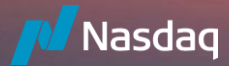


# Corporate Presentation

October 2023



IperionX Limited  
NASDAQ & ASX: IPX  
ABN 84 618 935 372

A photograph of a modern building at night with the 'IPERION X' logo illuminated in white and yellow neon lights on its facade. The building has a grid-like pattern of windows and panels. The background shows a dark sky and some trees in the distance.

IPERION X

# 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.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance, and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company’s control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

## Cautionary Statements and Important Information

This presentation has been prepared by the Company as a summary only and does not contain all information about assets and liabilities, financial position and performance, profits and losses, prospects, and the rights and liabilities attaching to securities. Any investment in the Company should be considered speculative and there is no guarantee that they will make a return on capital invested, that dividends would be paid, or that there will be an increase in the value of the investment in the future.

The Company does not purport to give financial or investment advice. No account has been taken of the objectives, financial situation or needs of any recipient of this presentation. Recipients of this presentation should carefully consider whether the securities issued by the Company are an appropriate investment for them in light of their personal circumstances, including their financial and taxation position.

## 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 [www.IperionX.com](http://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.

*What do we do?*

**We produce high-performance, sustainable, low-cost titanium metal products in the U.S. using proprietary technologies**



*Panerai Submersible S BRABUS eTitanio*

*Made with IperionX 100% recycled titanium  
using Direct Metal Laser Sintering (DMLS)*

*What is our plan?*

# **Build low-cost, sustainable metal production today, and integrate with minerals production tomorrow, entirely within the U.S.**

**1**

## **Scale metal production capacity via revolutionary patented titanium metal technologies using titanium scrap as a raw material**

- 100% recycled titanium products - fully circular, a world first
- Zero scope 1 & 2 greenhouse gas emissions
- Significant reductions to the cost of titanium

**2**

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

- One of the largest JORC & SK-1300 titanium mineral resources in U.S.
- Fully permitted for Phase 1 development and operations
- Highly valuable co-products of rare earth minerals and zircon

*Why do we focus on titanium?*

**Titanium has superior material properties that are prized across industries from defense to consumer electronics**



**High strength-to-weight ratio**

(Titanium alloys can have a far higher strength-to-weight ratio than aluminum & magnesium alloys)



**45% lighter than steel**

(Titanium alloys can be 3-5x stronger than stainless steel)



**Superior corrosion resistance**

(Durable, long-life products that don't need paint)



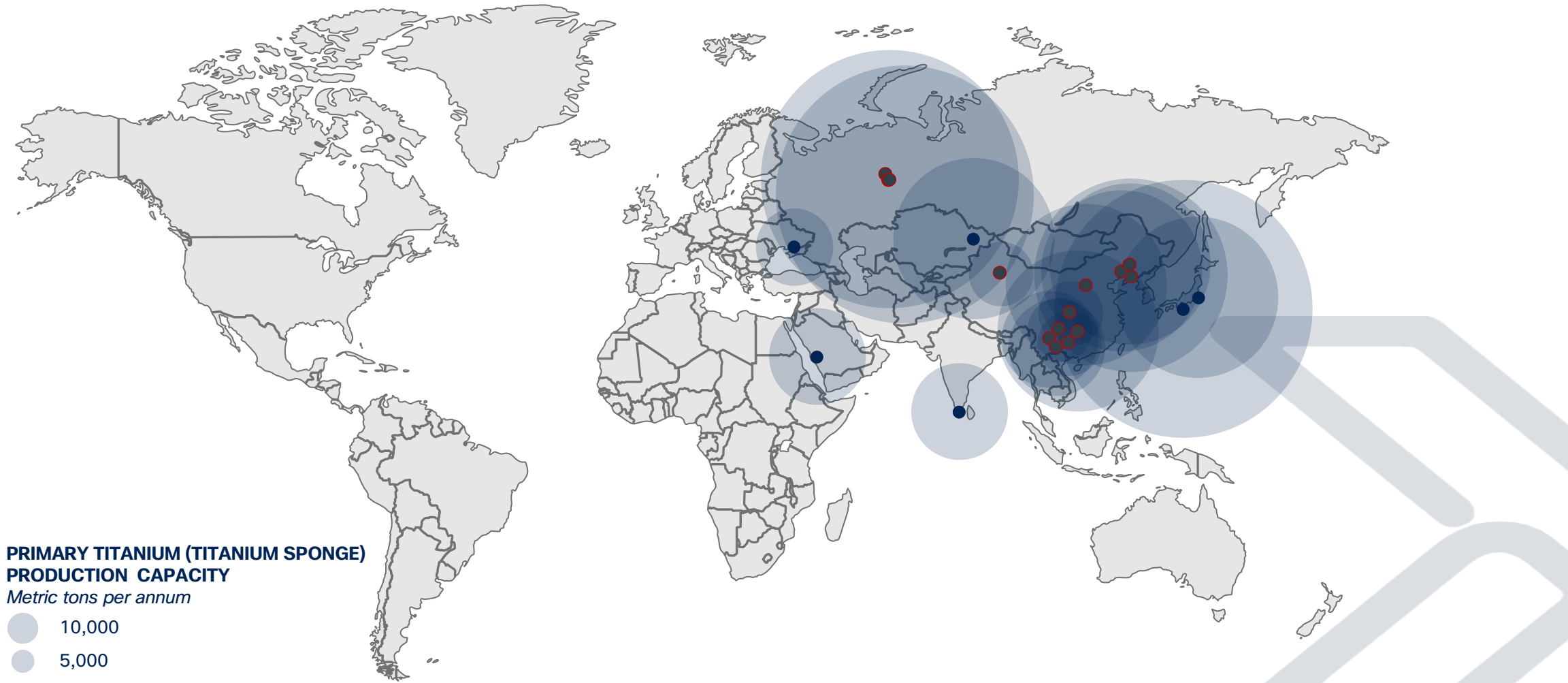
**Lockheed Martin F-35 Lightning II**  
*~20% titanium by weight*



