

PENSANA Plc

**Financing to unlock one of the world's
largest undeveloped rare earth projects**

**UK Government backing to establish
magnet metal supply chain in the UK**

LSE:PRE

**Chairman's AGM Address
December 2023**



Corporate Summary

LSE standard list (**LSE: PRE**)

285 million shares on issue

Market Capitalization ~£75 million

Supportive Major Shareholders (~50%)

Angolan Sovereign Wealth Fund FSDEA (26%)

(Invested US\$32 million Mar 2020 – Apr 2023)

M&G Investments (12%)

(Invested US\$22 million Jan 2022 – Apr 2023)

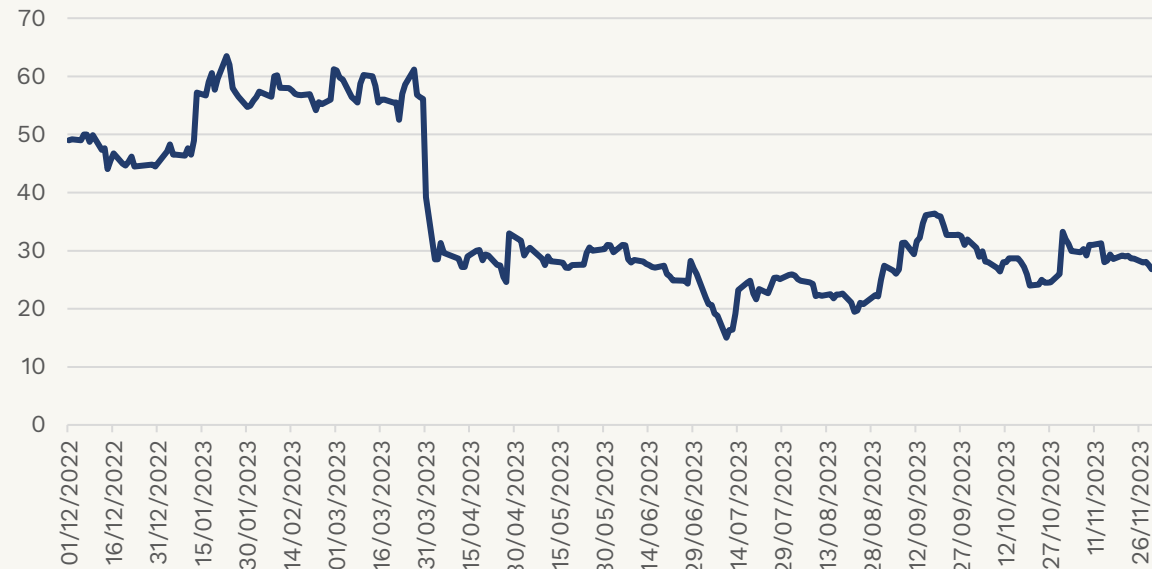
Selection Capital (Chairman PCA) (5%)

(Invested US\$750,000 Mar 2020 and subsequently US\$292,000 on-market purchases)

Other Institutional investors (5%)

Management and Related parties (3%)

12 Month Share Price

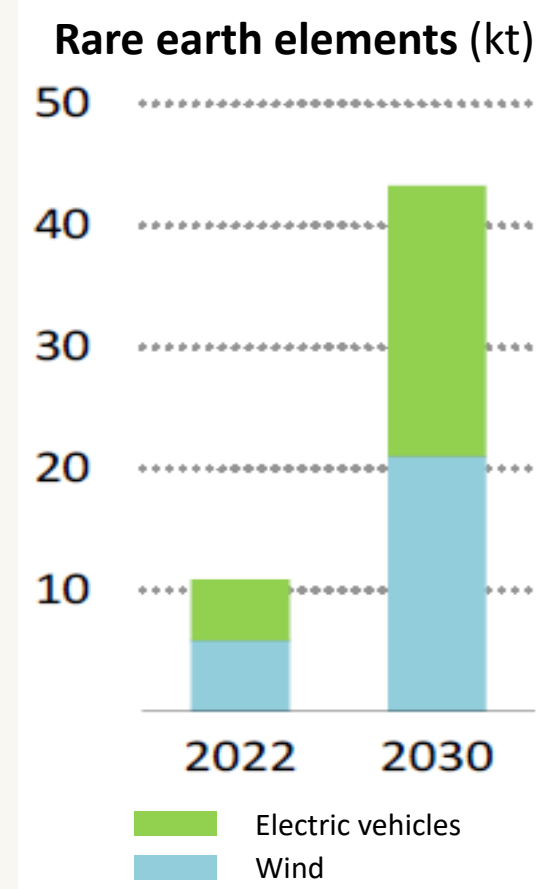


IEA World Energy Outlook 2023: Electric Vehicles to increase 10-fold by 2030 amid *'unstoppable'* net zero shift

The transition to clean energy is happening worldwide and it's unstoppable. Electric vehicles are now expected to have a global market share of 38% of new sales by 2030.

Rapid uptake in EVs in recent years with projections now showing more than 220 million passenger cars on the road in 2030, a 20% increase in the 2020 outlook.







Long lead times for mines and the associated infrastructure mean that scaling up supplies takes time, raising the risk of supply bottlenecks.



*Demand for rare earths expected to increase
by almost 400% by 2030 under IEA APS*

Investment Opportunity

Rare opportunity to gain direct exposure to the biggest energy transition in history

-  The electrification of motive power through EVs and Wind Turbines will generate a demand growth for magnet metal NdPr of 7.5% CAGR over the next decade.
-  Pensana owns one of the world's largest undeveloped rare earth mines, one of only three with a JORC Reserve >100,000 tonnes of NdPr.
-  Global significant producer ~5% of world production of NdPr at full capacity.
-  Upfront capital cost of US\$200 million for the fully permitted mine and processing facilities is amongst the lowest amongst its peers.
-  FSDEA, ABSA and African multilateral agencies working towards the US\$200 million capital requirement.
-  Fully permitted US\$250 million downstream separation facility at the Saltend Chemicals Park in the Humber Freeport. Financing underway.

One of the Largest Undeveloped Rare Earth Deposits Globally

Excellent rail, hydro and port infrastructure

JORC RESERVE 30 million tonnes 2.55% TREO containing 166,000 tonnes NdPr oxide for initial 20-year mine-life.

The near surface, deeply weathered orebody, has an average mine depth of less than 30 metres.

High average mine grade of 3.73% TREO and 0.79% NdPr over the first five years.

Access to affordable hydroelectric power and direct access to the Lobito Port via the Benguela rail line.



