IPERIONX

Corporate Presentation

February 2023

Nasdaq ASX

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.

IPERIONX LIMITED
ABN 84 618 935 372

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
Rem. Committee Member
ESG 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

Executive Summary

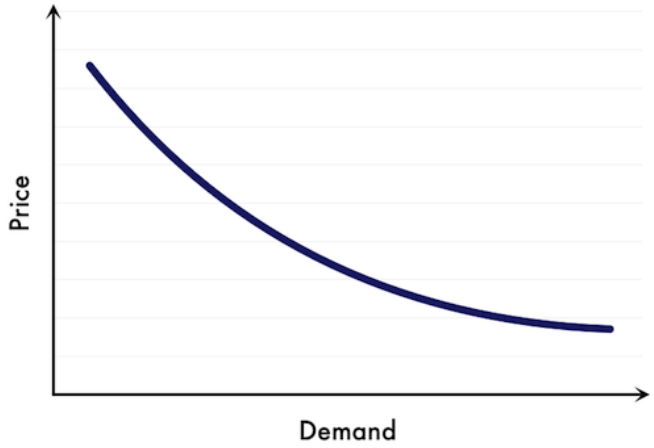
Titan Project

Titanium Scrap Market

Our vision is to re-shore a 100% recyclable, sustainable and low-cost integrated U.S. titanium metal supply chain

All American
Meeting domestic and allied countries needs for titanium across defense and industry

Sustainably & circular
Creating a low-to-zero carbon, fully circular titanium industry



Revolutionary technology with a pathway to lower cost & accelerating demand
Low cost, low carbon and circular titanium to drive increased demand across existing and new industries

IperionX has two core business units to achieve this vision: Minerals and Metals Technology

Minerals business

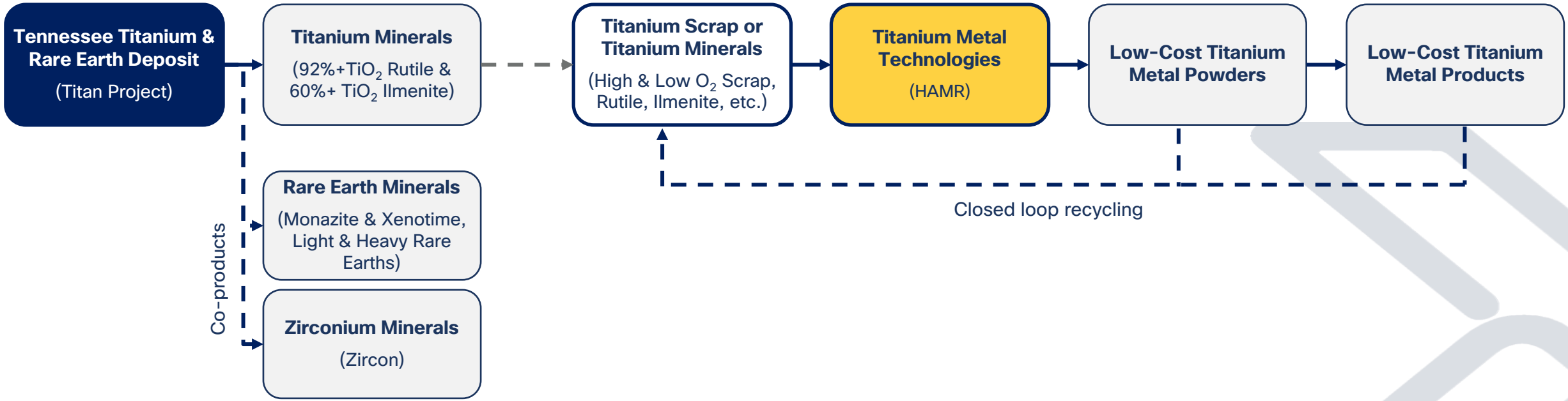
Upstream U.S. titanium & rare earth deposit

Sustainable extraction & mineral separation

Metals technology business

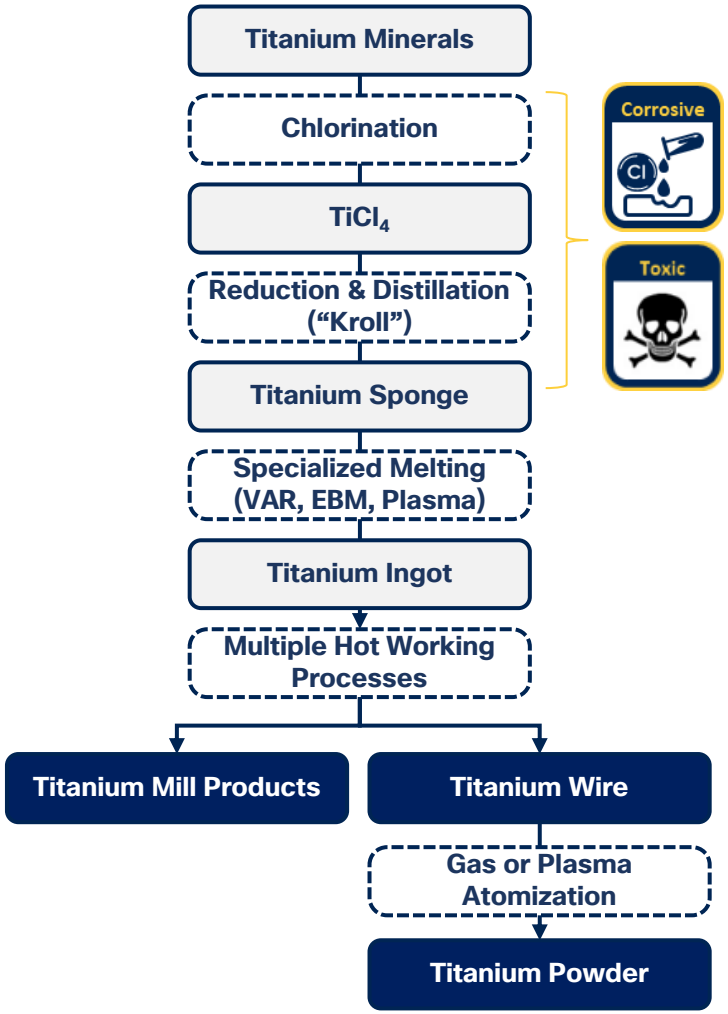
Downstream U.S. titanium metal manufacturing

100% recyclable, low/zero carbon process

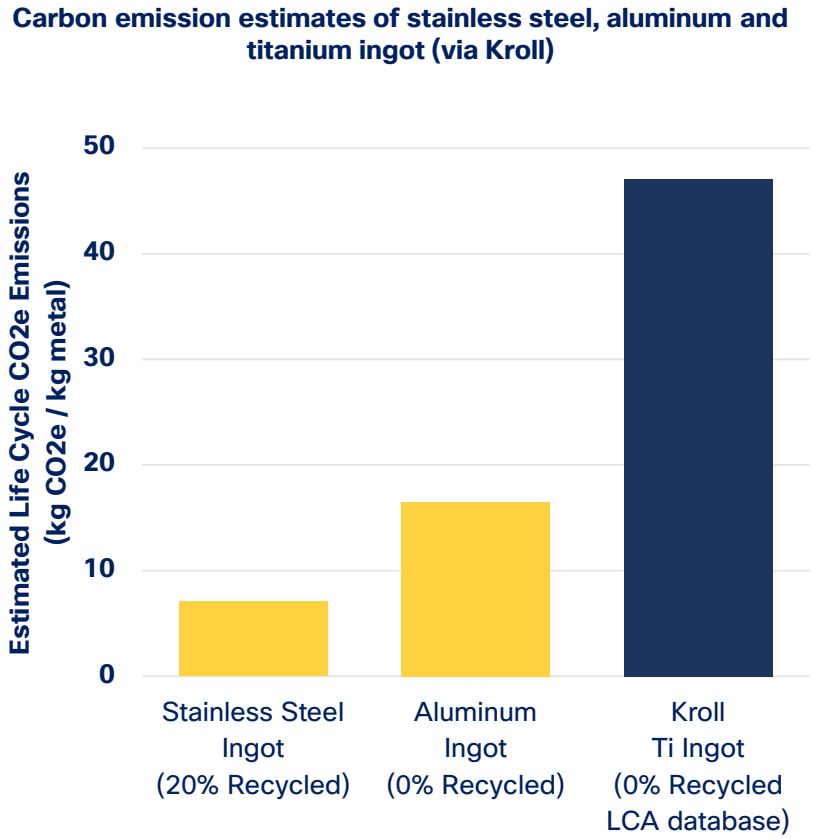


The primary challenge for titanium has been the complex, high cost, high emissions, and non-circular supply chain

Current industry - complex mineral to metal supply chain



High emissions intensity



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

Non-circular supply chain

The second major challenge is a supply chain dominated by China & Russia, posing a threat U.S. national security

