

# 17<sup>TH</sup> MINERAL SANDS CONFERENCE

Perth  
15 – 16 March 2017



ASX: MDL



# STATEMENTS

## MDL OVERVIEW

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

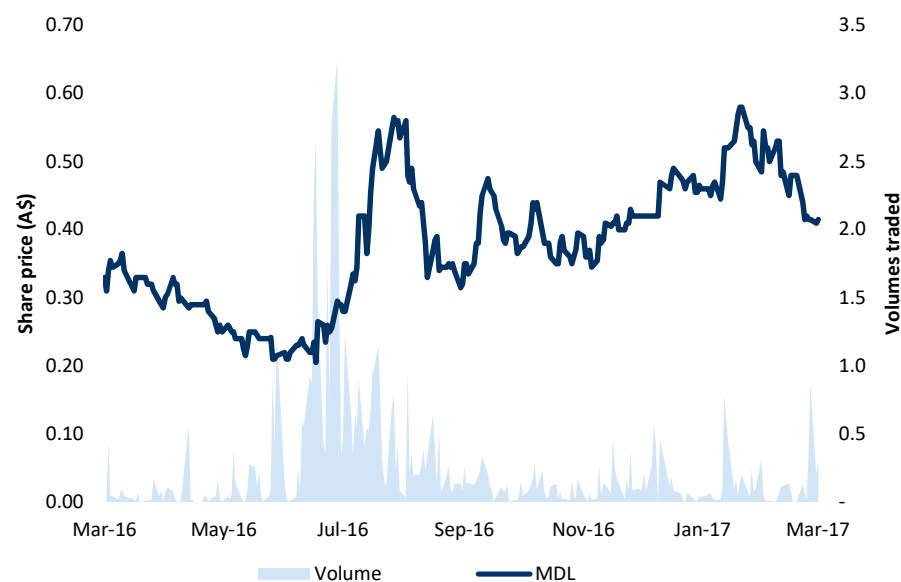
## FORWARD-LOOKING STATEMENTS

- Certain information contained in this presentation 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, financing risks, 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.
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# MDL OVERVIEW

## MDL VISION – CAPITALISE ON SCALE AND QUALITY OF ASSET BASE

Share price (as at 13 March 2017)	A\$0.41
Shares on issue	~139.5m
Market capitalisation	~A\$57.2m
12 month high	A\$0.62
12 month low	A\$0.20



1: Prior to capital raising

### Board

- Non Executive Chairman – Nic Limb
- Non Executive Director, Deputy Chair – Bobby Danchin
- Managing Director/CEO – Rob Sennitt
- Executive Director – Martin Ackland
- Non-Executive Director – Tom Whiting
- Non-Executive Director – Sandy MacDonald

### Executive team

- Chief Operating Officer – Jozsef Patarica
- Chief Financial Officer – Greg Bell
- Company Secretary – Michaela Evans

### Share register transitioning

- Top 10 beneficial shareholders own ~58.2%<sup>1</sup>
- Major shareholder is Allan Gray Australia Pty Ltd

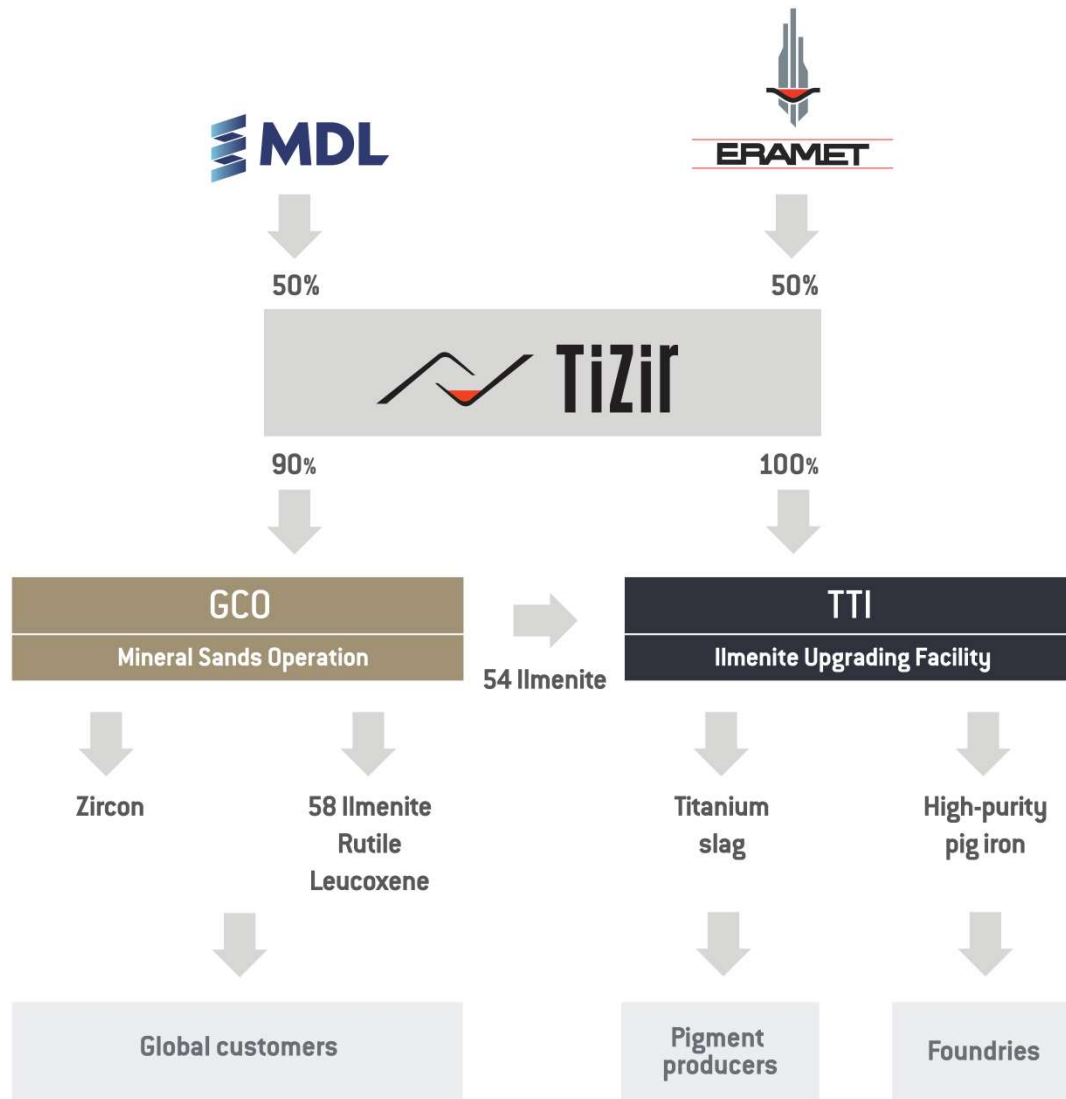
### Fully underwritten capital raising (A\$39.2m)

