



## Minerals for a sustainable future



Large deposit with unique location



Quality offtake partners



Robust project economics



Strong competitive position



Valuable investment in lithium



OAX: NOM

**NORDIC  
MINING**

Investor presentation

September 2019

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# Risk factors

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## Key risks specific to Nordic Mining or its industry

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- Development of the Group's assets will depend upon the Group's ability to obtain financing
- The operations of the Group are pre-commercial and will only be developed provided technical, environmental and financial feasibility
- The Group is subject to production and operating risk, including unexpected geological formations, mine failures, explosives, availability of production equipment and potential damage to equipment, property and infrastructure
- The Group is subject to risk related to changes in mineral and metal prices, government regulations, political and environmental factors
- The minerals and metals industries are highly competitive and the Group has no guarantee that this competition will not have an adverse effect at some point on the Group's ability to acquire, explore and develop its mineral and metals resource deposits
- There is no assurance that the Group will be successful in obtaining governmental permits, licenses and approvals related to its projects on conditions acceptable to the Group
- The Group's estimates as to the size of the mineral resources and ore reserves are in accordance with the JORC code (2012 edition). Actual operating results may deviate from these estimates
- Development of the Group's projects are subject to various risks, including the size of required capital expenditures, processing costs and other financial and non-financial aspects that may impact project return

*Adverse developments or occurrences in any of the risk factors may have a material adverse effect on the business and financial condition of the Group*

## Key risks specific to the securities

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- The price of the Shares could fluctuate significantly
- Future sales, or the possibility for future sales, including by existing shareholders, of substantial number of Shares could affect the Shares' market price
- Future issuances of Shares or other securities could dilute the holdings of shareholders and could materially affect the price of the Shares
- Investors may not be able to exercise their voting rights for Shares registered in a nominee account
- The transfer of the Shares may be subject to restrictions on transferability and resale in certain jurisdictions
- Exchange rate fluctuations could adversely affect the value of the Shares and any dividends paid on the Shares for an investor whose principal currency is not NOK

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# Nearing construction for two strategic assets

## Engerbø – rutile and garnet (100%)



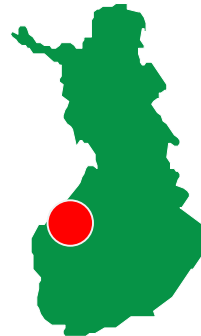
- Large resource base
- Long term industrial partners
- First European producer of garnet
- Post tax NPV@6.8% USD 305m



## Keliber – lithium hydroxide (18.5%)



- First European producer
- Large resource potential
- Scalable production configuration
- Post tax NPV@8% of USD 422m<sup>1</sup>



# Board of Directors and Management team

## Board of Directors



**Kjell Roland, Chairman**

- Former CEO of Norfund
- Previous experience as partner and CEO in ECON Management AS and ECON Analysis
- Finance / economics background



**Kjell Sletsj e, Deputy Chairman**

- Comprehensive international management experience from mining, coatings and construction industries as well as consulting
- Technical / financial background



**Benedicte Nordang, Board member**

- 20 years' experience from the offshore industry, including various management positions from Equinor ASA and Aker Marine Contractors
- Held board positions in the mining industry for more than 10 years, including for Nussir ASA and Wega Mining ASA



**Antony Beckmand, Board member**

- More than 20 years' experience in financial, commercial and corporate roles within the mining industry
- Currently CEO of Sydvaranger AS (iron ore) and has previous industry experience across a range of commodities



**Eva Kaijser, Board member**

- More than 18 years of experience in the Swedish mining industry, including 11 years in Boliden
- Finance / industry background

## Management team



**Ivar S. Fossum, CEO**

- 13 years with Nordic Mining (since founding)
- 20 years experience from management positions in Norsk Hydro and FMC Technologies



**Birte Norheim, CFO**

- Employed as of August 2018
- Broad management experience from various companies in the natural resources and infrastructure sector, i.a. as CEO of Njord Gas Infrastructure AS and VP Finance of Sevan Marine ASA



**Kenneth Nakken Angedal, Project Manager Engeb **

- Employed as of August 2018
- Broad management and project coordination experience from various management positions in the ABB Group



