



Corporate Presentation

Ord Minnett East Coast Mining Conference

March 2023



NASDAQ & ASX: IPX
ABN 84 618 935 372

Disclaimers

Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

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Competent Persons Statements

The information in this document that relates to Exploration Results, Mineral Resources, Production Targets, Process Design, Mine Design, Cost Estimates, and Financial Analysis is extracted from IperionX’s ASX Announcement dated June 30, 2022 (“Original ASX Announcement”) which is available to view at IperionX’s website at www.iperionX.com.

The Company confirms that a) it is not aware of any new information or data that materially affects the information included in the Original ASX Announcement; b) all material assumptions and technical parameters underpinning the Production Target, and related forecast financial information derived from the Production Target included in the Original ASX Announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons’ findings are presented in this report have not been materially changed from the Original ASX Announcement.

Our vision:
**Sustainably re-shore titanium
metal production in the U.S. - and
disrupt the stainless steel and
aluminum markets**



Stronger than steel & aluminum



Lighter weight than steel



Superior corrosion resistance

How?

Build metal production in the short term & integrate with minerals production in the medium term

1

Scale metal production capacity via our revolutionary patented titanium metal technology using titanium scrap as a raw material

- Enables 100% recycled content in titanium products – fully circular, a world first
- Zero scope 1 & 2 greenhouse gas emissions
- Significantly lowers the cost of titanium

2

Backward integrate our titanium metal production with titanium minerals from our Titan Project in the medium term

- 11,000 acres of land in Tennessee
- Largest titanium mineral resource in U.S. (JORC & SK-1300 compliant)
- Highly valuable co-products of Rare Earth minerals and Zircon

Why focus on titanium?

Strategic need for a non-China & Russia supply chain

Current titanium defense applications

U.S. Airforce



F-35 Lightning

U.S. Army



M777 Howitzer

U.S. Navy



SSN774 Virginia Class



V-22 Osprey

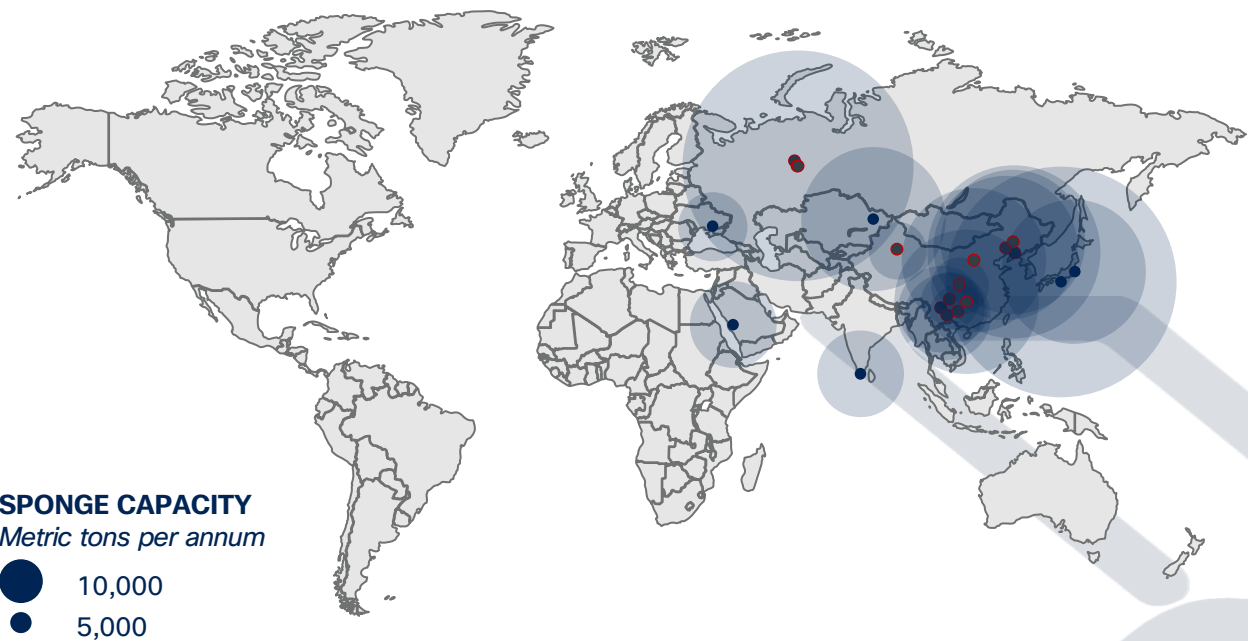


M1 Abrams



LPD17 San Antonio Class

Global titanium sponge capacity ~72% China & Russia

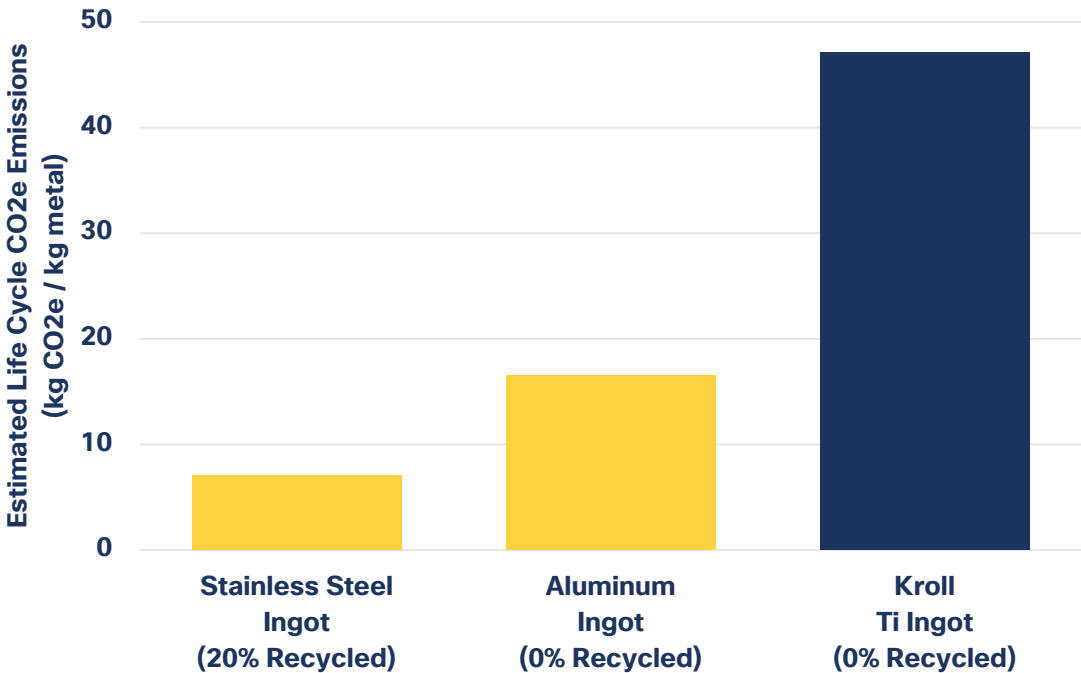


The U.S. closed its last “Kroll” sponge plant in 2020, owned by TIMET in Nevada, and is now almost 100% reliant on imports

Why focus on titanium?