- Placement and institutional entitlement offer completed (~A\$15m raised)
- Retail entitlement offer underway (to raise ~A\$24.2m)
- Shares on issue post raising ~197m



## TIZIR JOINT VENTURE – 50% MDL

### TIZIR – AN INTEGRATED PRODUCER OF HIGH-QUALITY ZIRCON AND TITANIUM SLAG



#### Key operating assets

- Grande Côte mineral sands operation (GCO)
  - Senegal, West Africa
- TiZir Titanium & Iron ilmenite upgrading facility (TTI)
  - Tyssedal, Norway

#### Joint venture company & partner

- TiZir – joint venture entity comprising MDL ownership of 50%
- ERAMET
  - French multinational mining and metallurgy company
  - Listed on the Euronext Paris (Trading code: ERA)

# SENEGAL – WEST AFRICA

## ONE OF THE MOST STABLE DEMOCRACIES IN AFRICA



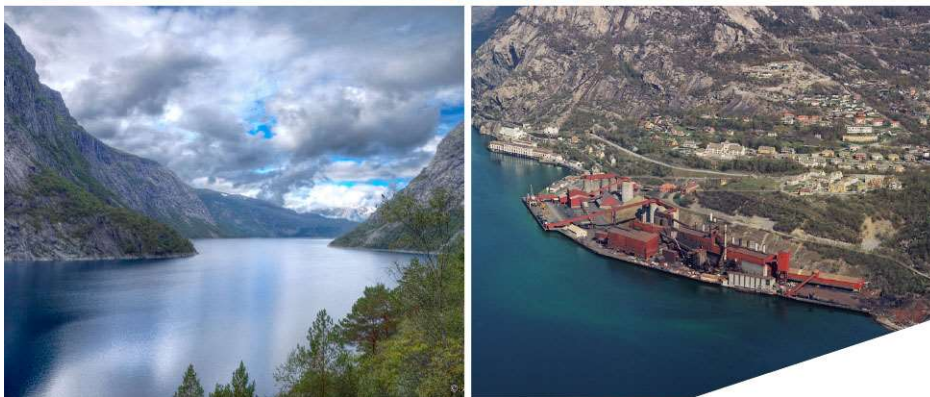
- Democratic republic based on French civil law system
- Reputation as one of the most stable democracies in Africa
  - three peaceful political transitions since independence in 1960
  - long history of participating in international peacekeeping and regional mediation
- President Macky Sall elected in March 2012 and launched an economic reform program designed to boost economic growth
- Fiscal outlook continues to improve

# TYSSEDAL – NORWAY

## NORWAY IS LOCATED IN NORTHERN EUROPE



- Norway has a highly educated workforce
- Tyssedal is a village in Odda municipality in Hordaland county
- Located in a valley between the Hardangerfjord to the west and mountains to the east
- TTI is the largest employer in the village



## GRANDE CÔTE OPERATIONS



MINE ► INTEGRATE ► TRANSFORM





# GCO

## MINERAL RESOURCES & RESERVES

### Mineral Resource Estimate<sup>1</sup>

100% basis Resource category	Tonnes Mt	In Situ HM Mt	HM %
Measured	1,509	21.8	1.4
Indicated	350	4.8	1.4
Inferred	41	0.5	1.2
<b>Total</b>	<b>1,900</b>	<b>27.1</b>	<b>1.4</b>

### Ore Reserve Estimate<sup>1</sup>

100% basis Classification	Tonnes Mt	In Situ HM Mt	HM %
Proved	1,122	16.6	1.5
Probable	343	5.1	1.5
<b>Total</b>	<b>1,465</b>	<b>21.7</b>	<b>1.5</b>

