

# REALISING THE TIZIR VISION – THE INTEGRATION OF GCO AND TTI

Informa Mineral Sands Conference  
15 March 2016



# STATEMENTS

## MDL OVERVIEW

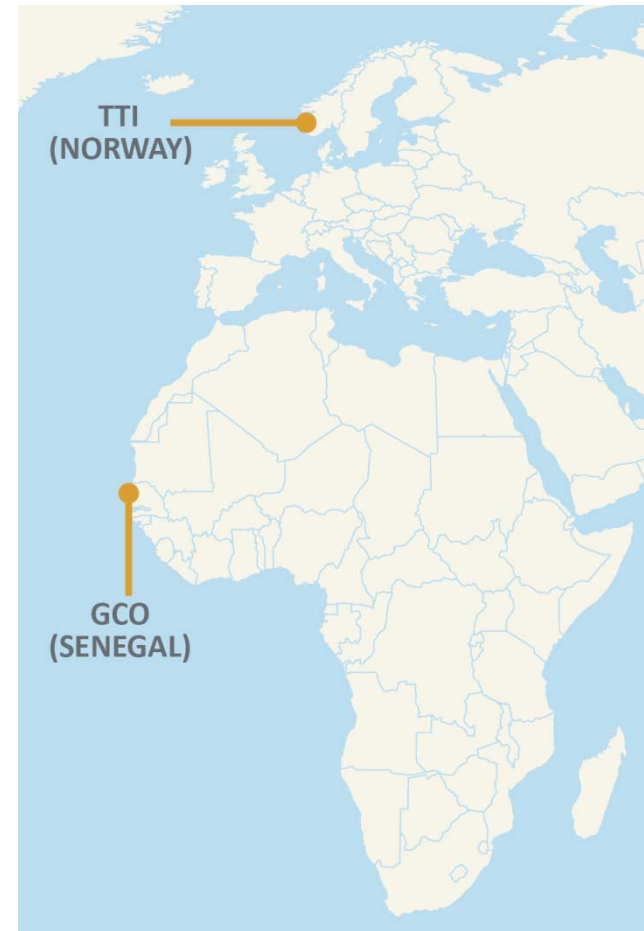
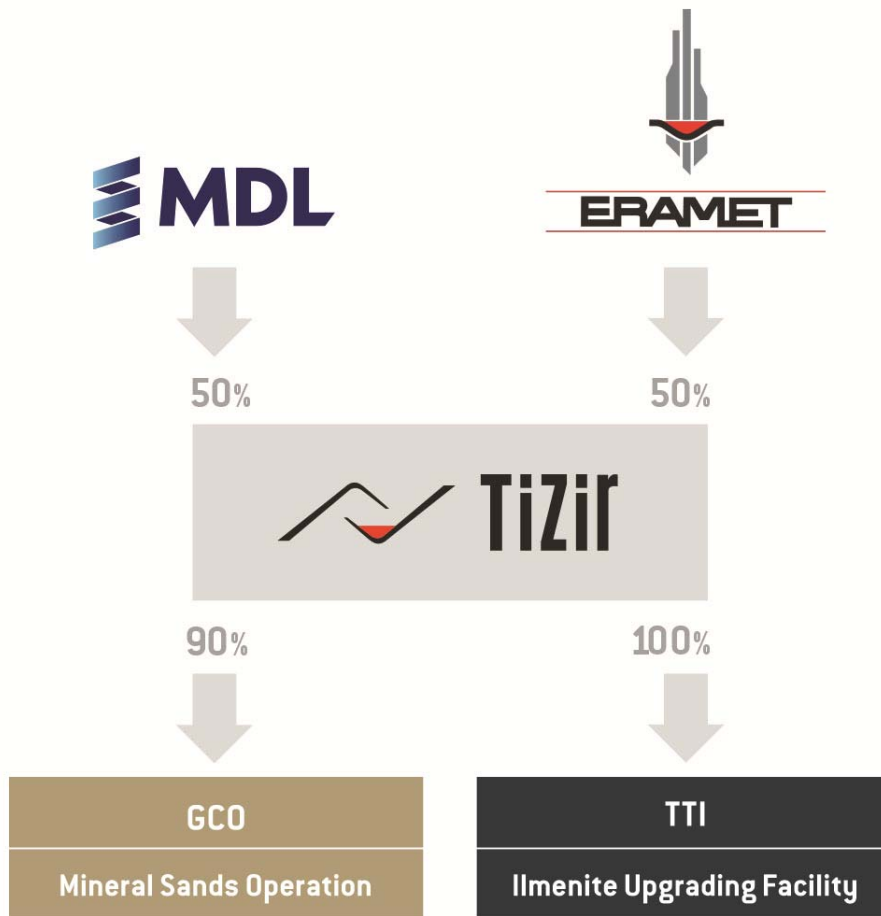
- MDL's primary asset is a 50% interest in the TiZir joint venture ('TiZir'), which owns the Grande Côte mineral sands operation ('GCO') in Senegal, West Africa and the TiZir Titanium & Iron ilmenite upgrading facility ('TTI') in Tyssedal, Norway. ERAMET of France is MDL's 50% joint venture partner in TiZir.