Opportunity to develop a low-cost, sustainable titanium supply chain

Carbon emission estimates of stainless steel, aluminum, and titanium ingot (via Kroll)



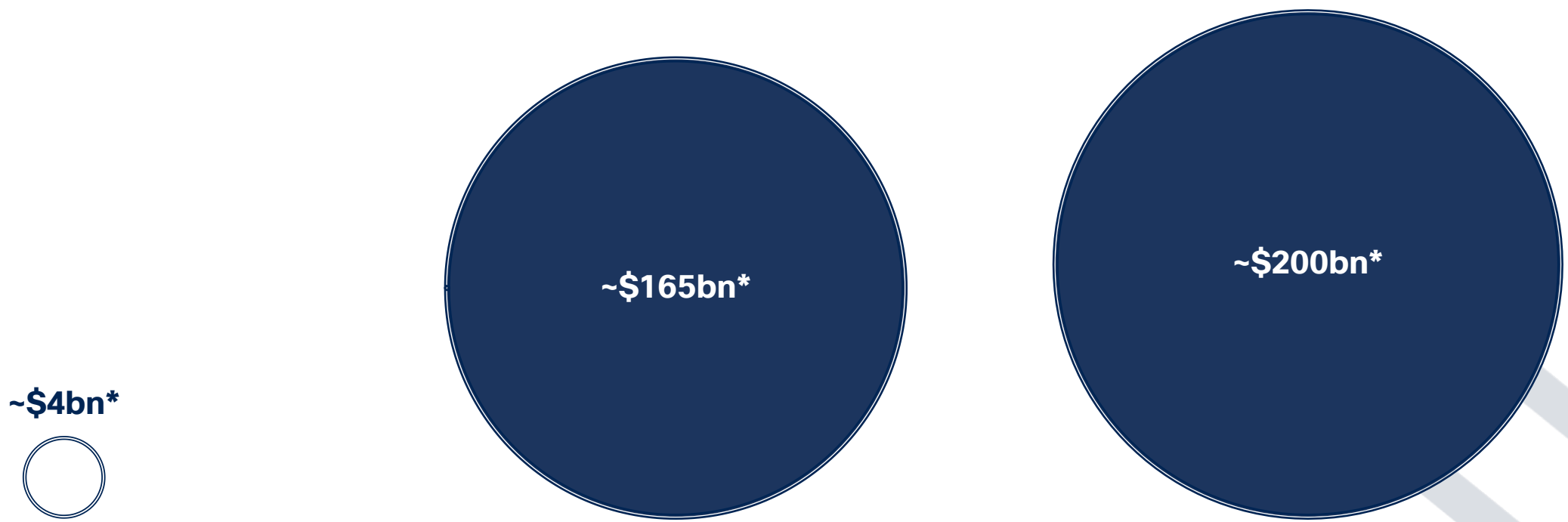
Source for Stainless Steel Ingot figures: [International Stainless Steel Forum](#)
Source for Aluminum Ingot figures: [International Journal of Life Cycle Assessment](#)
Source for Titanium Ingot figures: [Ecoinvent Database 3.8](#)

Current supply chain is non-circular and high waste



Why focus on titanium?

Superior metal with massive potential market opportunity



Titanium Market¹

Aluminum Market²

Stainless Steel Market³

Titanium 6Al-4V Ingot – U.S. FOB
Q1-2023 Spot Price ~\$27,000/t

6000-Series Aluminum – 48” Coils, U.S. EXW
Q1-2023 Spot Price ~\$2,400/t

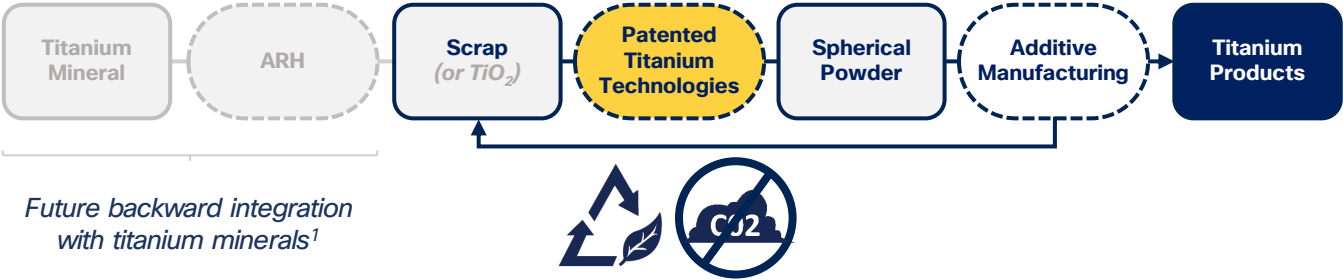
316 Stainless Steel, HRC, Int. Avg. EXW
Q1-2023 Spot Price ~\$5,700/t

* Estimated Global Market Summary in USD. TAM market sizes are built up using 2022 material pricing, which differs from spot prices shown.
1. Sources: Roskill, Argus Metals. 2019 titanium melt products production of ~283kt at Q4-2022 Rotterdam Ti64 pricing of ~\$16/kg. Note: Titanium market size uses 2019 volumes as base year, due to the Ukraine-Russia conflict.
2. Sources: Jefferies Equity Research, LME. Harbor Aluminum. 2021 global aluminum demand of ~67Mt at Q4-2022 pricing of ~\$2.4/kg.
3. Sources: International Stainless Steel Forum, MEPS, 2021 global stainless steel melt shop production of ~56Mt at Q4-2022 304 Coil pricing of ~\$3.6/kg.

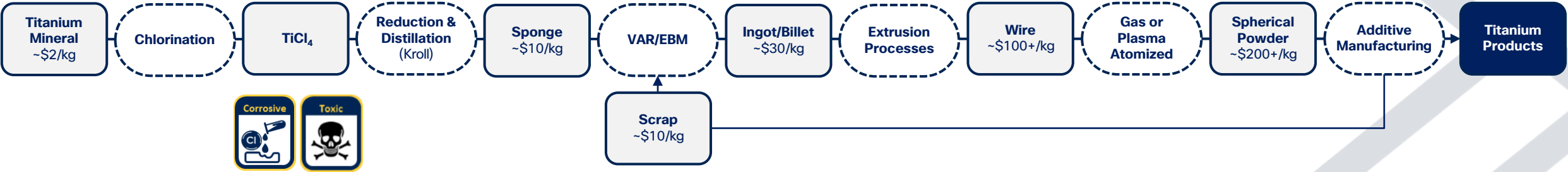
What is our solution?

