processes
IP Description	<ul style="list-style-type: none">• Application of cold-gas dynamic spraying of titanium or titanium alloy particles onto a scaffold to produce a load-bearing structure	<ul style="list-style-type: none">• Process to producing valves, flanges and pipe using Cold Spray; and• Process to producing seamless continuous titanium pipe using Titomic Kinetic Fusion™ (TKF)
Licence Terms	Exclusive licence from CSIRO	Exclusive licence from CSIRO
Granted	Australia, New Zealand, Europe, China, US and Japan	Europe, Ukraine, Australia, US
Pending	Korea and Hong Kong	-

Creating New Global Demand for Titanium Products

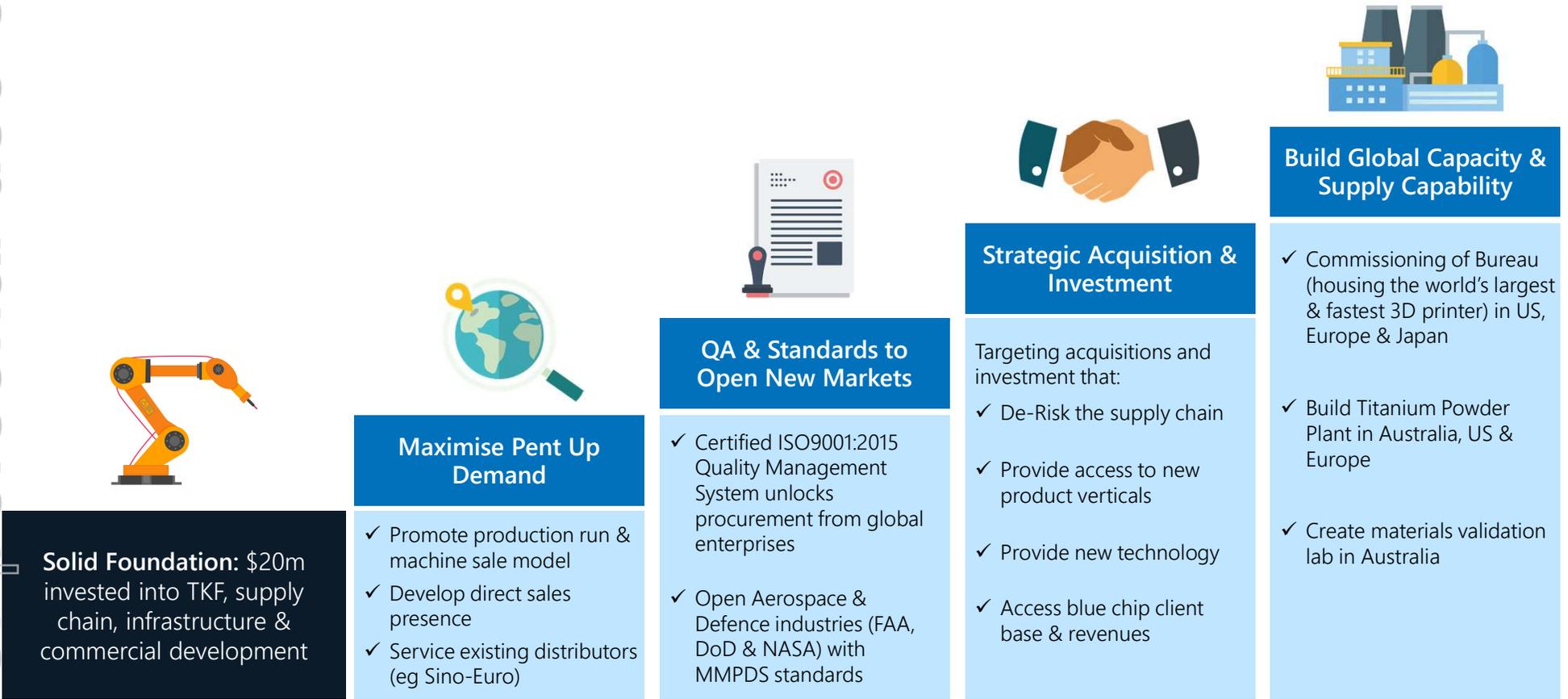
Current global additive manufacturing market of US\$10B pa can be substantially grown to over US\$720B once new Titanium and Alloy applications are unlocked by Titomic

