

Manufacturing innovation made reality

# **Annual General Meeting**

November 2022

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# **Chairman's Address** Mr Humphrey Nolan



# Board directors with global coverage and experience



Humphrey Nolan Non-Executive Chairman









Mira Ricardel
Non-Executive Director
Therefore
Group



Dag Stromme Non-Executive Director Morgan Stanley Triton



**Jeff Lang** Non-Executive Director







**Richard Willson** 

Non-Executive Director



# Thank you, Jeff

As a corporate and innovation visionary, Jeff has led multiple efforts in developing future advanced technologies, by driving a culture of out-of-the-box thinking to successfully manage collaborations and partnerships in advanced technologies.

With innovation and creativity at the core of Jeff's approach, he was a key driver in bringing Titomic to Australia and the world. Working with co-founder and Director, Richard Fox, along with Australia's CSIRO, Jeff worked diligently to develop a technology that sought to utilise Australia's titanium mineral sands to re-shore advanced manufacturing to Australian and to enhance Australia's sovereign manufacturing capability.

The resulting technology was Titomic Kinetic Fusion – a novel and innovative process that would provide significant commercial benefits to manufacturers. Jeff played a crucial role in beginning the process of commercialisation – including identifying pathways to market, significant material science developments, and the development of a sound commercialisation strategy.

During his tenure, Jeff oversaw and led a growing team to strong achievements. These include the establishment of the Titomic Manufacturing Bureau, development of a structured IP portfolio, and driving early successes with major aerospace and defence primes, research organisations, and government groups.



# **Attendees – Voting Process**

A poll will be conducted on the resolutions set out in the notice of meetings.

If there is any person present who believes they are entitled to vote but has not registered to vote, please see the staff at the registration desk for assistance.

The persons entitled to vote on this poll are all shareholders, representatives and attorneys of shareholders, and proxyholders who hold (colour) admission cards.

On the reverse of the (colour) admission card is the voting paper and instructions.

### Procedures for filling in the voting papers

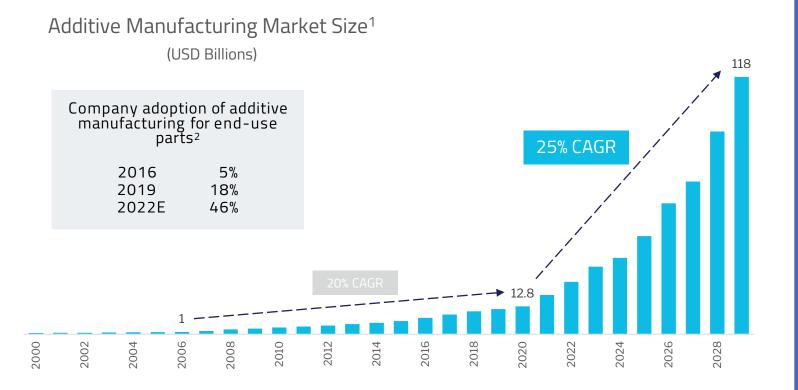
Proxyholders have attached to their admission card a Summary of Proxy Votes which details the voting instructions, for business items on the appointment documents in your favour.

By completing the voting paper, when instructed to vote in a particular manner, you are deemed to have voted in accordance with those instructions.

In respect of any open votes a proxyholder or shareholder may be entitled to cast, you need to mark a box beside the motion to indicate how you wish to cast your open votes.