[Pensana RNS Ore-Reserve Statement- -23Sept2022-1.pdf](#)

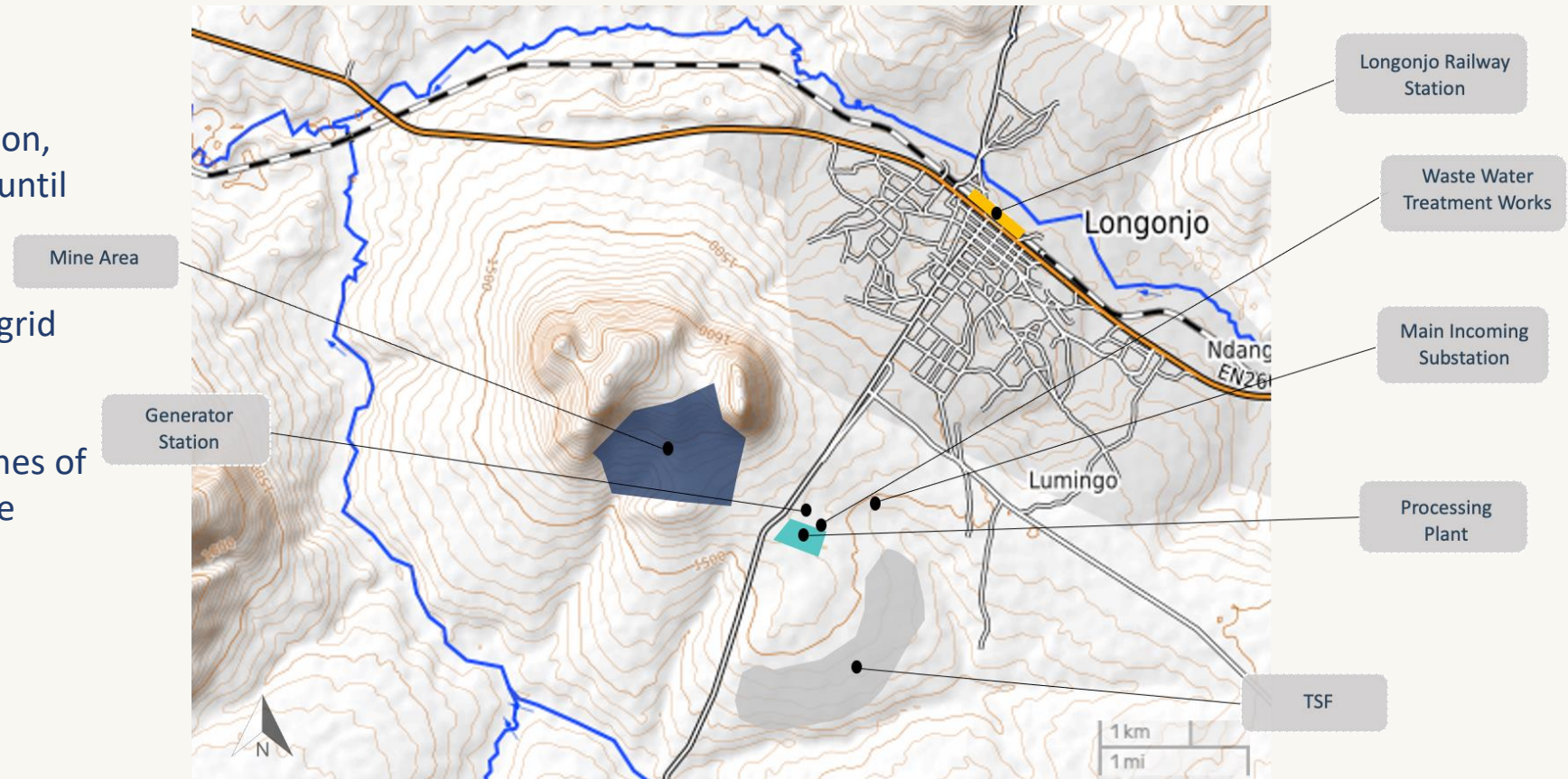
State-of-the-art Mine and Processing Facility

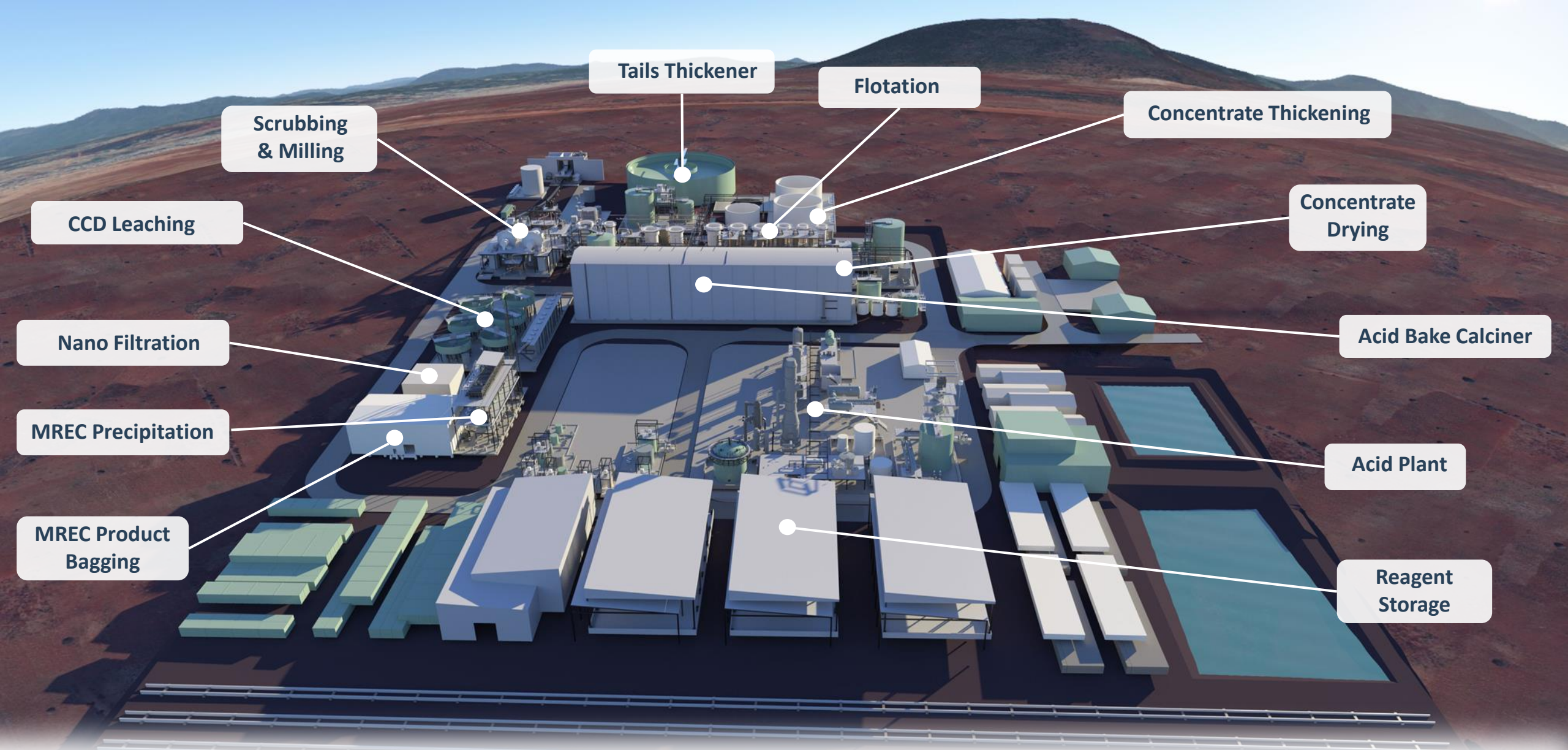
Upfront capital cost lowest amongst peers