	 Defence	 Aerospace	 Marine	 Resources	 Auto	 Sports	 Construction
Need for large seamless pieces	✓	✓	✓	✓			✓
Structures with highest strength to density ratio	✓		✓	✓	✓	✓	✓
High temperature resistance	✓			✓	✓		
Corrosion resistance in aggressive environment	✓	✓	✓	✓	✓	✓	✓
Anti-fouling	✓	✓	✓	✓	✓		✓
Ballistics protection	✓						
Near term market potential	Soldier Systems: US\$14B pa by 2023	Ti & composite supply: US\$8B pa	Boats hulls Aus & Germany: \$7B	Pipelines: \$264B Valves & fittings: \$88B	Auto applications: \$84B	Sporting Goods: \$33B pa	Construction use: \$230B

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Strategic Growth Plan

The Titomic strategic journey is focused on the four key factors that will deliver the future growth of the business



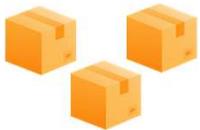
Business Model Drives Broad & Recurring Revenues

Differentiated business model reduces barriers to adoption while increasing long tail of revenues



Transactional revenue streams

Recurring revenue streams



OEM production run manufacture
@ TTT service bureau

R&D and feasibility of project services

Validation period

Products license fees

Product exclusivity fees

Repeat runs & expansion into new runs

Production fees that grow as production requirement expands



Purchase their own TKF system
@ Customer site

Consulting and advisory services

Commissioning period

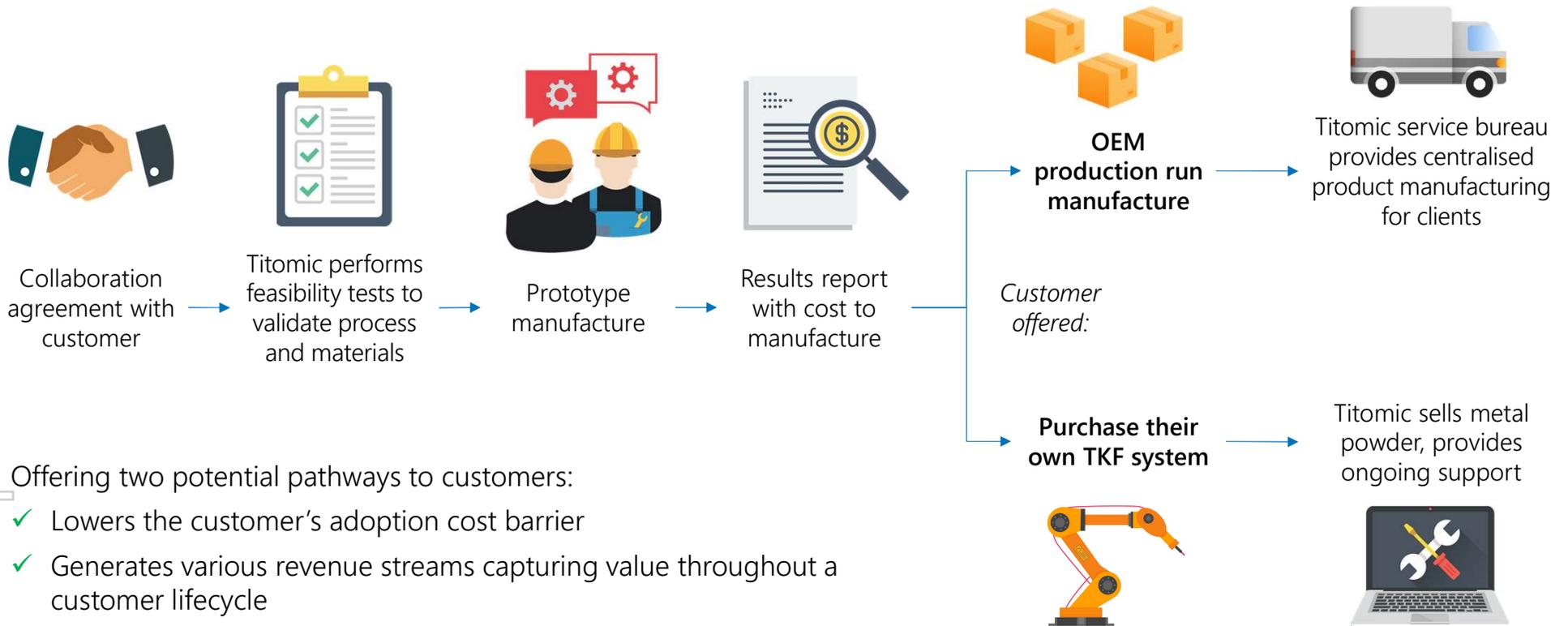
TKF system sales

Consumables (powders, nozzles, spare parts) & system upgrades

Service & maintenance contracts

Converts customer capex into ongoing opex (first-in-market to offer)