**Consumer Electronics**  
*Titanium used in frames and enclosures*

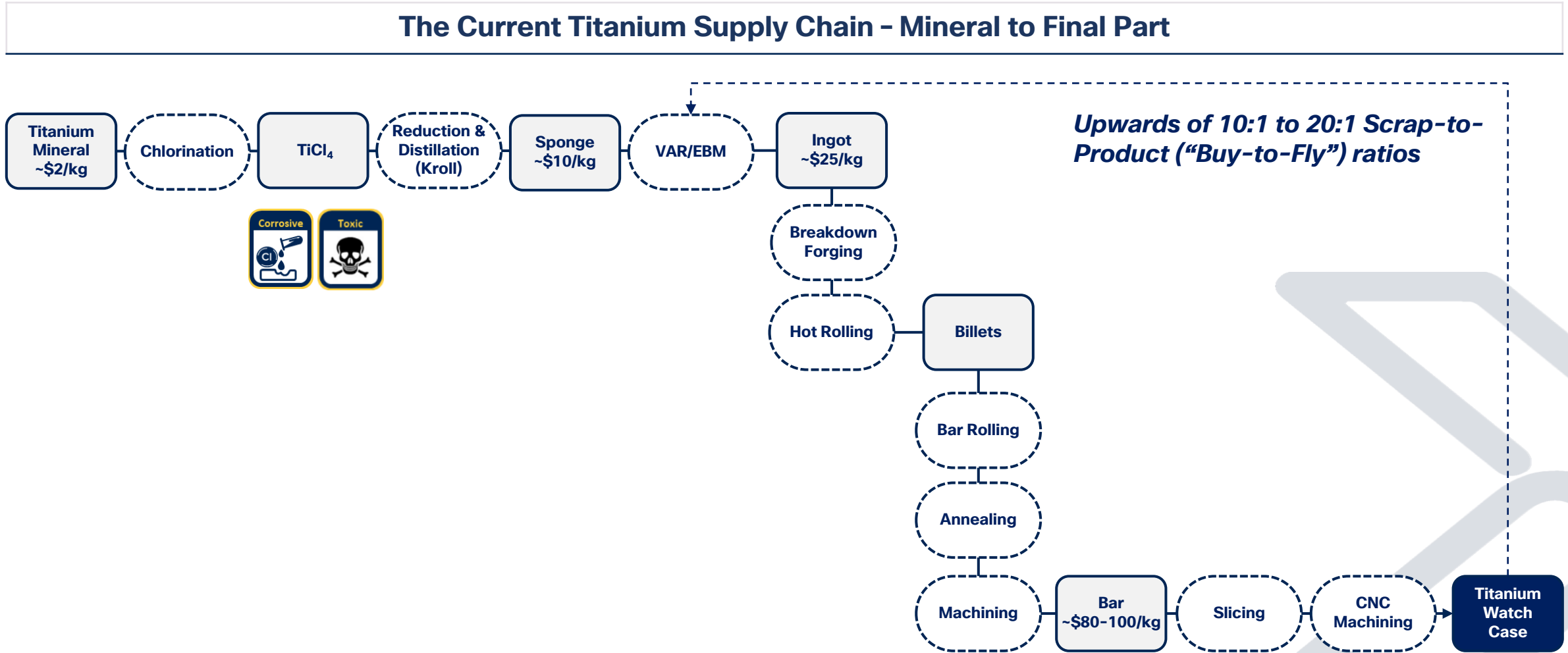
*Why do we focus on titanium?*

# The current global titanium supply chain has become +70% reliant on China & Russia



# Why do we focus on titanium?

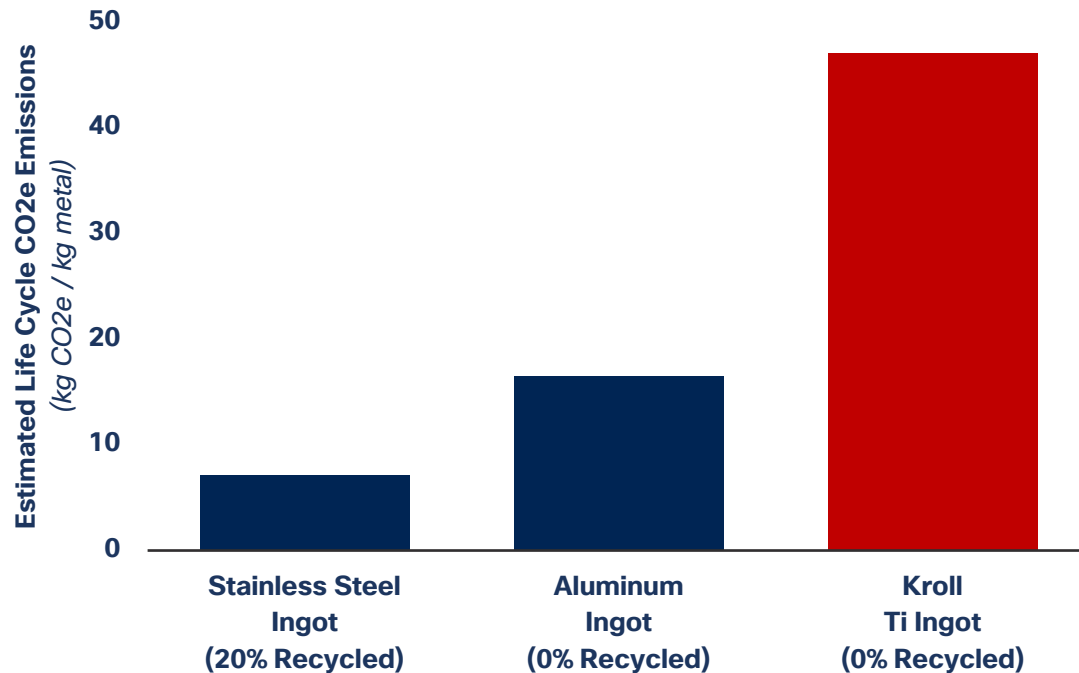
## The current titanium supply chain is complex, expensive, and generates large volumes of scrap



## Why do we focus on titanium?

# The current titanium supply is unsustainable, with high carbon emissions and cannot achieve full circularity

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



Current supply chain is non-circular and high waste

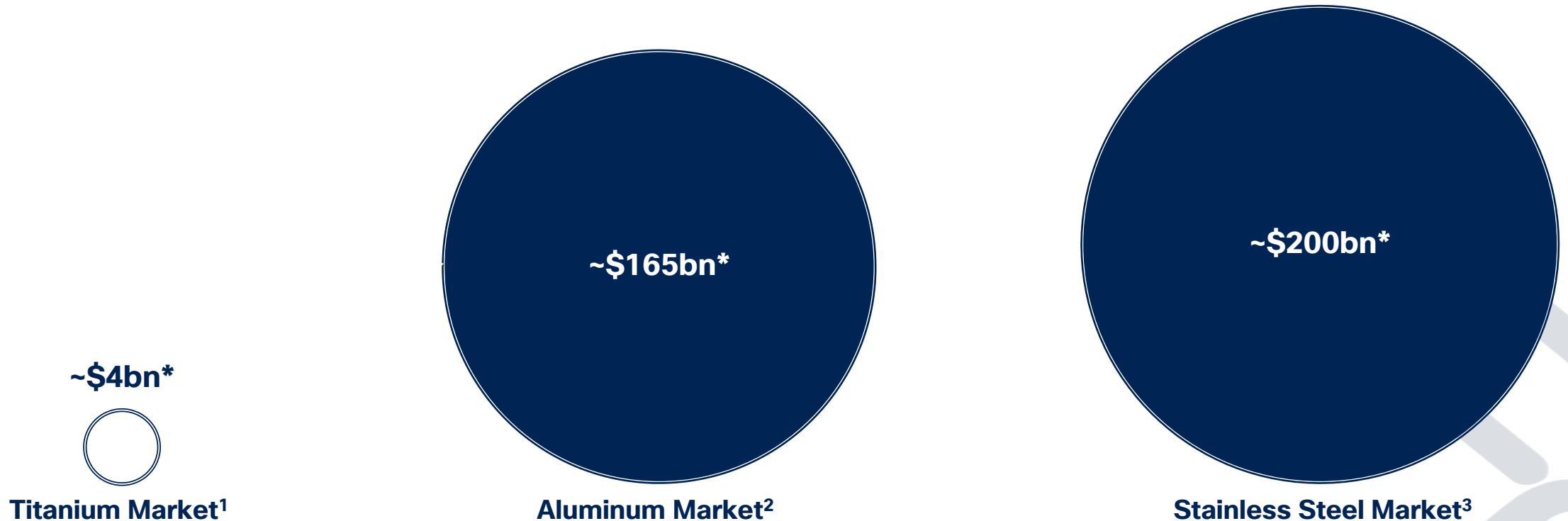


Source for Stainless Steel Ingot figures: [International Stainless Steel Forum](#)  
Source for Aluminum Ingot figures: [International Journal of Life Cycle Assessment](#)  
Source for Titanium Ingot figures: [Ecolnvent Database 3.8](#)



*Why do we focus on titanium?*

# Low-cost, sustainable titanium has a large-scale opportunity to disrupt lightweight structural materials markets



\* Estimated Global Market Summary in USD. TAM market sizes are built up using 2022 material pricing

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 award-winning titanium metal production can convert titanium minerals or scrap into high-performance titanium metal products**



ENERGY.GOV

Office of  
ENERGY EFFICIENCY &  
RENEWABLE ENERGY



*What is our solution?*

# Our technologies provide a low-cost, sustainable solution to the refining and forging of titanium metal

## Titanium Refining Technologies



### *High-performance titanium powders*

#### **Hydrogen Assisted Metallothermic Reduction (HAMR)\***

- Titanium deoxygenation technology; far more efficient than industry standard Kroll process
- A direct replacement to the high-cost Kroll and Ingot manufacturing process
- Titanium minerals or scrap can be manufactured directly into titanium metal powders and products