## FORWARD LOOKING STATEMENTS

- Certain information contained in this report, including any information on MDL's plans or future financial or operating performance and other statements that express management's expectations or estimates of future performance, constitute forward-looking statements. Such statements are based on a number of estimates and assumptions that, while considered reasonable by management at the time, are subject to significant business, economic and competitive uncertainties. MDL cautions that such statements involve known and unknown risks, uncertainties and other factors that may cause the actual financial results, performance or achievements of MDL to be materially different from the company's estimated future results, performance or achievements expressed or implied by those forward-looking statements. These factors include the inherent risks involved in mining, operation of mineral processing facilities, exploration and development of mineral properties, changes in economic conditions, changes in the worldwide price of zircon, ilmenite and other key inputs, changes in the regulatory environment and other government actions, changes in mine plans and other factors, such as business and operational risk management, many of which are beyond the control of MDL. Except as required by applicable regulations or by law, MDL does not undertake any obligation to publicly update, review or release any revisions to any forward looking statements to reflect new information, future events or circumstances after the date of this report.
- Nothing in this report should be construed as either an offer to sell or a solicitation to buy or sell MDL securities.

# INTRODUCTION

MDL OWNS 50% OF TIZIR, AN INTEGRATED PRODUCER OF HIGH GRADE ZIRCON AND TITANIUM MINERALS



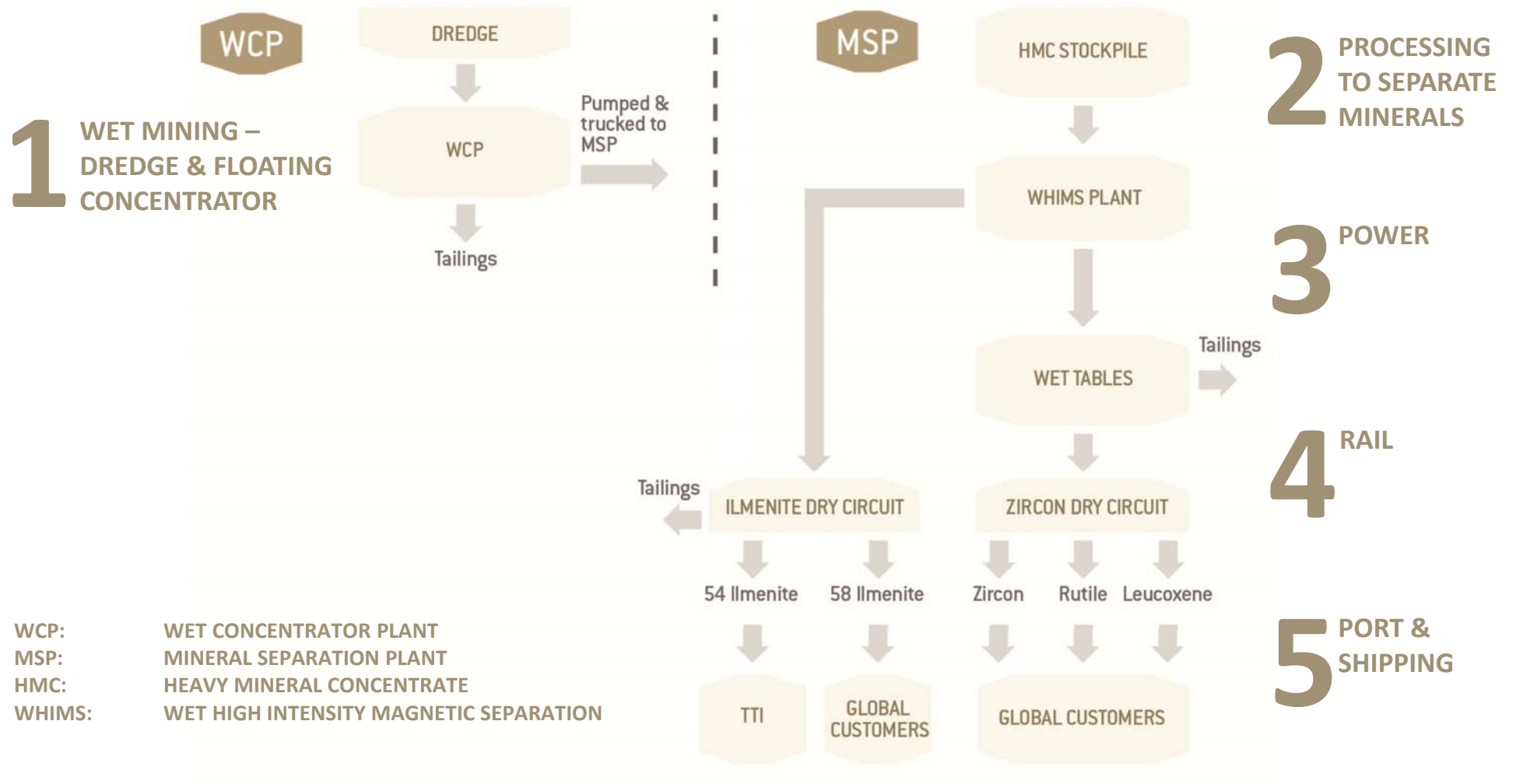
## THE VALUE OF VERTICAL INTEGRATION



[Video](#)