Current titanium defense applications

U.S. Airforce

F-35 Lighting

V-22 Osprey

U.S. Army

M777 Howitzer

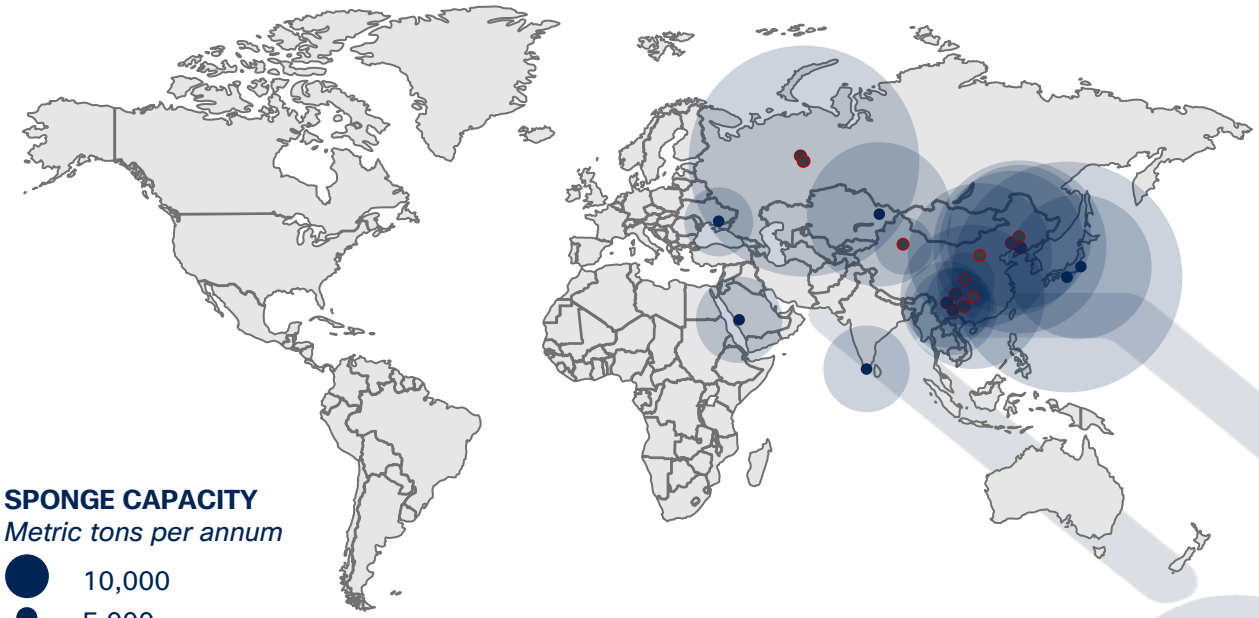
M1 Abrams

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

Our patented and award-winning Hydrogen Assisted Magnesiothermic Reduction (HAMR) process[2] is the revolutionary discovery with the potential to solve these challenges

THE UNIVERSITY OF UTAH

Invented by and based on a scientific discovery in 2016 by Dr. Zak Fang[1], Professor of Metallurgical Engineering at the University of Utah

arpa·e

Majority of early funding provided by ARPA-e from within the U.S. Department of Energy

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Funding support from the DoE's Office of Energy Efficiency & Renewable Energy

NSF

Funding support from the National Science Foundation

U.S. AIR FORCE

Winner of U.S. Airforce Research Laboratories Grand Challenge for titanium recycling

U.S. ARMY | xTECH SEARCH

Winner of U.S. Army's xTech Search Award

1. Hydrogen Assisted Magnesiothermic Reduction (HAMR) of Commercial TiO2 to Produce Titanium Powder with Controlled Morphology and Particle Size, Published in Materials Transactions by the Japan Institute of Metals and Materials, 2016
2. IperionX holds an exclusive option until the end of 2024 to acquire the HAMR technology and other associated technologies

Our industrial pilot facility has proven our revolutionary process and has been validated by government and commercial partners

Industrial Pilot Facility producing titanium powders from 100% scrap feedstock

Funded by DoE's ARPA-E Metals Program & recent capital investment upgrades by IperionX

RICHEMONT

Major European luxury goods manufacturer (Euro ~81 billion market cap[1]) with maisons (brands) including Cartier, Panerai and IWC – IperionX supplying near net shape watch housings to Panerai[2]

CARVER PUMP™

Specialized supplier of centrifugal pumps to the U.S. Navy and industry – IperionX introducing US made and recycled titanium pump components for US Navy Applications[3]

AIR FORCE RESEARCH LABORATORY

U.S. Airforce, Airforce Research Laboratories – IperionX working with AFRL to develop a circular supply chain for additively manufactured titanium parts in the U.S. Airforce[4]

NAVAIR

U.S. Navy's, Naval Air Systems Command – IperionX working with MRL to qualify flight critical replacement parts for U.S. Navy aircraft[5]

NAVSEA
NAVAL SEA SYSTEMS COMMAND

U.S. Navy's, Naval Sea Systems Command – IperionX working with Carver to qualify replacement parts for U.S. Navy surface ships[3]

1. Common market capitalization as of February 6, 2023
2. See ASX announcements dated August 20, 2022 and November 17, 2022 for details
3. See ASX announcement dated February 6, 2023 for details
4. See ASX announcement dated January 18, 2023 for details
5. See ASX announcement dated February 3, 2022 for details

We are now scaling into our first commercial facility in 2023

Titanium Demonstration Facility, Halifax County, Virginia

125tpa (Phase I)
Targeted production rate

Completing detailed design for 125tpa of titanium powder production

Existing 50,000sqf building has sufficient space for rapid modular expansion capacity

~US$20 million
Projected initial capital cost[1]

Phase I capital cost of ~US$20 million including ~US$8 million in capital equipment[1]. ~US$4.5 million of incentives by the State of Virginia and Halifax County's Industrial Development Board[1]

High margin potential

Current titanium powder prices up to US$250/kg – implied revenue potential of ~US$30 million at 125tpa targeted run-rate[1]

VALIDATED

ISO

Recycling certification and LCA being completed

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

We are an economic and sustainable solution to re-shore the U.S. titanium supply chain

100% U.S. made with the potential to establish facilities in allied countries

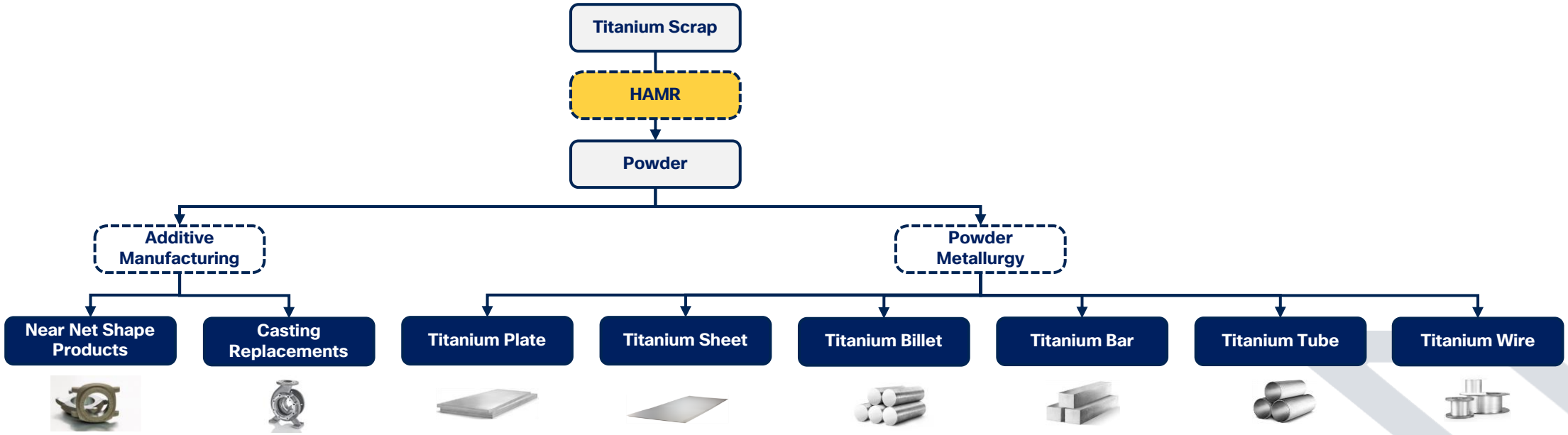
100% scrap used in production with no need for titanium sponge

Low capital and operating costs in a low risk, modular design

Zero scope 1 & 2 emission with potential for minimal scope 3 emissions

Potential for valuable product range, including titanium scrap-to-product and unique alloys

We have a wide range of commercial routes to market – from traditional titanium products to high growth additive markets



