IPERIONX

Corporate Presentation

Investor Webinar – April 2023

Nasdaq ASX

NASDAQ & ASX: IPX

ABN 84 618 935 372

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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.

IPERIONX LIMITED
ABN 84 618 935 372

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 Lighting

V-22 Osprey

U.S. Army

M777 Howitzer

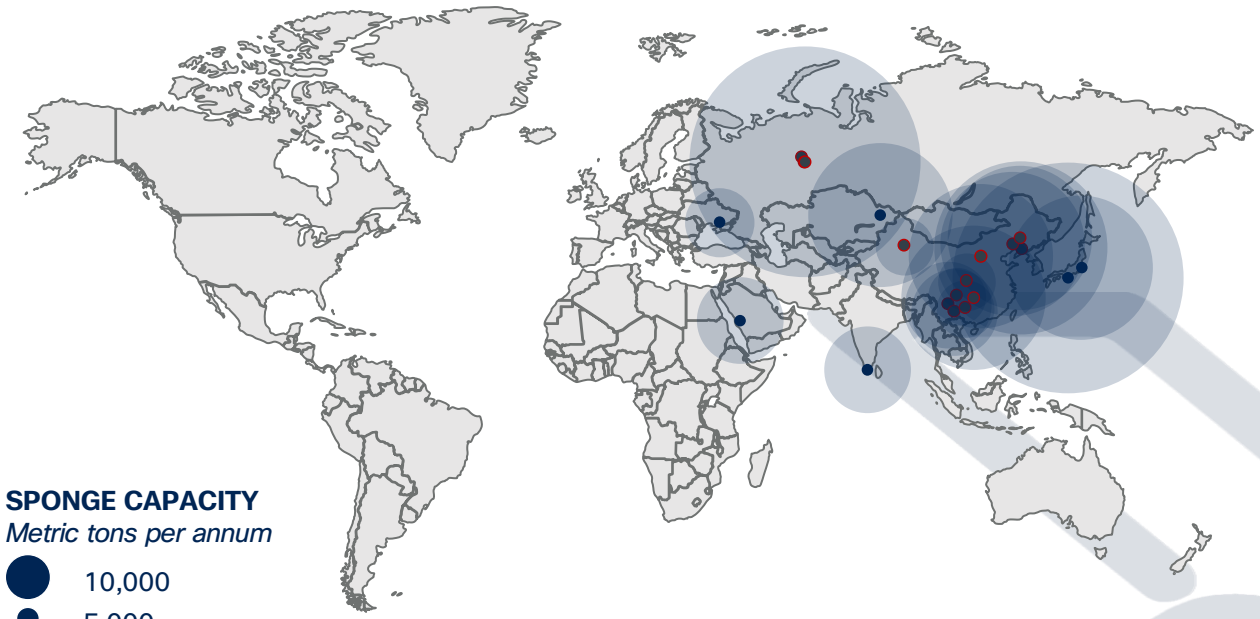
M1 Abrams

U.S. Navy

SSN774 Virginia Class

LPD17 San Antonio Class

Global titanium sponge capacity ~72% China & Russia



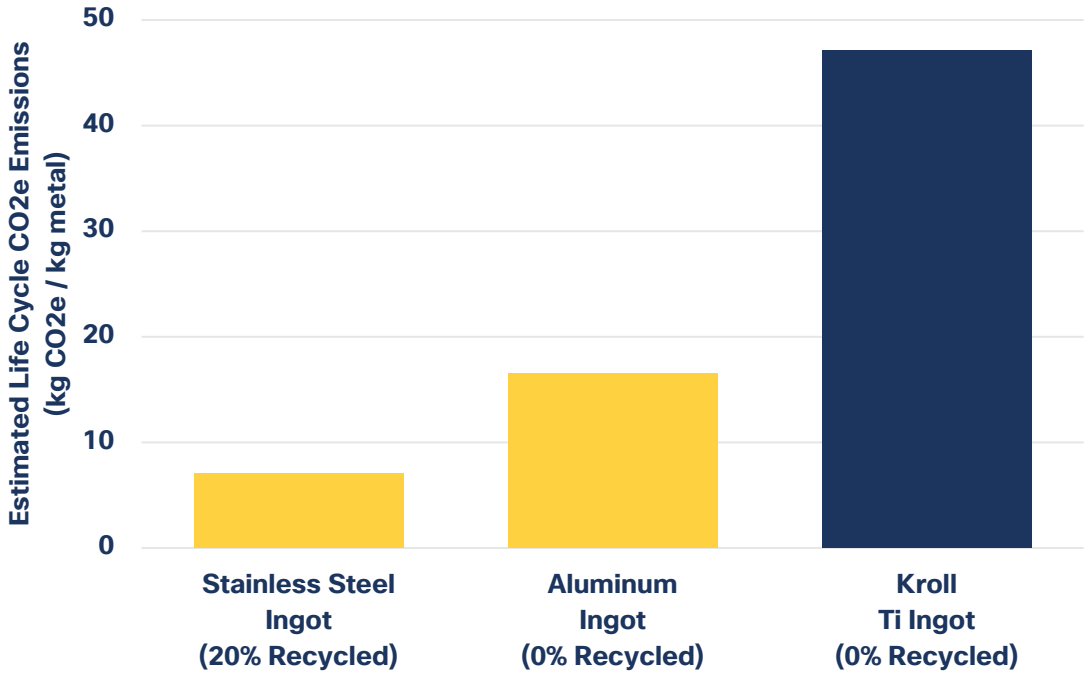
The U.S. closed its last “Kroll” sponge plant in 2020, owned by TIMET in Nevada, and is now almost 100% reliant on imports