### Key figures

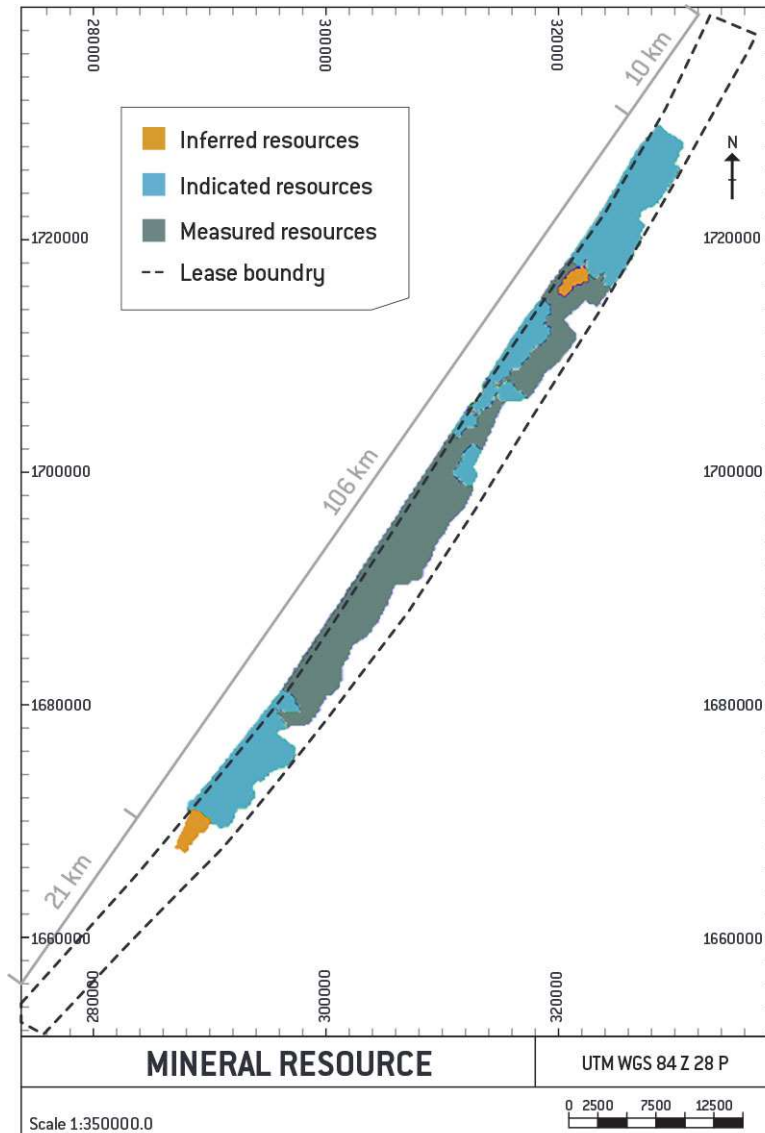
- Mineral Resource estimate of 27.1 million tonnes (**Mt**) of heavy minerals (**HM**) (Measured and Indicated and Inferred)<sup>1</sup>
- Increase in Ore Reserve during 2016 to 21.7 Mt of HM (Proven and Probable)<sup>1</sup>
- Optimised and updated mine path and schedule
- Grande Côte life of mine through to 2043
- Mineral assemblage:
  - Ilmenite (72%)
  - Zircon (10.7%)
  - Leucoxene (3.2%)
  - Rutile (2.5%)

1: ASX release – 22 February 2017 (Grande Côte Mineral Resource and Ore Reserve Update) and 24 February 2017 (Annual Statement of Mineral Resources and Ore Reserves as at 31 December 2016). MDL confirms that it is not aware of any new information or data that materially affects the information included in the ASX releases of 22 February 2017 and 24 February 2017 and that all material assumptions and technical parameters underpinning the estimates in the release continue to apply and have not materially changed.



# GCO

## LARGE SCALE – LONG MINE LIFE



### Ore deposit

- Stretches for over 100km of coast line
- Comprises a linear series of Aeolian sand dunes
- Dunes range between 5m and 35m in height
- Mineralised zones
  - essentially flat lying
  - average ~15m in thickness
- Heavy mineral assemblage concentrated by wind action