Potential target markets

Automotive

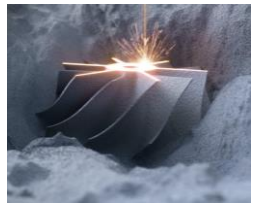
Consumer electronics

Luxury Goods

Bikes & other mobility

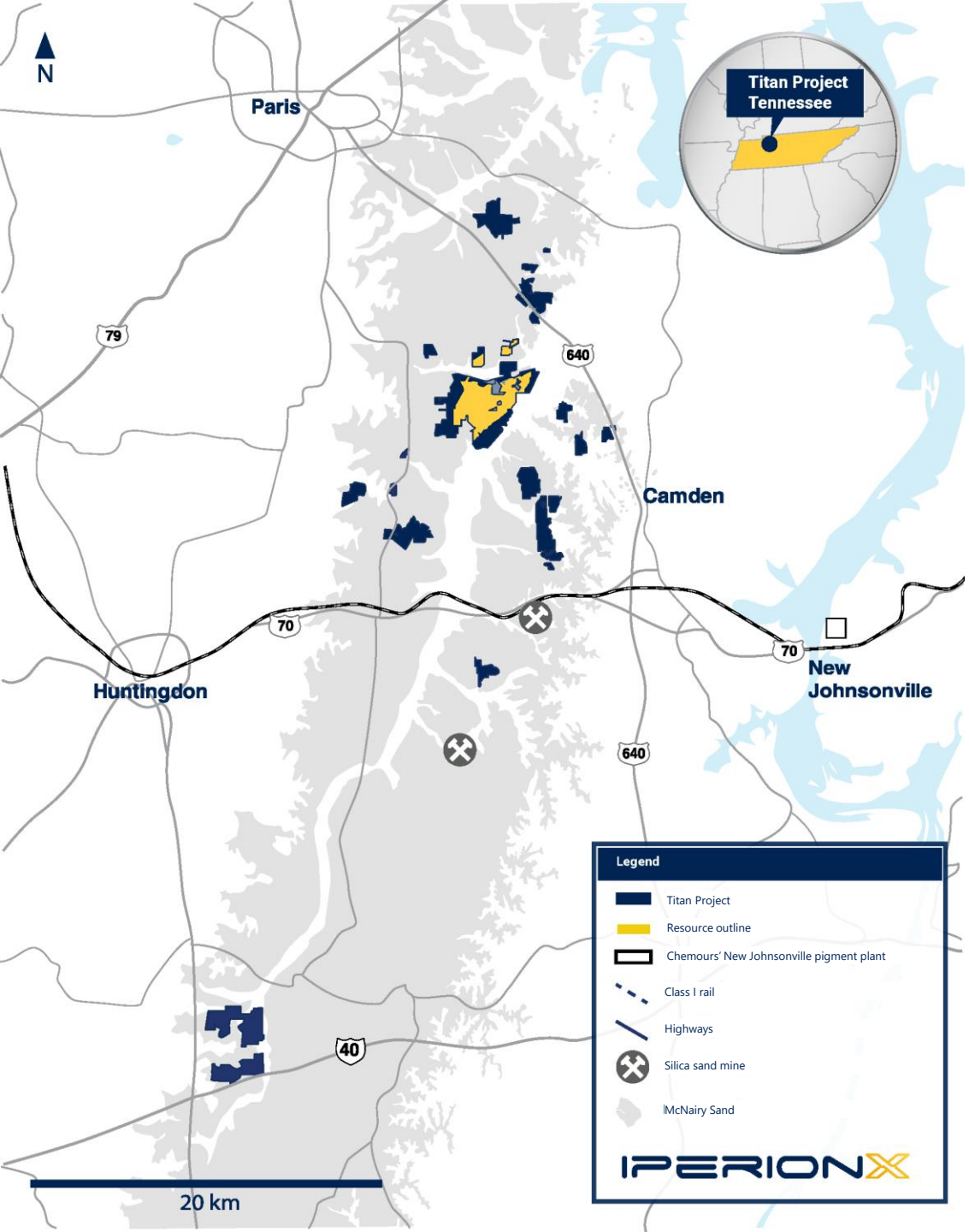
Industrial equipment

Green H_2 components



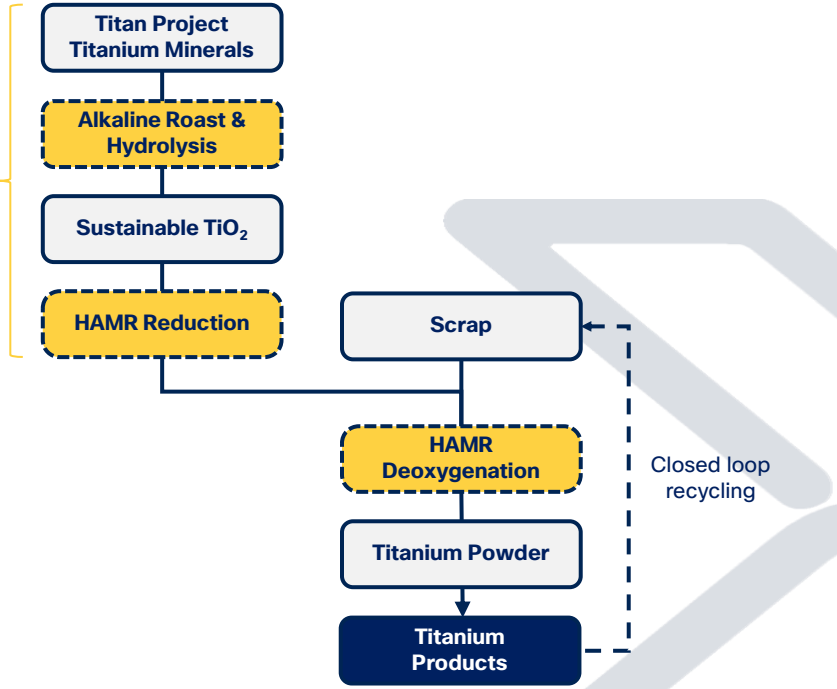
AM industry

U.S. defense



Future Titan Project integration could re-shore a circular, low cost and sustainable U.S. mineral to metal titanium supply chain

Titan Project, 100% controlled by IperionX, is the largest titanium resource in North America[1], with co-products including rare earths and zircon



1. JORC and SK-1300 code compliant

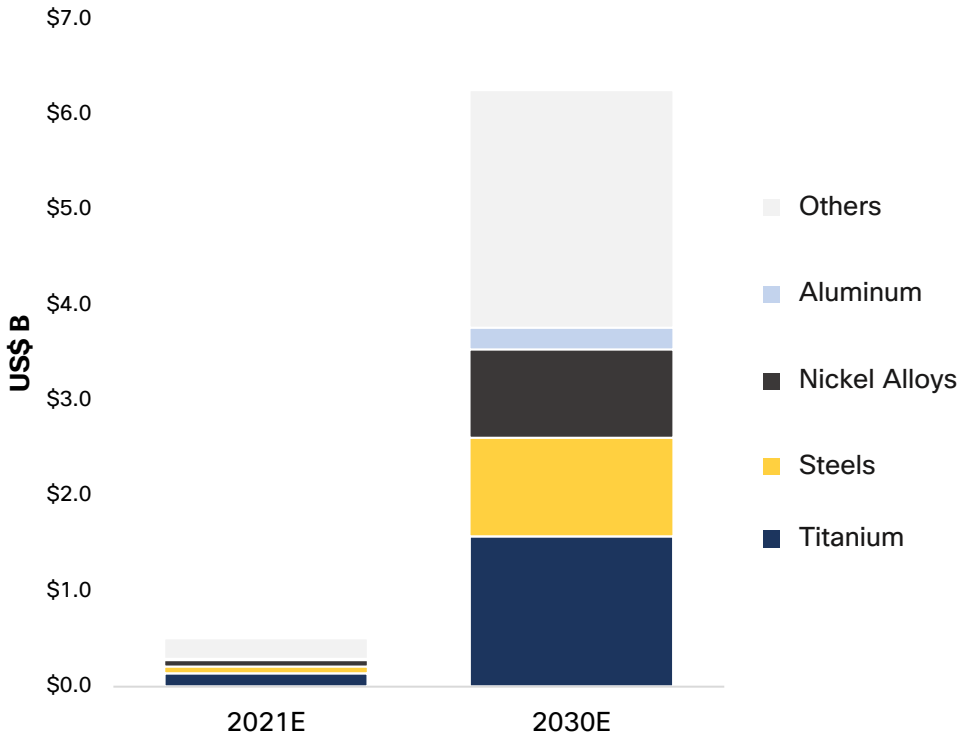
We are an industrial technology company which can disrupt the metals sector, with our sights on stainless steel & aluminum

Metal & global market size[1]	Consumer Metal Products	Automotive & Transportation	Construction Materials	Machinery, Equipment, & Electronics	Other
~$201bn **Stainless steel market** 2021 global stainless steel melt shop production: 56Mtpa	**~$76bn** 21Mtpa	**~$27bn** 8Mtpa	**~$25bn** 7Mtpa	**~$16bn** 4Mtpa	**~$58bn** 16Mtpa
~$164bn **Aluminum market** 2021 global aluminum demand: 67Mtpa	**~$38bn** 15Mtpa	**~$41bn** 15Mtpa	**~$41bn** 17Mtpa	**~$38bn** 15Mtpa	**~$10bn** 4Mtpa