Our revolutionary patented technology aims to re-shore a sustainable and low-cost titanium metal supply chain

IperionX sustainable, 100% recycled spherical powder-to-part supply chain
(Zero scope 1 & 2 carbon emissions, low cost and environmentally superior process that uses lower cost titanium scrap)



Current industrial spherical powder-to-part supply chain
(High carbon emissions & energy consumption, toxic with limited recycled content and high-cost scrap)



1. See ASX Announcement dated August 26 2022 for details. To produce titanium powders from titanium mineral ore from TN, a two-step reduction then deoxygenation process is needed, which is achievable using IperionX's proprietary Alkaline Roasting and Hydrolysis (ARH) process.

What are we doing today?

Producing recycled titanium powders at our Industrial Pilot Facility



Revolutionary technology from the University of Utah, funded by the U.S. Department of Energy ARPA-E program



100% scrap feedstock used in production, with zero scope 1 and 2 greenhouse gas emissions

What are we doing today?

Using our titanium powder production to secure major potential partners across industries

Existing collaborations¹

U.S. Defense	Additive Manufacturing	Luxury Goods
		

Target collaborations

Bikes & Micromobility	Green Hydrogen	Consumer Electronics	Industrial Applications	Automotive
				

RICHEMONT

SLM
SOLUTIONS


CARVER PUMP™



1. Richemont: See ASX announcements dated August 20, 2022 and November 17, 2022 for details; AFRL: See ASX announcement dated January 18, 2023 for details; Carver Pump and NAVSEA (US Navy): See ASX announcement dated February 6, 2023 for details; U.S. Navy's Naval Air Systems Command: See ASX announcement dated February 3, 2022 for details; SLM: See ASX announcement dated March 14, 2023 for details

Where are we going in 2023?