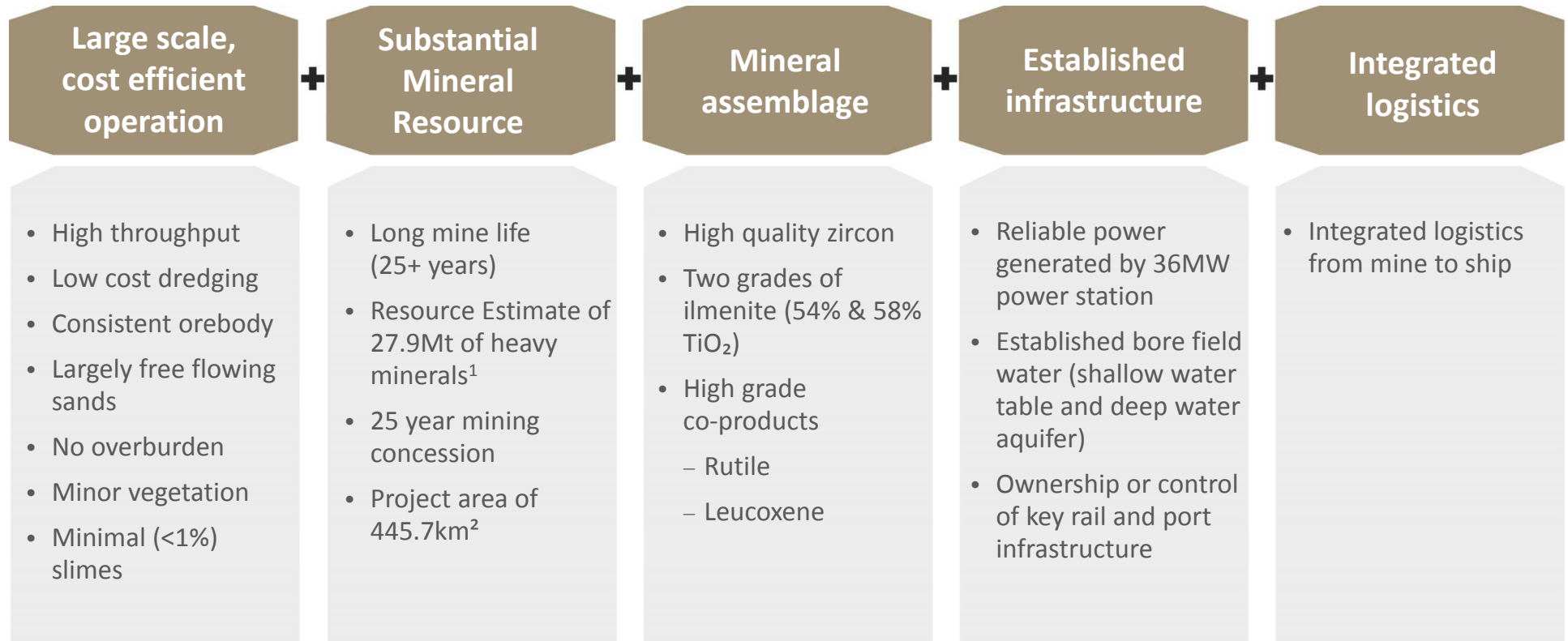
# GCO – A LARGE SCALE, COST COMPETITIVE MINERAL SANDS OPERATION

CONVENTIONAL MINING AND PROCESSING THAT IS INTEGRATED FROM MINE TO SHIP



# GCO – A HIGHLY COMPETITIVE MINERAL SANDS MINE

## KEY ATTRIBUTES WHICH DRIVE PERFORMANCE

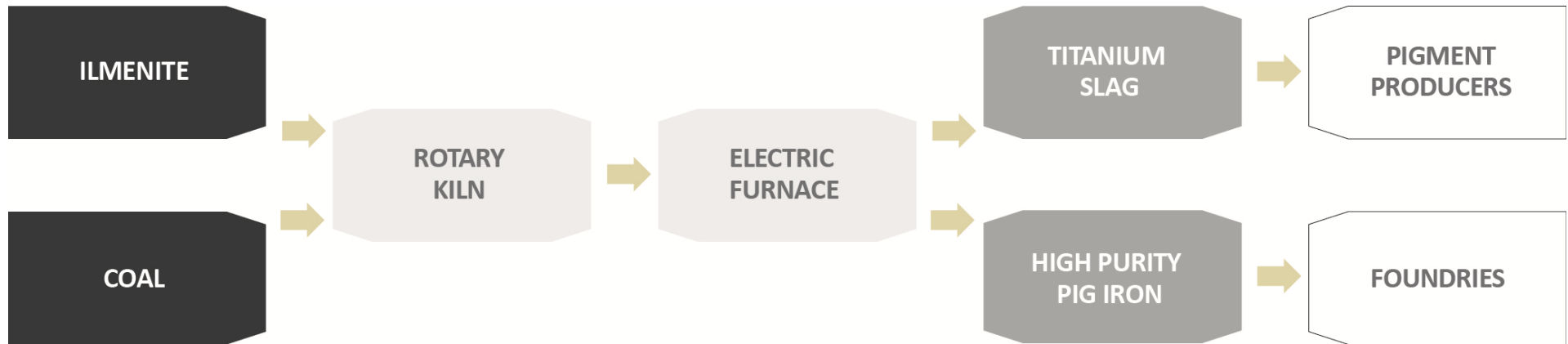


1: ASX release – 19 February 2015 (2015 GCO Updated Grande Côte Mineral Resource and Ore Reserves) and 18 February 2016 (Annual Statement of Mineral Resources and Ore Reserves as at 31 December 2015). The combined measured and indicated and inferred resource estimate of 27.9Mt is comprised of a measured resource estimate of 23.5Mt, an indicated resource estimate of 3.1Mt and an inferred resource estimate of 1.3Mt. MDL confirms that it is not aware of any new information or data that materially affects the information included in the ASX releases of 19 February 2015 and 18 February 2016 and that all material assumptions and technical parameters underpinning the estimates in the release continue to apply and have not materially changed.

