

The background of the slide is a high-quality image of space. It shows the curved horizon of the Earth from a high altitude, with the blue atmosphere and white clouds visible. A bright orange and yellow rocket launch is seen on the left side, with a white plume of smoke trailing upwards. The rest of the background is a deep black space filled with numerous small white stars and some faint blue nebulae.

IPERIONX

Sustainable, Low-Cost Critical Materials for America

ThinkEquity Presentation

March 2022

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 announcement that relates to Exploration Results and Mineral Resources is extracted from IperionX’s ASX Announcement dated October 6, 2021 (“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 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

The PERIONX logo is displayed in a white, stylized, sans-serif font. The letters are bold and modern, with the 'X' having a unique, angular design. The background of the slide features a dark, blue-toned image of a wind farm at night, with several wind turbines visible against a dark sky. A large, yellow, stylized graphic element, resembling a double 'X' or a series of nested chevrons, is positioned on the right side of the slide.

PERIONX

Our mission is to be the leading developer of low-carbon, environmentally sustainable and low-cost critical materials for the U.S.

Beginning with Titanium.

About IperionX

- Re-shoring critical material supply chains to the U.S. with a focus on **technology, integration and sustainability**

Technology Developing proprietary, breakthrough metal processing technologies

Integration Control over the largest untapped titanium mineral resource, also rich in rare earth elements, in the U.S.

Sustainability Full cycle sustainability is a core tenet of our existence

- Led by a seasoned management team with **proven company-building experience** in U.S. materials supply chains
- Founded in 2020, publicly Listed on the ASX (ASX:IPX), **and plans to pursue a listing in the U.S. in Q2 2022**

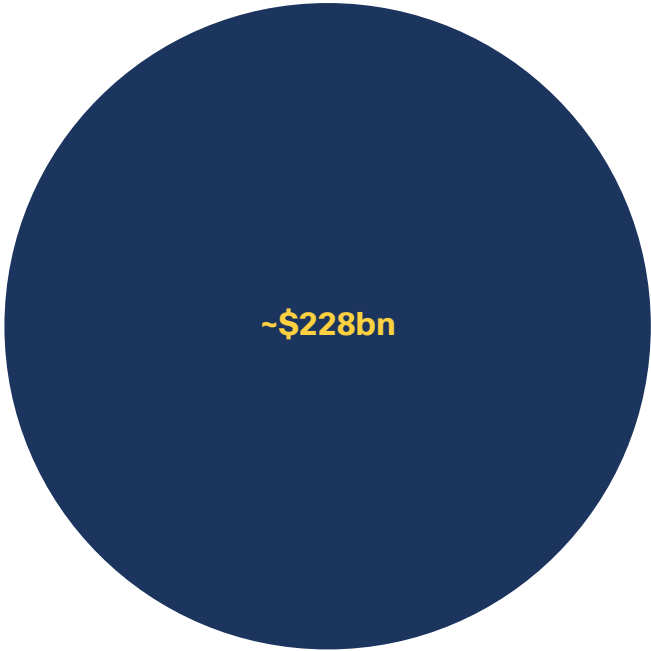


Titanium is a superior metal, but the high cost of titanium products have reduced it to a fraction of the lightweight metal market dominated by stainless steel & aluminum



Titanium Market

2019 global melted product production: 283kt
Global average price for melted product: ~\$15,100/t



Aluminum Market

2021 global aluminum demand: 67Mt
March 2022 LME Spot price for aluminum: ~\$3,400/t



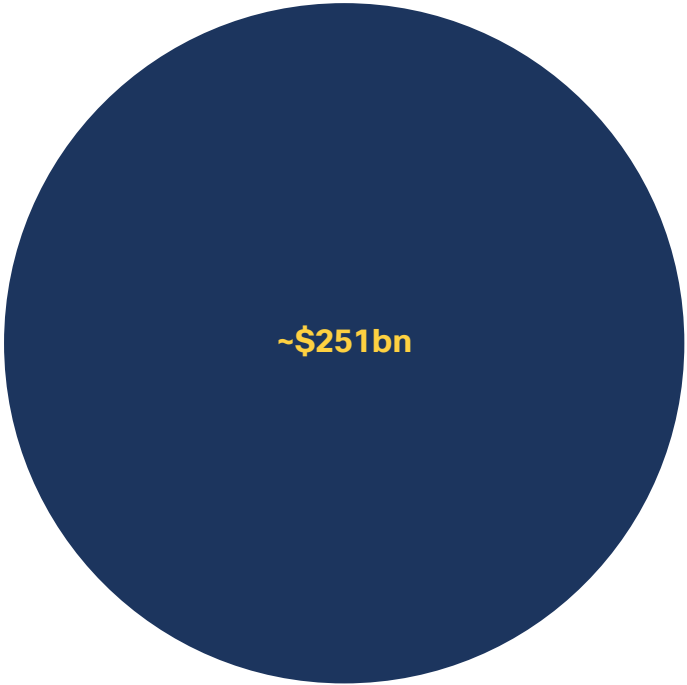
Lower strength-to-weight ratio than titanium