## Titanium 'Forging' Technologies



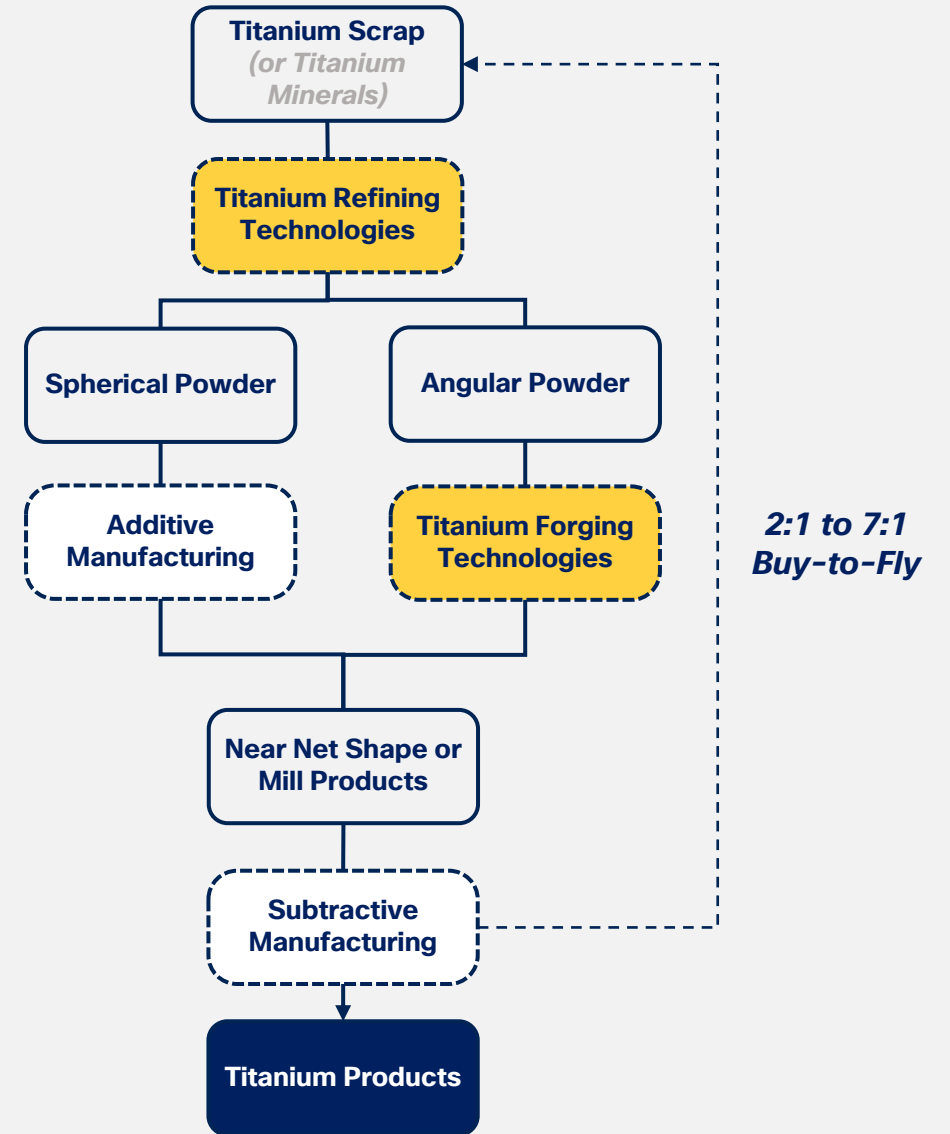
### *'Forged' near-net shape titanium products*

#### **Hydrogen Sintering & Phase Transformation (HSPT)\***

- Technology refines the microstructure of titanium to give it wrought-quality (forged) properties
- Solves the current high-cost and complex titanium manufacturing process
- Significant cost savings by reducing total part weight for subtractive manufacturing OEMs

*What is our solution?*

**Our technologies<sup>1</sup> disrupt the titanium supply chain to deliver a low-cost, sustainable solution, with no sacrifice on performance**



1. IperionX has exclusive rights over a suite of titanium metal technologies. Refer to ASX announcement dated December 8 2022 for further details.

*What is our solution?*

# Our technologies deliver high-performance products to our customers, providing significant cost and waste reductions

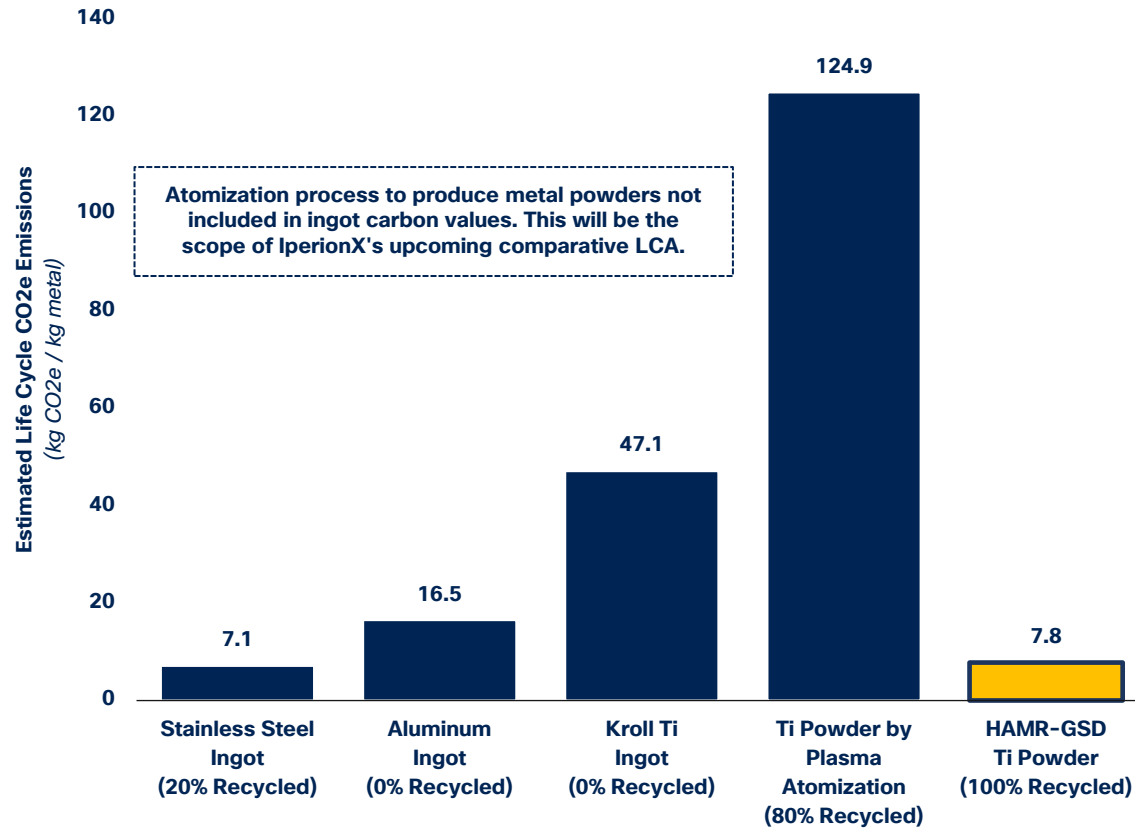
*IperionX near-net shape titanium products – for higher CNC productivity, lower cost, and improved sustainability*



\* IperionX has exclusive rights over HAMR, HSPT, and range of other award-winning titanium technologies.