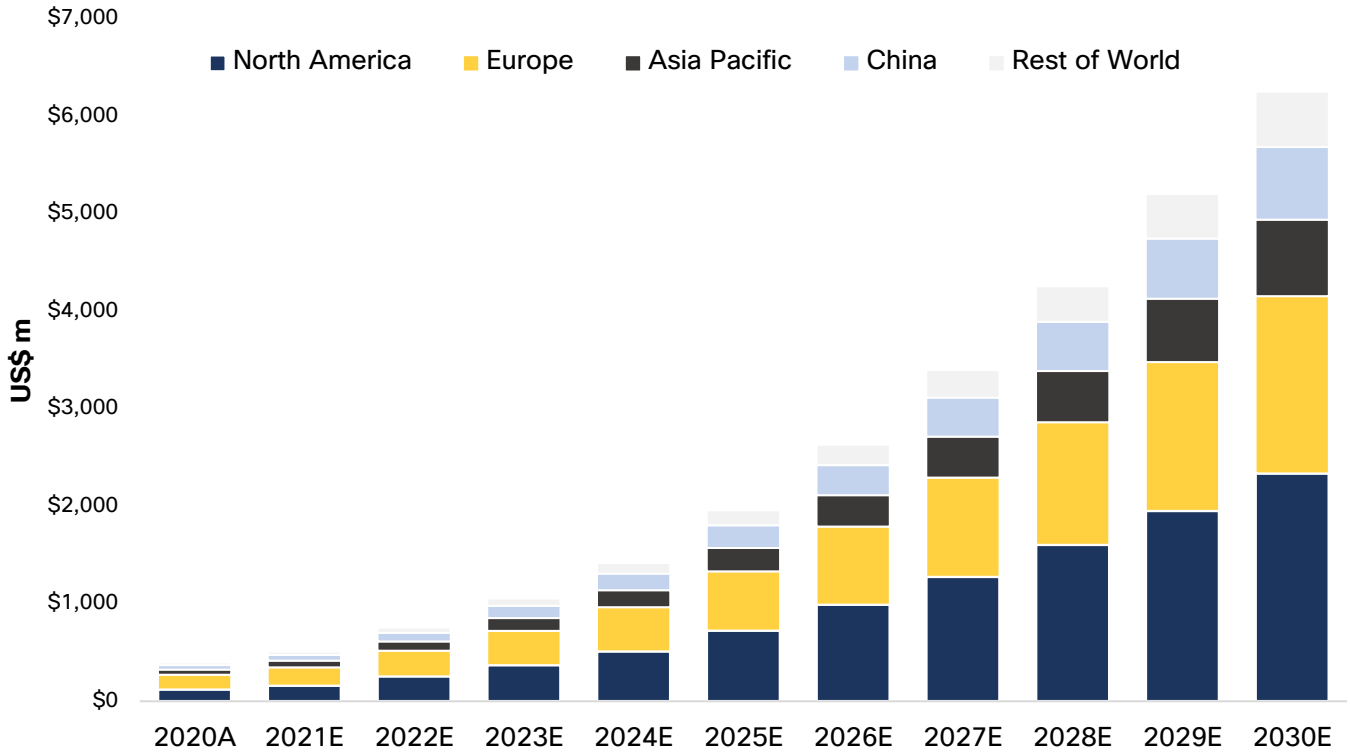
* Estimated Global Market Summary in USD
Sources: Roskill, International Stainless Steel Forum, Jefferies Equity Research, LME, MEPS, Argus Metals. Pricing as of Q4-2022.

We are also highly 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



Source: SmarTech Analysis research.

We are well-positioned to benefit from government funding and incentives for re-shoring 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

Multiple value adding, near term, catalysts

- **Secure strategic partners for our titanium metal operations**
  - [x] Test powders and/or prototype parts with prospective customers
  - [x] Secured customer & government validation
  - [ ] Secure additional customers across auto, consumer electronics and other
- **Scale-up of titanium metal powder production**
  - [x] Scale up of titanium pilot plant production
  - [x] 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**
  - [x] Definition of largest titanium mineral resource in U.S.[1]
  - [x] 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)

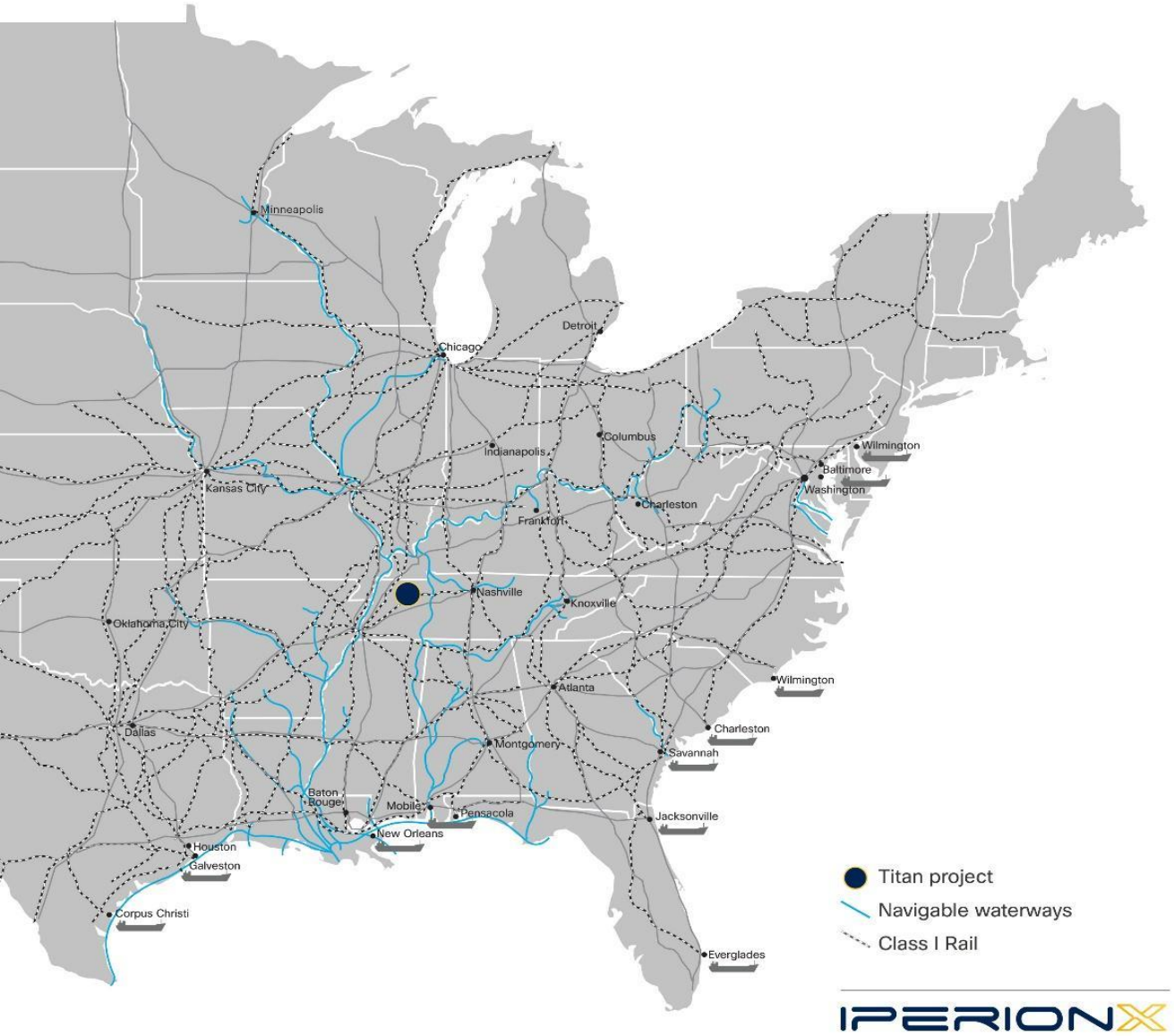
Common shares / ADR's (1:10) outstanding	175 million / 17.5 million
Last 10 days - Daily volume (ASX / NASDAQ)	A$330k / US$103k
Market capitalization	US$110 million
Cash (31-Dec)	US$11.5 million
Fidelity Management & Research (FMR)	~10%
Fidelity International (FIL)	~7%
B Riley Financial	~5%
Insider ownership	~30%

1. JORC and SK-1300 code compliant

Executive Summary

Titan Project

Titanium Scrap Market



Our Titan Project is the large scale, simple & sustainable answer to U.S. critical mineral supply chains

100% owned by IperionX, our Titan Project covers 11,000+ acres of titanium & rare earth rich mineral sands in Tennessee

- Infrastructure rich location in the heartland of the U.S.
- The largest JORC and SK-1300 code compliant titanium and rare earth monazite / xenotime resource in the U.S.
- Simple, low-cost extraction & processing operations
- Sustainable operations with active reclamation