Building our Titanium Demonstration Facility in Halifax County, Virginia



100% recycled content & low emissions

125tpa

Phase 1 targeted production rate

~US\$20 million

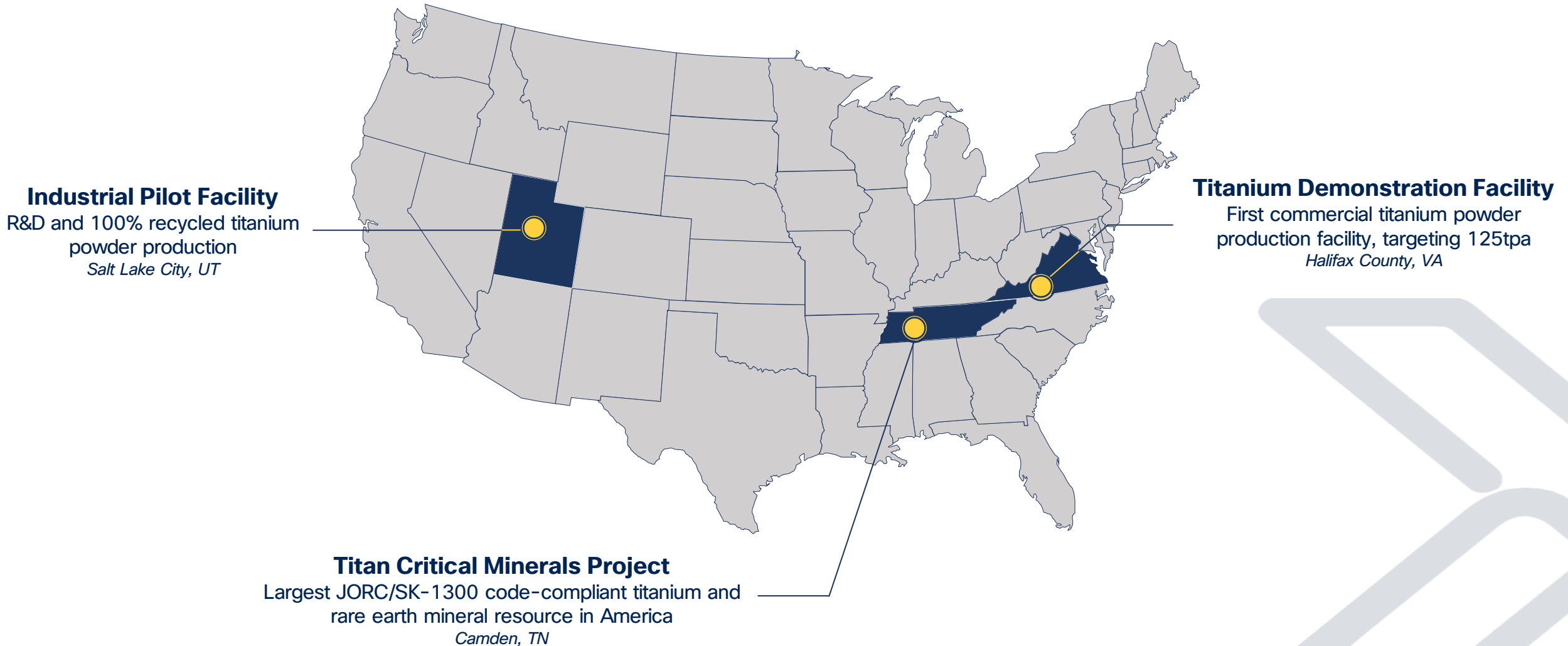
Projected initial capital cost¹



1. See ASX announcement dated September 28, 2022 for details

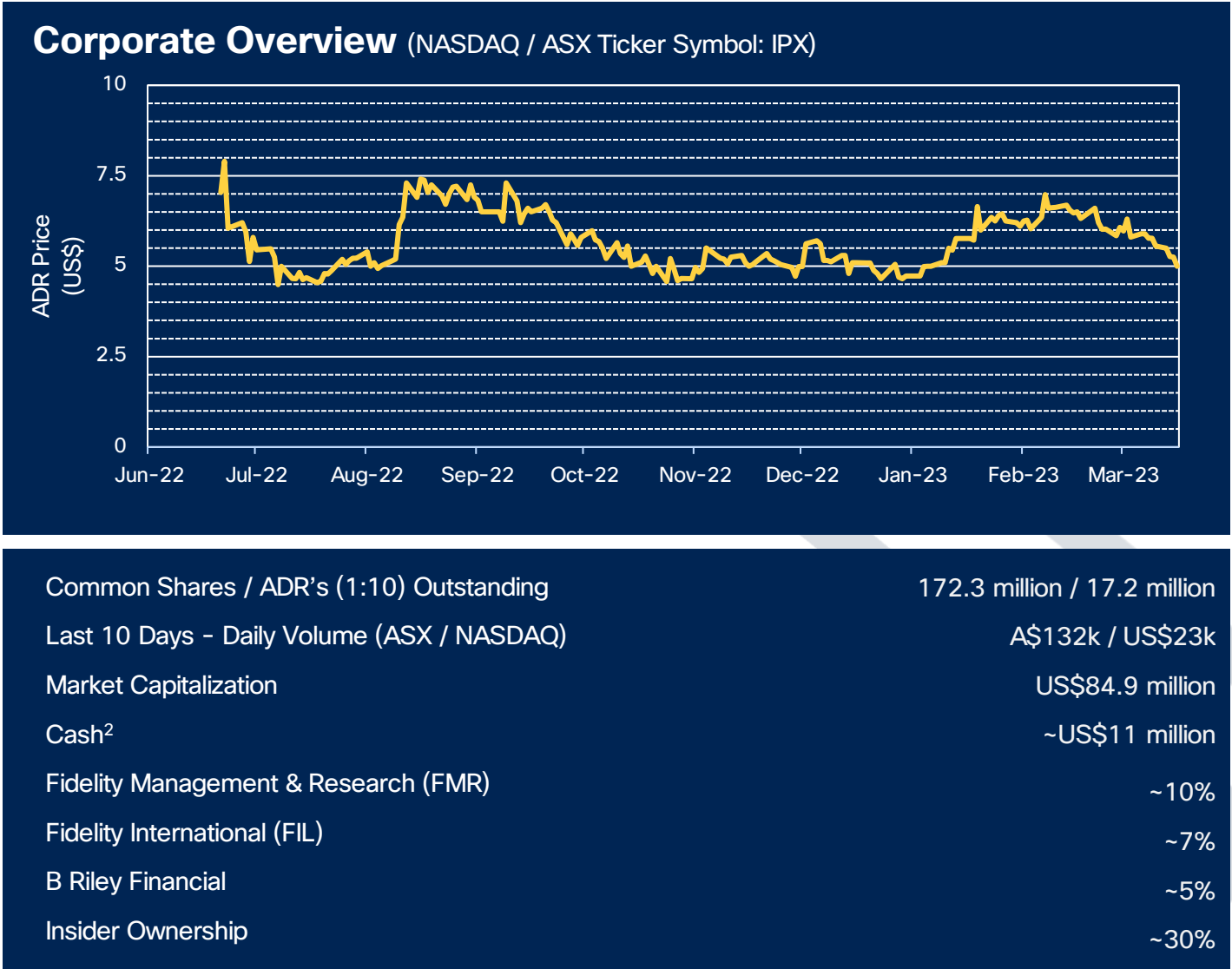
Where are we going in the future?

Building a sustainable, integrated and low-cost U.S. titanium supply chain



Major value-adding, near-term, catalysts

- ☒
Secure strategic partners for our titanium metal operations
 - ☒ Test powders and/or prototype parts with prospective customers
 - ☒ Secured customer & government validation
 - ☒ Secure additional customers across auto, consumer electronics and other
- ☒
Scale-up of titanium metal powder production
 - ☒ Scale up of titanium pilot plant production
 - ☒ Secured Virginia site for TDF
 - ☒ Complete detailed engineering design of TDF
 - ☒ Large scale furnace hot test & powder production run
 - ☒ TDF+ (expansion to 1,000+tpa) and modular capex & opex
 - ☒ Commence equipment installation at TDF
- ☒
Progress Titan Project to be construction ready
 - ☒ Definition of largest titanium mineral resource in U.S.¹
 - ☒ Scoping study defining highly economic, low-cost operation
 - ☒ Feasibility Study level metallurgical report completion
 - ☒ State Mine & NPDES permit
 - ☒ Pre-Feasibility & Feasibility Studies



1. JORC and SK-1300 code compliant
 2. As at 31 December 2022

Supporting Information



Senior leadership team



Anastasios "Taso" Arima

Co-founder, Director & CEO

Successful entrepreneur, founder of multiple \$1billion+ companies, including most recently Piedmont Lithium (Nasdaq: PLL)



Todd Hannigan

Executive Chairman

25+ years of global experience in natural resources as company founder, CEO, private capital investor, and non-executive director



Toby Symonds
President

30+ years in capital markets, founder of two asset management firms



Scott Sparks
Chief Operating Officer

30+ years in engineering, construction and management



Jeanne McMullin
Chief Legal Officer

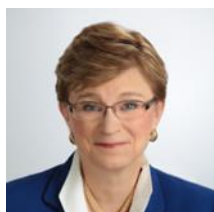
25+ years in corporate law experience, previously CLO of start-up tech PE firm



Dominic Allen
Chief Commercial Officer

15+ years commercial experience across the metals and minerals sector

Board Members



Lorraine Martin
Audit Committee Member
ESG Committee Member

35+ yrs senior aerospace exec. with Lockheed Martin, CEO National Safety Council Board Member; Kennametal



Beverly Wyse
Rem. Committee Member
ESG Committee Member

30+ yrs senior aerospace exec. with Boeing, Board Member; Heroux-Devtek



Melissa Waller
ESG Committee Chair
Rem. Committee Member

30+ yrs senior finance exec. President of the AIF Institute



Vaughn Taylor
Audit Committee Chair
Rem. Committee Chair

20+ yrs senior investment executive, Ex CIO of AMB Capital Partners, Board member global organizations

We are well-positioned to benefit from government funding and incentives to re-shore U.S. critical material supply chains



Department of Defense

Defense Production Act Title III funding for Strategic and Critical Minerals

Industrial Base Analysis and Sustainment (IBAS) Program

Air Force Research Laboratory funding

Small Business Innovation Research Program

Defense Logistics Agency National Defense Stockpile qualification funding



Department of Energy

Advanced Materials and Manufacturing Technologies Office funding

Advanced Technology Vehicles and Manufacturing Loan Program

Industrial Demonstrations Program

Critical Materials Research, Development, Demonstration, and Commercialization Application Program



U.S. Congress

Inflation Reduction Act

CHIPS and Science Act

Ukraine Supplemental Appropriations Act

Bipartisan Infrastructure Act

Consolidated Appropriations Act, 2022



White House

AM Forward Program

America Makes

Advanced Manufacturing Production Tax Credit for titanium production

Qualifying Advanced Energy Project Credit

We are an industrial technology company which can disrupt the metals sector, with our sights on stainless steel & aluminum

Metal & Global Market Size ¹		Consumer Metal Products	Automotive & Transportation	Construction Materials	Machinery, Equipment, & Electronics	Other
 ~\$200bn	Stainless Steel Market					
	2021 global stainless steel melt shop production: 56Mtpa	~\$76bn 21.1Mtpa	~\$27bn 7.7Mtpa	~\$25bn 6.9Mtpa	~\$16bn 4.4Mtpa	~\$58bn 16.2Mtpa
 ~\$165bn	Aluminum Market					
	2021 global aluminum demand: 67Mtpa	~\$38bn 15.4Mtpa	~\$41bn 15.4Mtpa	~\$41bn 16.8Mtpa	~\$38bn 15.4Mtpa	~\$10bn 4Mtpa

* Estimated Global Market Summary in USD. TAM market sizes are built up using 2022 material pricing, which differs from spot prices shown. Numbers may not sum due to rounding.