Upfront capital cost of US\$200 million, with circa US\$105 million deferred until year three.

Related mainly to plant expansion, grid connection and rail spur.

It will produce annually 40,000 tonnes of highly marketable, radionuclide-free mixed rare earth carbonate (MREC) containing 4,400 tonnes of NdPr.





Tails Thickener

Flotation

Concentrate Thickening

Scrubbing
& Milling

Concentrate
Drying

CCD Leaching

Acid Bake Calciner

Nano Filtration

MREC Precipitation

Acid Plant

MREC Product
Bagging

Reagent
Storage

✓ Modular Manufacture

✓ On-site Assembly

✓ Extensively Pilot-Tested

✓ High Quality Vendors

✓ Hydro & Solar Powered

✓ Low Scope 2 Emissions

✓ Low Impact Footprint

PENSANA Plc

Growing Mining Jurisdiction Attracting Global Investment

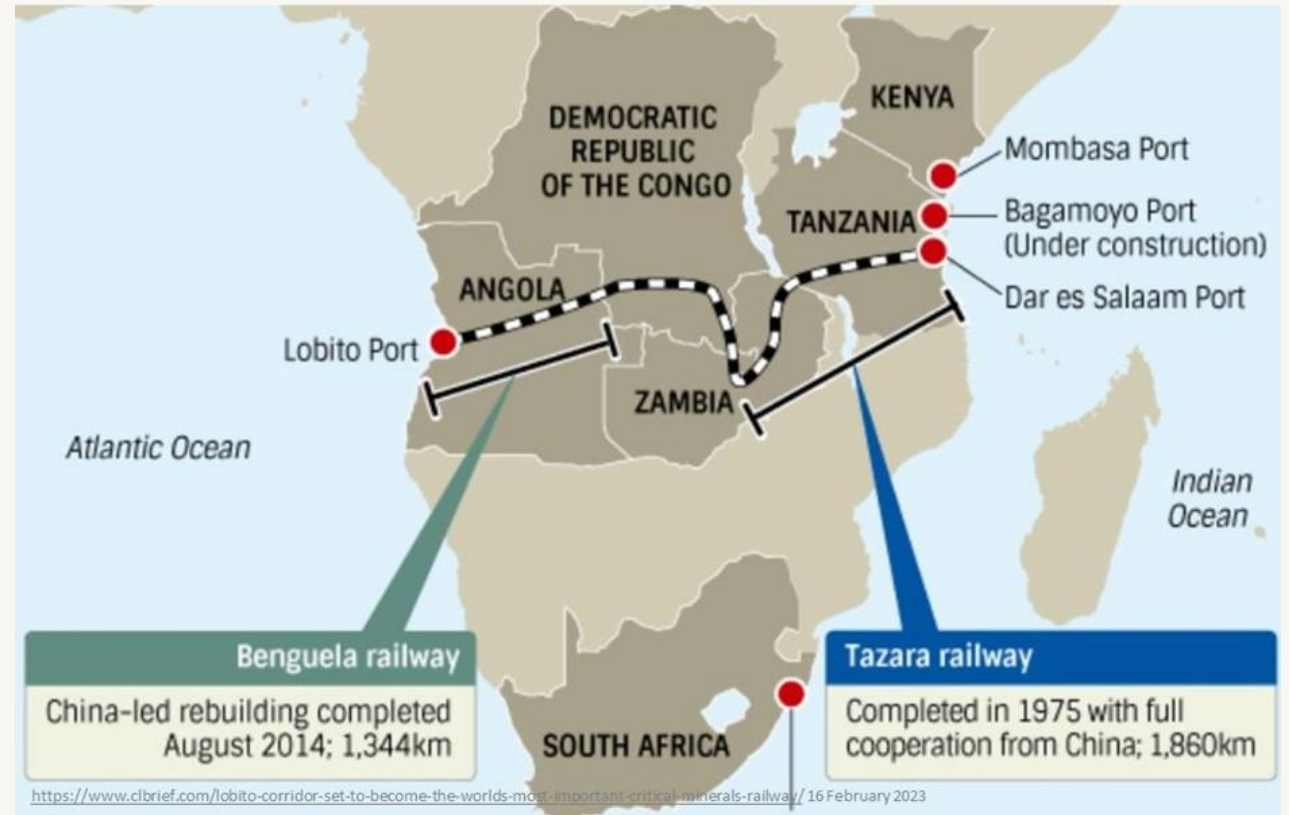
Angola has an untapped critical minerals endowment, exceptional rail, hydro and port infrastructure and a highly supportive Government.