# Managing Director's Address Mr Herbert Koeck

## Additive manufacturing to grow over 11x in the next decade



Evolution of the AM Market

#### Additive 1.0

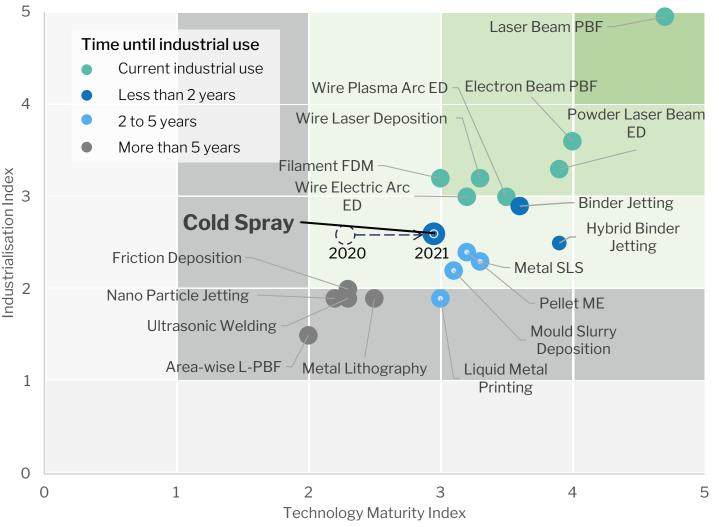
- Key players now off-patent, leaving them with minimal differentiation and commoditized technology
- Significant loss in market share to open source and low-cost providers
- Have not participated in market growth due to focus on design and rapid prototyping

#### Additive 2.0

- Additive 2.0 innovation is being driven by VC- funded, emerging players across printers, materials and parts businesses
- New players are driving advances in speed, accuracy, material variety and build volume/size
- Focus on mass production and end-use parts is driving market growth (certain industries ahead in maturity curve)

2. Source: "3D printing: hype or game changer?" Ernst & Young Global Report 2019.

## Metal Additive Manufacturing Maturity Index



Cold Spray continues to mature towards widespread industrial use in AM

Note that this chart is for AM only and not coatings, where Cold Spray is already experiencing widespread industrial use

PBF: Powder Bed Fusion L-PBF: Laser Powder Bed Fusion ED: Energy Deposition SLS: Selective Laser Sintering FDM: Fused Deposition Modelling ME: Material Extrusion



# Leadership with proven industry experience



Herbert Koeck Managing Director BD SYSTEMS



Jon Nield Chief Financial Officer



Colin Horman Chief Operating Officer IVECO iSelect



Klaas Rozema General Manager Titomic Europe Dycomet



General Manager Titomic USA



Max Osborne Head of Engineering

BOEING



Neil Matthews Head of Business Development Coating and Repairs



**Dominic Parsonson** Head of Sales





**Chris Healy** Legal Counsel Company Secretary

BondAdviser





Michael Rochford Head of HR

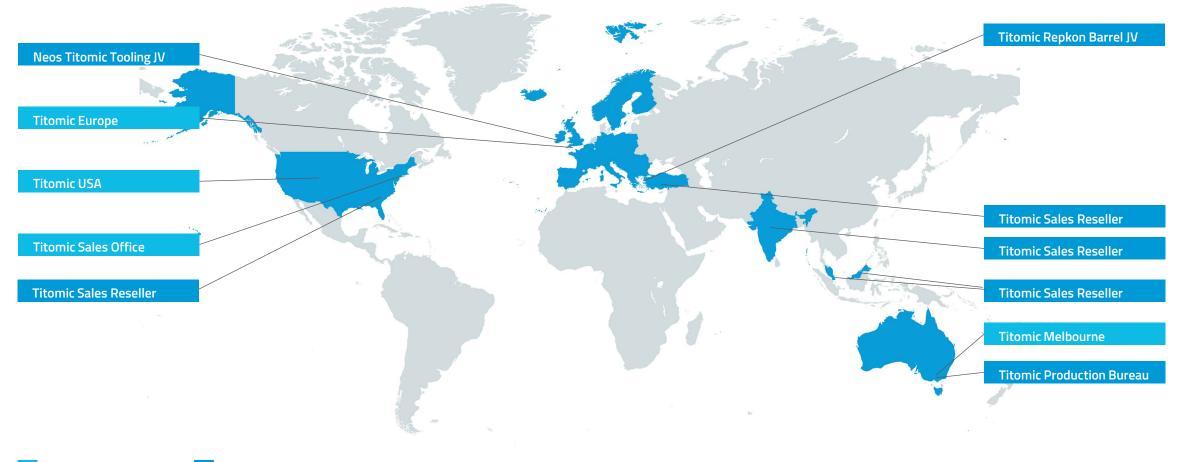


Titomic holds a combined 165 years of Cold Spray Technology experience in the Staff and Board



# Taking our technology to the world – Global footprint

Global production, supply and service network to meet our customer's needs.