# What is our solution?

## We can provide a sustainable, fully circular U.S. titanium supply chain with zero scope 1 & 2 carbon emissions



### First UL Validated 100% Recycled Titanium Metal Powders

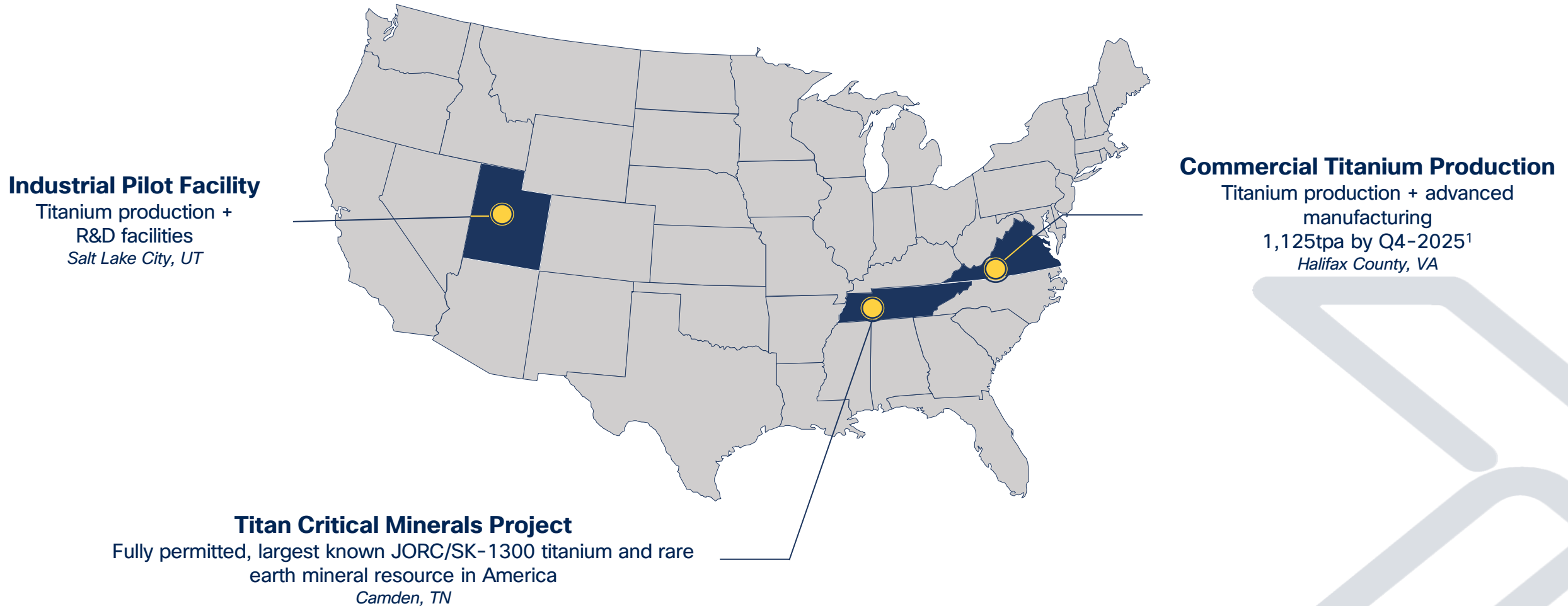


See ASX Announcement dated April 26 2023 for details  
 Atomization process to produce metal powders not included in ingot carbon values. This will be the scope of IperionX's upcoming comparative LCA.  
 Source for Stainless Steel ingot emissions, assuming 20% recycled content: [https://www.worldstainless.org/files/issf/non-image-files/PDF/ISSF\\_Stainless\\_Steel\\_and\\_CO2.pdf](https://www.worldstainless.org/files/issf/non-image-files/PDF/ISSF_Stainless_Steel_and_CO2.pdf)  
 Source for Aluminum ingot emissions: <https://link.springer.com/article/10.1007/s11367-015-1003-7>  
 Source for Kroll ingot emissions: Gao, F., Nie, Z., Yang, D., Sun, B., Liu, Y., Gong, X., & Wang, Z. (2018). Environmental impacts analysis of titanium sponge production using Kroll process in China. Journal of Cleaner Production, 174, 771-779. doi: <https://doi.org/10.1016/j.jclepro.2017.09.240>. and <https://ecoinvent.org/the-ecoinvent-database/data-releases/ecoinvent-3-8/>

See ASX Announcement dated June 15 2023 for details

*What are we doing today?*

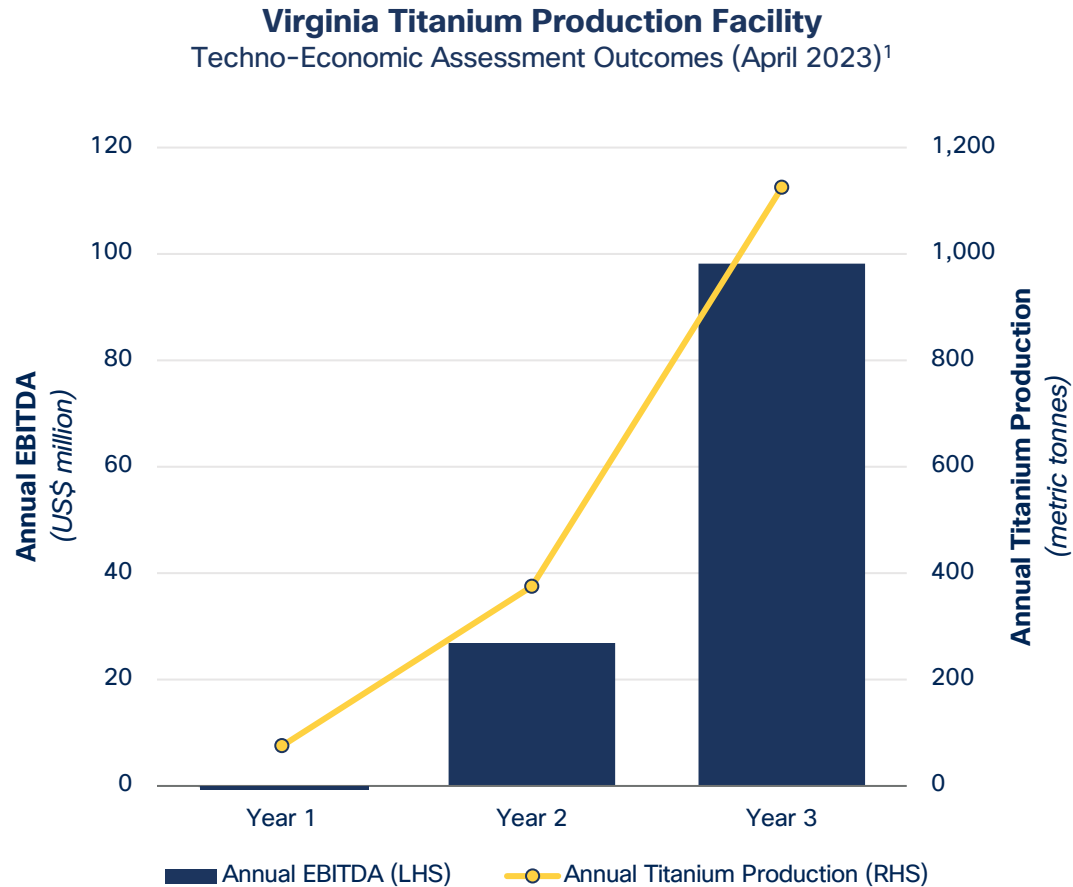
# We produce high-performance titanium at our industrial pilot facility in Utah, and plan to scale production in Virginia



1. See ASX Announcement dated April 27 2023 for details

Where are we going tomorrow?

# By scaling production at our Virginia facility, we begin to re-shore a fully integrated U.S. titanium supply chain



1. See ASX Announcement dated April 27 2023 for details. Based on key operating assumptions as outlined in announcement.






Who are our partners?

Our plans have already led to strong collaborations across industries, and we expect this to only grow as we scale

Current Industries<sup>1</sup>

<b>U.S. Defense</b> 	<b>Additive Manufacturing</b> 	<b>Luxury Goods</b> 	<b>Bikes &amp; Micromobility</b> 	<b>Automotive</b> 
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Target Industries

<b>Green Hydrogen</b> 	<b>Consumer Electronics</b> 	<b>Industrial Applications</b> 
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**RICHMONT**

**CANYON**

**LOCKHEED MARTIN**



**SLM SOLUTIONS**



1. Richmont: 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; Ford: See ASX Announcement dated June 13 2023 for details; Lockheed Martin: See ASX Announcement dated July 18 2023 for details; GKN Aerospace: See ASX announcement dated October 2

# Supporting Information



# High value, near-term catalysts

- Secure strategic partners for our titanium metal products**
  - Test powders and/or prototype parts with prospective customers
  - Secured customer & government validation
  - Secure additional customers across core industry sectors
  
- Scale up production of titanium powder and products**
  - Scale up of titanium pilot plant production
  - Secured Virginia site for Titanium Demonstration Facility (“TDF”)
  - Announce TDF+ (expansion to 1,000+tpa) CAPEX & OPEX
  - Large scale furnace hot test & powder production run
  - Complete final engineering for TDF
  - Commence equipment installation at TDF
  
- Progress Titan Project to be construction ready**
  - Definition of largest known titanium mineral resource in U.S.<sup>1</sup>
  - Scoping study defining highly economic, low-cost operation
  - Feasibility Study level metallurgical report completion
  - State Mine & NPDES permit
  - Feasibility Study, Critical Minerals sales contracts and FID

## Corporate Overview (NASDAQ / ASX Ticker Symbol: IPX)



<b>Common Shares / ADR's (1:10) Outstanding</b>	<b>194.7 million / 19.5 million</b>
<b>Last 10 Days - Avg. Daily Volume (ASX / NASDAQ)</b>	<b>A\$383k / US\$502k</b>
<b>Market Capitalization (2-Oct-2023)</b>	<b>~US\$186 million</b>
<b>Cash (30-June-2023)</b>	<b>~US\$12 million</b>
<b>Fidelity Management &amp; Research (FMR)</b>	<b>~10%</b>
<b>Fidelity International (FIL)</b>	<b>~9%</b>
<b>B Riley Financial</b>	<b>~5%</b>
<b>Insider Ownership</b>	<b>~30%</b>