# GCO

## LARGE SCALE – LONG MINE LIFE



### Mine

- Dredge
- Floating wet concentrator plant

### Mineral separation plant

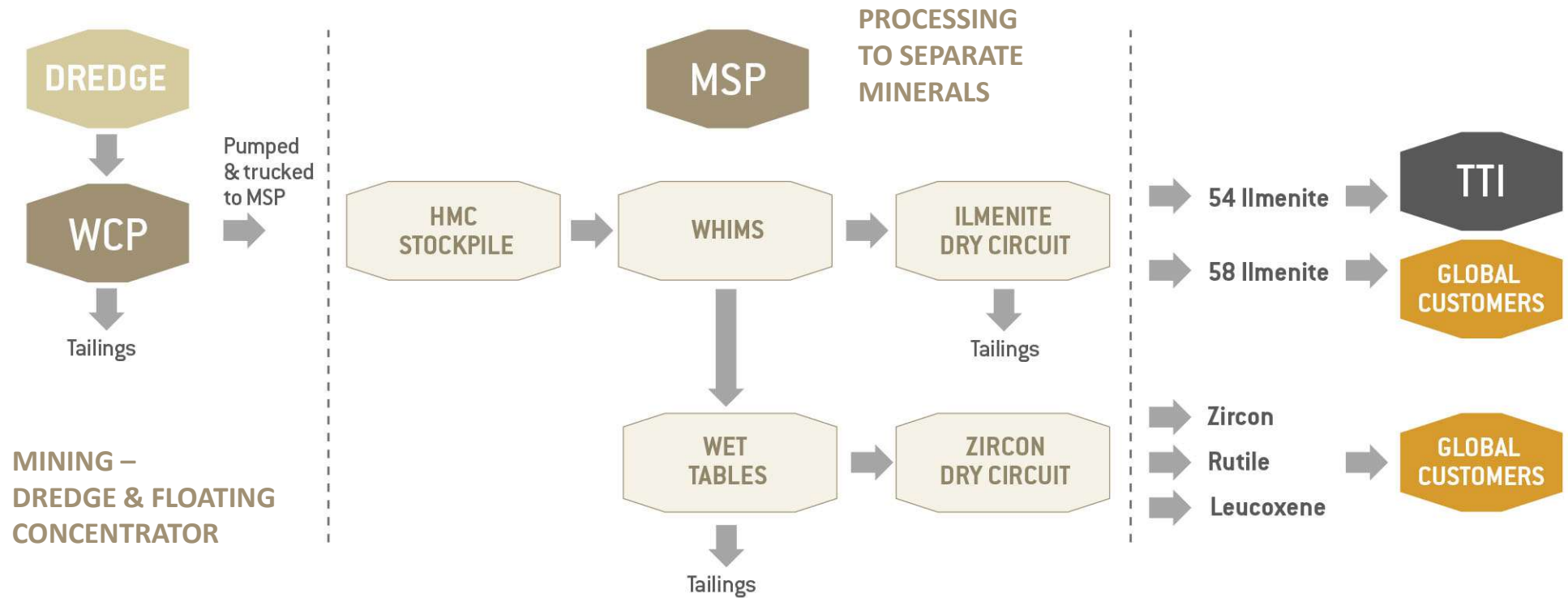
- Heavy mineral concentrate upgraded through a wet and dry circuit
- Magnetic and non-magnetic separation
- Dry circuit is a combination of electrostatic and magnetic separation
- Final products of high-quality zircon, ilmenite, rutile and leucoxene

### Logistics

- Owned and operated power and water infrastructure
- Rail between mine and Dakar port operations
  - owned and operated locomotives
- Exclusive berth at Dakar port and warehousing facilities

# GCO

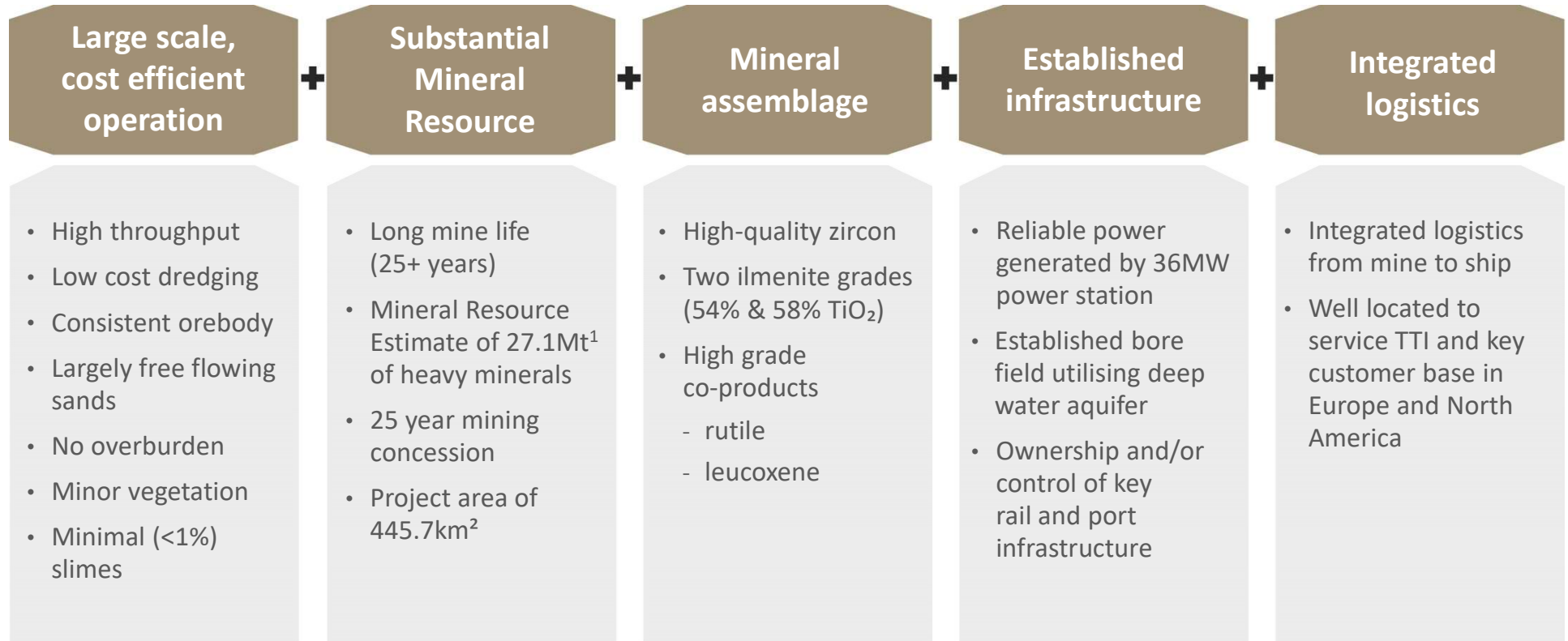
## LOW COST DREDGE MINING AND CONVENTIONAL PROCESSING THAT IS INTEGRATED FROM MINE TO SHIP



**WCP:** WET CONCENTRATOR PLANT  
**MSP:** MINERAL SEPARATION PLANT  
**HMC:** HEAVY MINERAL CONCENTRATE  
**WHIMS:** WET HIGH INTENSITY MAGNETIC SEPARATION

# GCO

## KEY ATTRIBUTES



1: ASX release – 22 February 2017 (Grande Côte Mineral Resource and Ore Reserve Update) and 24 February 2017 (Annual Statement of Mineral Resources and Ore Reserves as at 31 December 2016). The combined measured and indicated and inferred resource estimate of 27.1Mt is comprised of a measured resource estimate of 21.8Mt, an indicated resource estimate of 4.8Mt and an inferred resource estimate of 0.5Mt. MDL confirms that it is not aware of any new information or data that materially affects the information included in the ASX releases of 22 February 2017 and 24 February 2017 and that all material assumptions and technical parameters underpinning the estimates in the release continue to apply and have not materially changed.