Ivanhoe Founder Robert Friedland *"We thank the government of Angola for welcoming Ivanhoe Mines and entrusting us to explore their vast mineral endowment. Our goal is to make Angola a globally significant producer of strategic minerals that our planet so desperately needs, for many generations to come."*

Anglo American CEO Mark Cutifani *"I was impressed with the strategic vision that the Minister has for Angola, and what he wants to do with the Mining Sector."*

De Beers CEO Bruce Cleaver highlighted the *"..stable and attractive investment environment."*

Pensana CEO Tim George *"..the Lobito Corridor will have a very positive impact on the transport logistics during construction and on the reagent and product transport during operations."*



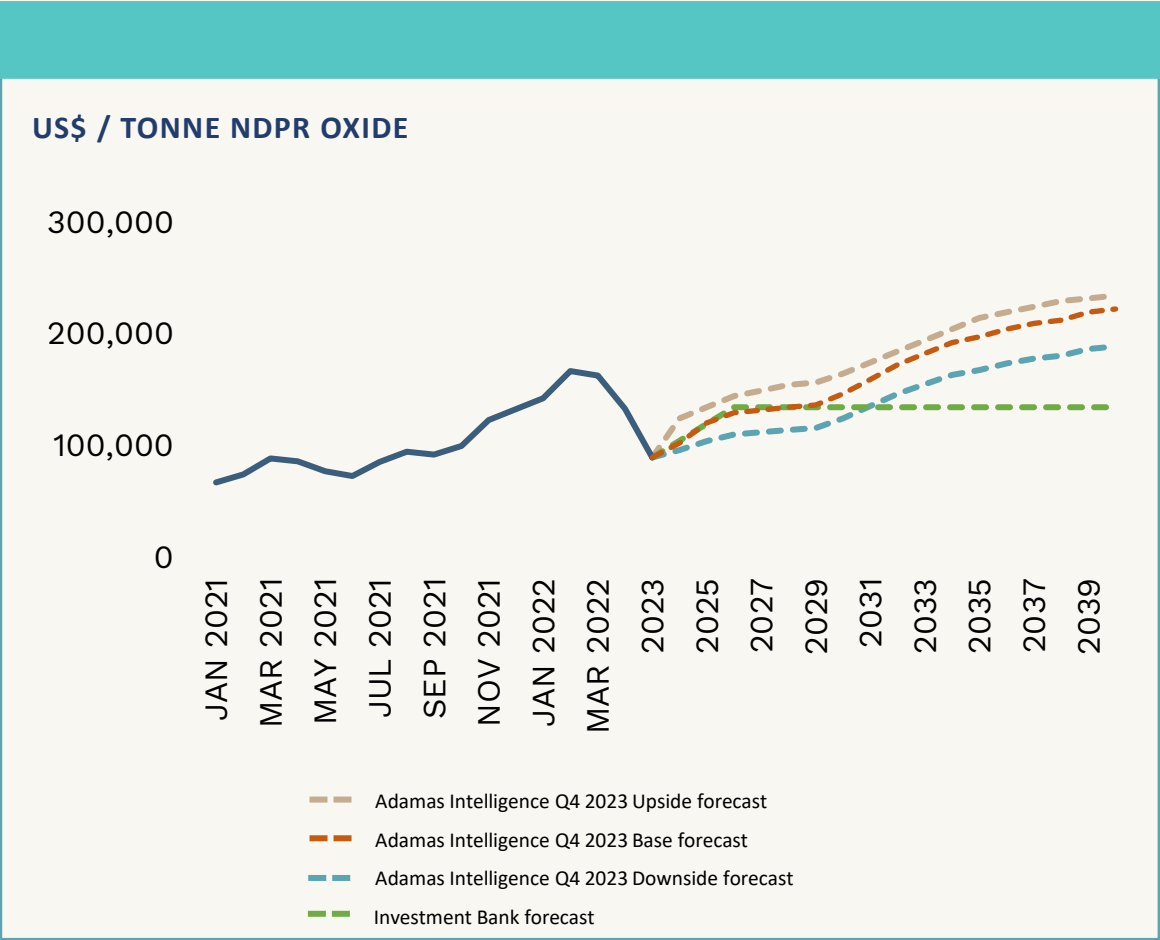
The US\$550 million Lobito Corridor is anticipated to become one of Africa's most important rail transport systems.

Longonjo - Compelling Economics

Low upfront Capex with strong cashflow highly leveraged to the NdPr price

Management Valuation and Financial estimates based on NdPr price forecasts by Adamas Intelligence and Investment Bank

	Adamas Intelligence Base Case ¹	Investment Bank Forecast
NPV @ 8%	US\$ 1,116 million	US\$ 603 million
IRR	34%	29%
Payback	4 Years	4 Years
Revenue	Stage 1: US\$ 227m Stage 2: US\$ 437m	Stage 1: US\$ 217m Stage 2: US\$ 371m
EBITDA	Stage 1: US\$ 126m Stage 2: US\$ 313m	Stage 1: US\$ 124m Stage 2: US\$ 263m
Capex	Stage 1: US\$ 200m Stage 2: US\$ 105m	Stage 1: US\$ 200m Stage 2: US\$ 105m



1. Adamas Intelligence Base Case Rare Earth Pricing Outlook (Q4 2023)

Highly Experienced Project Delivery Team

Proven design and delivery track record of modular process plants across Africa



MCC is a leading project management team with a track record of delivering projects across Africa including Angola.



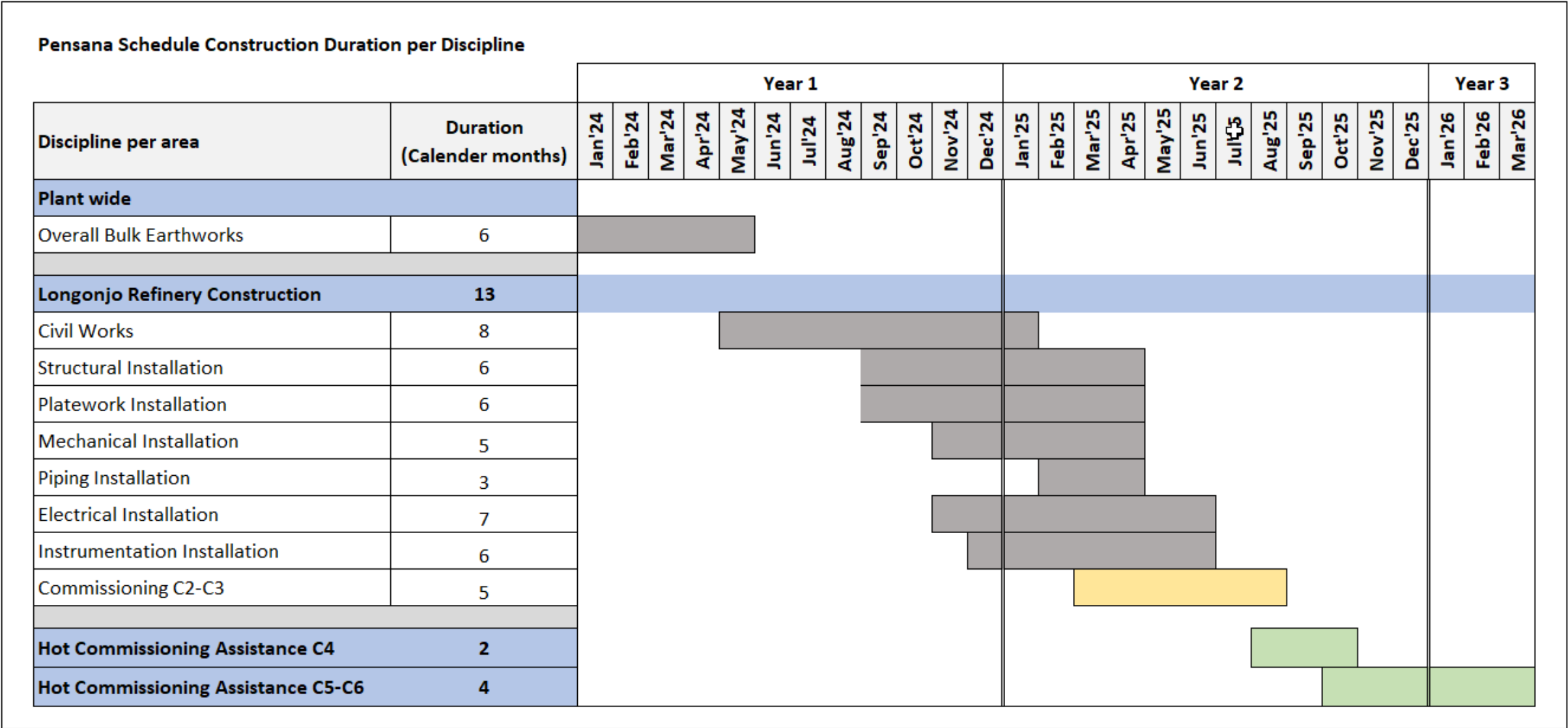
ADP is Lycopodium's African minerals specialist in detailed design, construction and commissioning of modular mineral processing plants. ADP has extensive development experience in Angola.