Lower melting point than titanium



Less corrosion resistant than titanium



Stainless Steel Market

2021 global stainless steel melt shop production: 56Mt
March 2022 Spot price for 304 2B stainless steel: ~\$4,450/t



1.8x heavier than titanium, with weaker strength-to-weight ratio



Lower melting point than titanium

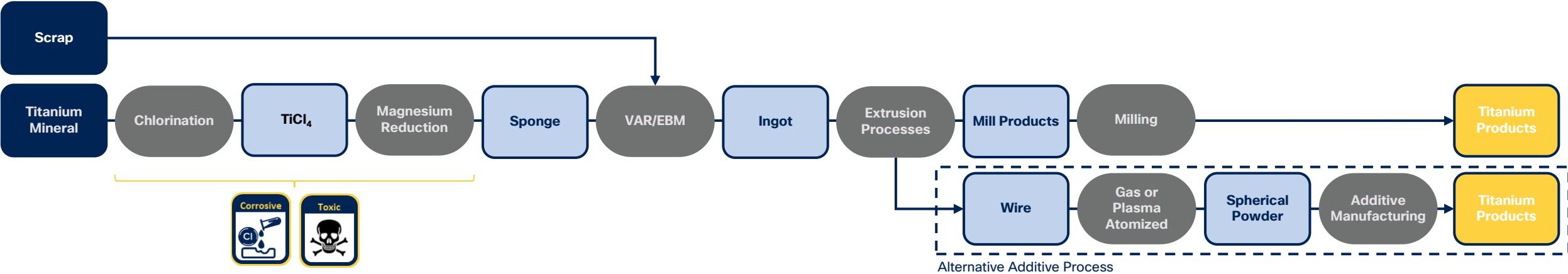