# GCO

## SUSTAINABILITY FUNDAMENTALS



### FINANCIAL & EMPLOYMENT

- Government owns 10% of GCO
- 5% gross production royalty
- Focus on:
  - maximising local employment
  - use of local suppliers and service providers
  - capacity building and training

### ENVIRONMENT & SAFETY

- Progressive rehabilitation
  - program developed with regulators and local communities
- ‘Zero incident’ ethos
- Medical clinic and Emergency Response Team
- Multilingual OHS training

### SOCIAL & COMMUNITY

- Stakeholder approved social development programs
  - community infrastructure
  - agricultural improvement
  - small business development
  - focus on opportunities for women & young people
- Resettlement eco-villages

## TIZIR TITANIUM & IRON

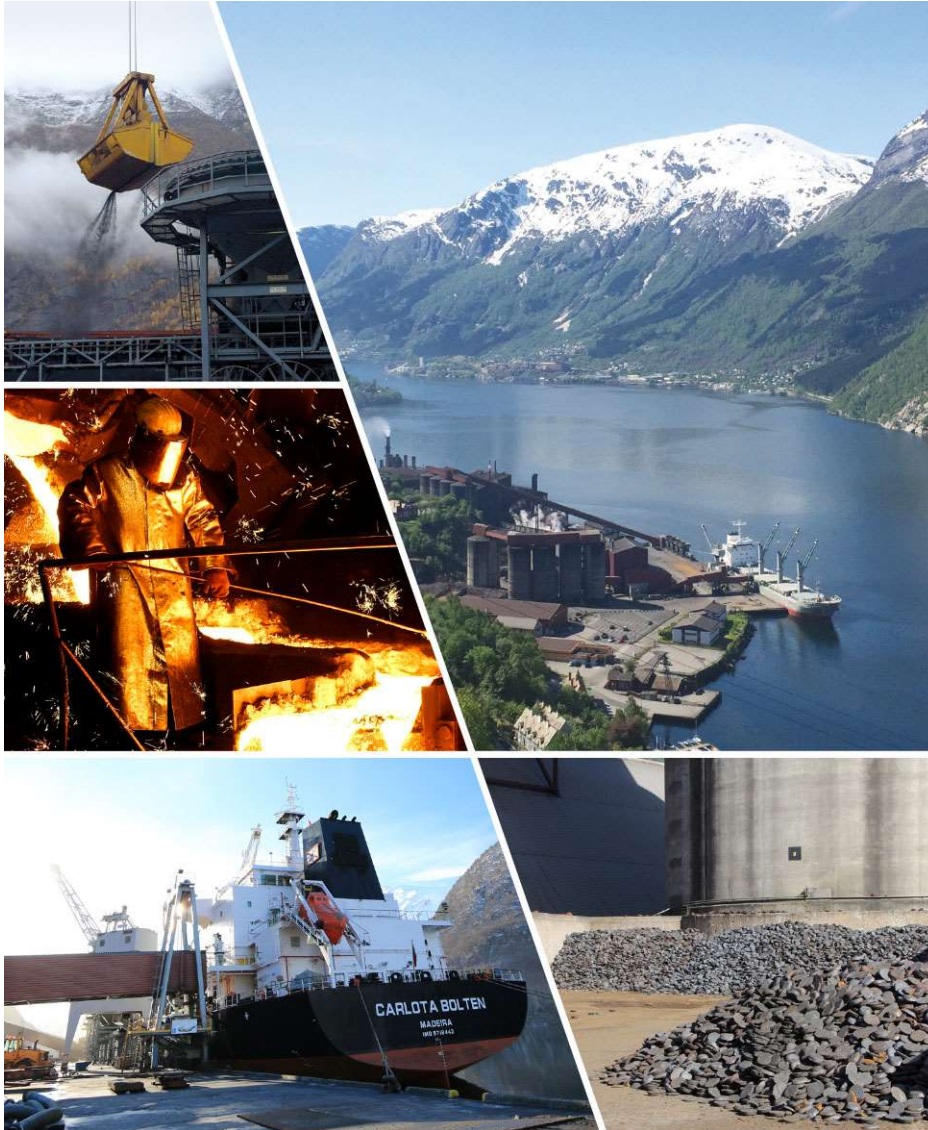


MINE ► INTEGRATE ► TRANSFORM





## ONLY UPGRADING FACILITY OF ITS TYPE IN EUROPE



### Upgrading facility

- Furnace capacity expansion project completed in 2015
- First chloride slag production early January 2016
  - closely followed by high purity pig iron
- Chloride slag and iron specifications are consistent with expectations