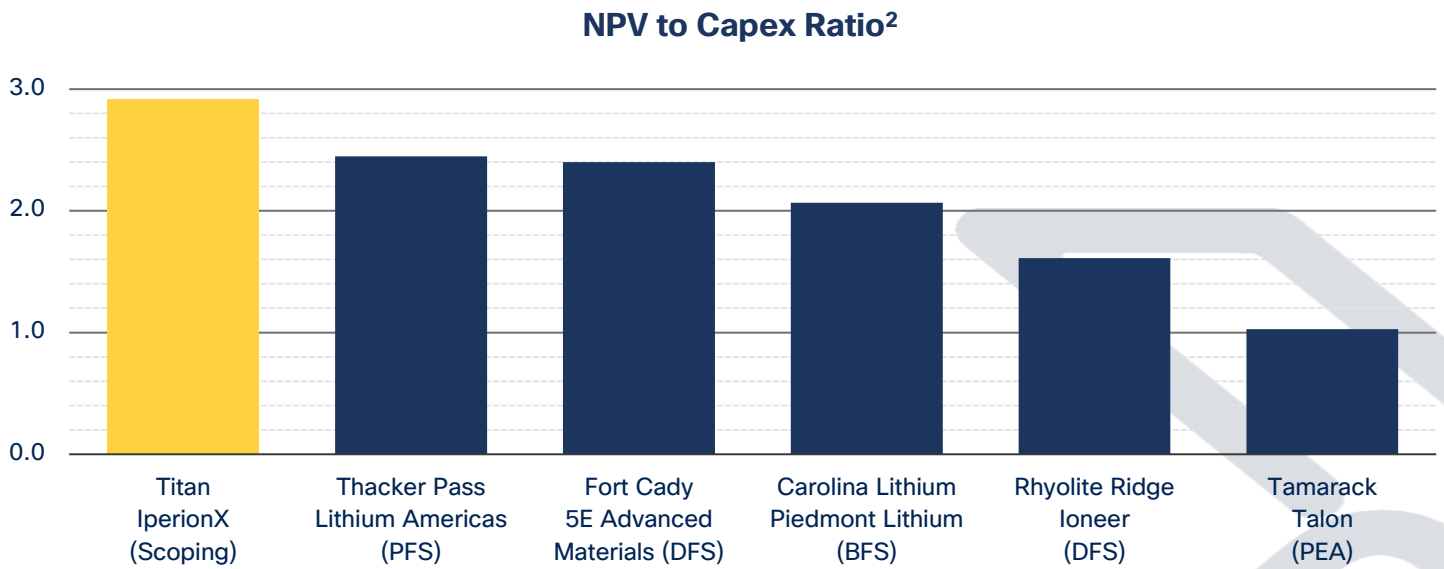
US$117 million
Average EBITDA[1]

US$692 million
$NPV_{8\%}$[1]

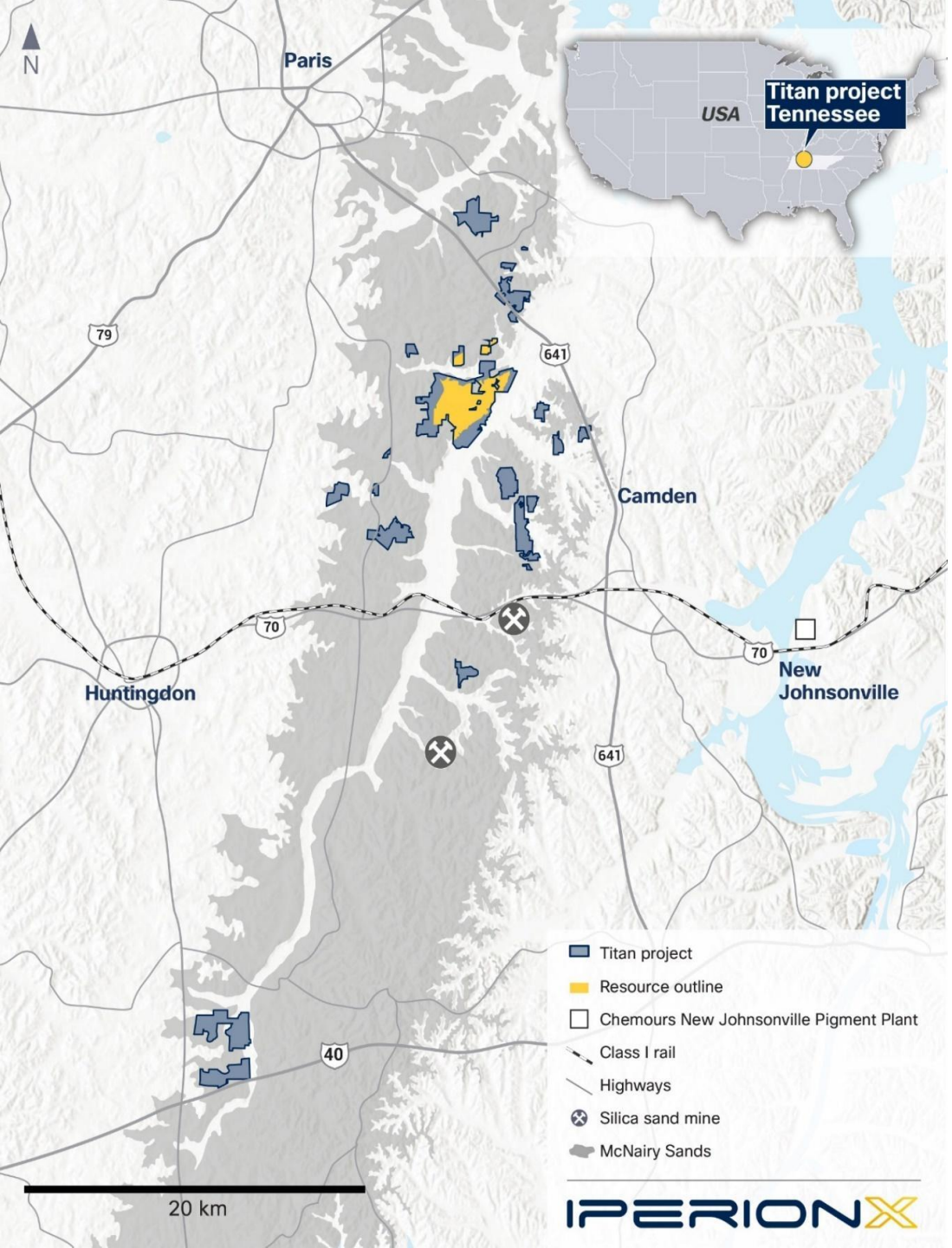
40%
After-tax IRR[1]

25 years
Initial life of operations

The Titan Project's potential economics demonstrate one of the highest NPV-to-CAPEX ratios of advanced U.S. critical mineral development projects



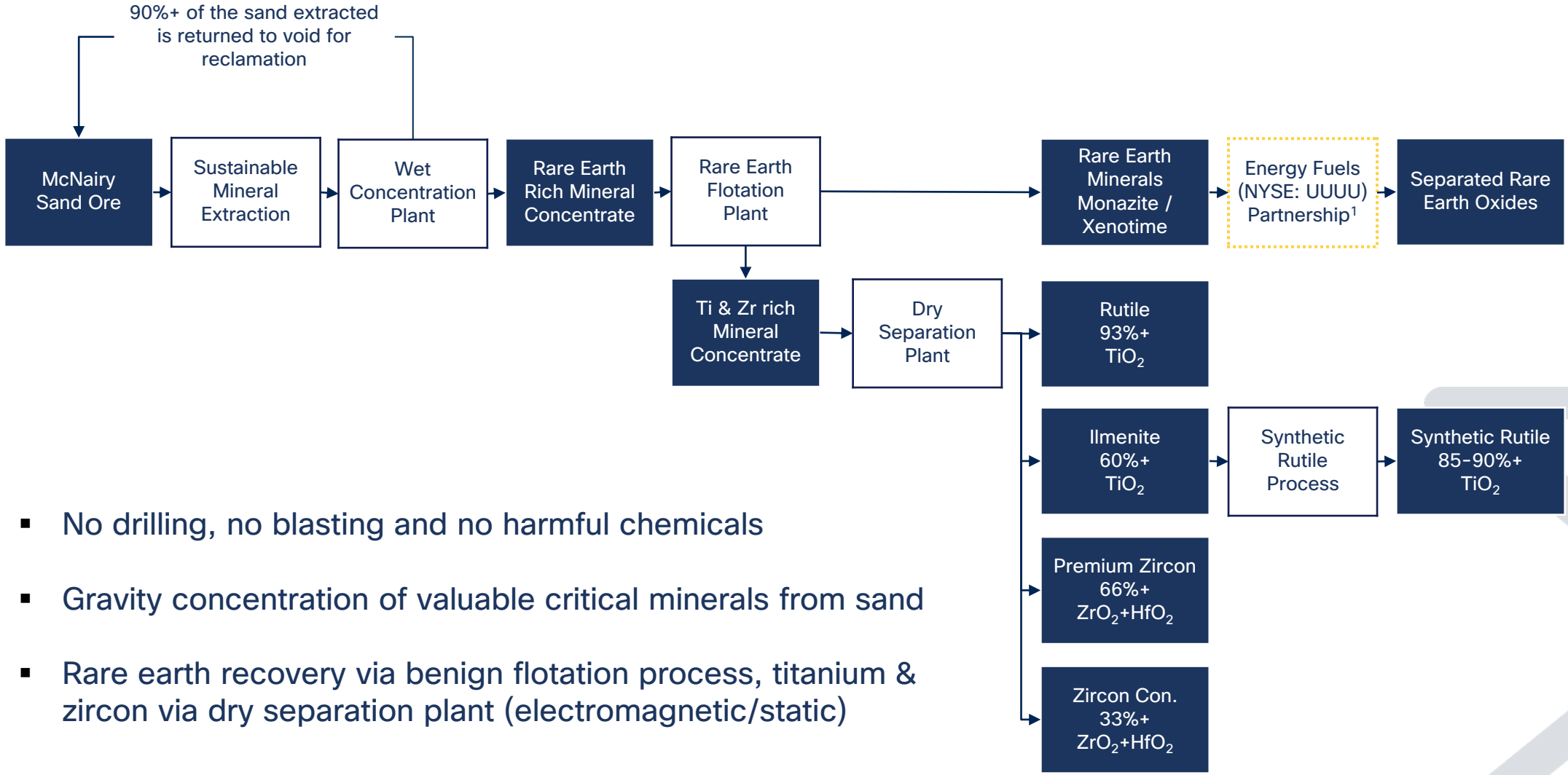
1. Based on June 2022 Scoping Study. June 2022 Scoping Study projections are based on Q1-2022 price projections and cost estimates in U.S. Dollars. Evaluation was carried out on a 100% equity basis using an 8% discount rate. For further information, see Scoping Study press release dated June 30, 2022.
2. NPV to CAPEX ratio calculated as published NPV divided by published development CAPEX, and is unadjusted for inflation or different assumptions contained within each company's respective technical documents.
Sources: Lithium Americas Thacker Pass Project PFS (link), 5E Advanced Materials Fort Cady Project DFS (link), Piedmont Lithium Carolina Lithium Project BFS (link), Ioneer Rhyolite Ridge Project DFS (link), Talon Metals Tamarack Nickel Project PEA (link)