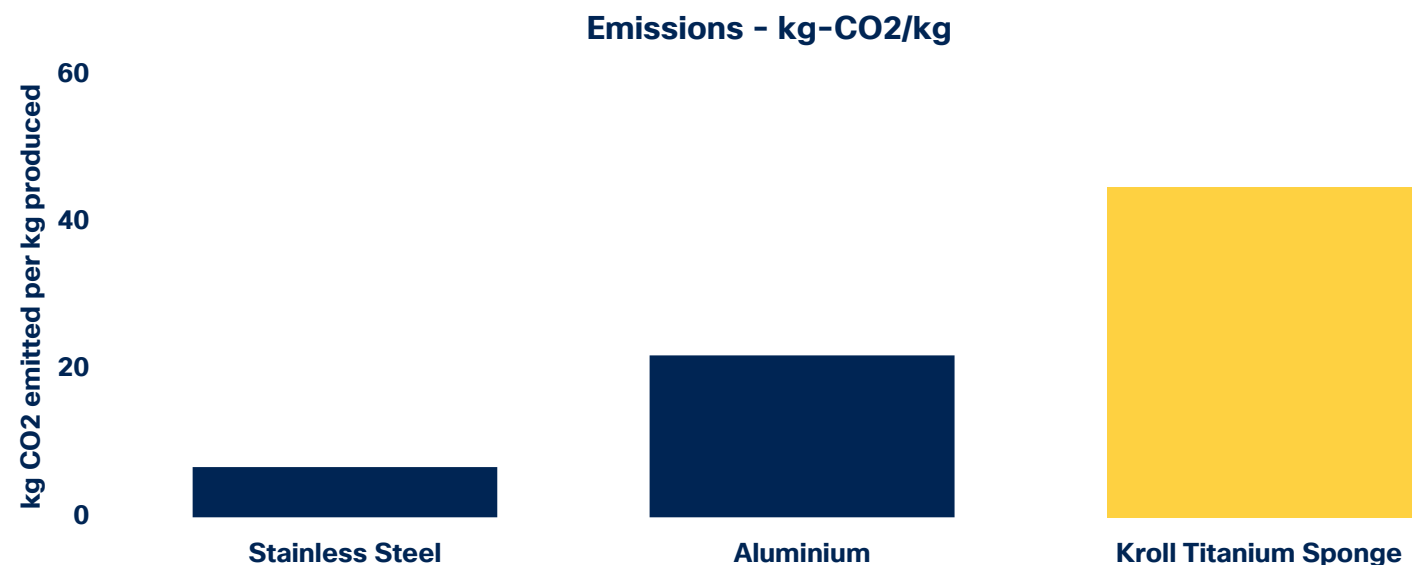
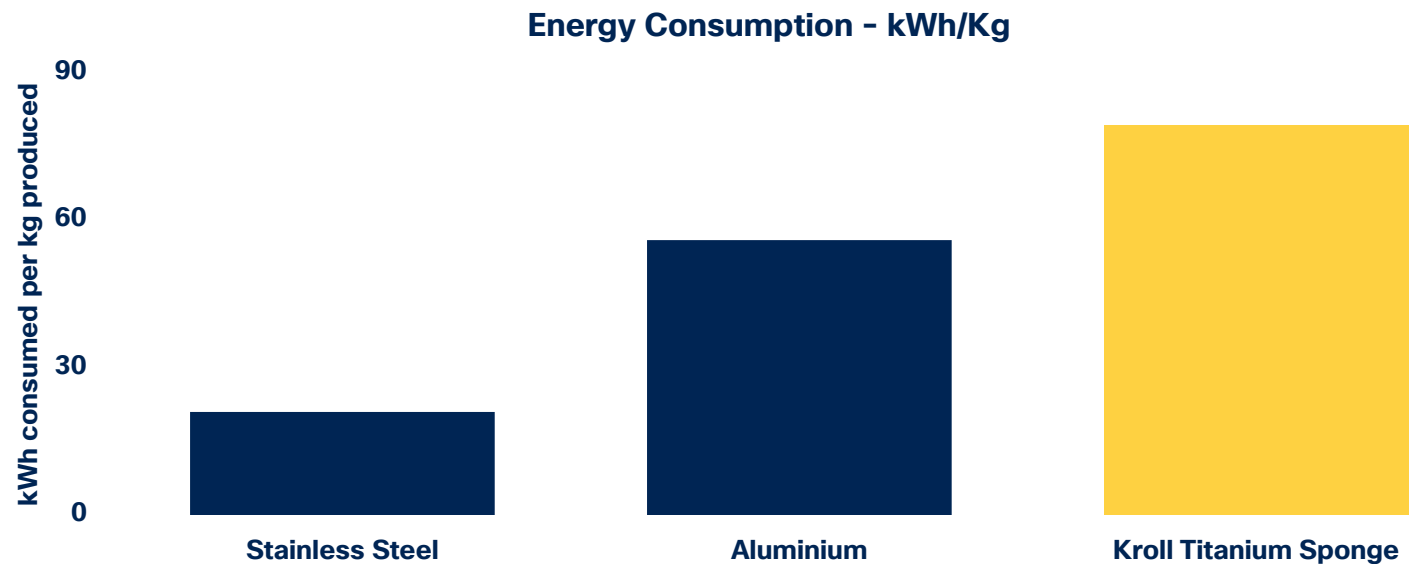
Less corrosion resistant than titanium

Sources: Roskill, International Stainless Steel Forum, Jefferies Equity Research, LME, Metal Miner

The complexity and cost of the titanium supply chain has led to the high relative cost of titanium products vs. competitor metals