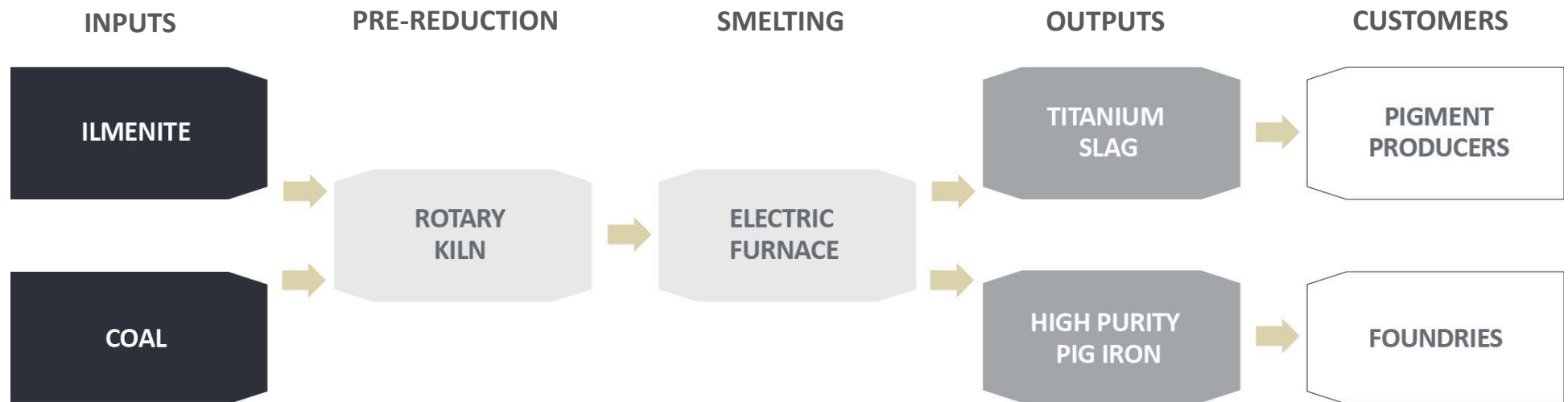
### Operation

- In operation for over 30 years
- Valuable intellectual property
  - technology/knowledge
  - operational expertise

### Logistics

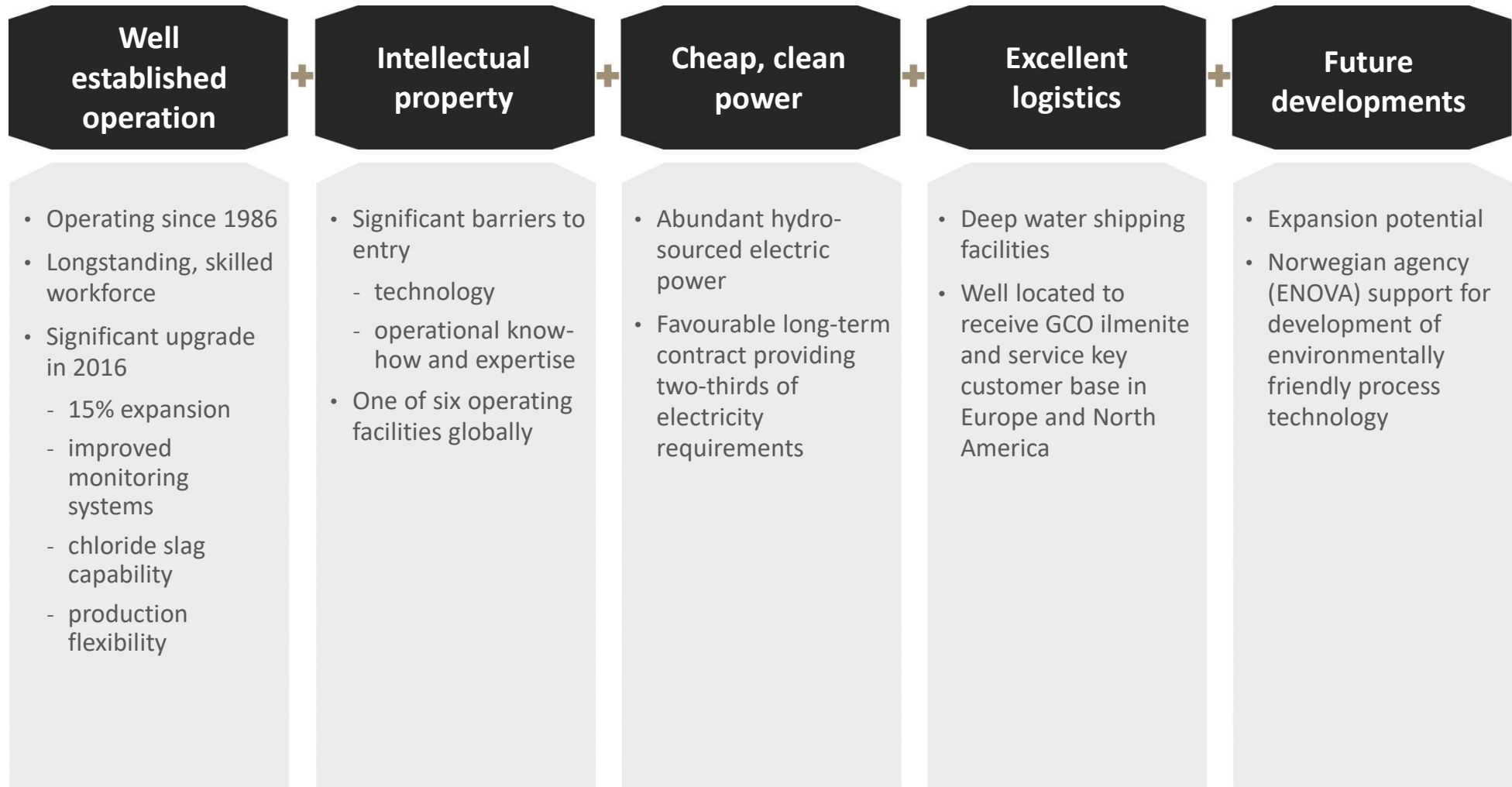
- Abundant hydro-sourced electric power
- Deep water shipping facilities