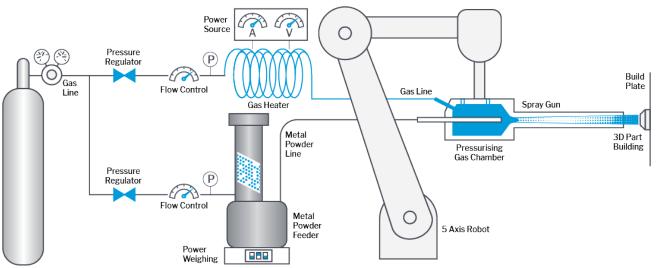


# Superior speed and size

#### **Titomic Kinetic Fusion (TKF)**

- Exclusive rights to commercialise a form of cold spray additive manufacturing developed with CSIRO
- This process, called Titomic Kinetic Fusion (TKF), employs cold spray technology using compressed gas to accelerate metal powder particles at supersonic speed, which bond together to form a layer upon impact

#### The TKF process



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#### Key attributes of the TKF process

#### Speed

• Up to 3x faster than other Additive Manufacturing (AM) processes

#### Size

- Highly Scalable
- Up to 9m x 3m x 1.5m

#### Sustainable

• Less energy use and material waste

#### **Cost effective**

- Ability to use wide range of metal powders
- Cost competitive grade metal powders of dissimilar particle sizes and irregular shapes

#### **Multiple Metals**

- Build with almost any metal in a powder form
- Unique ability to combine different materials in a single part



## Existing diverse and customisable machine portfolio



## **TKF 9000**

- High pressure Cold Spray additive manufacturing and coating
- Demonstration of Titomic's ability to engineer and construct bespoke AM systems
- Build volume of 40.5m<sup>3</sup>
- Deployed in the Titomic Melbourne Production Bureau



## **TKF 1000**

- High pressure Cold Spray additive manufacturing and coating
- Designed for prototyping and low volume production tasks
- Build volume of 0.75m<sup>3</sup>
- 1<sup>st</sup> gen system operating at Titomic Melbourne Bureau
- 2<sup>nd</sup> gen system under construction for TWI (UK)





## **ISB Series**

- Low pressure Cold Spray coating
- Robotic or linear coating system
- Automated loading and unloading of parts
- Utilises D523 core cold spray system
- Ideal for R&D deployment or as a base for customised automated coating systems

- Low pressure Cold Spray coating
- Modular portable repair system
- Designed for robotic or manual repair and coatings

• Deployable for in-field repairs



# Our rapidly growing trusted global customer base



# Five distinct fast growing revenue streams

1. Machine Sales	2. Joint Ventures	3. Workflow Solutions 4. Application Development		5. Resellers	
<ul> <li>Broad range of machine solutions</li> <li>TKF 1000</li> <li>TKF Custom</li> <li>ISB Series</li> <li>D Series</li> </ul>		<ul> <li>Automated solutions to maximise uptime</li> <li>Improved manufacturing productivity and efficiencies</li> </ul>	<ul> <li>Development, prototyping and testing for strategic application pillars</li> </ul>	Territory Coverage India Middle East Singapore Malaysia USA	
<u>-</u>	Service, Maintenance, I	Materials (powders), Co	onsumables, Consulting	B	
<ul> <li>TWI</li> <li>D&amp;C Coating</li> <li>Lufthansa</li> <li>Flohe</li> </ul>	<ul> <li>Repkon JV</li> <li>Nèos JV</li> </ul>	<ul><li>Vetropack</li><li>Gallo Glass</li><li>Brauntell</li></ul>	<ul> <li>Boeing</li> <li>Fleet Space</li> <li>Thales</li> <li>Royal Australian Navy</li> <li>Airbus</li> <li>Inovor</li> <li>BAE Systems</li> <li>Triton</li> <li></li> </ul>	<ul> <li>Shree Rapid</li> <li>Repkon</li> <li>Alliance</li> <li>MSI-Viking</li> </ul>	