Source: U.S. Geological Survey

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

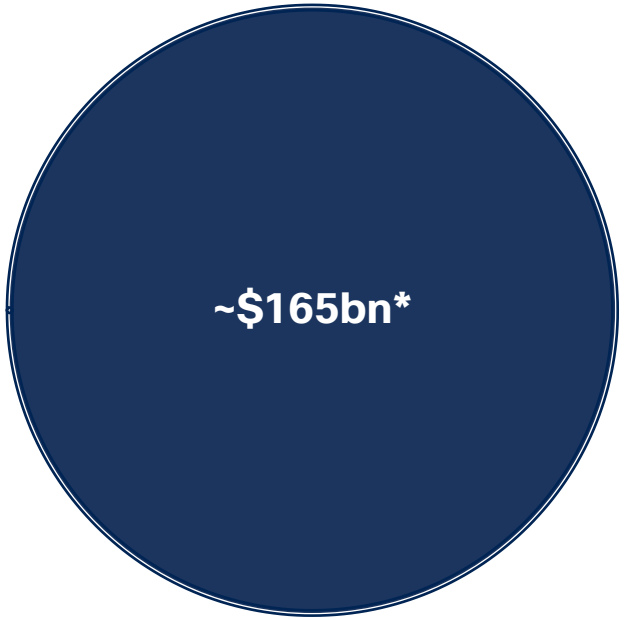
Current supply chain is non-circular and high waste

Why focus on titanium?

Superior metal with massive potential market opportunity

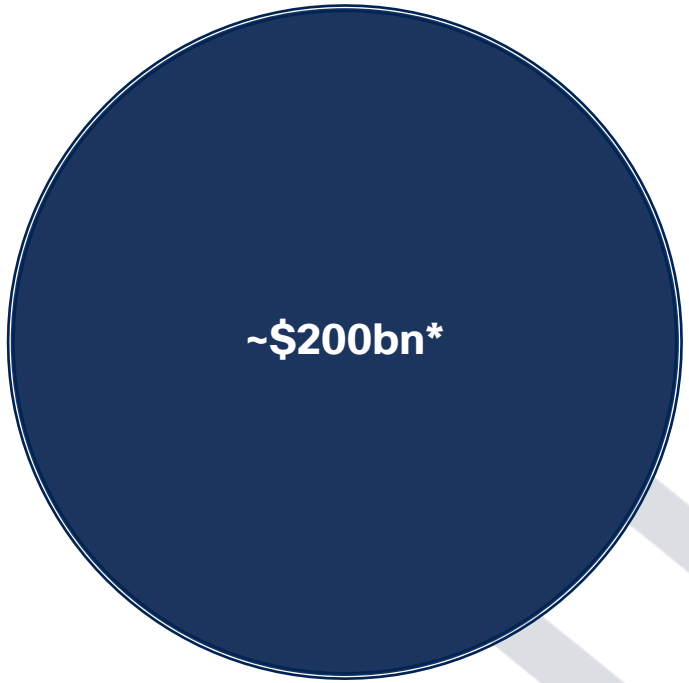
Titanium Market[1]

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



Aluminum Market[2]

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



Stainless Steel Market[3]

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

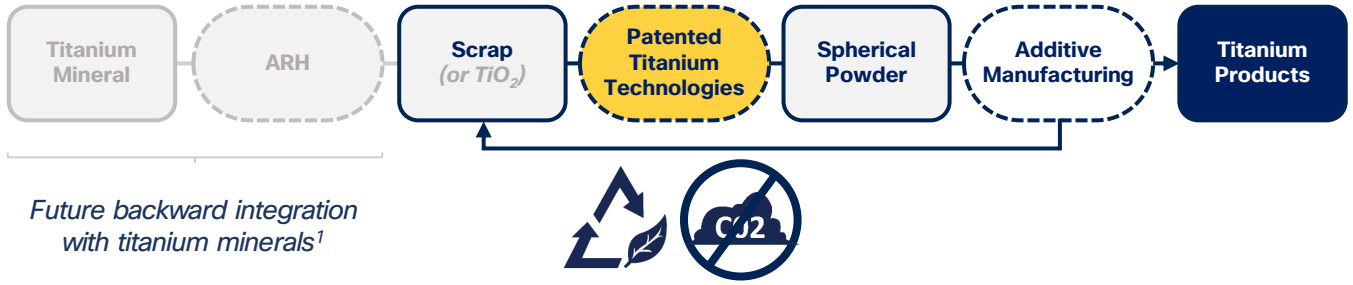
* Estimated Global Market Summary in USD. TAM market sizes are built up using 2022 material pricing, which differs from spot prices shown.
1. Sources: Roskill, Argus Metals. 2019 titanium melt products production of ~283kt at Q4-2022 Rotterdam Ti64 pricing of ~$16/kg. Note: Titanium market size uses 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