Pro Process are hydrometallurgical specialists with expertise in delivering modular process plants throughout Africa.



Construction and Commissioning Schedule – first production 2026

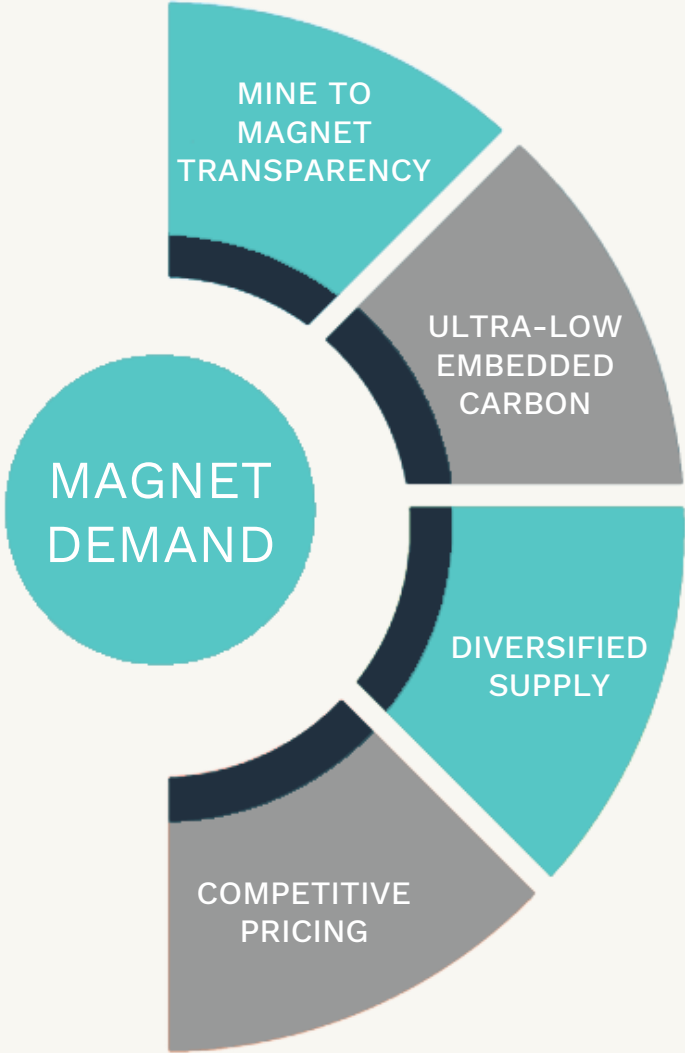


Highly Marketable Mixed Rare Earth Carbonate (MREC)

One of the only mine developers to offer a high value, radionuclide-free product available for export.

Executed letter of intent for the offtake of 100% of stage 1 production from Longonjo.

Sample qualification underway which will lead to finalised agreements in Q1 2024.



Mercedes-Benz

C02 targets as a key criterion and 50% diversified supply chain.