Customer Journey with Titomic



Offering two potential pathways to customers:

- ✓ Lowers the customer's adoption cost barrier
- ✓ Generates various revenue streams capturing value throughout a customer lifecycle
- ✓ De-risks the business model by providing optionality

Growing Customer Pipeline

Titomic has accumulated a healthy opportunities pipeline across industries since marketing initiatives commenced in 2018

Over 60 significant opportunities globally across 12 industry categories

Proposed capex on validation lab can accelerate these opportunities

Feasibility & Scope of Works Discussions



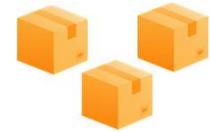
FINCANTIERI



TAUV



Proof of Concept Agreements



1. OEM production run manufacture

2. Purchase their own TKF system



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Machine Sale & Leasing

The TKF9000

The world's largest 3D metal printer engineered for manufacturing large-size products.



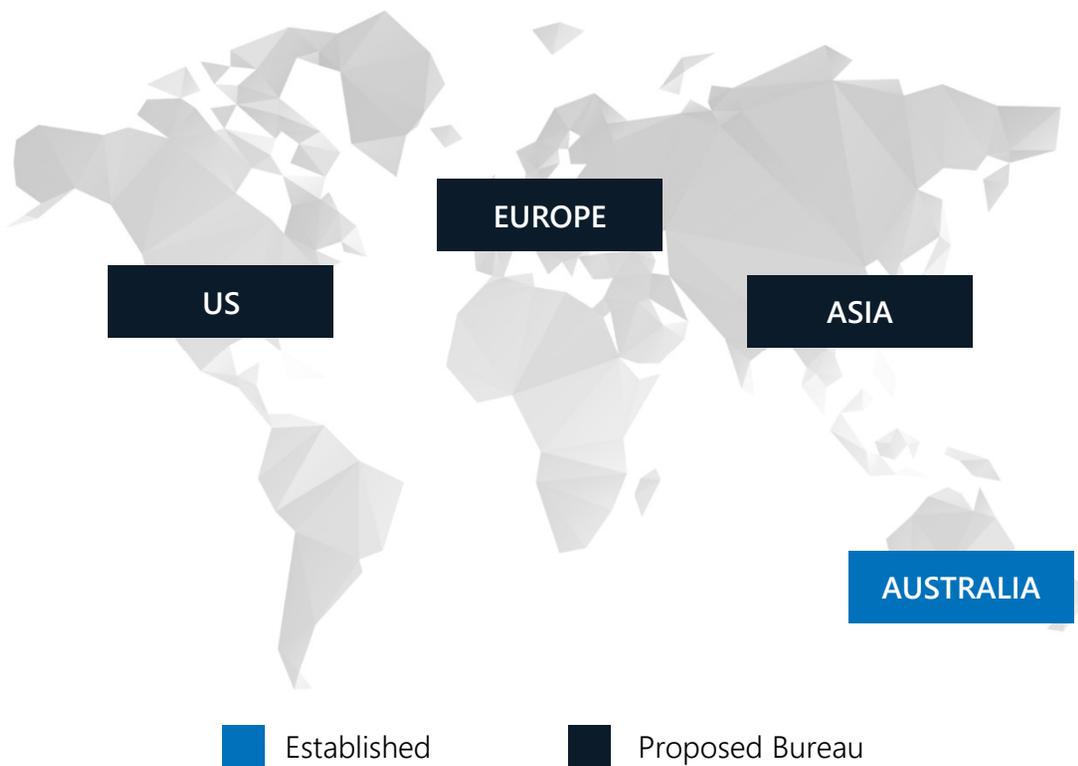
The TKF1000

Engineered for smaller-scale and R&D production for all industries, academia and research organisations



Expansion of Production Run & Sales Bureau

The Australian production bureau will provide a basis for replication for bureaus overseas



To facilitate recurring production runs with customers in key export territories:

- Transfer the TKF production knowhow and capability with a Bureau created for each region
- Establishing regional technical/implementation leads to support client sales & implementations
- Increasing marketing to the key target industries