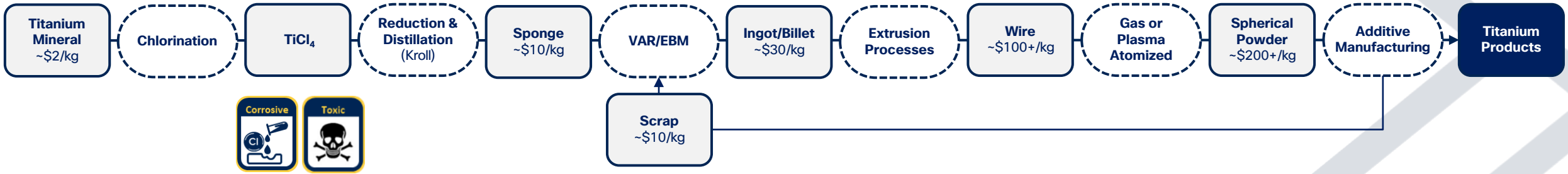
IperionX sustainable, 100% recycled spherical powder-to-part supply chain

(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

THE UNIVERSITY OF UTAH

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

CO2

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 collaborations[1]

U.S. Defense

Additive Manufacturing

Luxury Goods

Bikes & Micromobility

Target collaborations

Green Hydrogen

Consumer Electronics

Industrial Applications

Automotive

RICHEMONT CANYON 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; Canyon: See ASX announcement dated March 29, 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 cost[1]

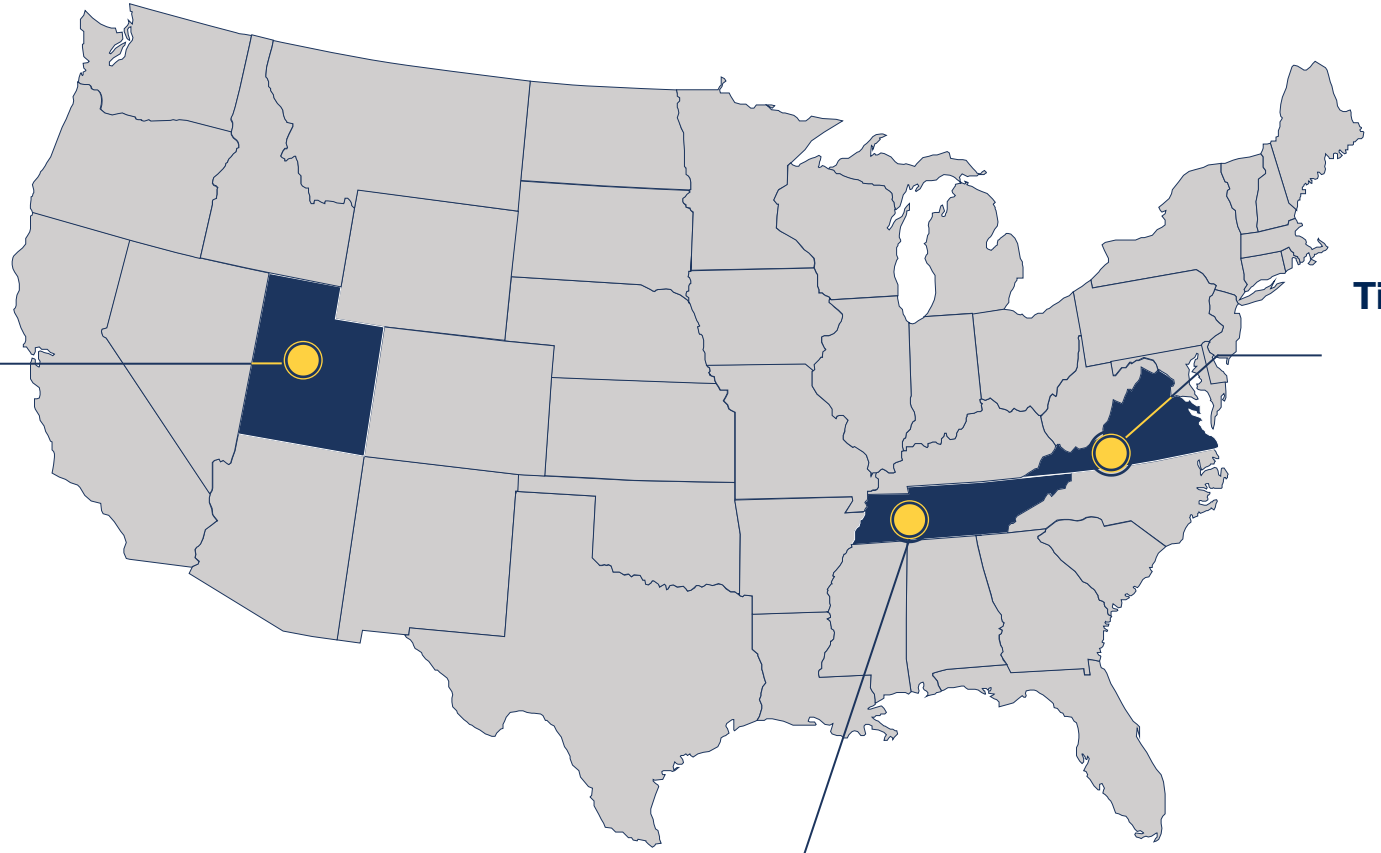
Recycling certification and LCA being completed