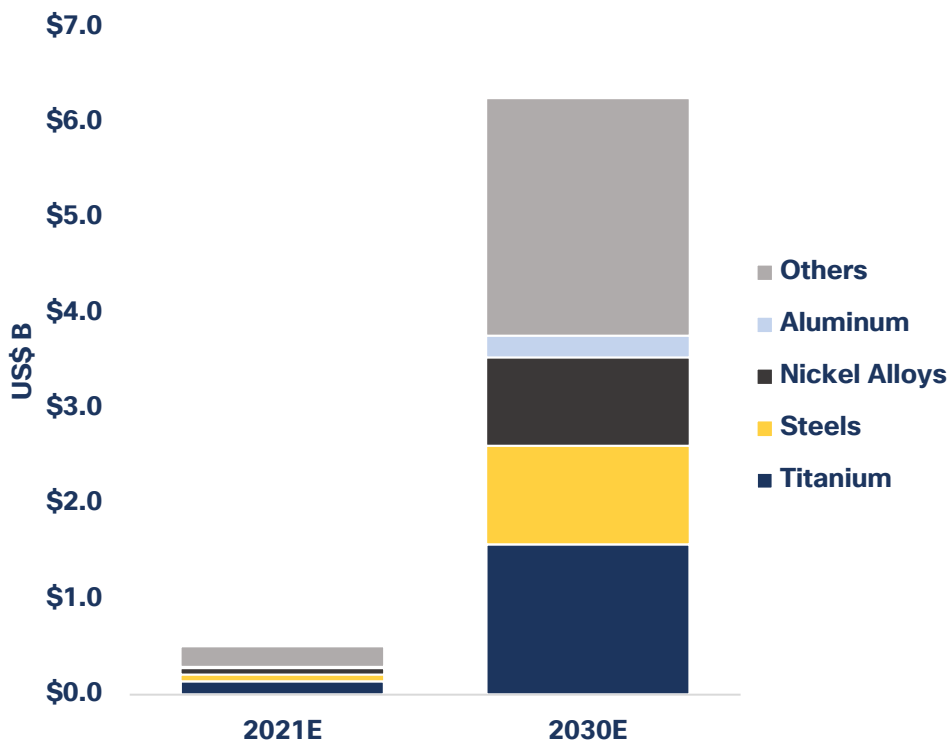
1. Sources: Roskill, Argus Metals. 2019 titanium melt products production of ~283kt at Q4-2022 Rotterdam Ti64 pricing of ~\$16/kg. Note: Titanium market size uses 2019 volumes as base year, due to the sustained impact on aerospace demand (as the primary driver of the titanium metal market) since COVID-19 and the Ukraine-Russia conflict.

2. Sources: Jefferies Equity Research, LME. Harbor Aluminum. 2021 global aluminum demand of ~67Mt at Q4-2022 pricing of ~\$2.4/kg.

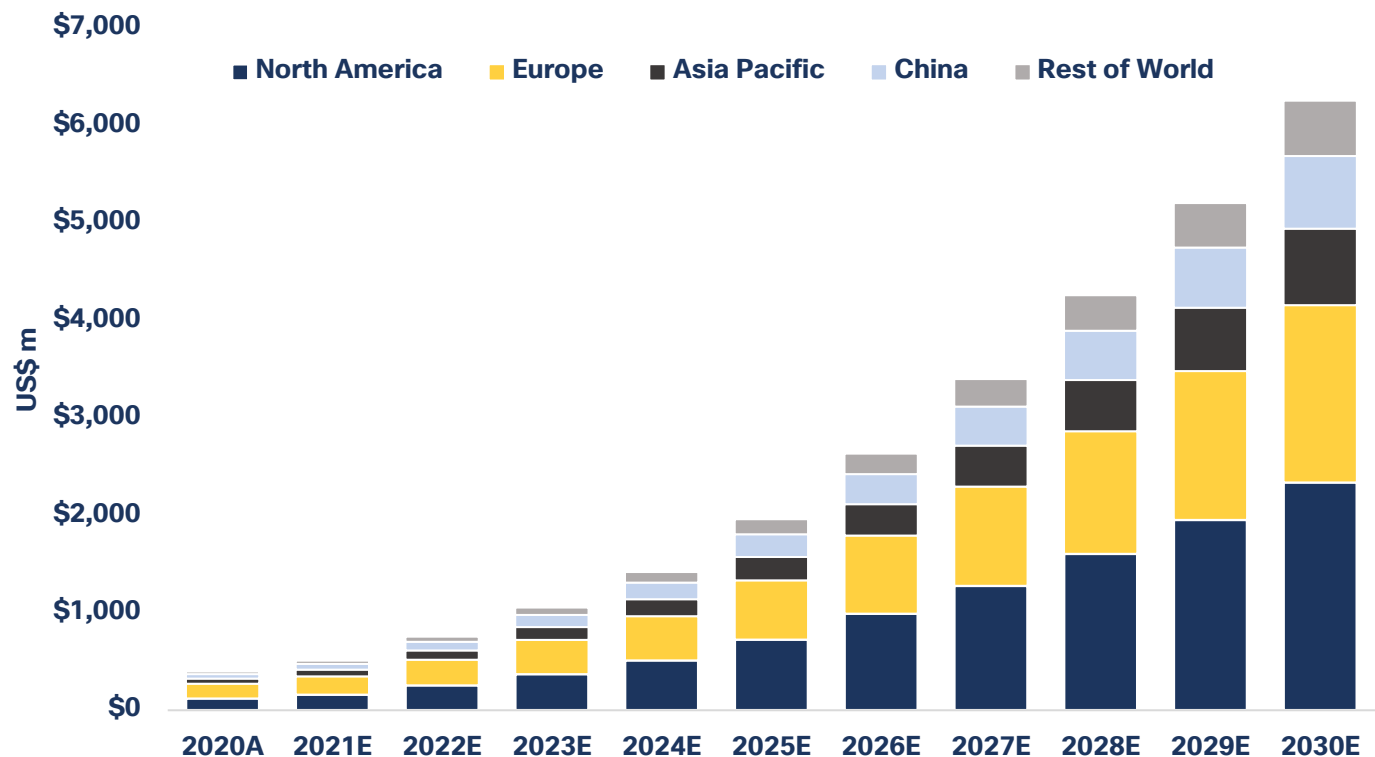
3. Sources: International Stainless Steel Forum, MEPS, 2021 global stainless steel melt shop production of ~56Mt at Q4-2022 304 Coil pricing of ~\$3.6/kg.