# TTI – PRODUCING UPGRADED SLAG FOR OVER 20 YEARS

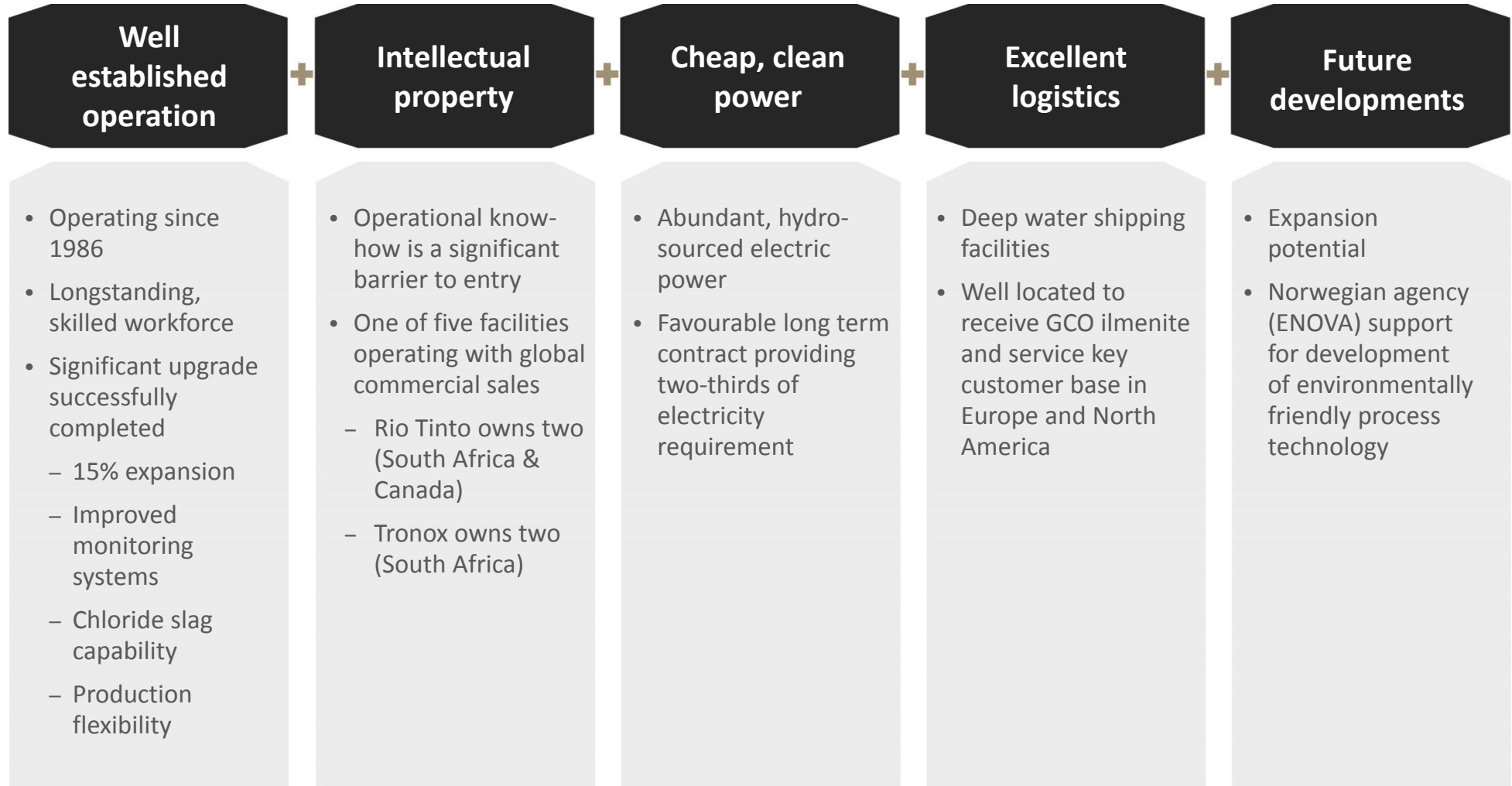
THE EXPANSION AND UPGRADE PROJECT ENABLES CHLORIDE STRATEGY AND PRODUCTION FLEXIBILITY

**6** INPUT      **7** PRE-REDUCTION      **8** SMELTING      **9** OUTPUTS      **10** CUSTOMERS