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

Industrial Pilot Facility
R&D and 100% recycled titanium powder production
Salt Lake City, UT



Titanium Demonstration Facility
First commercial titanium powder production facility, targeting 125tpa
Halifax County, VA

Titan Critical Minerals Project
Largest JORC/SK-1300 code-compliant titanium and rare earth mineral resource in America
Camden, TN

Locations shown are approximate.

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

Corporate Overview (NASDAQ / ASX Ticker Symbol: IPX)

Common Shares / ADR's (1:10) Outstanding	172.3 million / 17.2 million
Last 10 Days - Daily Volume (ASX / NASDAQ)	A$132k / US$23k
Market Capitalization	US$84.9 million
Cash[2]	~US$11 million
Fidelity Management & Research (FMR)	~10%
Fidelity International (FIL)	~7%
B Riley Financial	~5%
Insider Ownership	~30%

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

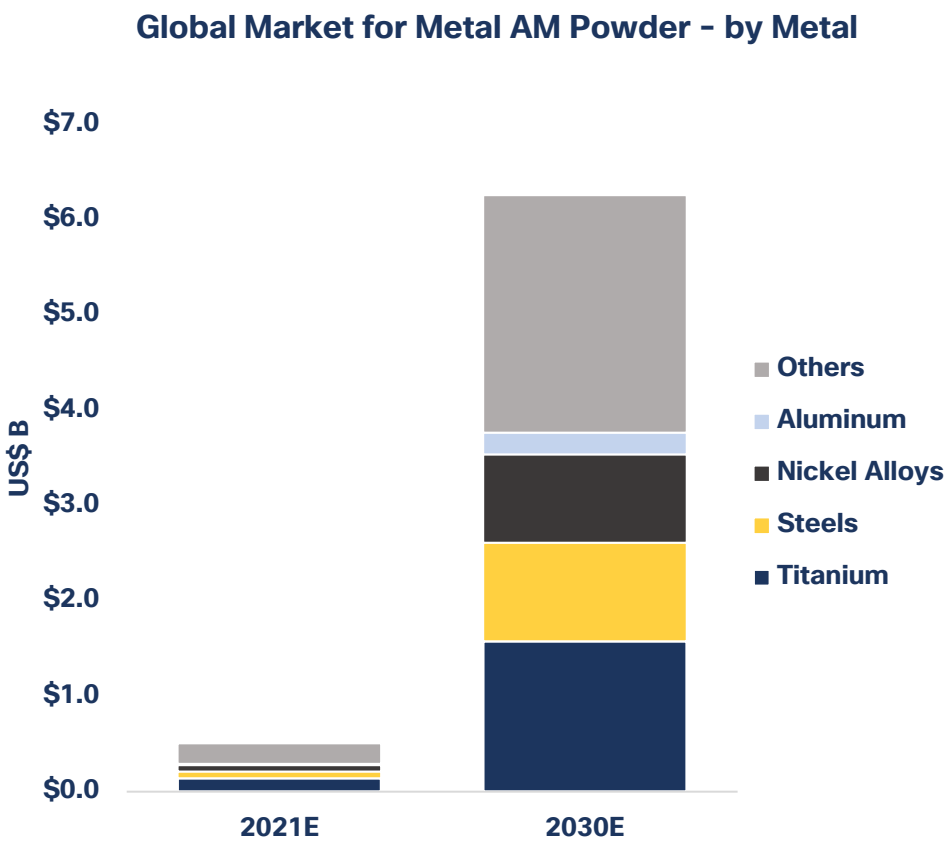
Vaughn Taylor
Audit Committee Chair
Rem. Committee Chair
20+yrs senior investment executive, Ex CIO of AMB Capital Partners, Board member global organizations