# Targeting growing markets

Market Sizes and Estimated Revenues

Additive Manufacturing						
Application		Estimated Market	Target Revenue to FY27			
	Armaments	\$16.9b	\$50-55m*			
	Tooling	\$700m	\$55-65m*			
$\bigcirc$	Ballistic Protection	\$24.8b	\$12-15m			
	Structures	\$7.0b	\$45-50m			
	Embedded Sensors	\$1.0b	\$10-15m			

\* Revenues related to joint ventures: This is a blend of sales to JVs, incl. machine, powder, consumables and servicing revenue, and revenue in the JV, from sales of finished product. Revenue within the JV will not be reported by Titomic, rather dividends will be returned from net profits

Coating & Repair						
Application		Estimated Market	Target Revenue to FY27			
Ę	Wear Resistance	\$23.6b	\$25-35m (glass)			
e constantes a constantes a constantes a constantes a constantes a constantes constantes a constantes a constantes a constantes a con	Repairs & Corrosion	\$15b	\$55-70m			
*	Energy	\$14.1b	\$10-15m			
<b>C</b>	Inductive and Conductive Coatings	\$2.5b	\$10-15m			
	Radiation Shielding	\$5.0b	\$5-12m#			

<sup>#</sup>Radiation Shielding may not generate a large amount of revenue, but opens the door to a number of exciting applications in the space industry. Additionally, minimal investment is required to enter the market as technical solution development is completed.

# **Profit & Loss**

Earnings Summary	FY22 \$,000	FY21 \$,000
Revenue	5,321	1,985
Less Expenses	(22,293)	(19,160)
Profit (loss) before Income Tax	(16,972)	(17,175)
Less Tax	-	-
Net profit (loss) After Tax	(16,972)	(17,175)
Less Non-operating items	6,430	6,079
Underlying operating profit (loss)	(10,542)	(11,096)

#### Non-operating items

Expenditure incurred to obtain grants	(701)
Share based payments	(2,070)
Business acquisition related costs	(2,962)
Other one-off expenses	(697)

- Stronger financial result with revenue up 168% to \$5.3m inclusive of
  - Revenue from customers \$3.4m 7x increase on pcp
  - Government grants and other adjustments of \$1.9m
- Underlying operating loss of \$10.6m (FY21: \$11.1m loss)
- 16% increase in total expenses to \$22.3m primarily through acquisition of Dycomet and Tri-D Dynamics
- Total expenses include \$6.4m non-operating items, of which \$3.0m relate to acquisitions
- Slight improvement in statutory net loss after tax to \$17.0m

# Cash flow and balance sheet

Statement of Cash Flows	FY22 \$,000	FY21 \$,000
Customer & Grant Receipts	5,929	1.908
Operating cash flows	(10,161)	(9,037)
Investing cash flows	(1,962)	(25)
Financing cash flows	11,324	(449)
Net cash flow	(799)	(9,512)

Statement of Financial Position	30 June 2022 \$,000	30 June 2021 \$,000
Cash	7,108	7,946
Current assets	10,847	11,084
Non-current assets	3,971	2,505
Total Assets	14,818	13,589
Current Liabilities	4,739	2,977
Non-current liabilities	2,667	1,170
Total liabilities	7,406	4,147
Total Equity	7,413	9,442