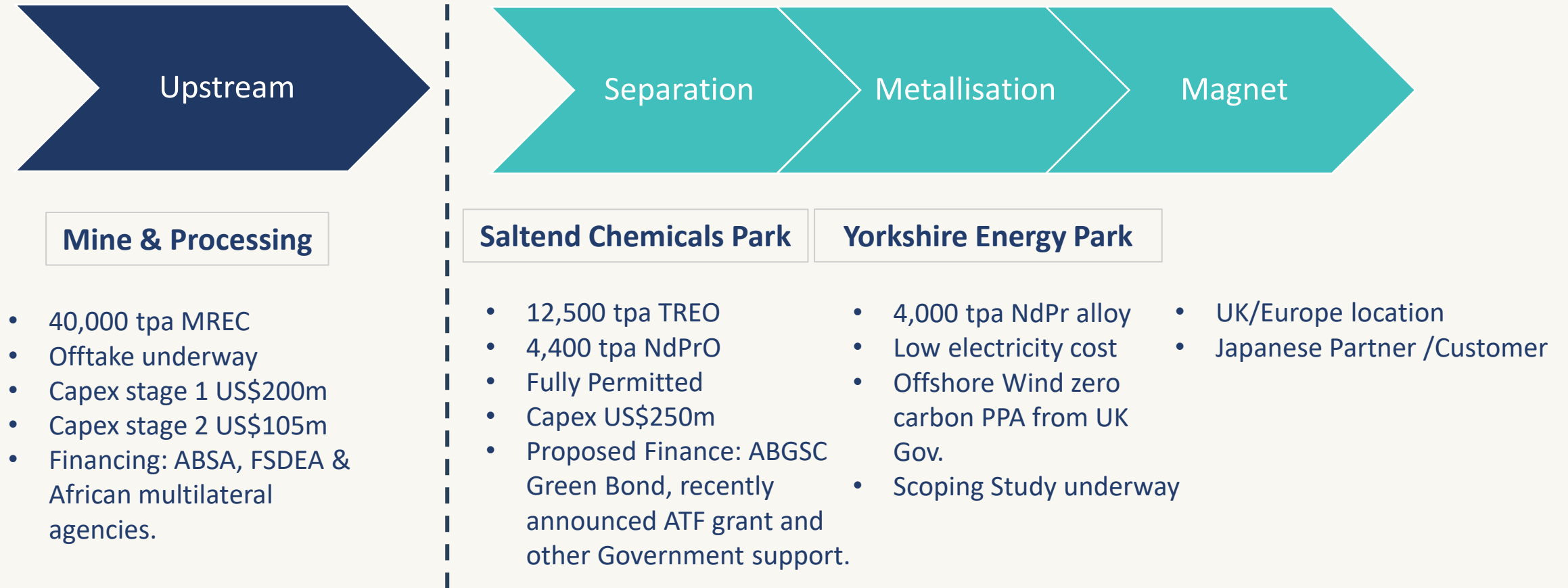
Polestar

Net-Zero by 2030. Responsible sourcing: Ethical and transparent supply chain.



Net-Zero 2039. Full transparency for all supply chain partners.

Looking to Establish an Independent Downstream Supply Chain



China controls **91%** of Refining, **87%** of Separation and **94%** of Magnet Production

Source: Wall Street Journal - [The U.S. Wants a Rare-Earths Supply Chain. Here's Why It Won't Come Easily. - WSJ](#)

Minister confirms that Saltend is of strategic importance to the UK and offers ATF Grant Funding

By 2030 the UK is expected to transition from being a major producer of internal combustion engines to a world leader in electric drive units (EDUs), producing three million EDUs annually, with a large proportion for export.

Without a secure magnet metal supply chain this is under threat.

Nusrat Ghani, Minister of State at the Department for Business and Trade and Cabinet Office, highlighted that the Saltend project would be an important step in supporting the UK automotive industry which employs 780,000 people.



Secretary of State for Business and Trade has offered a £4,000,000 Grant towards the funding required to build the Saltend rare earth separation facility.

Establishing a magnet metal supply chain to support automotive Electric Drive Unit (EDU) manufacture in the UK

Saltend Chemicals Park, Humber Freeport



Fully engineered and permitted downstream UK Separation Facility.

Strategically located within Humber Freeport and powered by low-cost offshore wind.

Designed to produce 12,000 tonnes of TREO and 4,400 tpa of NdPr oxides equivalent to ~5% of world demand.

This will create 450 jobs during construction and 150 high-value full time jobs.

Strong interest in Saltend's development across a range of stakeholders

Recent site visit by M&G, Automotive Transformation Fund, Cabinet Office for Investment, Department for Business & Trade, PX Group, Future Humber, Yorkshire Energy Park, East Riding Council and University of Lincoln.



Studies commenced on Offshore Wind powered magnet metal facility located at Yorkshire Energy Park



YEP Chairman Chris Turner and Pensana Chief Commercial Officer William Izod execute letter of intent for site selection and zero carbon electricity supply

Located in YEP adjacent to the Saltend separation facility and with 50MW green electricity from the grid.

Low cost, zero carbon electrical power supplied under the Energy Intensive Industry and British Industry Supercharger Schemes.

Studies into the conversion of rare earth oxides into magnet metals using electric furnaces powered by offshore wind.

The letter of intent with YEP covers the proposed site as well as the supply of zero carbon electricity and a range of bespoke facilities for the processing of rare earths in magnet metals, R&D and supply chain activities.

Saltend's Importance as an Independent and Sustainable Supplier

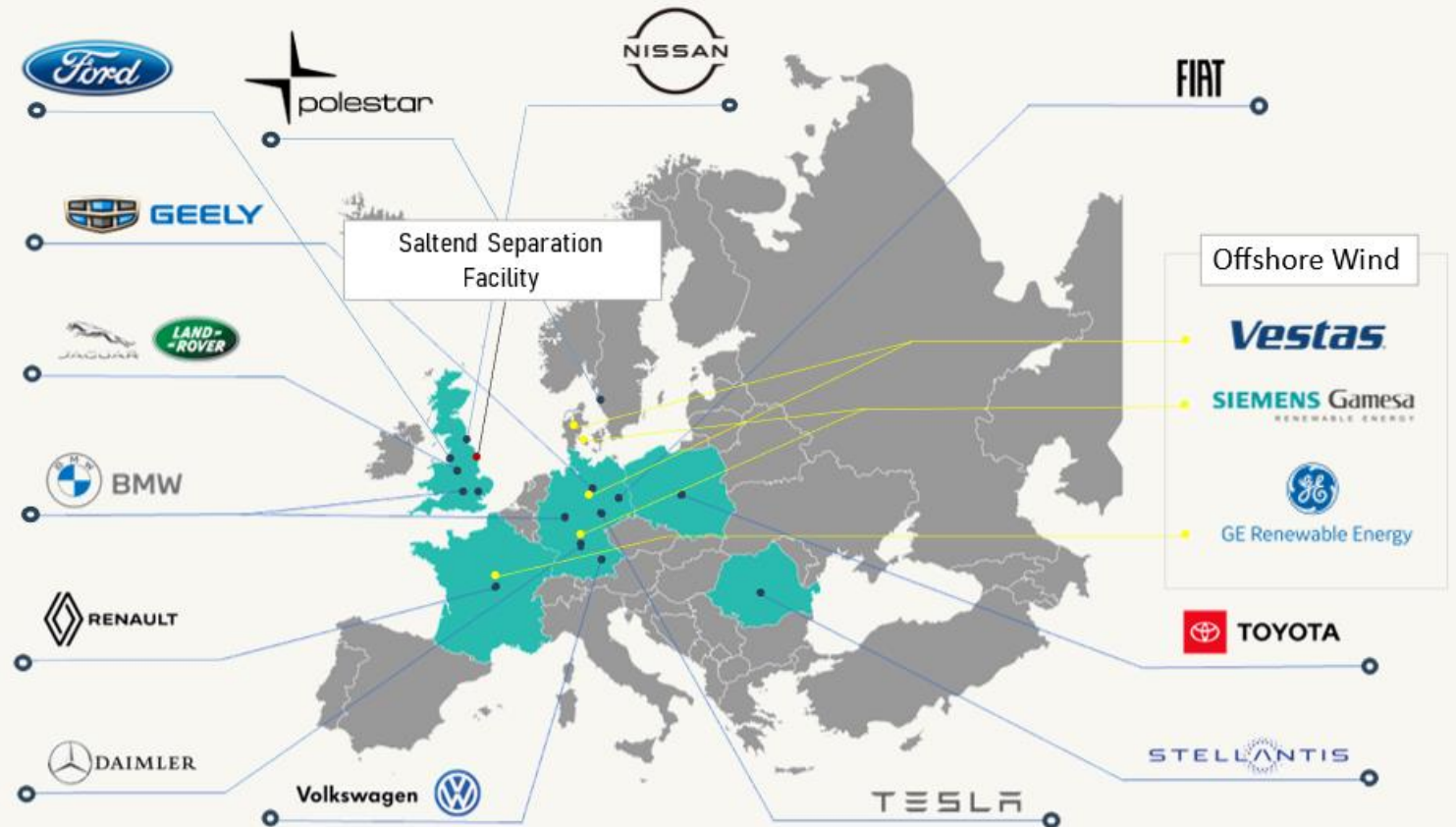
European and UK electric vehicle industry