Titomic Ahead of AM Manufacturing Trends

Titomic is acting on the main trends identified by industry peers

“ Digital manufacturing at scale requires the repeatability and quality of parts to rival that of injection moulding

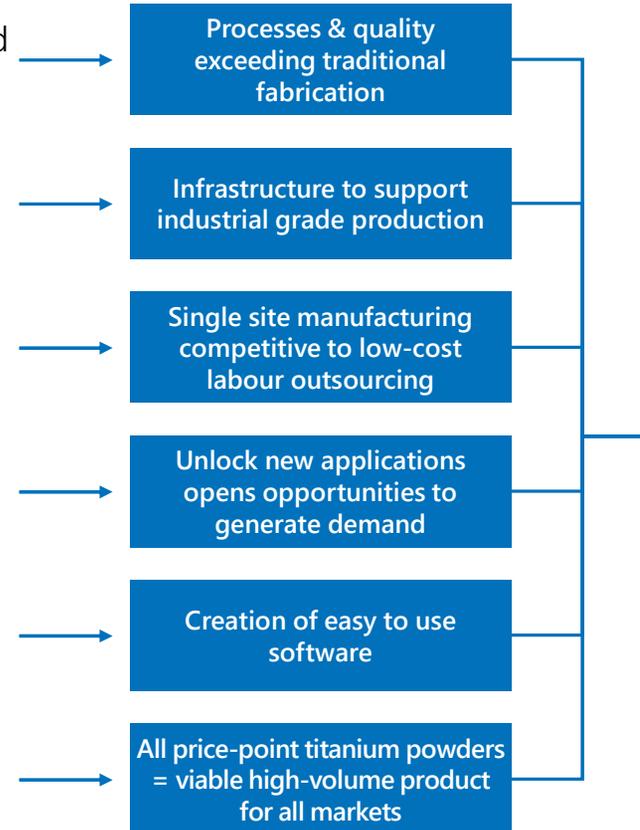
“ Achieving industrial grade productivity, quality control, workflow, repeatability, standardisation, and automation

“ Impact on global supply chain to move toward decentralisation of manufacturing

“ Transform manufacturing for businesses enabling them to realise a competitive advantage

“ Holistic workflow solution from concept to print which will accelerate 3D printing adoption

“ End-use production applications to broaden beyond specialised industries like aerospace and medical



Source: 3D Printing Industry

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Appendices



Board of Directors

The current Board has steered the company from pre-IPO through to its current performance and results



Philip Vafiadis
Chairman &
Non-Executive Director

Executive Chairman of Innovyz, a leading organisation at the forefront of additive manufacturing in Australia



Jeffrey Lang
Managing
Director & CEO

30 years as MD and CEO in manufacturing specialising in composite manufacturing technologies across Australia, Europe & Asia



Prof. Richard Fox
Non-Executive
Director

Co-inventor of Titomic Kinetic Fusion, highly experienced in advanced materials, manufacturing and biotechnologies