We are leveraged to the growth of the Additive Manufacturing industry - we are the potential “Ink” for 3D printers

Global Market for Metal AM Powder - by Metal

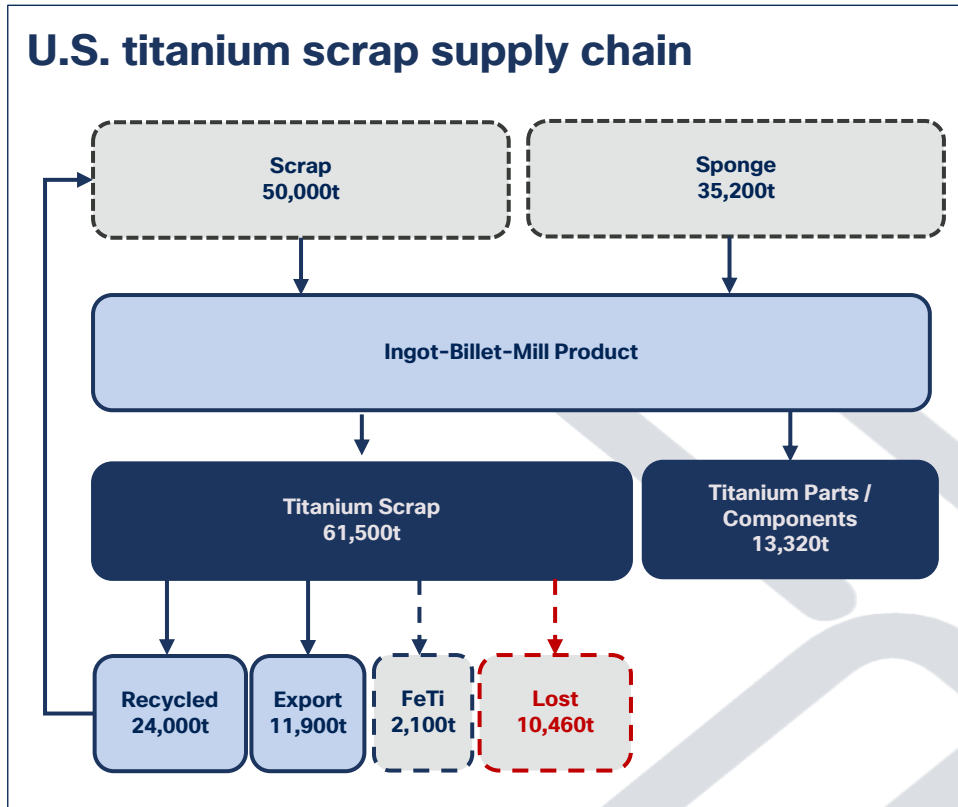
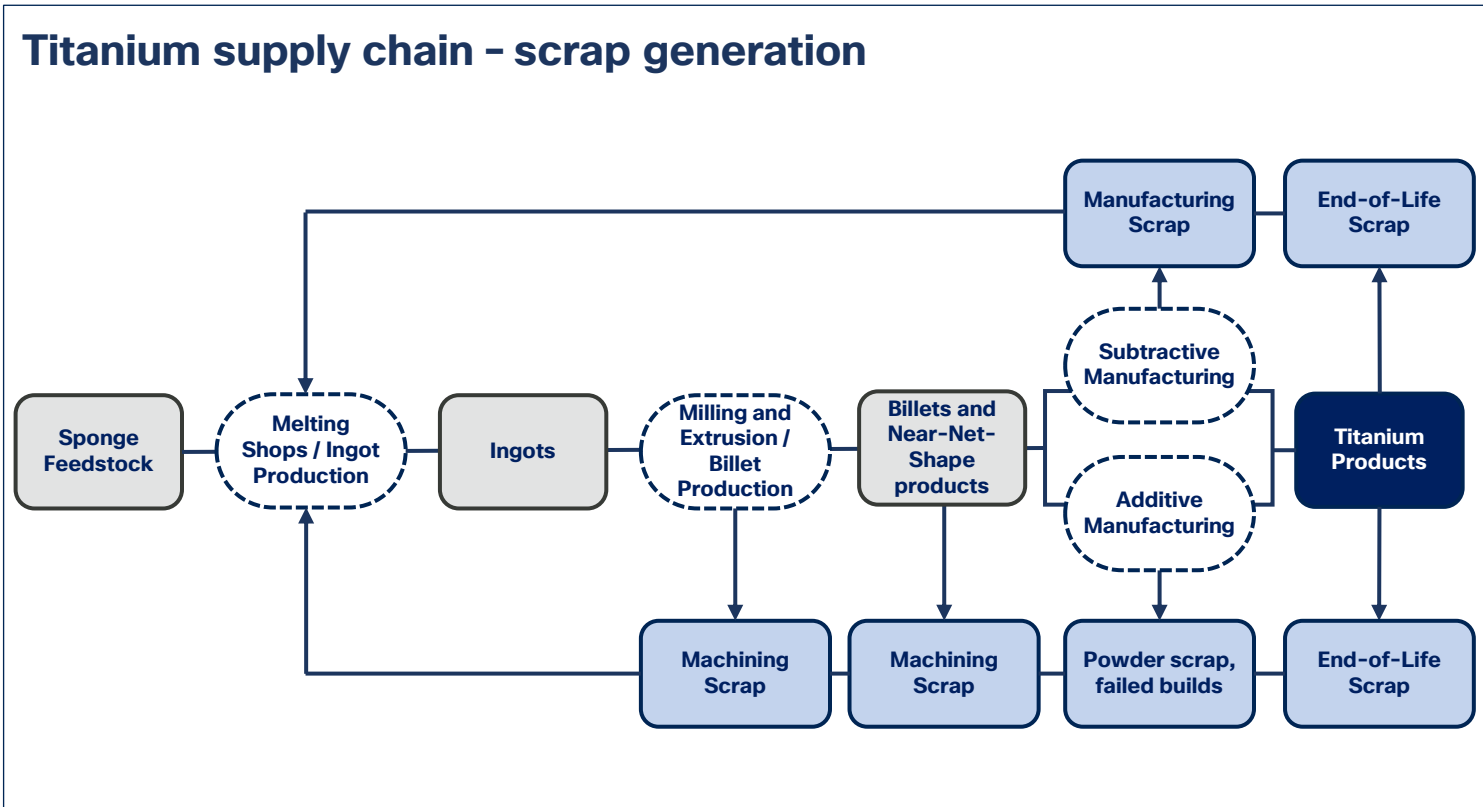