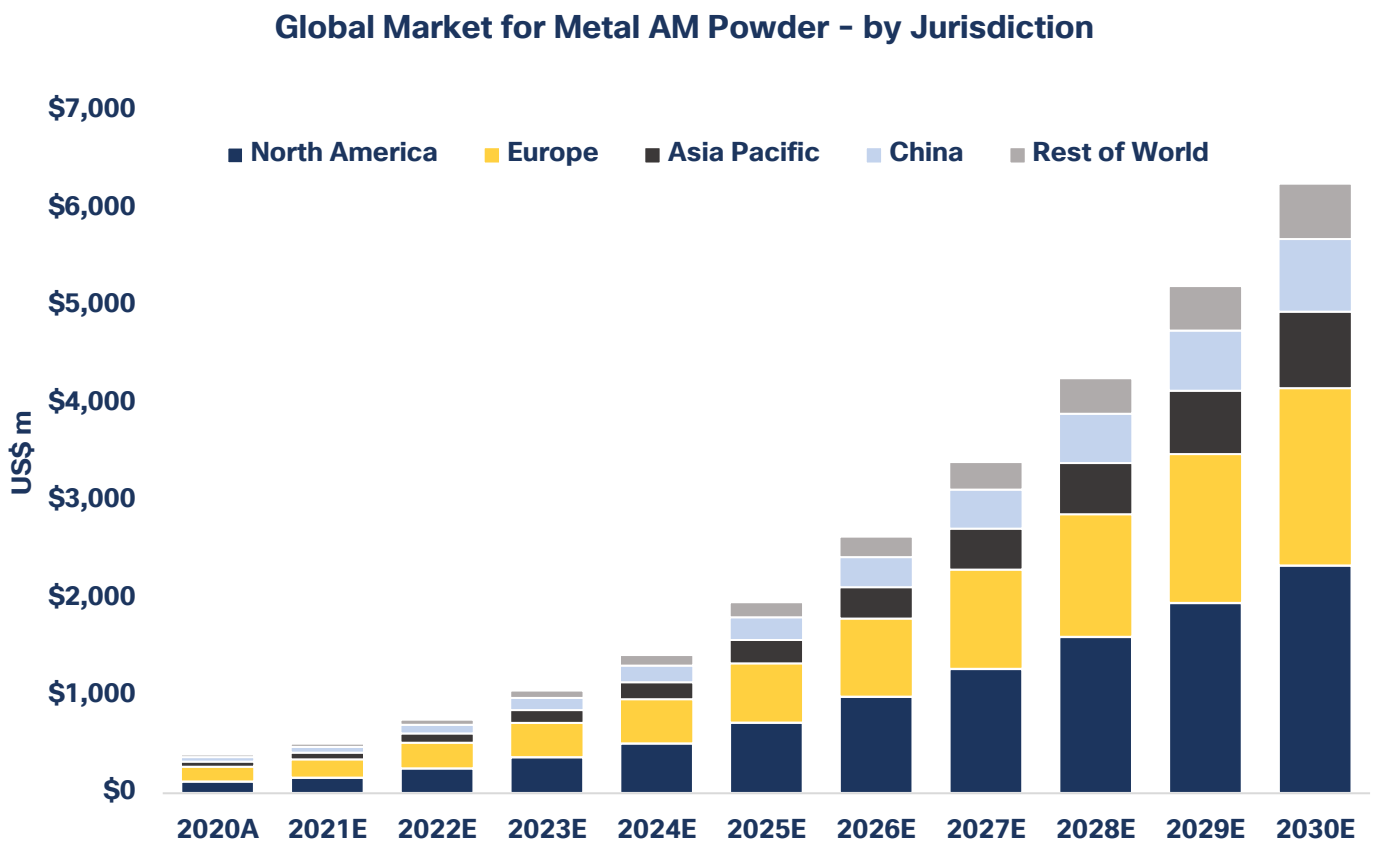
We are an industrial technology company which can disrupt the metals sector, with our sights on stainless steel & aluminum