# TTI – A HIGH QUALITY UPGRADING FACILITY

## RELINE AND EXPANSION PROJECT COMPLETE





## THE TIZIR VISION – VERTICAL INTEGRATION

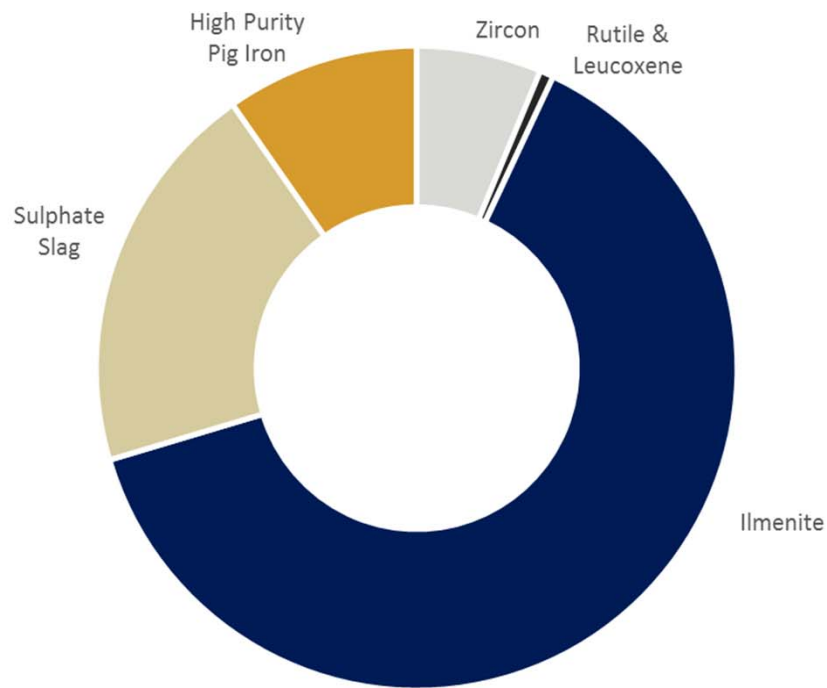
### STRONG RATIONALE FOR ESTABLISHMENT OF TIZIR – SHAREHOLDERS TO BENEFIT FROM SYNERGIES