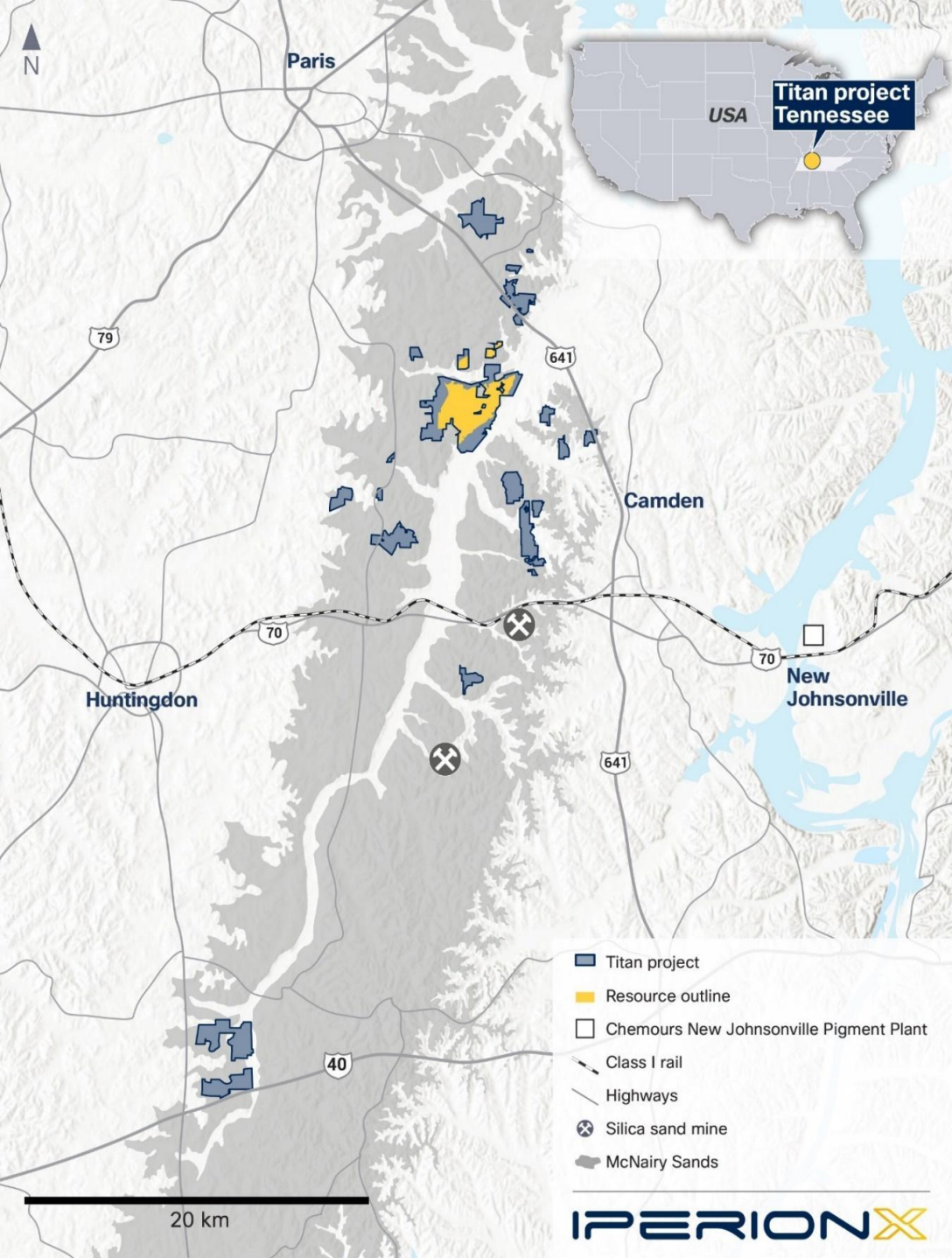
Global Market for Metal AM Powder - by Jurisdiction



Scrap generation in the U.S. titanium supply chain

- A significant amount of scrap is lost, or un-usable, in the current U.S. supply chain
- IperionX's technology provides a potential pathway to sustainably recycle this scrap to produce valuable titanium metal





Based on the results of our Scoping Study, the Titan Project is a potential multi-decade source of U.S. titanium, with significant rare earth co-product

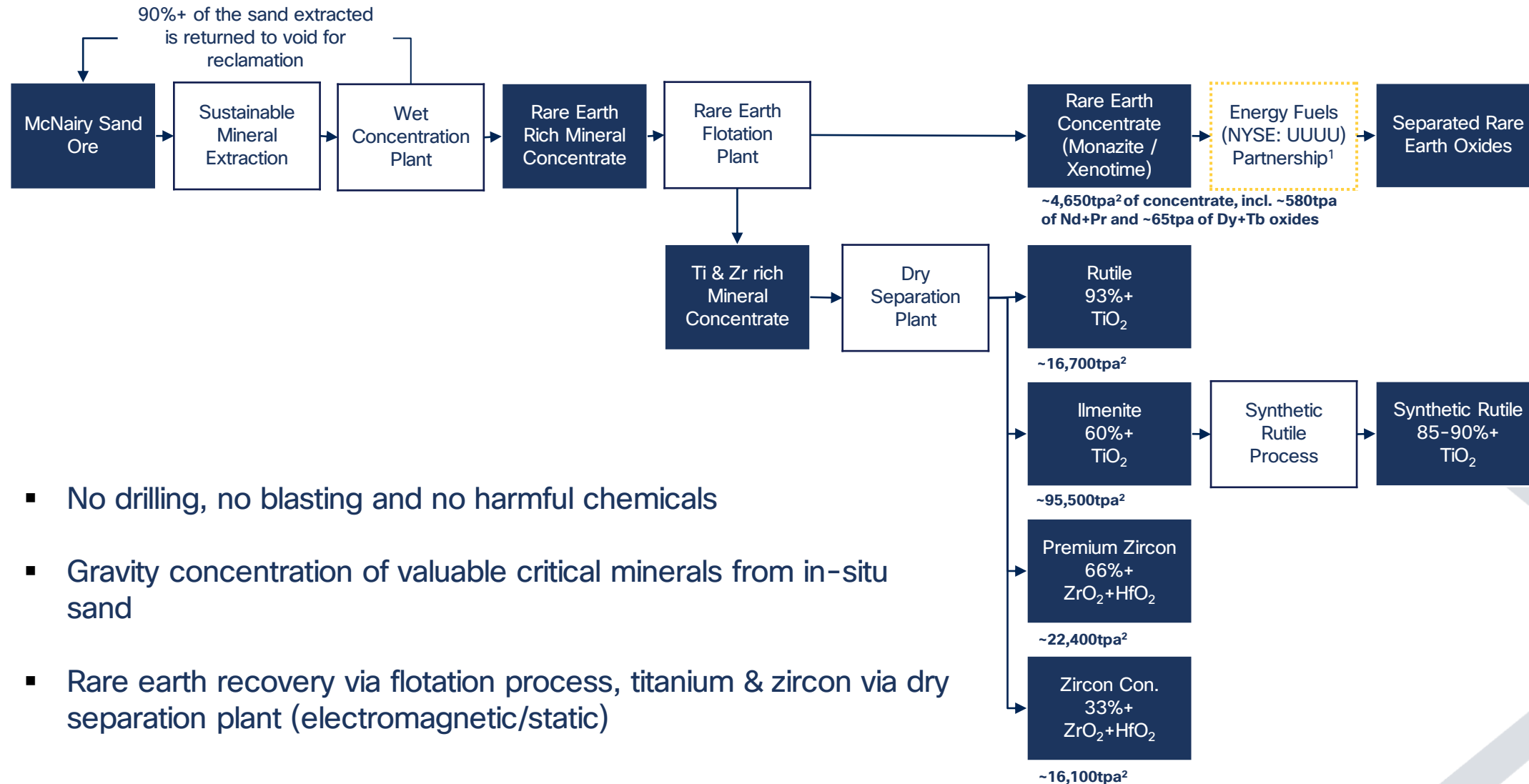
- Geological formation targeted is the McNairy Sand, a massive formation extending North-South through West Tennessee
- Projected 25-year initial operational life covers only a small portion of existing landholdings
- Potential for additional resource discovery and conversion within land controlled by IperionX
- Significant potential for additional land leasing or acquisition could add to further resource conversion
- 2022 Scoping Study showed potential operation generating US\$117 million of average annual EBITDA, with a US\$692 million NPV and 40% IRR¹