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



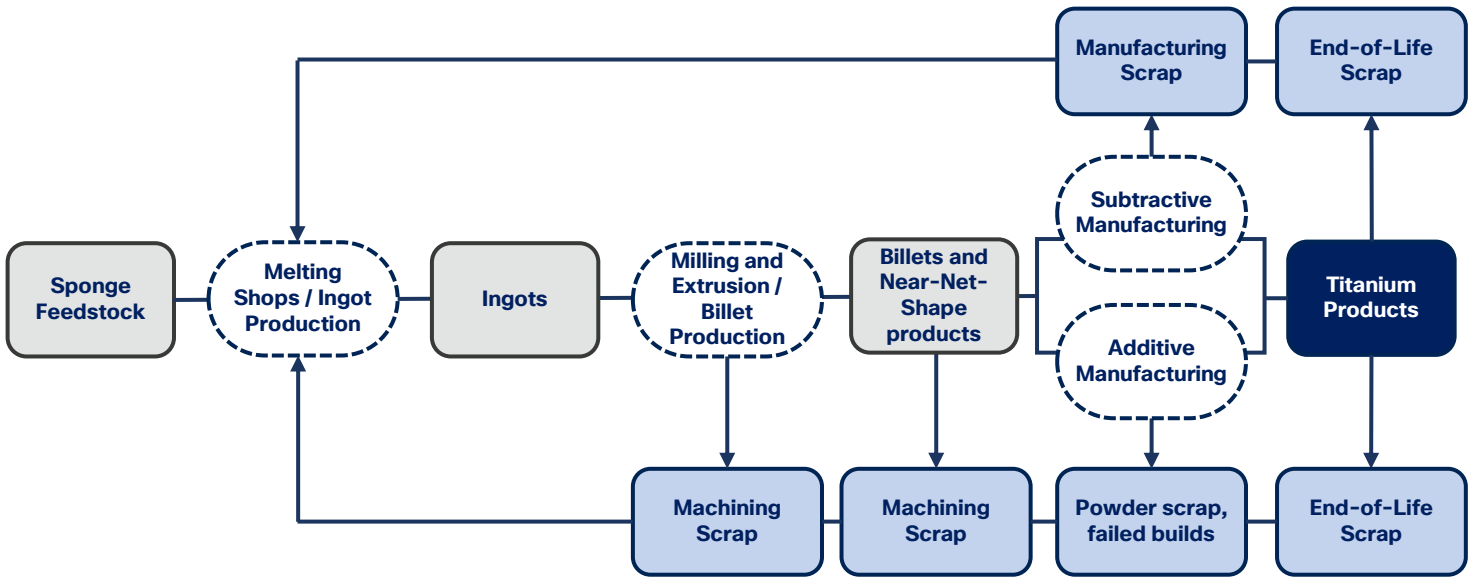


Source: SmarTech Analysis

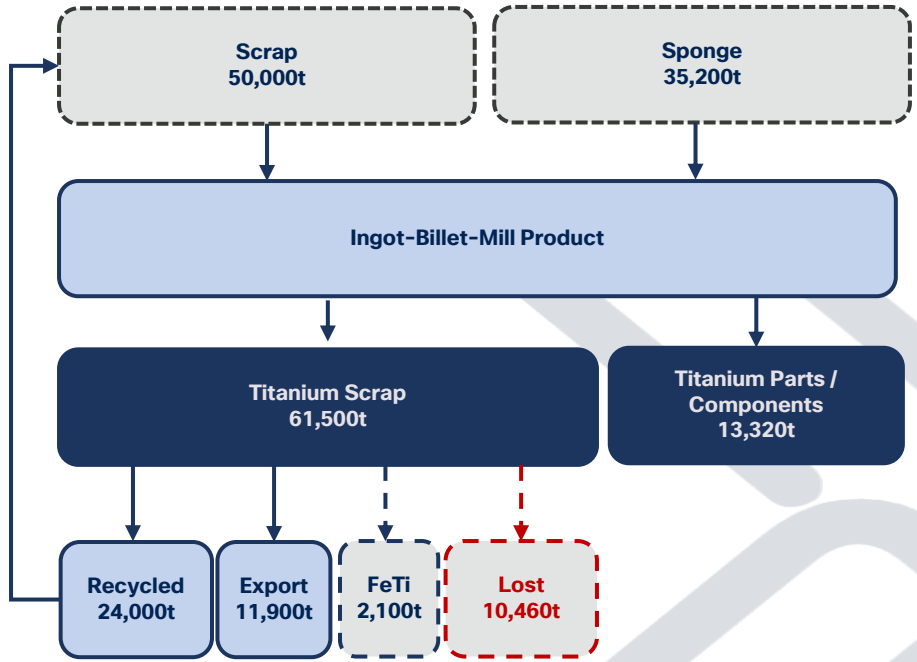
Scrap generation in the U.S. titanium supply chain