1. JORC and SK-1300 code compliant

# Senior leadership team



## Anastasios "Taso" Arima

### Co-founder, MD & CEO

Successful founder of multiple billion-dollar 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, Chief Strategy Officer

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, previously CLO of start-up tech PE firm



## Marcela Castro Chief Accounting Officer

25+ years of financial leadership experience across multiple industries



## Dominic Allen Chief Commercial Officer

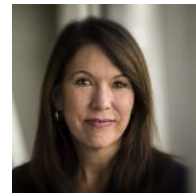
15+ years commercial experience across the metals and minerals sector

## Independent Board Members



## Lorraine Martin Audit Committee Member ESG Committee Member

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



## Beverly Wyse Audit Committee Member Rem. Committee Member ESG Committee Member

30+yrs senior aerospace exec. at 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 that can disrupt the metals sector, with our sights on stainless steel & aluminum

Metal & Global Market Size <sup>1</sup>		Consumer Metal Products	Automotive & Transportation	Construction Materials	Machinery, Equipment, & Electronics	Other
 <p><b>~\$200bn</b></p>	<p><b>Stainless Steel Market<sup>2</sup></b></p> <p>2021 global stainless steel melt shop production: 56Mtpa</p>	<p><b>~\$76bn</b></p> <hr/> <p>21.1Mtpa</p>	<p><b>~\$27bn</b></p> <hr/> <p>7.7Mtpa</p>	<p><b>~\$25bn</b></p> <hr/> <p>6.9Mtpa</p>	<p><b>~\$16bn</b></p> <hr/> <p>4.4Mtpa</p>	<p><b>~\$58bn</b></p> <hr/> <p>16.2Mtpa</p>
	<p><b>Aluminum Market<sup>3</sup></b></p> <p>2021 global aluminum demand: 67Mtpa</p>	<p><b>~\$38bn</b></p> <hr/> <p>15.4Mtpa</p>	<p><b>~\$41bn</b></p> <hr/> <p>15.4Mtpa</p>	<p><b>~\$41bn</b></p> <hr/> <p>16.8Mtpa</p>	<p><b>~\$38bn</b></p> <hr/> <p>15.4Mtpa</p>	<p><b>~\$10bn</b></p> <hr/> <p>4Mtpa</p>

\* 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.

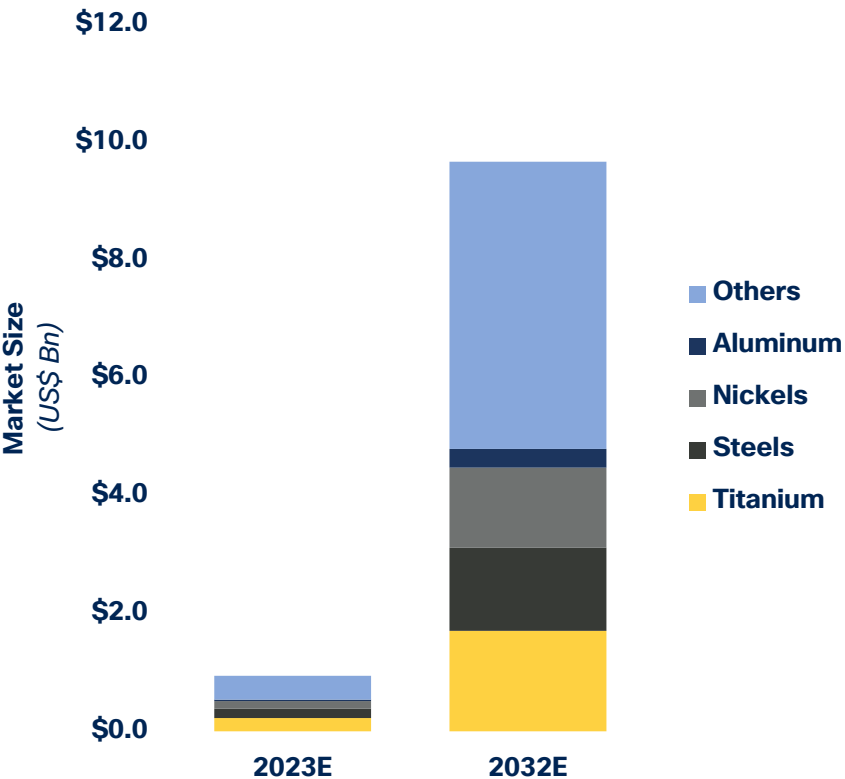
1. Sources: Roskill, Argus Metals. 2019 titanium melt products production of ~283kt at Q4-2022 Rotterdam Ti64 pricing of ~\$16/kg. Note: Titanium market size uses 2019 volumes as base year, due to the sustained impact on aerospace demand (as the primary driver of the titanium metal market) since COVID-19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

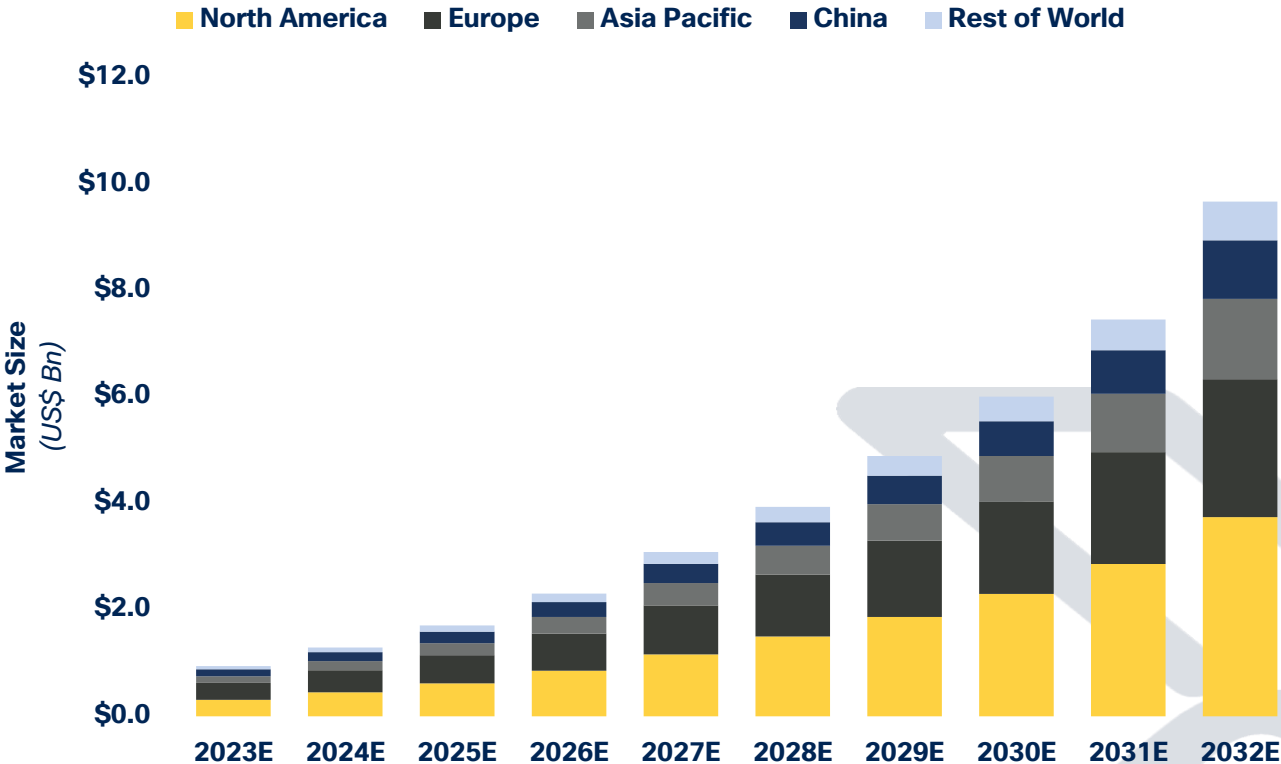
3. Sources: International Stainless Steel Forum, MEPS, 2021 global stainless steel melt shop production of ~56Mt at Q4-2022 304 Coil pricing of ~\$3.6/kg.