JORC Compliant Resource ²					THM assemblage				
Titan Project	Cut off	Tons	THM %	THM	Zircon	Rutile	Ilmenite	REE	Staurolite
	(THM %)	(Mt)	(%)	(Mt)	(%)	(%)	(%)	(%)	(%)
Indicated	0.4	241	2.2	5.3	11.3	9.3	39.7	2.1	15.6
Inferred	0.4	190	2.2	4.2	11.7	9.7	41.2	2.2	13.7
Total Mineral Resource	0.4	431	2.2	9.5	11.5	9.5	40.3	2.1	14.8
Including High Grade Core	2.0	195	3.7	7.1	12.1	9.9	42	2.3	10.7

1. Based on June 2022 Scoping Study. June 2022 Scoping Study projections are based on Q1-2022 price projections and cost estimates in U.S. Dollars. Evaluation was carried out on a 100% equity basis using an 8% discount rate. For further information, see Scoping Study press release dated June 30, 2022.

2. See ASX announcement dated October 6 2021 for details

Simple, conventional extraction and processing to produce multiple high-value product streams including rare earths



- No drilling, no blasting and no harmful chemicals
- Gravity concentration of valuable critical minerals from in-situ sand
- Rare earth recovery via flotation process, titanium & zircon via dry separation plant (electromagnetic/static)

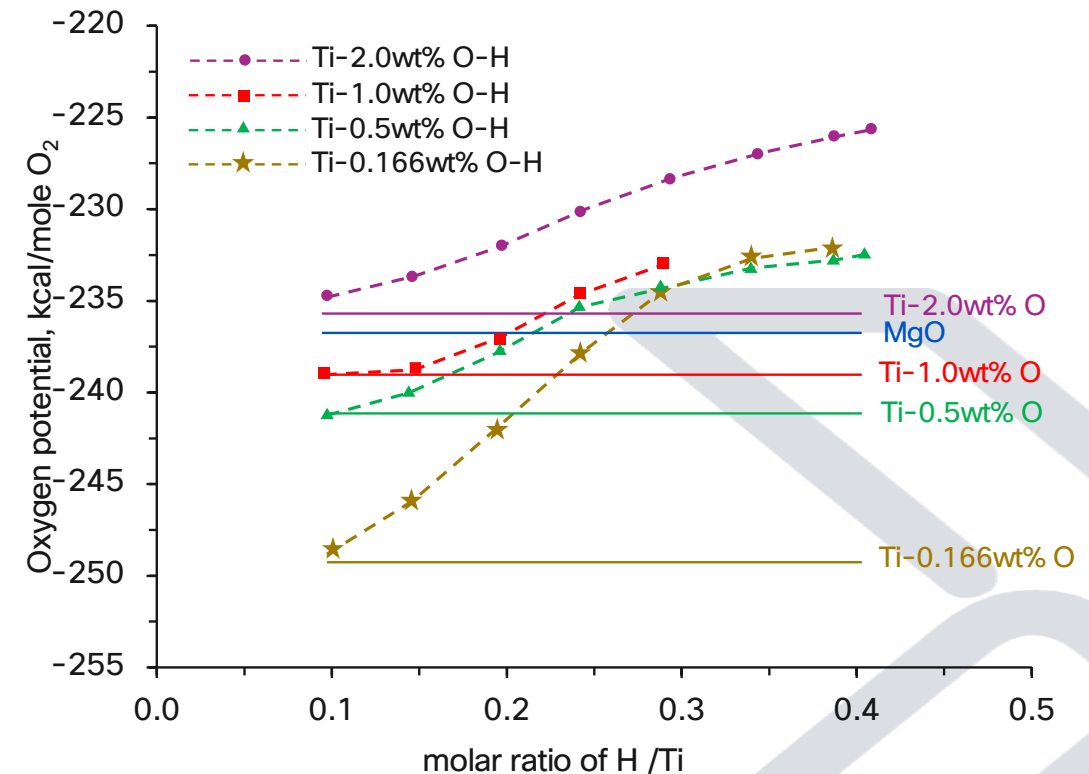
1. See ASX announcements dated April 22nd, 2021, and update announcement dated March 8th, 2022 for details
2. LOM annual average production based on the results of 2022 Scoping Study. See ASX Announcement dated June 30, 2022 for detail..

HAMR – the breakthrough science behind the revolutionary process

- Most common metals can be reduced to metal from oxides by carbon (or hydrogen) – this is not the case for Titanium Dioxide (“TiO₂”) because of the stability of the Ti-O bonds
- In 1940, William Kroll invented a process to overcome this challenge and it relies on chlorination of TiO₂ in a carbothermal reaction to create TiCl₄, which is then reduced by molten magnesium in a vacuum and distilled to produce Titanium sponge (primary metal)
- This sponge is then vacuum melted multiple times to create a titanium ingot which can then be hot worked into mill products
- Dr Zak Fang discovered, in 2016, that TiO₂ can be reduced by solid magnesium under a hydrogen atmosphere because Hydrogen destabilizes the Ti-O bonds – Hydrogen Assisted Magnesiothermic Reduction (“HAMR”)
- This principle also applies to deoxygenation of recycled titanium scrap as the most difficult impurity to “clean” is the pickup of oxygen on the surfaces – especially prevalent with machining scrap
- **HAMR revolutionizes the ability to manufacture titanium metal from mineral or scrap that was previously not thought possible**

Hydrogen effect on the Ti-O bonds

Ti-O bonds at various weight percent (solid lines) vs. Ti-O-H bonds destabilized at various weight percent (dashed lines) @ 700 C°



* IperionX holds an exclusive option to acquire the HAMR technology and other associated technologies

1. Dr Fang's history: <https://powder.metallurgy.utah.edu/research/hamr.php>

2. Original HAMR discovery article "A novel chemical pathway for energy efficient production of Ti metal from upgraded titanium slag": <https://www.sciencedirect.com/science/article/abs/pii/S1385894715015016>

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Further information contact:
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