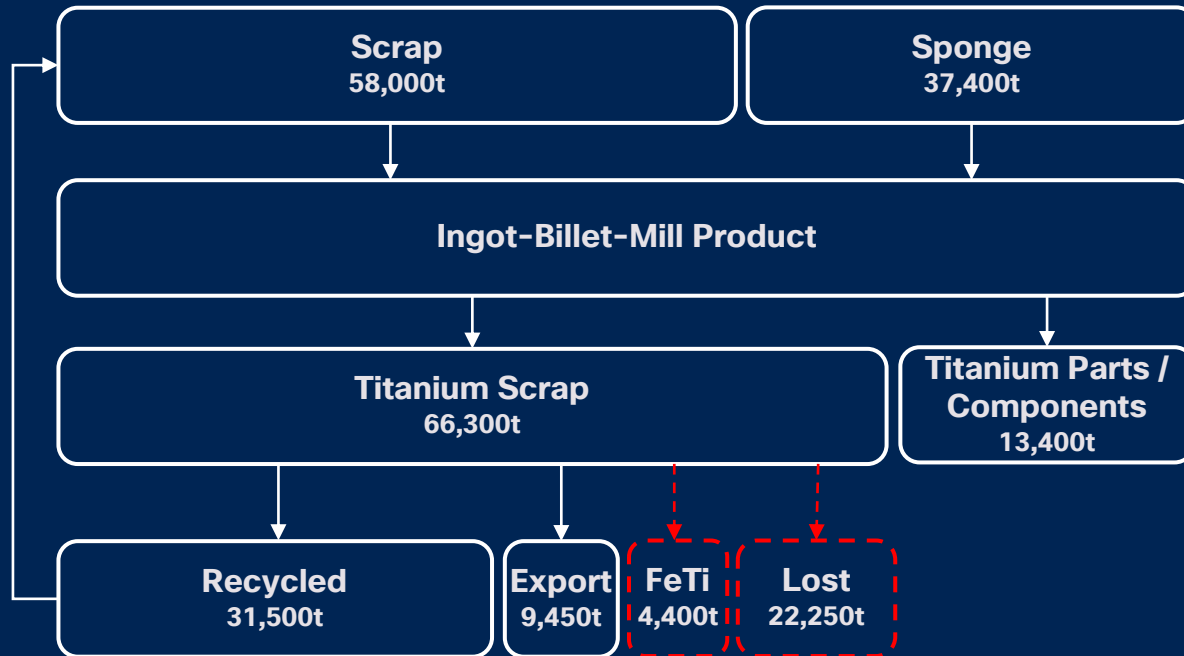
Traditional Titanium Subtractive & Additive Supply Chains





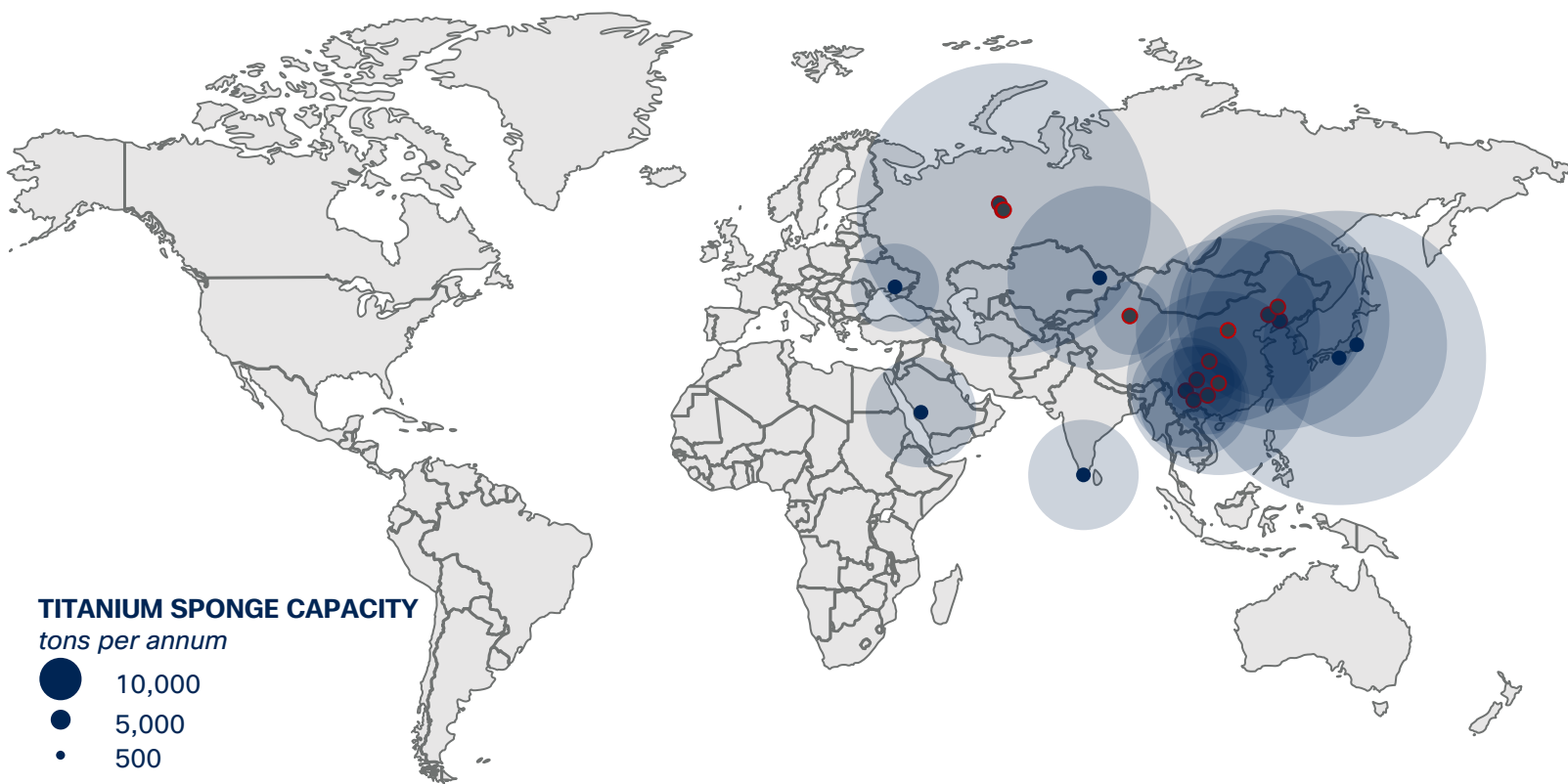
The titanium supply chain is also **environmentally unsustainable** under the existing Kroll Process