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

Simple and 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 sand
- Rare earth recovery via benign 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.

Rare Earth Minerals from the Titan Project provide a pathway for a U.S. rare earth supply chain

Upstream

Targeting shovel-ready in 2023

Conventional processing routes

Low CAPEX relative to other projects

Midstream

Cracking & leaching operational today with multibillion dollar replacement value

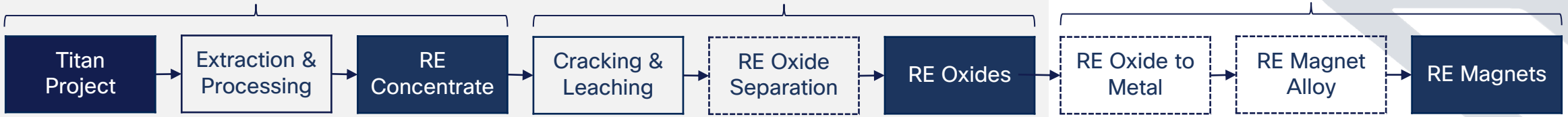
Separation expected in the coming years via conventional processing

Downstream

Future potential for metallization & magnet alloy manufacturing

Low CAPEX using conventional technology

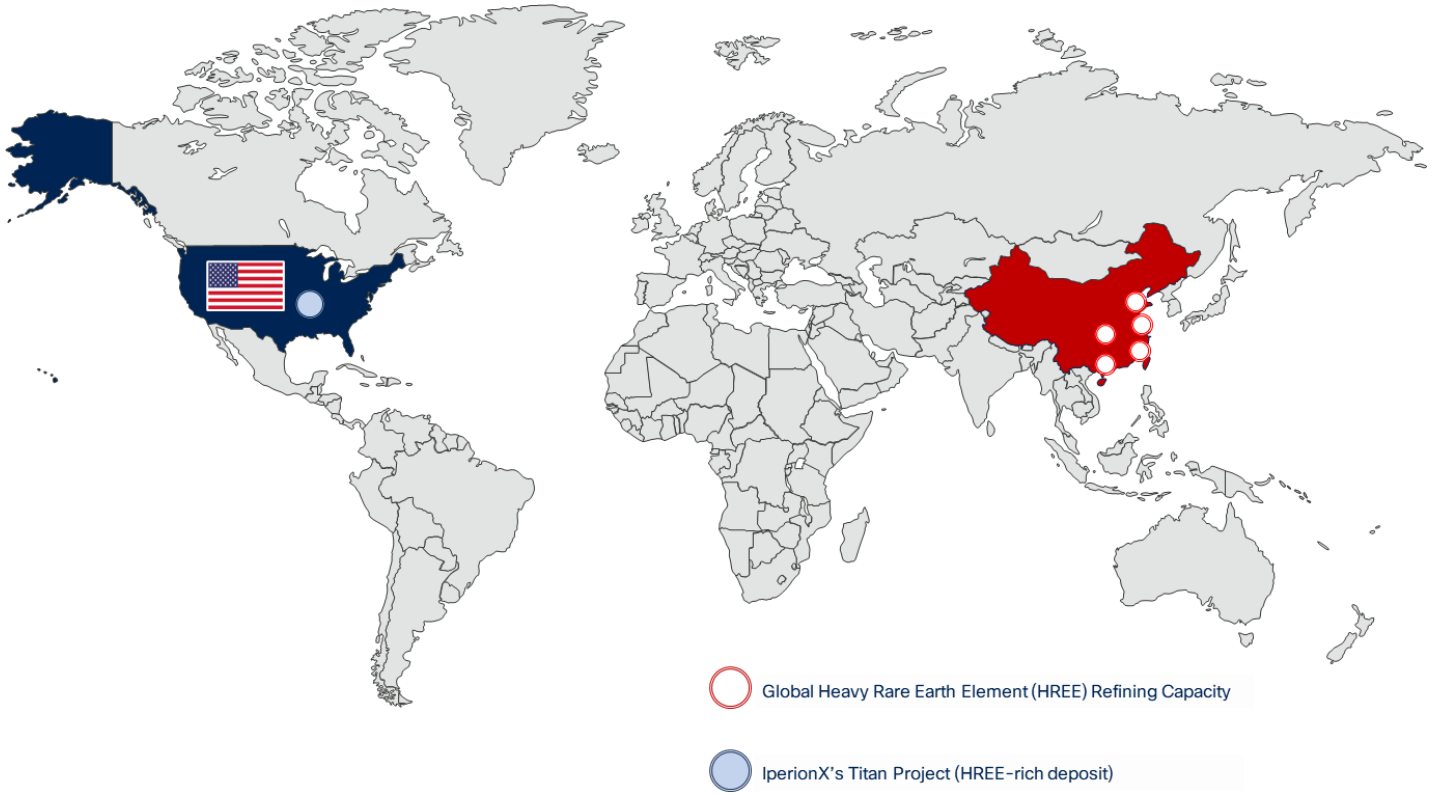
Potential to use IperionX HAMR technology



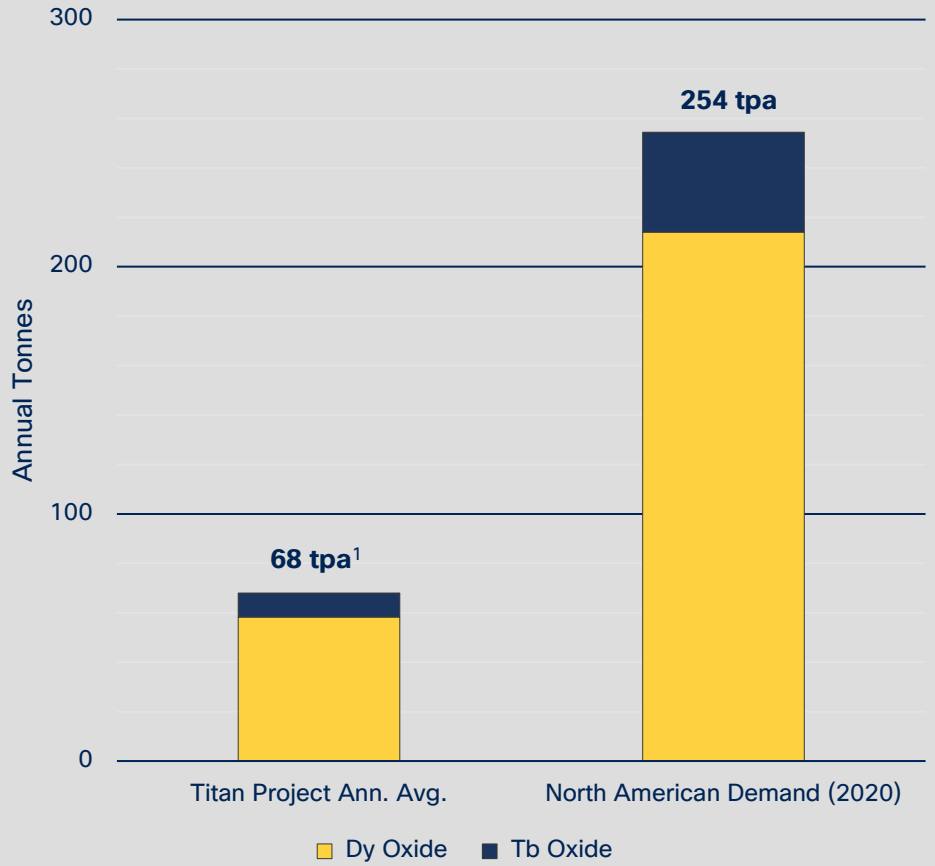
MoU signed between IperionX & Energy Fuels (NYSE: UUUU)[1] for development of the REE supply chain from U.S. mineral to oxides