The UK will produce 2- 3 million Electric Drive Units (EDU's) annually from 2030.

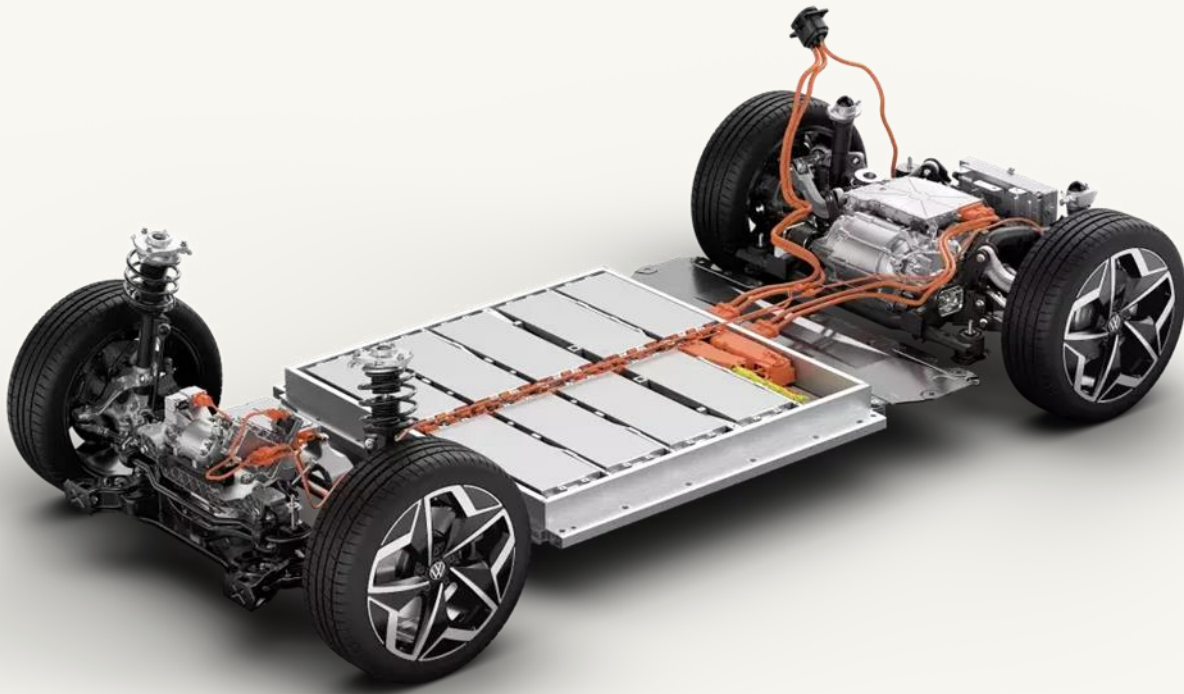
Exporting around the world supporting the burgeoning demand for electric vehicles globally.

The UK and Europe remain committed to the Automotive sector and governments continue to offer support.

Highlighting Saltend's growing importance as an independent and sustainable supplier and critical supporting supply chain for the Auto industry.



The UK is currently a net exporter of automotive engines but needs a magnet metal supply chain to convert to electric drive units (EDUs)



The UK is a leader in EDU technology which is being acquired by major automotive OEM's (eg: Mercedes buys UK Start-up Yasa).

It is essential for the UK that this production is not lost to overseas.

This will only happen if these supply chains are established in the UK. UK Gov is already working on electrical grade steels and rotor/stator manufacture but needs to secure a magnet metal supply chain, such as the Saltend rare earth processing facility.

UK Gov also wishes to utilise Pensana's relationship with the world's largest magnet manufacturer with a view to bringing their next investment to the UK.

PARTNERING WITH POLESTAR 0

Pensana is partnering with Polestar (Nasdaq: PSNY) on its moon-shot goal of creating the first truly climate-neutral car by 2030.

The Polestar 0 project is aiming to eliminate all greenhouse gas emissions from all raw materials used to when the car is delivered to the customer and onwards to the end of the vehicle life.



Chairman Paul Atherley with Hans Pehrson Project Lead, at the Stockholm launch of Polestar's moon-shot climate-neutral car.

Cooperation Agreement with Equinor to Recycle Offshore Wind Turbine Magnets using Low Carbon Hydrogen



Pensana Chairman Paul Atherley with Equinor President and CEO Anders Opedal

Pensana is partnering with leading energy provider, Equinor, to develop a low-energy method for recycling end-of-life wind turbine magnets using low-carbon Hydrogen produced from Equinor's Hydrogen to Humber (H2H) at Pensana's Saltend Rare Earth processing facility.

Strong Independent Board and Experienced Executive Management Team



PAUL ATHERLEY
CHAIRMAN

Mr. Atherley is an experienced mining executive and is the founder of the Company. Previously Executive Director of the investment banking arm of HSBC. He has completed numerous successful acquisitions and financings of resource projects in Europe, China, and Australasia. He is a supporter of Women in STEM.



RT HON BARONESS NORTHOVER
NON-EXEC DIRECTOR

Baroness Northover was the Prime Minister's Trade Envoy to Angola (2016- 2020), Zambia (2017-2020) and Minister in the Department for International Development ("DFID") 2011-15, including serving as Parliamentary Under Secretary and Africa Minister, 2014-15.



ROBERT KAPLAN
FINANCE DIRECTOR

Mr Kaplan is a Chartered Accountant with over 20 years of operating experience in the African mining sector. He brings a broad skill set in both the UK and sub-Saharan corporate finance together with experience in mining operations in Angola, South Africa and Tanzania.