The titanium supply chain is **not 100% recyclable** with the current industry process



TITANIUM RECYCLING CHALLENGES

- Titanium scrap has a ~67% recirculation rate in the U.S.
- Titanium scrap readily absorbs oxygen and therefore remelting requires a mix of new Ti sponge (from the Kroll process) and recycled titanium to maintain homogeneity
- ~21kt is not recycled back into the system and a further ~4kt is sold into Ferro-Ti - i.e., not truly circular
- This scrap does not include 10-20% of Titanium sponge production which is sold as “off-grade” into the Ferrotitanium market
- **IperionX’s HAMR technologies provide a pathway to 100% recycled titanium that could create an environmentally sustainable closed loop supply chain**



The U.S. is **100% import reliant** for titanium sponge feedstocks, with **China and Russia** controlling more than 70% of global capacity



PERIONX

Solving the titanium supply chain
by combining

**Technology, Integration &
Sustainability.**

Technology, using
breakthrough technology
developed by Dr. Zak
Fang from the University
of Utah for processing of
titanium scrap or
minerals



Dr Fang's breakthrough technology is the solution that has the potential to **overhaul the titanium supply chain**

Hydrogen assisted metallothermic reduction ("HAMR") / deoxygenation of titanium

- Dr. Fang, world renowned metallurgist, Professor of Powder Metallurgy at the University of Utah, current ARPA-E DOE Program Manager
- Scientific discovery that hydrogen destabilizes the Ti-O bonds making it thermodynamically possible to reduce Ti-O with Mg
- US\$10m invested by ARPA-E and others to develop the technology from lab scale to pilot scale from 2011

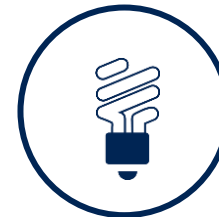
Lower Cost Refining of scrap or ores in purified titanium metal

Superior Powder Product allowing for use directly into additive manufacturing or into the current supply chain via powder metallurgy

Closed Loop Recyclable allowing for complete recyclability



Closed Loop Recyclable



Energy Efficient



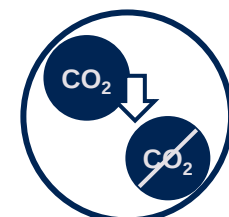
Sustainable



Powder Product



Low Cost



Zero Carbon Potential

HAMR has been **proven as a technology**, with scale up funding support provided by Department of Energy's ARPA-E program