**LONG OPERATING HISTORY – VALUABLE INTELLECTUAL PROPERTY**





## KEY ATTRIBUTES



## THE VALUE OF VERTICAL INTEGRATION



MINE > INTEGRATE > TRANSFORM

Video

## KEY BENEFITS OF INTEGRATION

### GCO

- Long life mine
- Low cost dredge mining
- High-quality product suite
- Owned and operated power and water infrastructure
- Ownership or control of key mine to port infrastructure

### TTI

- Operating for over 30 years
- Valuable intellectual property
  - technology/knowledge
  - operational expertise
- Abundant, hydro-sourced electric power
- Recent capacity upgrade

### INTEGRATION BENEFITS

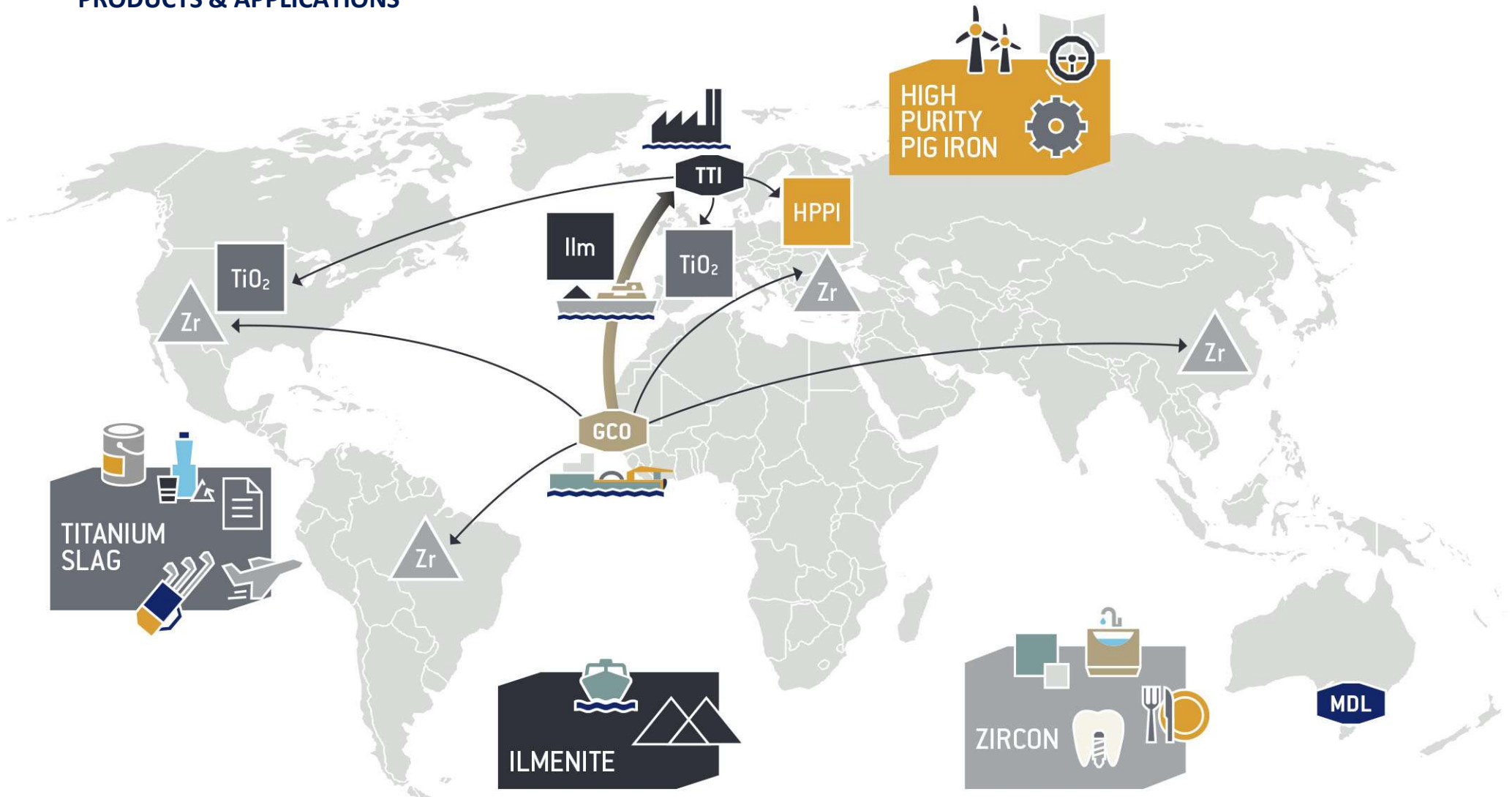
- Production flexibility
- Minimise risk profile
- Maximise margins
- Reduced logistics costs