- **Production flexibility**
  - Ability to produce either a chloride or sulphate titanium slag to maximise returns as market conditions dictate
- **Current strategy is to focus on chloride slag production**
  - Supply equation leads to a higher revenue product
  - GCO ilmenite compatible with chloride slag production
  - TTI already experienced in the production of chloride slag
  - Logistical advantages to access chloride slag customers in North America and Europe
  - Environmental benefits
- **GCO offtake security**
  - Limit exposure to lower value, more volatile ilmenite markets, particularly at low points in the commodity price cycle
- **TTI supply security**
  - Mitigates a major business risk at high points in the commodity price cycle
- **Margin enhancement**
  - Cost efficiencies
  - Maximise value on sale
- **Financing GCO development**
  - Ownership of TTI smelter allowed TiZir to secure access to attractive financing

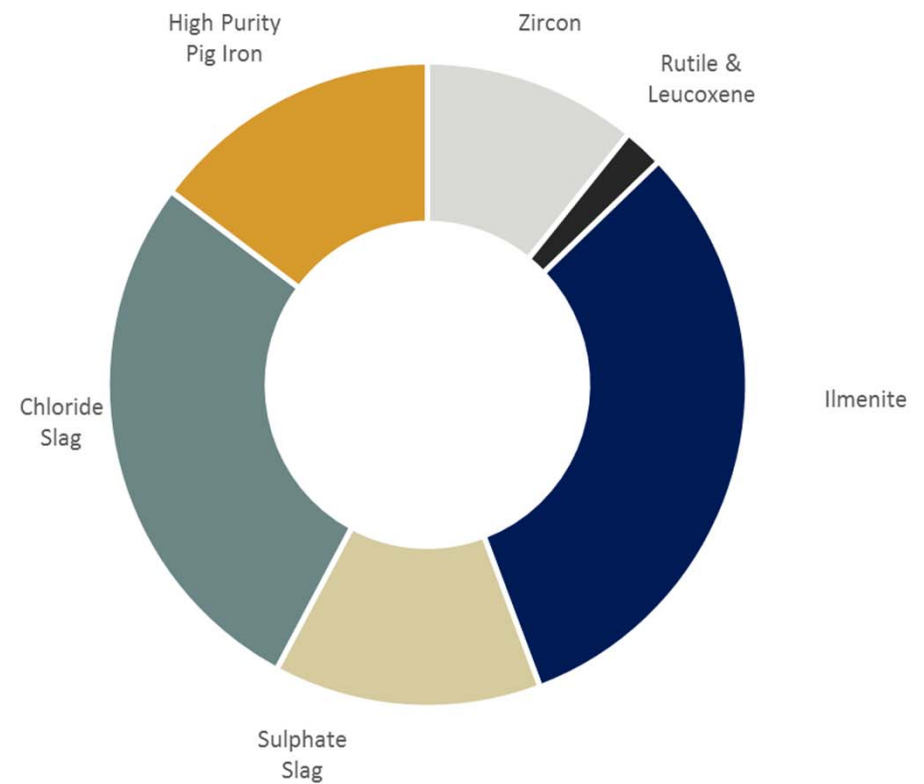
# IMPACT OF THE TRANSITION ON TIZIR

## SIGNIFICANTLY ENHANCED PRODUCT MIX

2015 Sales volume mix – a transition year<sup>1</sup>



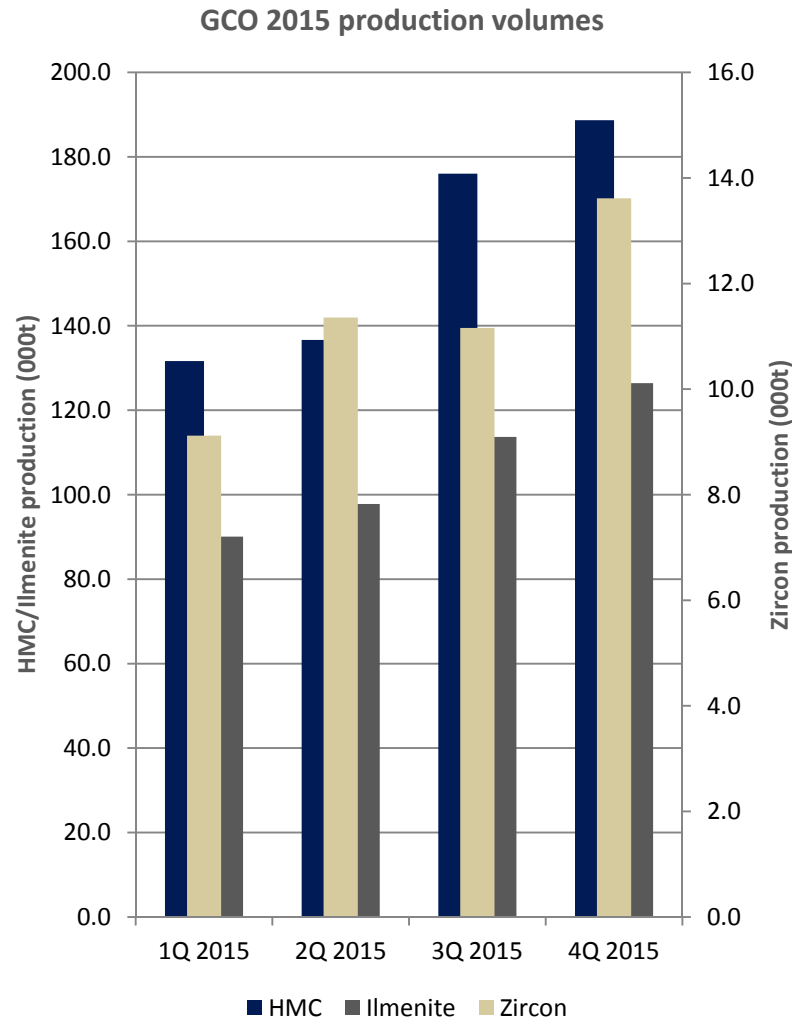
2016 Budget sales volume mix – post transition<sup>1</sup>



<sup>1</sup>: Ilmenite sales volumes between GCO and TTI have been eliminated

# GCO STATUS UPDATE

## OPTIMISATION COMMENCED



- **Mining operations**

- Utilisation of 90% in December 2015
- Optimisation projects commenced on all aspects of the operation
- First mine path turnaround completed in February 2016

- **Dredge**

- Dredge has shown the ability to operate consistently at rates above 7,000tph
  - Average throughput rate of 6,687tph in Q4 2015
- 11Mt of ore mined in Q4 2015
- Ongoing optimisation of availability and throughput
  - Improved main dredge pump impellor
- Award winning automation system

# GCO STATUS UPDATE

## OPTIMISATION COMMENCED



- **WCP**
  - Numerous HMC production records