Richard Willson
Independent
Non-Executive Director

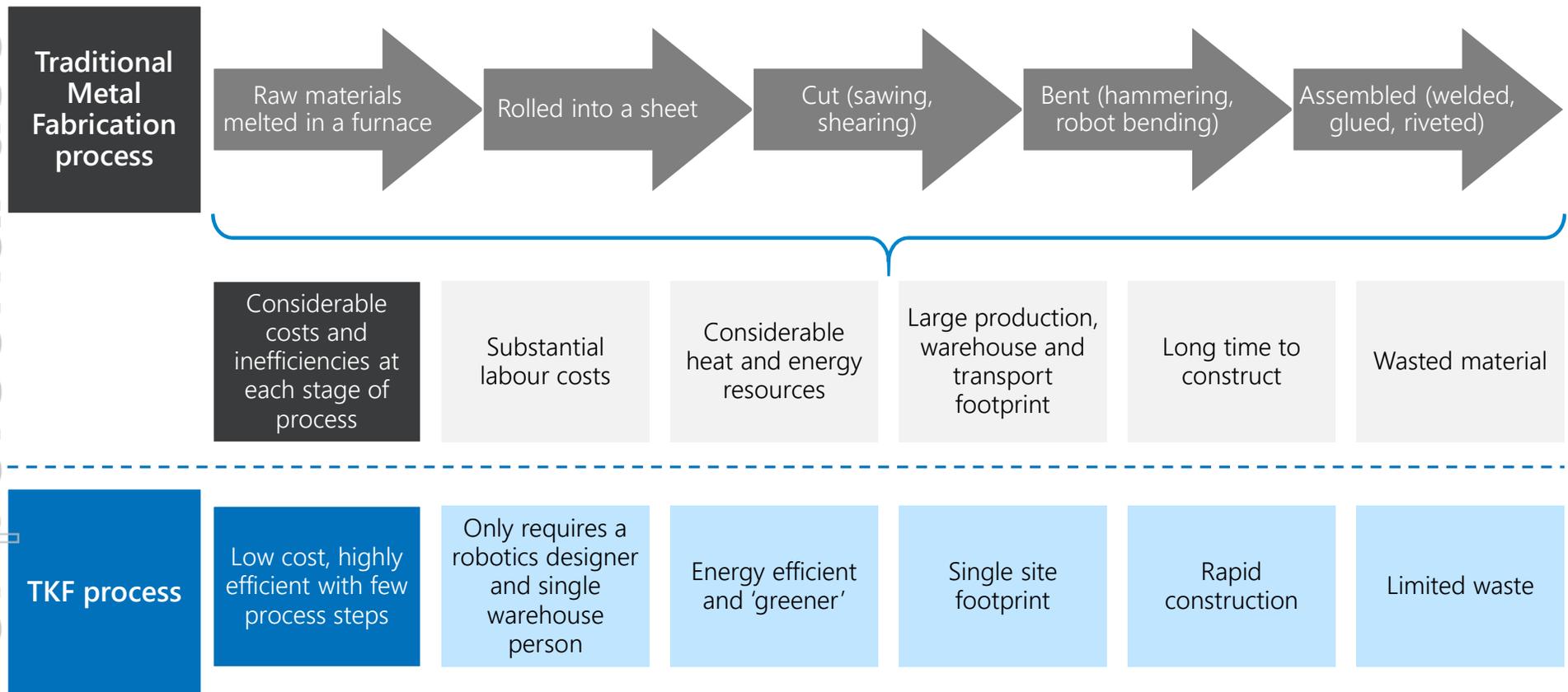
20 years' experience as a CFO, Company Secretary, and Non-Executive Director for ASX listed, private and multinational companies



Titomic is undertaking a global search for 3 additional Directors to grow the board ensuring the necessary skills are in place to successfully manage this global growth phase

Traditional Metal Fabrication vs TKF

TKF disrupts the inefficient, resource-heavy traditional metal fabrication process unchanged for thousands of years



Value Proposition

TKF is crucial to overcoming the technical and economic constraints in additive manufacturing production that have the potential to enable a new wave of materials applications and development.

TKF is a key enabler as:

- **Transforms production value proposition:** TKF can output complex shapes from CAD with no cutting, bending or welding needed eliminating the time and costs associated with traditional metal fabrication
- **Lowers total costs to enable onsite production:** As end-to-end production can be completed onsite, this lowers labour cost, overheads and transport footprint, to make production cost competitive to global outsourcing
- **Speed of production:** Ability to create parts of any size and complexity in a hours not days. Material throughput of 45 kg per hour
- **Substantially less material waste:** Milling titanium to produce parts can have up to 90% waste. TKF uses only the material that is needed.
- **Versatile:** TKF can run production using Titanium, other metals, alloys, superalloys and composites

Comparison Studies

Defence

- Existing project with TAUV, where Titomic-created ruggedised UAV = improved strength, functionality and capability
- Ballistics protection means TKF created combat helmets and body armour also open
- Soldier systems market: US\$14B by 2023



Sources: Research & Markets, Lucintel

Sporting Goods

- Current collaboration with world leading brands, Trek & Callaway
- Titomic can create single piece (fully monocoque) Titanium bicycle frame with superior strength to weight characteristics
- Opportunity to expand the global target market of mountain, racing & road bikes of US\$11B pa