- 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

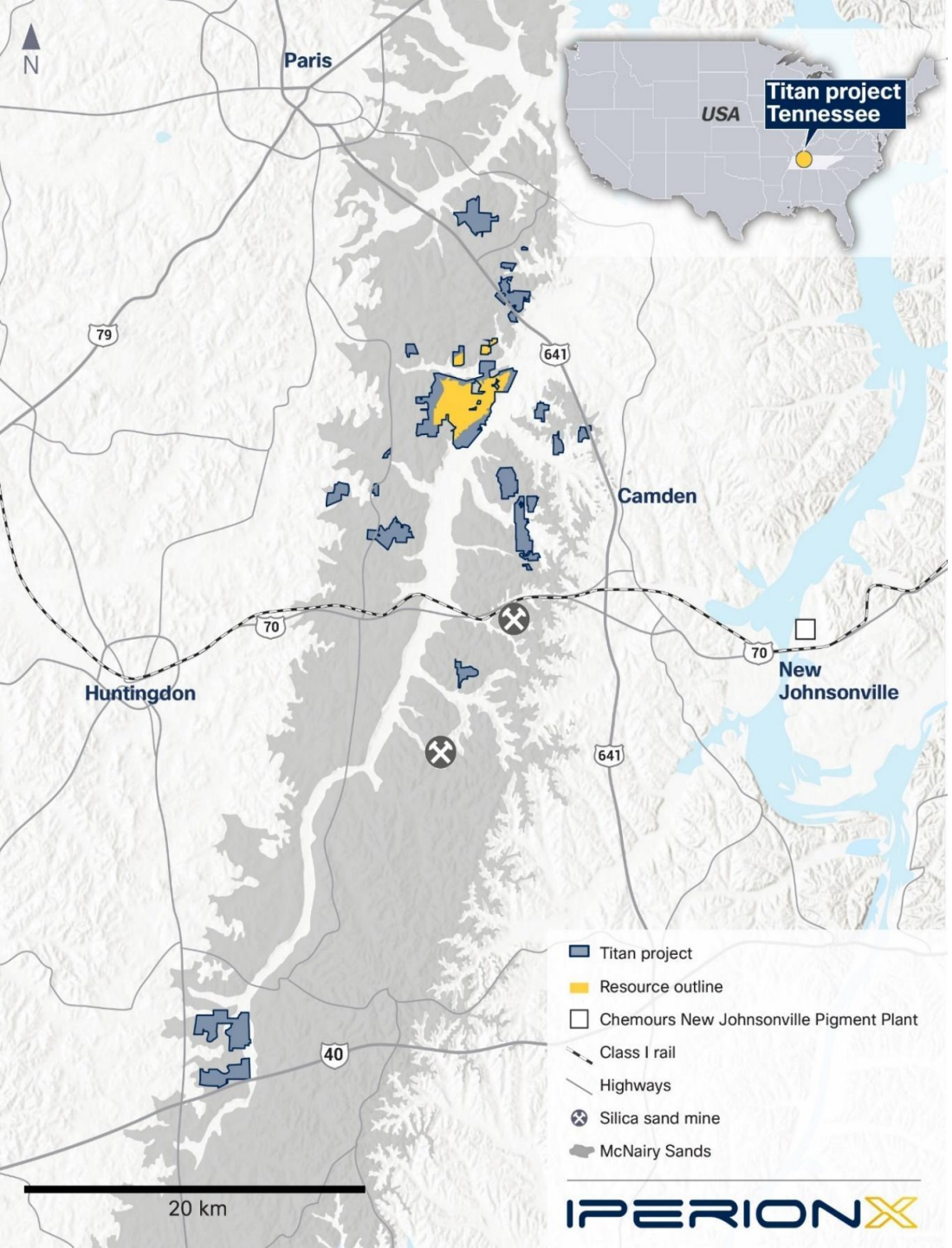
Titanium supply chain – scrap generation



U.S. titanium scrap supply chain



Source: U.S. Geological Survey (USGS), 2018 data shown



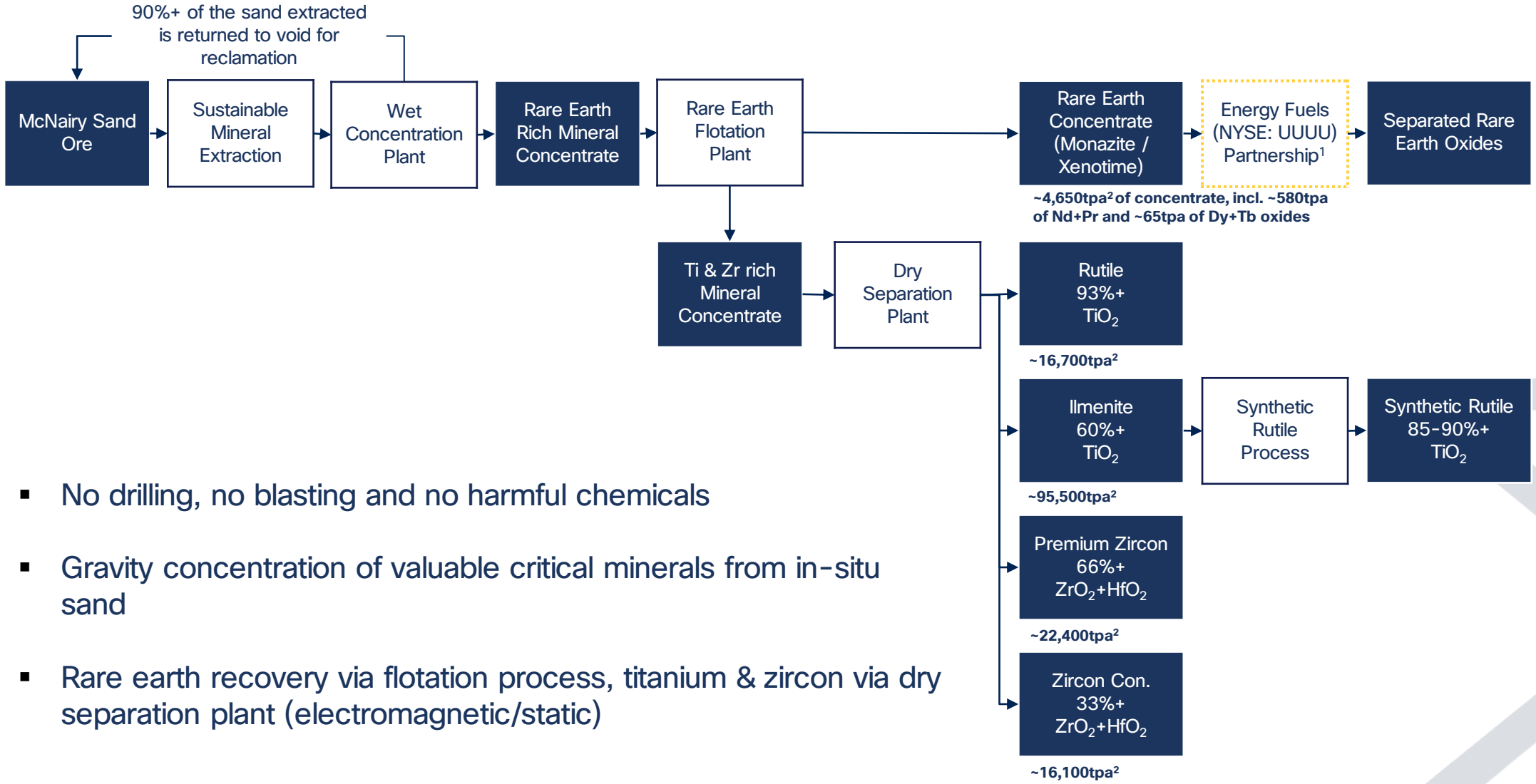
Based on the results of our Scoping Study, the Titan Project is a potential multi-decade source of U.S. titanium, with significant rare earth co-product