  - Significant periods where the plant operated at or above design capacity
  - Landbridge movement efficiencies
- **MSP**
  - Wet plant and ilmenite circuit of the dry plant operating at design rates
  - Zircon production volumes improving
  - High quality zircon production remains on-spec with ready acceptance by the market
- **Logistics**
  - Efficient rail & port operations
- **EBITDA positive**
  - Five successive months of positive EBITDA from August through December 2015 – a significant achievement in the current commodity price environment

# TTI STATUS UPDATE

## RELINE AND EXPANSION PROJECT SUCCESSFULLY COMPLETED



- **Ramp up of operation on schedule**
  - Strong performance by project team
    - effectively a complete rebuild of kiln and furnace
  - Crushing plant commissioned
  - Monitoring system upgraded
  - Results using GCO ilmenite continue to meet expectations
  - Both chloride slag and iron specifications are consistent with expectations
- **Logistics**
  - Commenced chloride slag shipments
- **ENOVA funding**
  - Recognition of TTI programs to improve energy efficiency and the utilisation of environmentally friendly energy technology

# STRATEGIC OUTLOOK

## THREE YEAR CAPITAL PROGRAM COMPLETE – SIGNIFICANT LEVERAGE AVAILABLE TO SHAREHOLDERS



- **Short-term focus on TTI ramp up and optimisation of operations to deliver free cash flow even at the bottom of the cycle**
  - Definition of a Tier 1 asset
- **GCO**
  - Continue to build on commissioning successes of 2015
  - Key focus on optimisation projects to deliver:
    - Better utilisation and sustainable throughput rates
    - Increasing efficiencies with respect to mining recoveries and processing yields
  - Cost saving initiatives
- **TTI**
  - Focus on delivering project outcomes:
    - High quality product mix
    - 15% expansion of operations
    - Improved maintenance performance
- **Optimisation of pre-reduction process**