Lab Scale Development



Pilot Scale Plant



IperionX is now taking this technology through **scale-up and into full commercialization** over the coming years



Pilot Facility

Q2 2022

- 100% scrap feedstock
- ~1.5 tpa capacity
- Debottlenecking and process improvements expected to increase capacity to ~6.5 tpa by the end of Q2 2022
- Capacity limited by installed, low temperature furnace for HAMR



Demonstration Facility

Q4 2022

- 100% scrap feedstock
- Plans to build a larger facility with initial designed capacity of ~125 tpa by the end of 2022
- Capacity achieved primarily through increased size of low-temp furnace for HAMR
- Capacity can be lifted by increasing size or number of low-temp furnaces in a modular expansion approach



Commercial Facility

- 100% scrap feedstock, or titanium mineral
- Scoping stage of evaluating size, location, and timing of first commercial facility
- Aim of becoming a 10,000+ tpa producer within 5 years

Integration of this technology with feedstocks that are sustainably sourced whether scrap titanium or titanium minerals



100% recycled scrap sources

- HAMR technology allows for the use of 100% recycled scrap, no other current process for titanium allows for 100% recycled titanium scrap
- IperionX actively working with key industry participants to source scrap that was previously destined for non titanium markets or landfill
- Opportunities available to source scrap with “unique” origins for use in various consumer facing products



Titan Project, the largest titanium resource in the U.S.

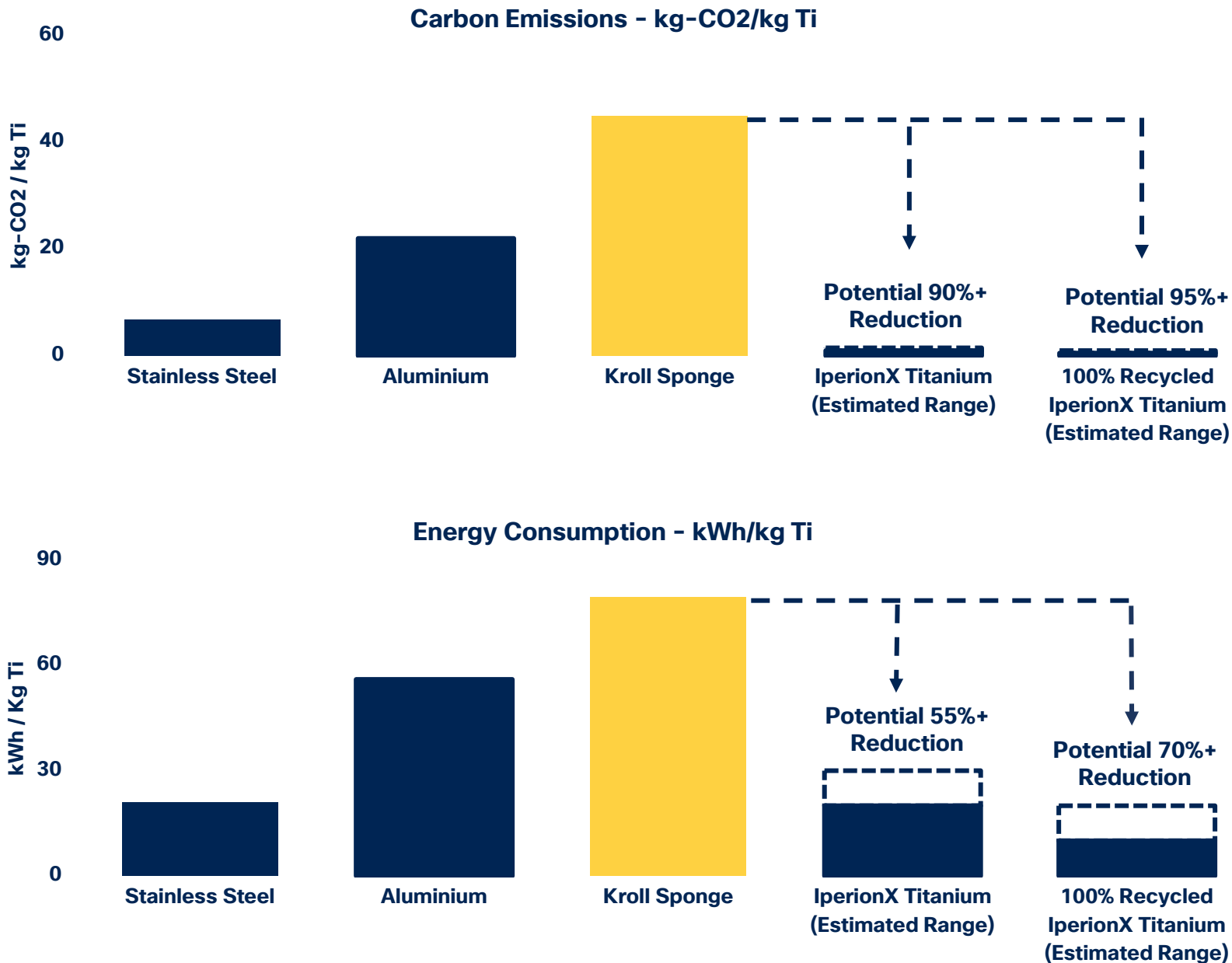
- IperionX has control over the Titan Project located in west Tennessee, the largest source of titanium minerals in the U.S.
- Conventional mineral sand resource which can be developed sustainably
- Also rich in Rare Earth minerals including, Neodymium, Praseodymium, Dysprosium & Terbium; key for automotive, renewable and defense industries