# We are leveraged to the growth of the Additive Manufacturing industry - we are the titanium 'ink' for 3D printers

Forecasted Global Metal AM Market by Metal



Forecasted Global Metal AM Market by Region



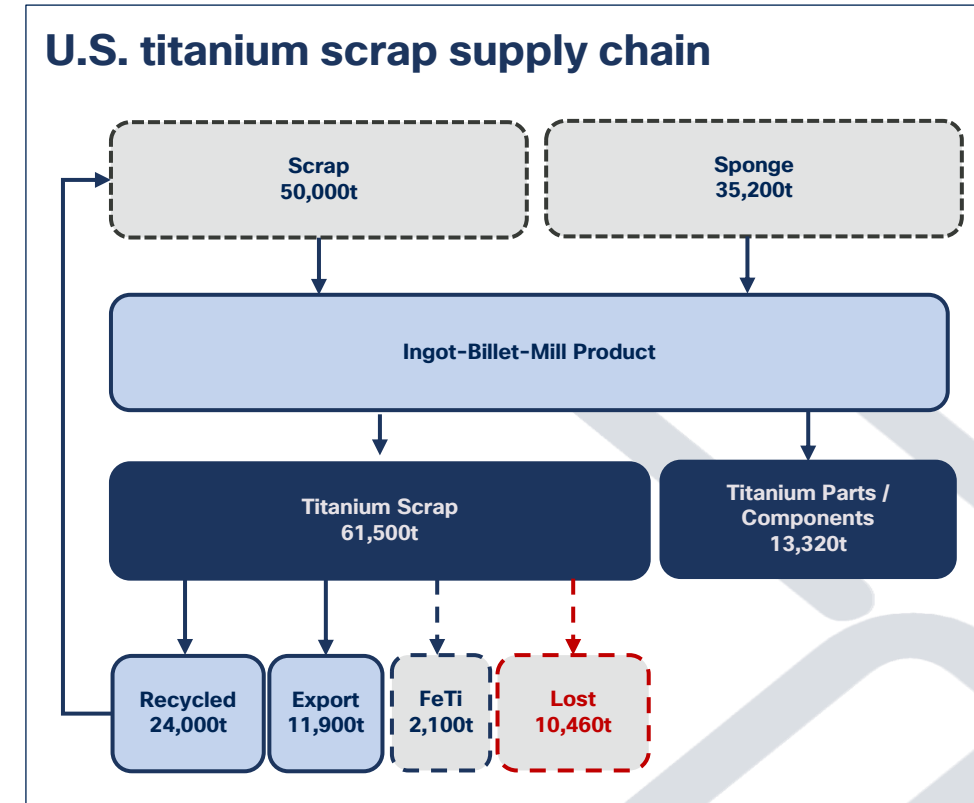
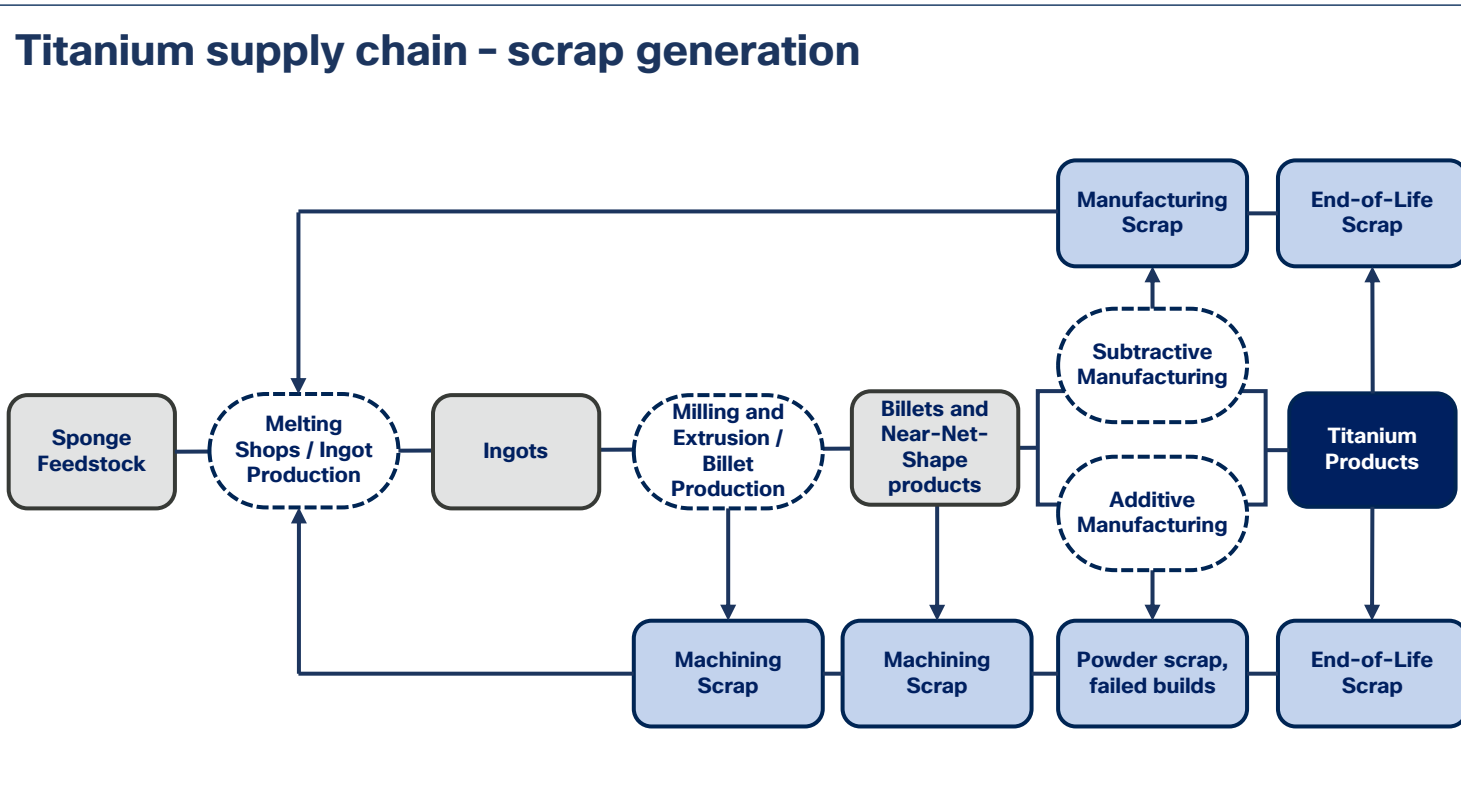
Source: SmarTech Analysis.