# SENEGAL – AN INDUSTRY FRIENDLY LOCATION IN AFRICA

## NEW DEVELOPMENT STRATEGY TARGETS EMERGING ECONOMY STATUS BY 2035



- Democratic republic based on French civil law system following independence from France in 1960
  - Three peaceful political transitions since 1960
- Reputation as one of the most stable democracies in Africa with a long history of participating in international peacekeeping and regional mediation
  - Top 10, Ibrahim Index of African Governance
- President Macky Sall came to power in March 2012 and launched an economic reform program designed to boost economic growth
  - Plan Senegal Emergent (‘PSE’) is an ‘ambitious yet feasible path towards emerging economy status’<sup>1</sup> by 2035 through becoming a hub for West Africa
  - First set of 14/27 flagship projects and 5/17 major reforms launched in 2014
- Fiscal outlook continues to improve
  - Economic growth rate projected at 5.1% in 2015 and 5.9% in 2016<sup>2</sup>. Projected to reach 7% by 2018
  - S&P sovereign credit rating of B+/B
  - Fiscal deficit continues to decline with a deficit of 4.8% of GDP expected in 2015 with a target of 4.2% in 2016<sup>2</sup>

1: Christine Lagarde, IMF Managing Director – 30 January 2015

2: IMF Commentary, January 2016

# GCO SUSTAINABILITY FUNDAMENTALS

## STRONG RELATIONSHIP WITH THE SENEGALESE GOVERNMENT



### FINANCIAL & EMPLOYMENT

- Government owns 10% of GCO
- 5% gross production royalty
- Support of local suppliers and contractors
- Focus on employment of Senegalese citizens – 93% of total workforce
- Further employment of 240 Senegalese contractors
- Training & skills building programs in partnership with Ministry of Vocational Training & Apprenticeships

### ENVIRONMENT & SAFETY

- Progressive rehabilitation
- On-site nursery, supplemented by a local community cultivation initiative
- ‘Zero incident’ ethos
- On-site, high-tech & well-equipped medical clinic and Emergency Response Team
- Multi-lingual health & safety training program

### SOCIAL & COMMUNITY

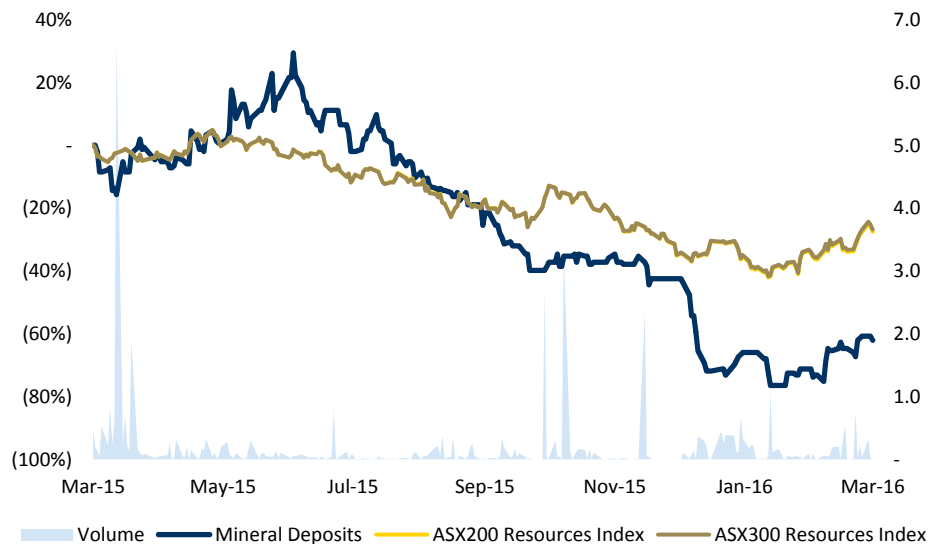
- Stakeholder approved social development programs
  - Health, water, education, transport and waste management
  - Agricultural improvement
  - Small business development & entrepreneurship for women & young people
- Land access & resettlement
  - Compensation above Senegalese rates
  - Resettlement eco-village 85% complete



# MDL UPDATE

## SIGNIFICANT LEVERAGE TO IMPROVING MARKETS

Share Price	A\$0.33 <sup>1</sup>
Market Capitalisation	A\$34 million
<b>Substantial Shareholders</b>	
Allan Gray	17.4%
Farjoy	8.5%
Ellerston Capital	8.2%
Renaissance	6.8%
HEST Australia	6.0%



1: As at 10 March 2016

- ✓ Significant leverage. As industry fundamentals improve, MDL is well positioned to benefit
- ✓ Share price leverage enhanced by asset quality and production flexibility
- ✓ Shareholder transition resulting in improved stock market liquidity
- ✓ Capital spend at TiZir complete and assets largely de-risked
- ✓ Improving financial performance at TiZir even in the current commodity price environment
- ✓ Short-term financing issues resolved
  - Updated agreement with TiZir Bondholders
  - Attractive short-term financing in place
- ✓ Partnership with ERAMET, a major global player in manganese and nickel mining & smelting

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