# TIZIR

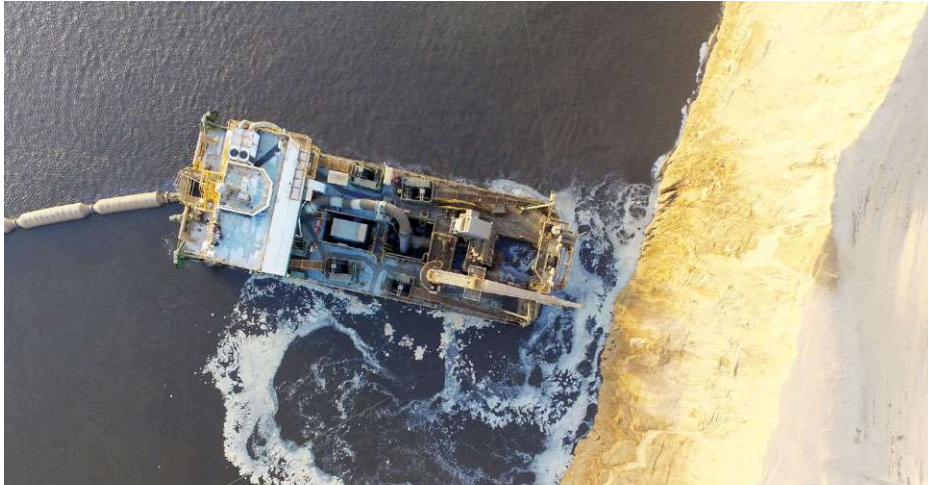
## PRODUCTS & APPLICATIONS





# STRATEGIC OUTLOOK

## OPERATIONS



### GCO

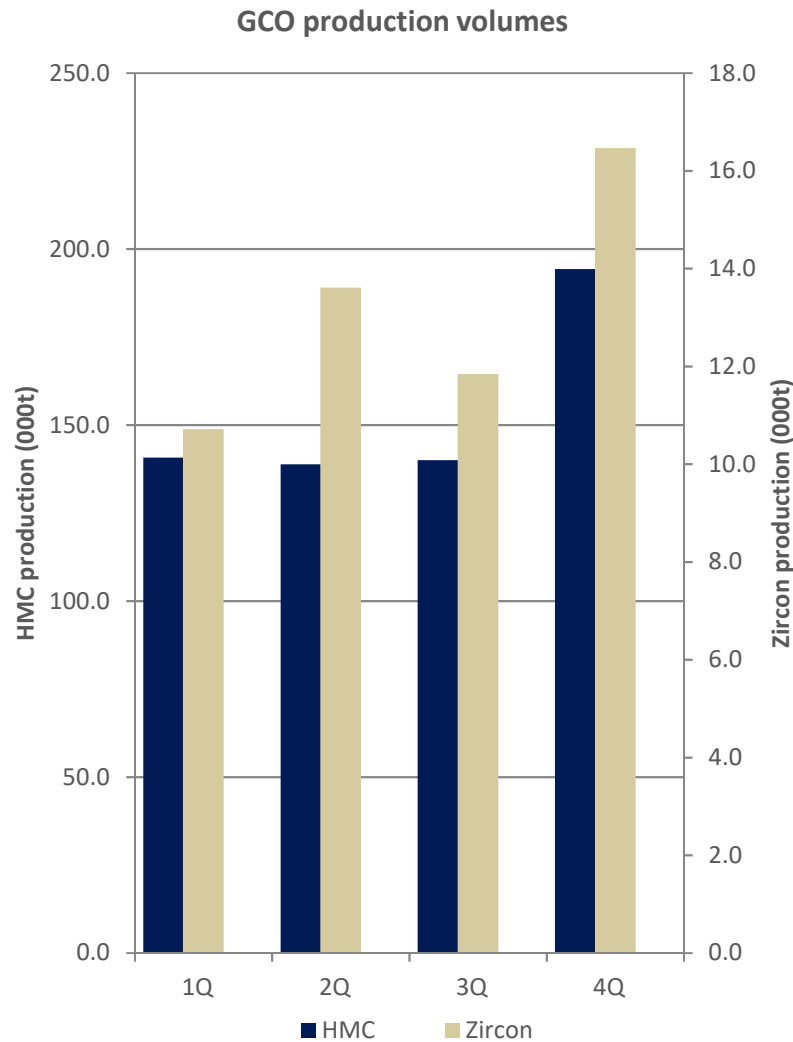
- Continue to optimise operational performance and mine path
- Key focus on optimisation projects to deliver:
  - increased utilisation and throughput rates
  - improving efficiencies of:
    - mining recoveries
    - processing yields
- Ongoing cost saving initiatives
- Supplementary feed using dry mining methods

### TTI

- Focus on delivering:
  - high-quality product mix
  - 15% expansion of operations
  - improved maintenance performance
- Optimisation of pre-reduction process

## 4Q 2016 – PERFORMANCE UPDATE

### PLATFORM SET FOR 2017



### GCO

- Strong result in 4Q 2016
  - multiple production records
  - record dredge and WCP utilisation
  - 1<sup>st</sup> year of positive cash flow (2016)
- Second successive quarter of positive free cash flows
- Mine optimisation study – focus on maximising cash flow

### TTI

- Furnace restart ahead of schedule
  - ramp up well underway
- Product shipments expected from early April

## SIGNIFICANT LEVERAGE FOR SHAREHOLDERS & NEW INVESTORS IN MDL

### STRONG PLATFORM TO GROW SHAREHOLDER WEALTH



50/50 Partnership with ERAMET, a world leader in manganese and nickel mining & smelting



Value leverage given industry fundamentals and asset replacement value



Improving sector outlook



Integrated operations maximising margin and minimising risk



Improving operational and financial performance



Substantial five year capital program complete

## CONTACT DETAILS

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