# We can offer unique titanium alloys that were not commercially available for customers

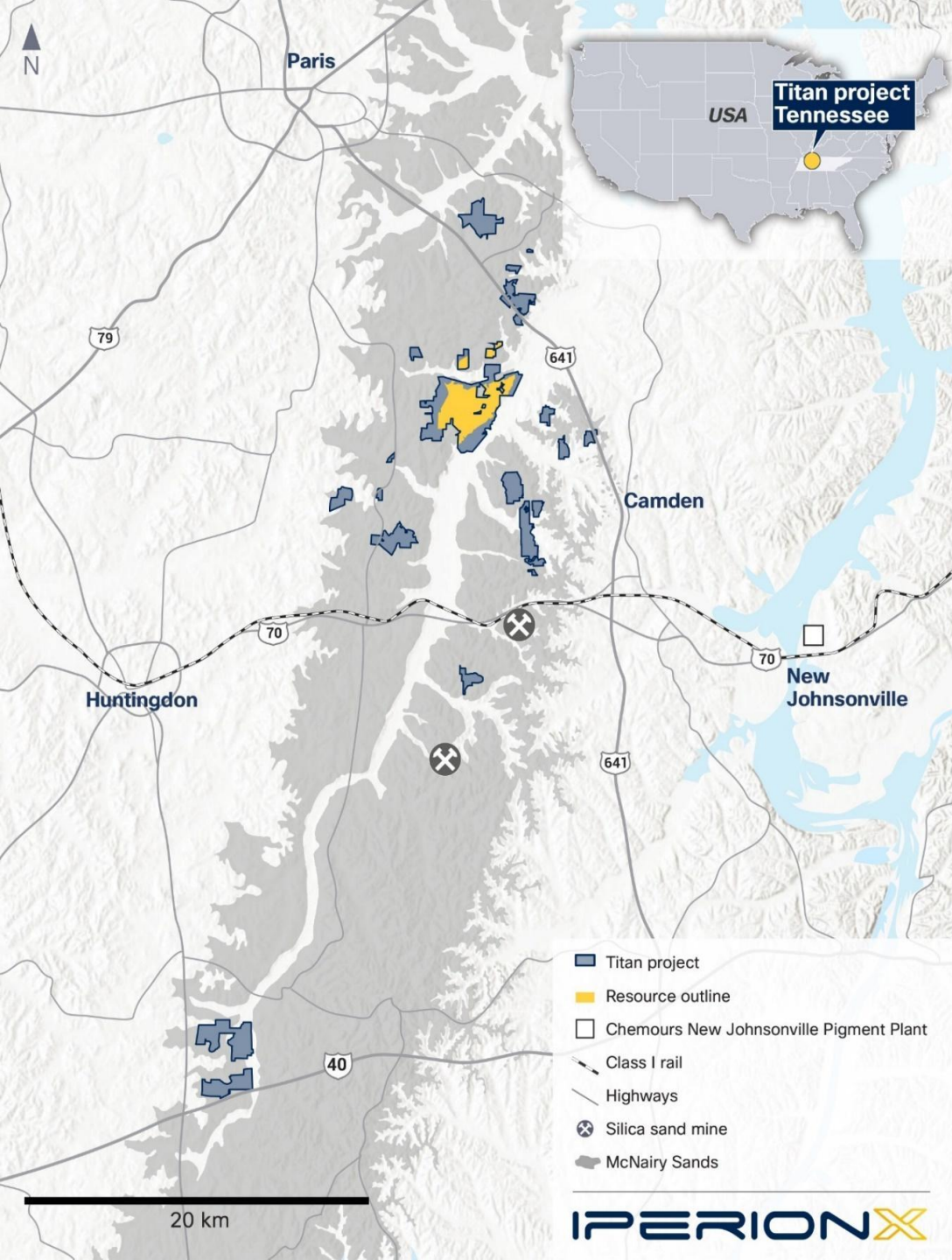
Alloy	Composition	Current Applications	YS (MPa)	UTS (MPa)	Elongation (%)	E Modulus (GPa)
Aluminum 6061	99% Al - <1% Fe - <1% Si	Broad / Bike Frames	276	310	12 -17	69
Stainless Steel 316L	65% Fe - 17% Cr - 12% Ni - 2.5% Mo - 2% Mn - 1% Si	Broad / Springs	205	515	60	193
IperionX Ti 6-4	6% Al - 4% V	Aerospace & Medical	1,100	1,160	15	114
Ti-3-2.5	3% Al - 2.5% V	Bicycle Tubes	483	620	12	95 - 103
Ti-5-5-5-3	5% Al - 5% V - 5% Mo - 3% Cr - 0.4% Fe	Aircraft Landing Gear	1,288	1,364	6	112
Ti 10-2-3	10% V - 2% Fe - 3% Al	Aircraft Landing Gear	1,198	1,274	7	110
Ti-Beta-C	3% Al - 8% V - 6% Cr - 4% Mo - 4% Zr	Springs	1,120	1,240	8	99 -124
Ti-1-8-5	1% Al - 8% V - 5% Fe	Armor Plate	1,233	1,263	15	114

# We take titanium scrap from the supply chain and recycle it into high-performance titanium metal powders and products

- Significant quantities of titanium scrap is lost, or unusable, in the current U.S. supply chain
- IperionX technologies<sup>1</sup> can sustainably recycle this scrap to produce high-performance titanium products







# The Titan Project is a future multi-decade source of U.S. titanium, with significant rare earth product

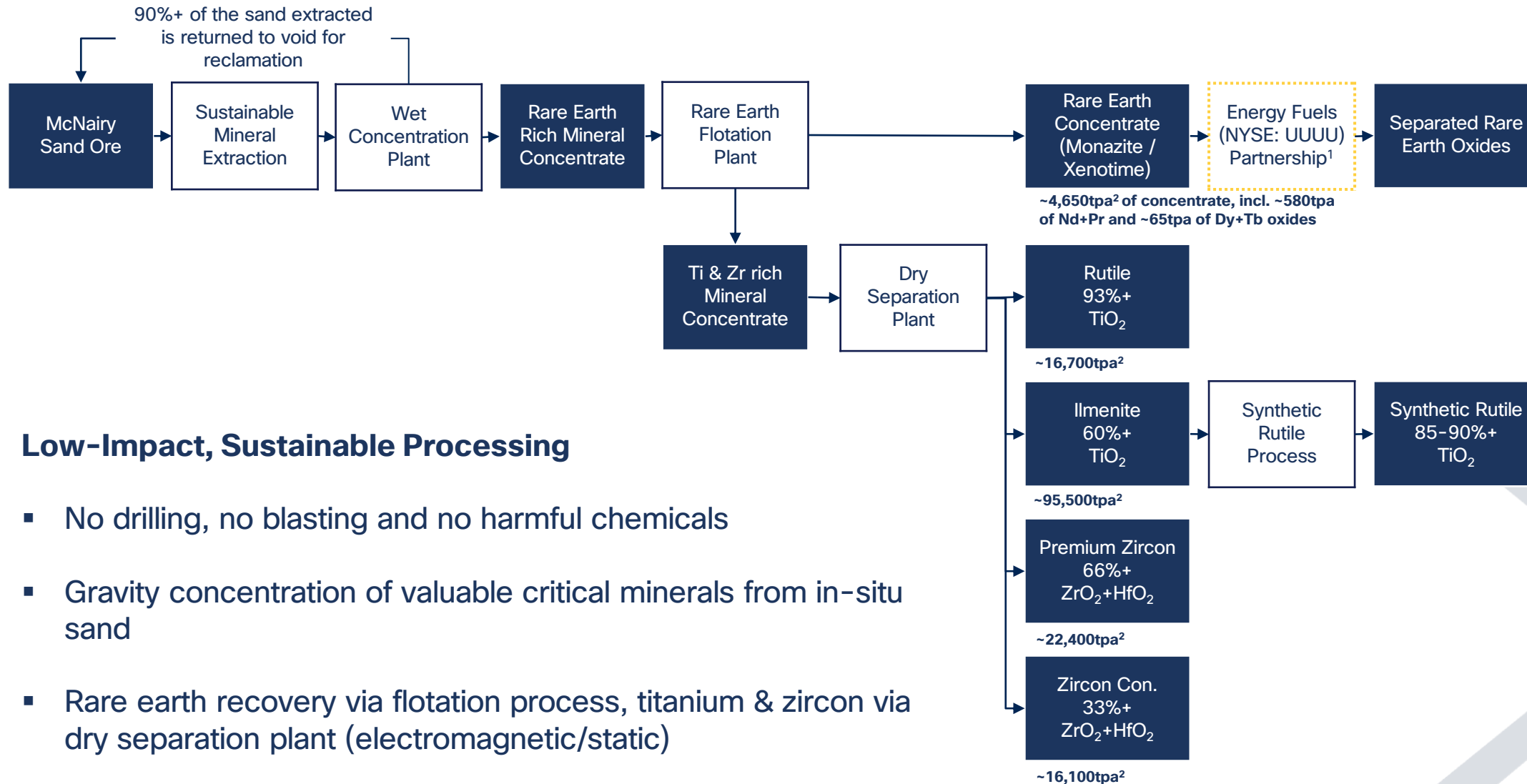
- Geological formation targeted is the McNairy Sand, a massive formation extending North-South through West Tennessee
- Projected 25-year initial operational life covers only a small portion of existing landholdings
- Potential for additional resource discovery and conversion within land controlled by IperionX
- Significant potential for additional land acquisition could add to resource base
- 2022 Scoping Study showed potential operation generating US\$117 million of average annual EBITDA, with a US\$692 million NPV and 40% IRR<sup>1</sup>

JORC Mineral Resource <sup>2</sup>					Total Critical Mineral Assemblage			
Titan Project	Cut-off	Tonnes	TCM %	TCM	Zircon	Rutile	Ilmenite	REE
	(TCM %)	(Mt)	(%)	(Mt)	(%)	(%)	(%)	(%)
Indicated	0.4	241	2.2	5.3	11.3	9.3	39.7	2.1
Inferred	0.4	190	2.2	4.2	11.7	9.7	41.2	2.2
<b>Total Mineral Resource</b>	<b>0.4</b>	<b>431</b>	<b>2.2</b>	<b>9.5</b>	<b>11.5</b>	<b>9.5</b>	<b>40.3</b>	<b>2.1</b>
<b>Including High Grade Core</b>	<b>2.0</b>	<b>195</b>	<b>3.7</b>	<b>7.1</b>	<b>12.1</b>	<b>9.9</b>	<b>42</b>	<b>2.3</b>