ALISON SAXBY
NON-EXEC DIRECTOR

Alison is an industry-leading expert with over 35 years of experience in industrial minerals and metals. She was previously a Managing Director at metals consultancy Roskill and was recently appointed as Research Director of Project Blue. Alison is the author of numerous publications on critical and other minerals and was originally trained as a mineral engineer.



STEVE SHARPE
NON-EXEC DIRECTOR

Mr Sharpe is a highly experienced natural resources financier. He is an Executive Board Member of EIT Raw Materials. Previously, he was Chair of AME Group, Managing Director at Canaccord Genuity, Managing Director at Endeavour Financial and held senior positions at Standard Bank and NM Rothschild.



ROCKY SMITH
CHIEF OPERATIONS OFFICER

Rocky Smith is a highly experienced Chemical Engineer with 35 years of rare earths experience. He was Managing Director of Molycorp's Mountain Pass rare earth project in California, US, which is now owned by New York Stock Exchange listed MP Materials.



JEREMY BEETON
NON-EXEC DIRECTOR

Former Director General of the 2012 London Olympic and Paralympic Games, Principal Vice President of Bechtel, Advisory Board of PWC, and Non-Exec of SSE Plc. Currently also a Non-executive Director of John Laing.



TIM GEORGE
EXEC DIRECTOR/ CEO

A Minerals Engineer, Mr. George leverages over 30 years of experience in the mining and engineering sectors, with a broad experience in mining project development throughout Sub-Saharan Africa.



WILLIAM IZOD
CHIEF COMMERCIAL OFFICER

William Izod has extensive experience in managing and developing rare earth supply chains, including 10 years working with large multi-national companies, including managing a Motor and Powertrain supply chain controlling £1bn of annualised spend.

CONTACT

Pensana Plc

Rex House,
4th Floor,
4 - 12 Regent Street,
London,
SW1Y 4PE



+44 203 356 2700



info@pensana.co.uk



pensana.co.uk



@PensanaRE



Pensana Plc



CAUTIONARY STATEMENT

This presentation and any additional documents presented (together the “Presentation Materials”) are being supplied to you solely for information only. The Presentation Materials do not constitute or form part of any offer or invitation to sell or issue, or any solicitation of any offer to acquire or subscribe for, any securities issued or issuable by Pensana Plc (the “Company”) or any of the business or assets described herein, nor shall any part of it nor the fact of its distribution form part of or be relied on in connection with any contract or investment decision relating thereto, nor does it constitute a recommendation or inducement to enter into any contract or commitment regarding the securities of the Company. In particular, this document and the information contained herein does not constitute an offer of securities for sale in the United States.

The Presentation Materials do not contain all the information that a prospective investor may require about the Company or its business, and have not been fully verified by the Company. It is not a complete statement of material information and is subject to updating, revision and amendment in any way without notice or liability to any party. Recipients of these slides and/or persons attending this presentation who are considering a purchase of ordinary shares in the Company are reminded that any such purchase must be made solely on the basis of the information that the Company has officially released into the public domain. Except where stated, the information disclosed in the Presentation Materials (“Information”) relates to the proposed business of the Company at the date of this document. This presentation does not contain advice relating to legal, taxation or investment matters. Whilst all reasonable care has been taken to ensure that the facts stated in these slides and this presentation are accurate and the forecasts, opinions and expectations contained in these slides and this presentation are fair and reasonable, the information contained in this document has not been independently verified and accordingly no representation or warranty, express or implied, is made by the Company or any of its subsidiaries, directors, employees, agents and consultants as to the accuracy, fairness or completeness of the information or opinions contained in these slides or this presentation and no reliance should be placed on the accuracy, fairness or completeness of the information contained in these slides and this presentation. The Company and its subsidiaries, directors, employees, agents and consultants shall have no liability (including liability to any person by reason of negligence or negligent misstatement) for any statements, opinions, information or matters (express or implied) arising out of, contained in or derived from, or for any omissions from the Presentation Materials, except liability under statute that cannot be excluded. The information in the Presentation Materials have been provided by the Company or obtained from publicly available sources. No reliance may be placed for any purposes whatsoever on the information or opinions contained in the Presentation Materials or on their completeness.

The Presentation Materials may contain reference to certain intentions, expectations and plans of the Company (“forward looking statements”). Those intentions, expectations and plans may or may not be achieved. Any forward-looking statements are subject to inherent risks and uncertainties and are based on certain assumptions that may not be met or on which views may differ. The performance and operations of the Company may be influenced by a number of factors, many of which are outside the control of the Company. Actual future results may be materially different. No representation or warranty, express or implied, is made by either the Company or any of its directors, officers, employees, advisers or agents that any intentions, expectations or plans will be achieved either totally or partially or that any particular rate of return will be achieved. You are cautioned against relying upon any forward-looking statement in this document which speak only as of the date of this document. The Company will not undertake any obligation to release publicly any revisions to these forward looking statements to reflect events, circumstances and unanticipated events occurring after the date of this presentation except as required by law or by a regulatory authority. Past performance of the Company or its shares cannot be relied on as a guide to future performance.

Neither this document, nor any copy of it, may be taken or transmitted into any jurisdiction where it would be unlawful to do so. Any failure to comply with this restriction may constitute a violation of relevant local securities laws.

The Presentation Materials do not contain an offer of securities in the Company, nor an invitation to apply for such securities. The document does not involve or imply a recommendation or a statement of opinion in respect of whether to buy, sell or hold a financial product. You should carry out your own independent investigations and assessment of the Information before acting and if you are in any doubt about the information and statements in this presentation you should obtain professional advice from a person authorised by the Financial Conduct Authority who specialises in advising on securities of the kind described in the Presentation Materials.

The Presentation Materials remain the property of the Company and may not be reproduced, distributed, transmitted or published (in whole or in part) without the prior consent of the Company. Information in this presentation which is attributed to a named third party source has not been checked or verified by the Company.

Neither this document nor any copy of it may be taken or transmitted into the United States of America, its territories or possessions or distributed, directly or indirectly, in the United States of America, its territories or possessions. Neither this document nor any copy of it may be taken or transmitted into Australia, Canada, Japan or the Republic of South Africa or to any securities analyst or other person in any of those jurisdictions. Any failure to comply with this restriction may constitute a violation of United States, Australian, Canadian, Japanese or South African securities law. The distribution of this document in other jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about and observe such restrictions.

This document has been prepared in compliance with English law and English Courts will have exclusive jurisdiction over any disputes arising from or connected with the Presentation Materials.