Sustainability, incorporating leading ESG best practices to ensure we respect our people, our communities and our planet, to leave a lasting positive legacy

IperionX has partnered with **PGS Consults** to develop and execute its **ESG strategy**



- **Business Conduct & Ethics**
- **Health & Safety:** *Community & employees*
- **Environmental Management:** *GHG emissions, air quality, water, energy, waste, biodiversity*
- **Community & Labor Relations:** *Employment & diversity, equity, inclusion*
- **End State Vision:** *Rehabilitation, tailings management & closure planning*



At commercial scale, IperionX's technology is a **potential step change reduction** to the carbon emissions and costs to produce Kroll titanium

Emissions and energy consumption shown represent the Company's estimates for producing titanium powder from TiO₂ feedstock using the HAMR process at 10,000tpa. Does not include upstream CO₂ emissions estimates.

IperionX is conducting a detailed lifecycle analysis (LCA) on the HAMR process to produce spherical titanium powders from TiO₂ feedstock.

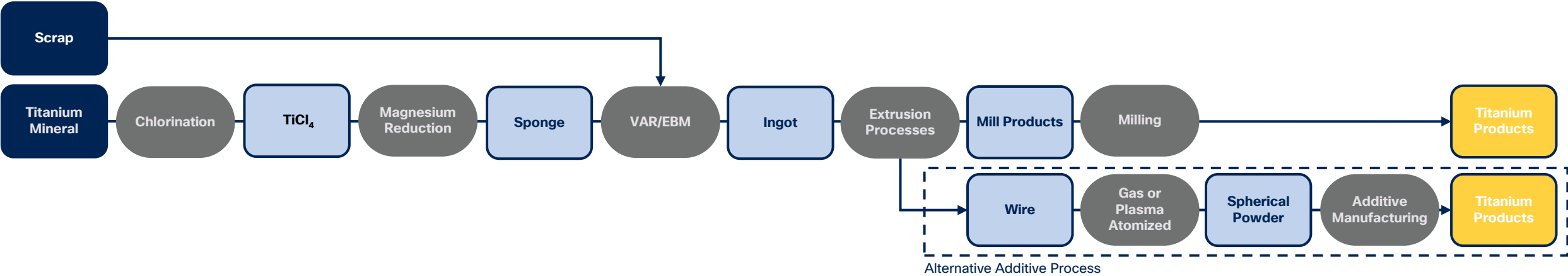
Source: Dr. Fang's ARPA-E funded HAMR-Research; NREL estimates for lifecycle solar PV GHG emissions; UK Government GHG Conversion Factors for Company Reporting; US DOE Alternative Fuels Data Center

Using this approach, IperionX has the potential to sustainably overhaul the titanium supply chain, **reducing complexity and cost**

IPERIONX Titanium Supply Chain - Potentially capable of producing titanium parts for 50%+ lower cost



Traditional Titanium Subtractive & Additive Supply Chains



The Vision:
An Age of Titanium.

The Prize:
\$480 billion market.
Stainless Steel & Aluminum



Automotive

*Consumer
Electronics*



Architectural



Industrial

*Consumer
Appliances*



Luxury Goods





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