Aerospace

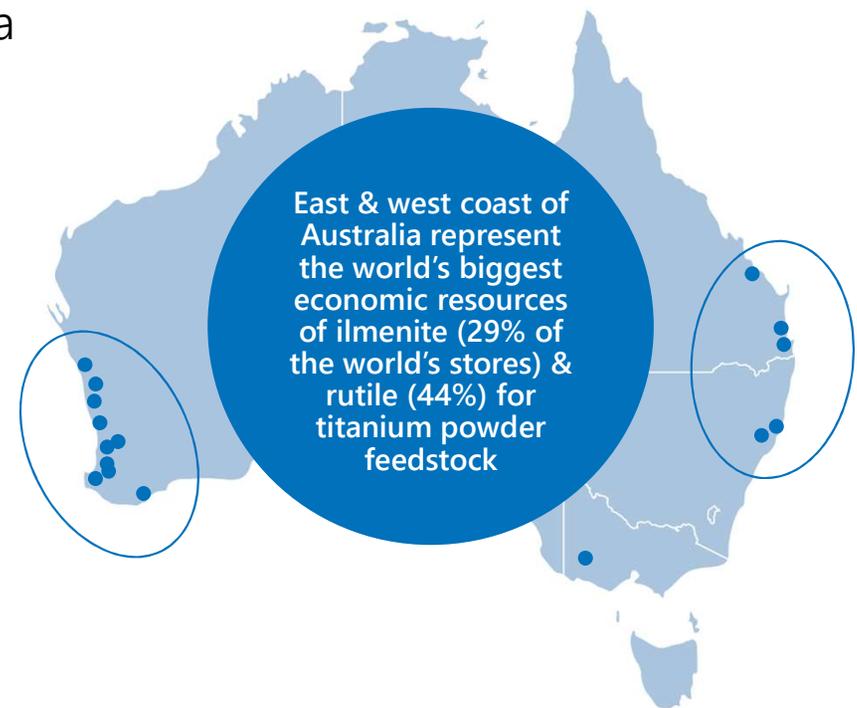
- TKF9000 allows creation of large scale aerospace parts
- Interior fittings can be produced with low waste and high speed compared to traditional solutions
- MMPDS standards can open market substantially
- Current opportunity of US\$8B pa can be exceeded if Titanium is viable versus alternate materials



Capturing More Value from the Supply Chain

Significant value is lost as input materials are value added

- Value added opportunity being lost to Australia
 - Mineral sands \$0.10 p/kg (*Exported*)
 - Titanium powder \$250 p/kg
 - Finished Titanium parts = \$1,000+ p/kg
- Industry average of raw material to finished part is 11:1 with 90% of this ratio representing waste
- Titomic is able to operate close to Titanium mineral sands to capture value



Source: Australian Mines Atlas

Underpinning Infrastructure Development in Progress

Considerable resources allocated to infrastructure to enable optimised industrial manufacturing



Building a World Class Lab

- Currently a piece needs to be sent to a number of labs taking weeks with certifications needed coming from numerous sources.
- By creating a validation lab, Titomic can test, validate, certify onsite in hours.



Creation and Certification of New Standards

- IMCRC project with RMIT & CSIRO creates new industry certification standards for TKF in producing aerospace and defence structures
- Opens new markets and applications



AI Automated Software

- New Department headed by NASA Aerospace Technologist & Mission Developer Nathanael Miller
- Achieving industrial grade QA, workflow, repeatability, automation and standardisation drives economies of scale, and accelerates TKF adoption
- Powered by AI and deep learning to automate processes over time

Leading in the New Industrial Revolution

With high speed production, supreme material versatility and commercial volume, Titomic is positioned to be the lead candidate for industrial scale production

High Speed
& Volume

Metal additive manufacturing processes with wire

- Oxidation issues
- Heat distortion
- Limited to available wires
- Cannot fuse dissimilar metals
- Cannot create heterogenous materials

Titomic Kinetic Fusion™

- ✓ No size constraints
- ✓ Supersonic speeds
- ✓ No oxidation issues
- ✓ No heat distortion
- ✓ Use in any environment
- ✓ Wide range of powder and price
- ✓ Fusion of dissimilar metals
- ✓ Create heterogenous materials
- ✓ More sustainable



Large
Size

Most metal additive manufacturing processes with powder

- Restricted to small precision parts in medical and aerospace
- Confined to inert environment
- Oxidation issues & heat distortion
- Slow process
- Costly refined powders
- Cannot fuse dissimilar metals
- Cannot create heterogenous materials

Traditional subtractive manufacturing

- Welding & machining time
- Welding & machining cost
- Energy intensive
- Cannot fuse dissimilar metals
- Cannot create heterogenous materials
- Up to 90% material wastage
- Unsustainable

Low Speed
& Volume

Titomic Limited

Titomic Kinetic Fusion™

Digital manufacturing solutions for metal industries

For further information, please contact:

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 1300 108 122

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