- Cash receipts of \$5.9m include \$3.0m receipts from customers and \$2.9m grant income received
- Operating cash outflow of \$10.2m includes \$0.7m acquisition costs.
- Investing cash outflows of \$1.9m include:
  - \$1.4m payments for acquisitions. (additional \$0.5m provisioned for deferred and contingent consideration)
  - \$0.6m capex
- Financing cash flows inclusive of:
  - \$9.9m successful share placement and share purchase plan
  - \$2.5m strategic investment from Repkon
- Well funded with \$7.1m in cash reserves and no debt



# Proven track record of execution

Performance to plan with progress across focus applications

Category	Application	Prior to FY2022	FY2022		FY2	2023	FY2024	FY2025	FY2026	FY2027		
		Validate Technology		Custom system des	sign		JV Product	ion				
ග	Armaments		JV Agreement with Repkon	JV Setup		Custom system in	nstall					
urin	Taaliaa	Validate Technology	JV Agreement with ot	ther partners C	Custom system of	design	JV Product	tion				
Additive Manufacturing	Tooling		JV Agreement with Ne	eos JV Setu	р	Custom system	n install					
nuf	Ballistic	Initial development tests	Identify specific target app	lications Per	formance impro	ovements Cus	tomer Articles					
Ma	Protection	MIL & NAT	O standards testing ST	TANAG Lvl2 Pass	Custom	ner Prototypes						
ive	Structures	Develop TKF Systems	Key customer engagemen	t Key custome	er demonstrators	6						
ddit	Structures		Sale of TKF 1000 to TWI	Titanium mate	erial testing and	specifications						
A	Embedded Sensors	Prototype Bytepipe	Test with Industry Partner	Refine design, i	n-field testing							
	Wear	Develop Glass Mould Coating S	ystem Installed at Vetr	opack	System co	ommissioned, produ	iction deployment					
	Resistance	New material solutions (carbide	es) Customer use cases, i	material selection &	performance te	esting Field t	rials					
airs	Repairs &		Acquire Dycomet	Titomic Europe i	ntegration	D523 Production	Scale-up					
Repairs	Corrosion		Hire Neil Matthews	D523 Glo	bal Re-launch	Defence ar	id new industr <mark>y use c</mark>	cases				
р Ц Н	Energy	Develop Silver coating for bush	bars									
Coating and	Lifergy	Develop copper spray for MW <sup>-</sup>	solar panels									
lting	Inductive & Conductive		Validate Materials									
Coa	Coating		Validate solu	ution efficacy								
	Radiation	Award of Space	e Grant		Commercial cus	stomers						
	Shielding	Demo ar	d test Rad. Shielding		1st parts deliver	First parts la	aunched					

# **Unlocking unprecedented potential**

### Large & expanding market

- Strong tailwind with additive manufacturing market set to grow by 29% to 2025<sup>1</sup>
- Buoyed by rapid prototyping, faster turnaround, less waste and lower emissions<sup>2</sup>
- Reduced costs and risks fuelling fourth industrial revolution

### Global foothold

- Transitioning to formal **joint venture partnerships** with shared risks and rewards
- Set to scale globally across aerospace, defence and other high-value markets
- Expansion underway with signed agreements in the US, Europe, Middle East and Australia

## Unparalleled expertise

- New board of directors and management team with strong industry, government and capital markets experience
- Deep scientific pedigree including Technical Advisory Committee with world-renowned scientists

# Proven process & industry leading technology platform

- Pioneering patented technology co-developed with the CSIRO, Australia's national science agency
- Strong cost advantage within Titanium alloys with patent protection
- **Overcomes challenges** like long lead times, limited scalability and excess waste seen in traditional manufacturing

# Compelling business model with attractive financial business profile

- Partnership manufacturing model with clients to deliver attractive unit economics with added benefit of sale of consumables and services
- Unique powder supply to reduce risk as well as cost of titanium parts while **boosting performance**
- Operating leverage will drive profitability

<sup>1</sup> AMPower Report 2021 <sup>2</sup> CSIRO study of Cold Spray vs Electroplating



## TITOMIC

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