- 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% IRR[1]

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)

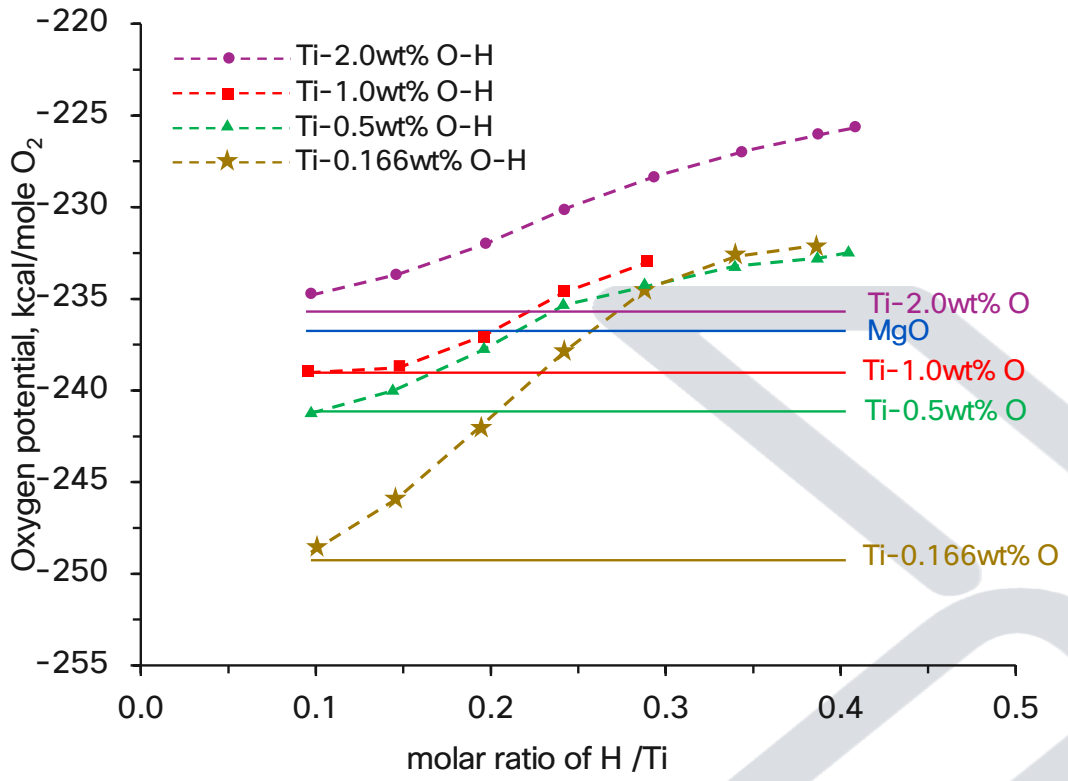
1. See ASX announcements dated April 22nd, 2021, and update announcement dated March 8th, 2022 for details
2. LOM annual average production based on the results of 2022 Scoping Study. See ASX Announcement dated June 30, 2022 for detail..

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 ("TiO_2") 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 TiO_2 in a carbothermal reaction to create $TiCl_4$, 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 TiO_2 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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