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



## Low-Impact, Sustainable Processing

- 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)

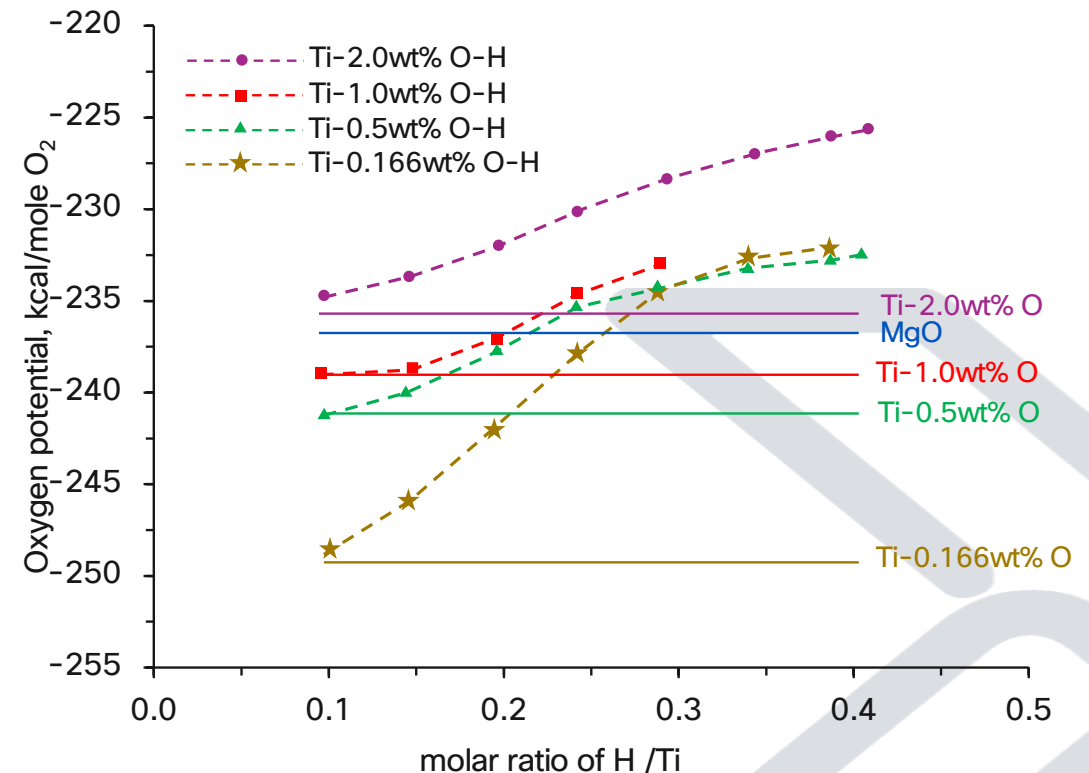
1. See ASX announcements dated April 22<sup>nd</sup>, 2021, and update announcement dated March 8<sup>th</sup>, 2022 for details  
 2. LOM annual average production based on the results of 2022 Scoping Study. See ASX Announcement dated June 30, 2022 for detail

# 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<sub>2</sub>”) 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<sub>2</sub> in a carbothermal reaction to create TiCl<sub>4</sub>, 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<sub>2</sub> can be reduced by solid magnesium under a hydrogen atmosphere because Hydrogen destabilizes the Ti-O bonds - Hydrogen Assisted Metallothermic 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’s 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°



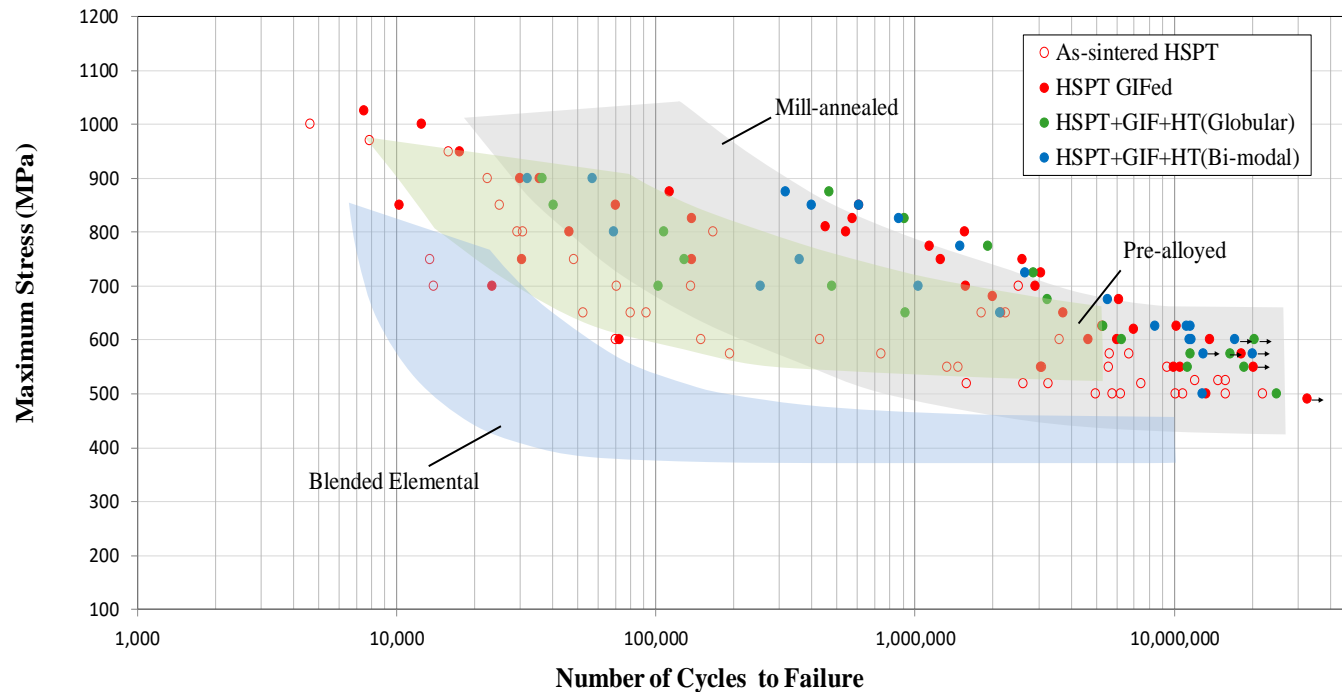
\* IperionX holds an exclusive option to acquire the HAMR technology and other associated technologies

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>

# HSPT - Forged quality titanium, without the forging process

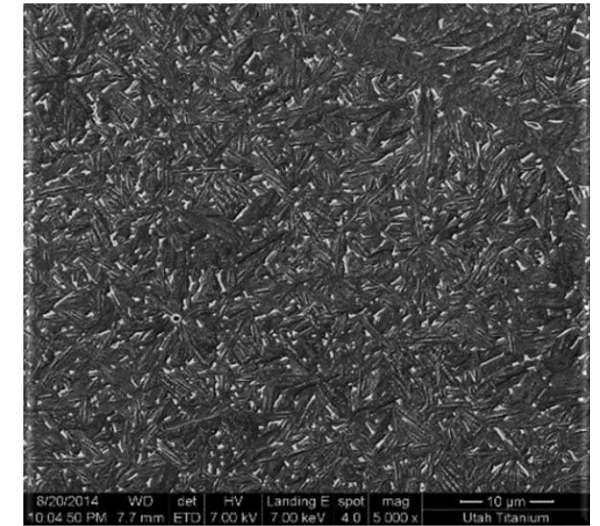
- The proprietary Hydrogen Sintering and Phase Transformation (“HSPT”) technology is a powder metallurgy pathway to produce forged quality titanium near-net shape parts and components
- HSPT delivers mechanical properties that can compete with wrought processes, but avoids the high-cost and high-emissions associated with them
- The process accepts angular powders produced via HAMR as feedstock
- **HSPT technology combined with HAMR provides a clear pathway to low-cost and sustainable production of high-quality titanium parts for the most challenging applications**



HSPT = Hydrogen sintering and Phase Transformation; GIF = Gaseous Isostatic Forging; HT = Heat Treatment

IperionX holds exclusive rights over the HSPT technology.

HSPT as-sintered microstructure



Vacuum as-sintered microstructure