1. See ASX announcements dated April 22nd, 2021, and update announcement dated March 8th, 2022 for details.

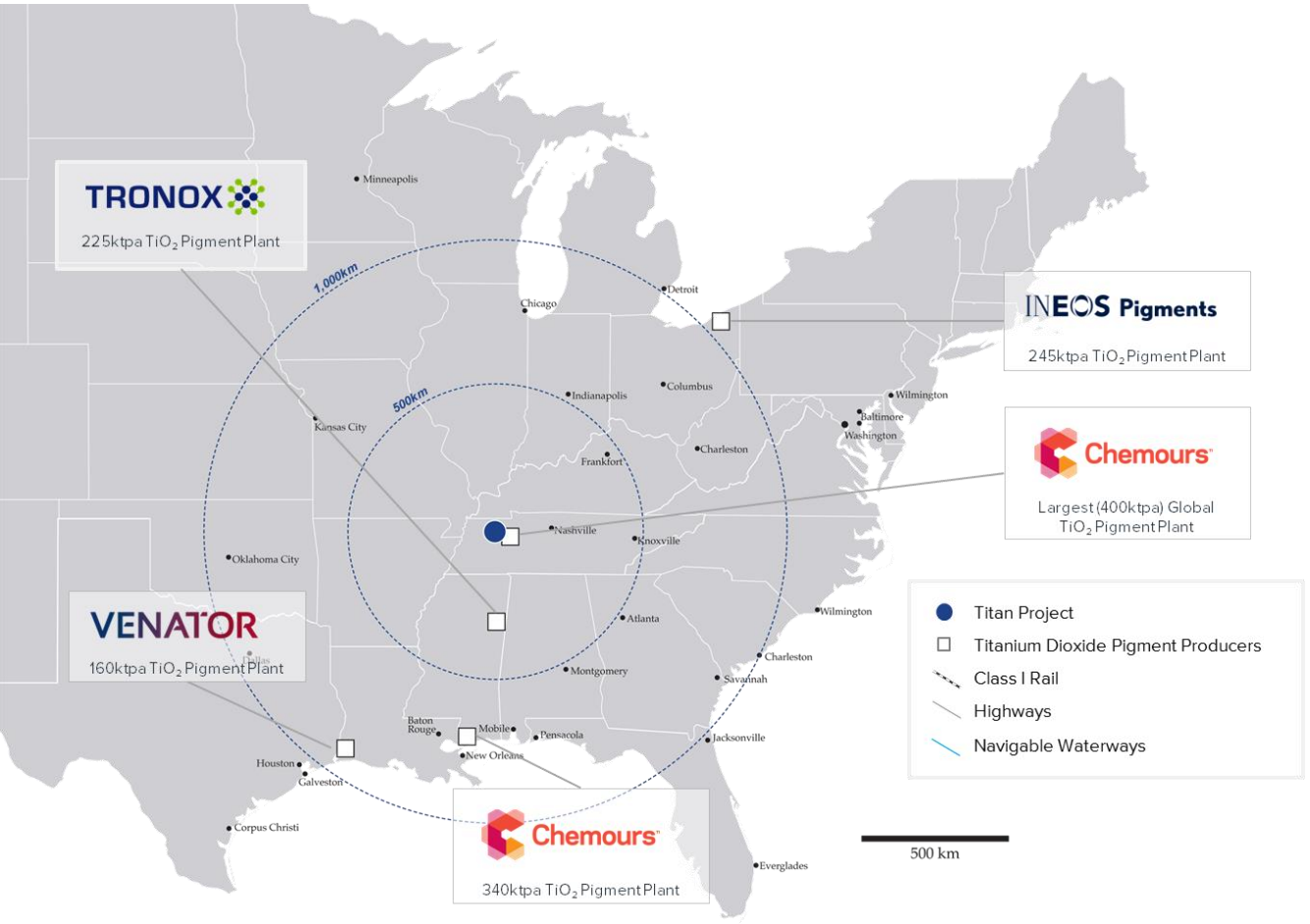
Potential to be a significant source of U.S. heavy rare earth minerals



Titan Project projected annual average production of REO-in-concentrate (first 5 years) v. 2020 North American Demand



Source: U.S. Geological Survey, Roskill, WoodMackenzie. Locations shown are approximate.
1. Based on June 30, 2022 Scoping Study.



A major potential source of titanium minerals for the paint & pigment industry

- U.S. paint & pigment industry is 90+% import dependent on titanium minerals
- U.S. domestic consumption of TiO_2 pigment in 2021 was approximately 1.1 million tons
- Titan Project will produce ~120ktpa of titanium minerals that can be sold into the paint and pigment industry
- Ukraine was a major source of supply of titanium minerals

Source: US Geological Survey. Locations shown are approximate.

We are also applying our titanium metal technologies to significantly improve our future mineral products

Tennessee ilmenite

58-60% TiO_2

Est. spot price ~US$400+ per tonne

Pelletize → Hydrogen Sintering → Leach

Patent pending, potential net zero carbon, low-cost process

Synthetic rutile

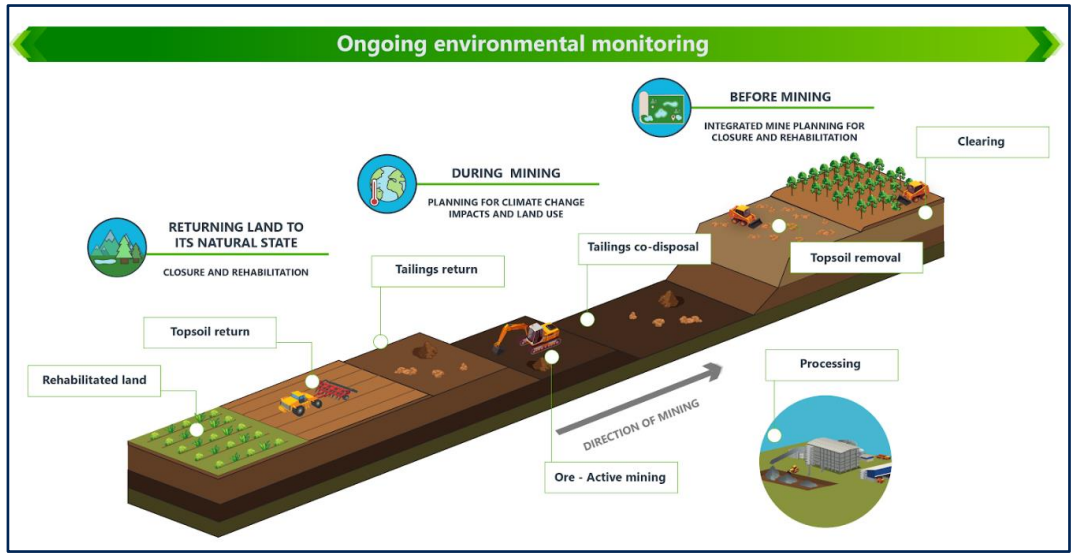
85-90% TiO_2

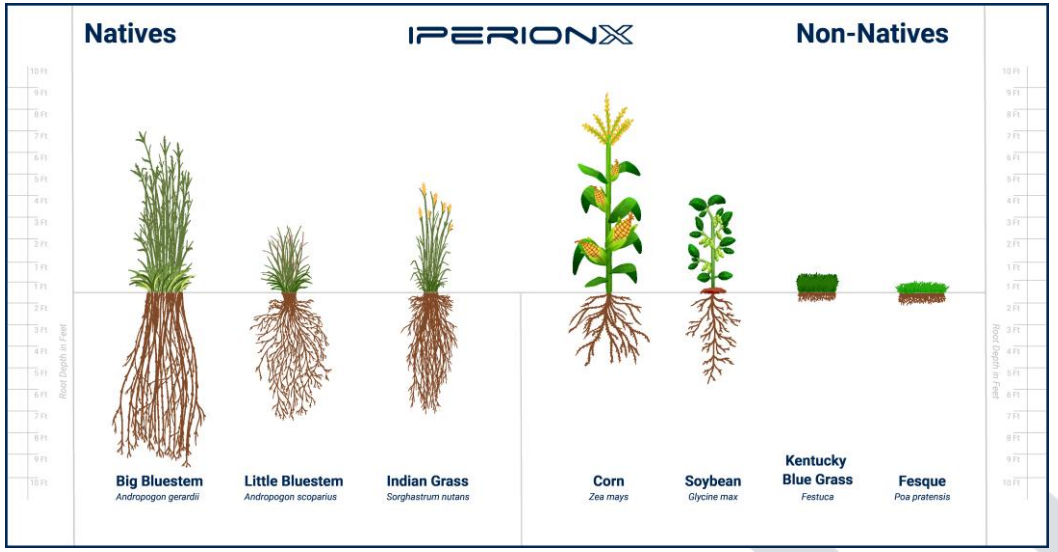
Est. spot price ~US$1,200+ per tonne

High purity iron powder by-product for LFP battery market

1. See ASX announcement dated August 9th, 2022 for details.

Focused on sustainable extraction, processing, reclamation and rehabilitation



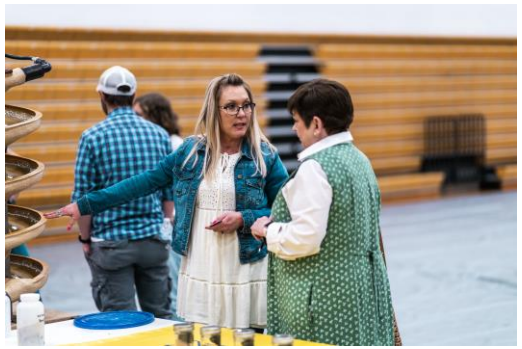


Low carbon impact extraction with active reclamation

- Focusing on zero carbon power (as processing requires mainly electrical power) to limit carbon intensity
- Actively reclaiming voids results in temporary disturbance in any one area at a time

Research into improved rehabilitation programs to return land to a better post operations state

- Native warm season grasses experimental plots for improved rehabilitation
- Experimental plots investigating carbon sequestration opportunities during rehabilitation



Benton County Community Q&A

Henry County Fish Fry

Committed to community engagement and education

- Since the beginning of IperionX, the strategy has been to engage and educate the communities of Benton, Henry & Carroll counties
- IperionX's team has been extremely active, and over the last few years has undertaken numerous community outreach programs, including;
  - Engagement in all major community fairs and programs
  - Advertising in major community newspapers and local radio stations
  - Presenting to key leaders in the community
  - An open door policy where anyone can ask any question
- Strong community support and relations is a top priority of IperionX

Mineral Demonstration Facility for customer and community engagement

Stage 1 (Operational): Initial hydro-cyclones to remove fine (<45 micron) clays from McNairy Sand ore, successfully used to process bulk sample for feasibility study metallurgical testwork

Stage 2 (Operational): Addition of spiral circuits to allow for gravity separation of critical minerals from sand and produce a valuable mineral concentrate

Stage 3 (Targeted Q2 2023): Pilot scale flotation & electromagnetic equipment to produce samples of rare earth minerals, titanium minerals and zircon concentrate

Executive Summary

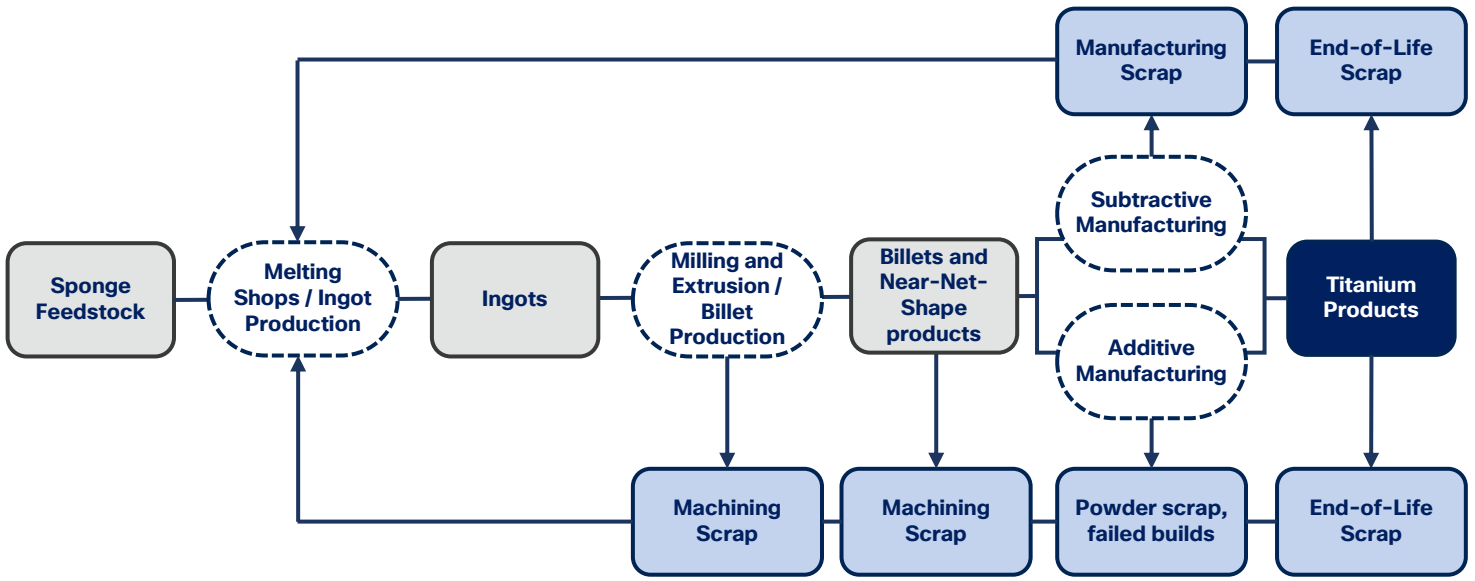
Titan Project

Titanium Scrap Market

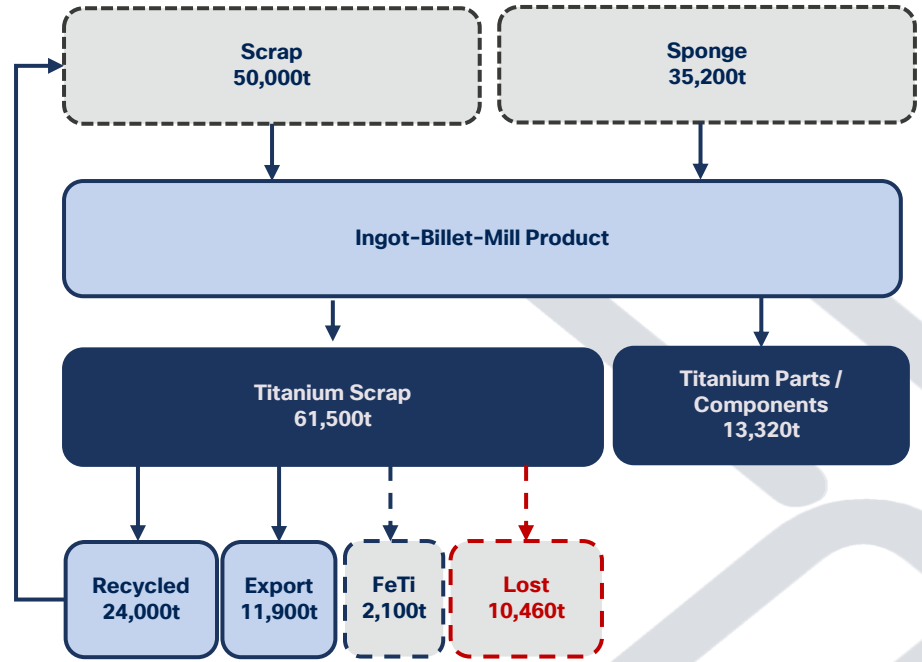
Scrap generation in the U.S. titanium supply chain

- 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

Large volumes of U.S. titanium scrap could be upcycled by IperionX technology into valuable titanium metal

U.S. titanium scrap summary (Metric tons)	2014	2015	2016	2017	2018	2019	2020
Total Titanium Scrap in Circulation	63,100	62,900	64,560	69,600	61,500	62,000	45,000
Titanium Scrap Used in Ingot Feed	50,000	51,000	53,000	58,000	50,000	50,000	35,000
Titanium Scrap Used in Other Industries	13,100	11,900	11,560	11,600	11,500	12,000	10,000
Scrap Generated in Titanium Industry	47,210	48,064	55,214	67,700	48,460	N/A[1]	N/A[1]
Scrap Consumed in Titanium Industry	32,000	32,100	30,300	31,600	24,000	N/A[1]	N/A[1]
Scrap Exported	4,610	6,860	9,720	9,450	11,900	15,000	N/A[1]
Implied FerroTi Scrap Consumption	-	1,200	2,000	4,400	2,100	N/A[1]	N/A[1]
Est. Titanium Industry Unused Scrap	**10,600**	**7,904**	**13,194**	**22,250**	**10,460**	**N/A[1]**	**N/A[1]**
Titanium Industry Scrap Recirculation Rate	78%	84%	76%	67%	78%	N/A[1]	N/A[1]
Titanium Scrap Consumption as % of Scrap in Circulation	49%	49%	53%	55%	61%	N/A[1]	N/A[1]

Source: U.S. Geological Survey (USGS)

1. USGS data publishing format changed in 2019, and no longer publishes sufficiently detailed data to estimate scrap recirculation in this manner. USGS began withholding various sponge, ingot, and scrap data in 2019 to protect proprietary company information. USGS collects its data via voluntary surveys and, beginning in 2021, reported no longer receiving sufficient responses to prepare scrap tonnage estimates.

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