**Mona Schanche, VP Exploration**

- 11 years with Nordic Mining
- Geologist with broad mining background

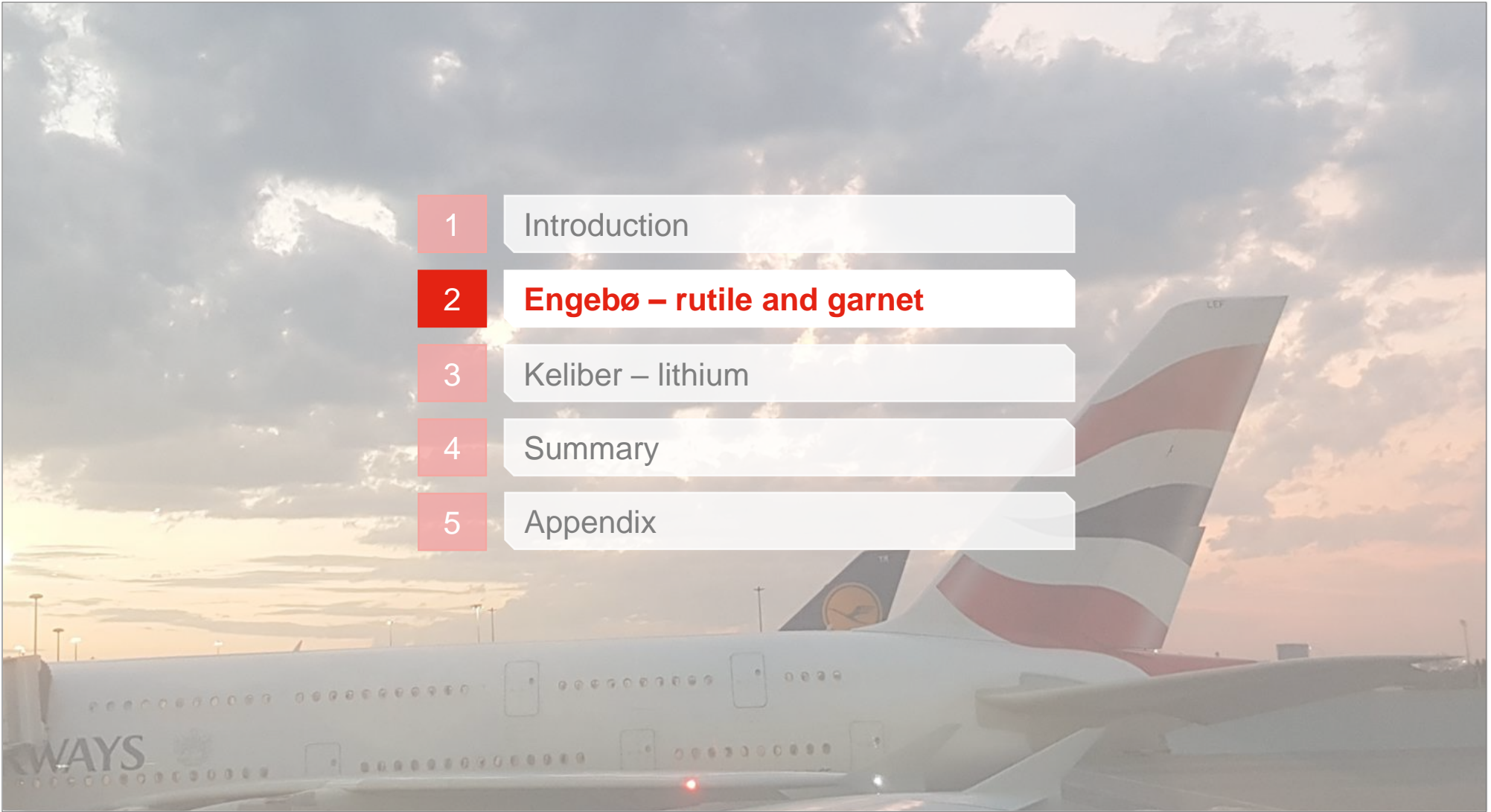


**Lars K. Gr ndahl, Senior Advisor**

- 13 years with Nordic Mining (since founding)
- Broad experience from various industrial management positions

Broad mining, industrial and financial experience combined with extensive network

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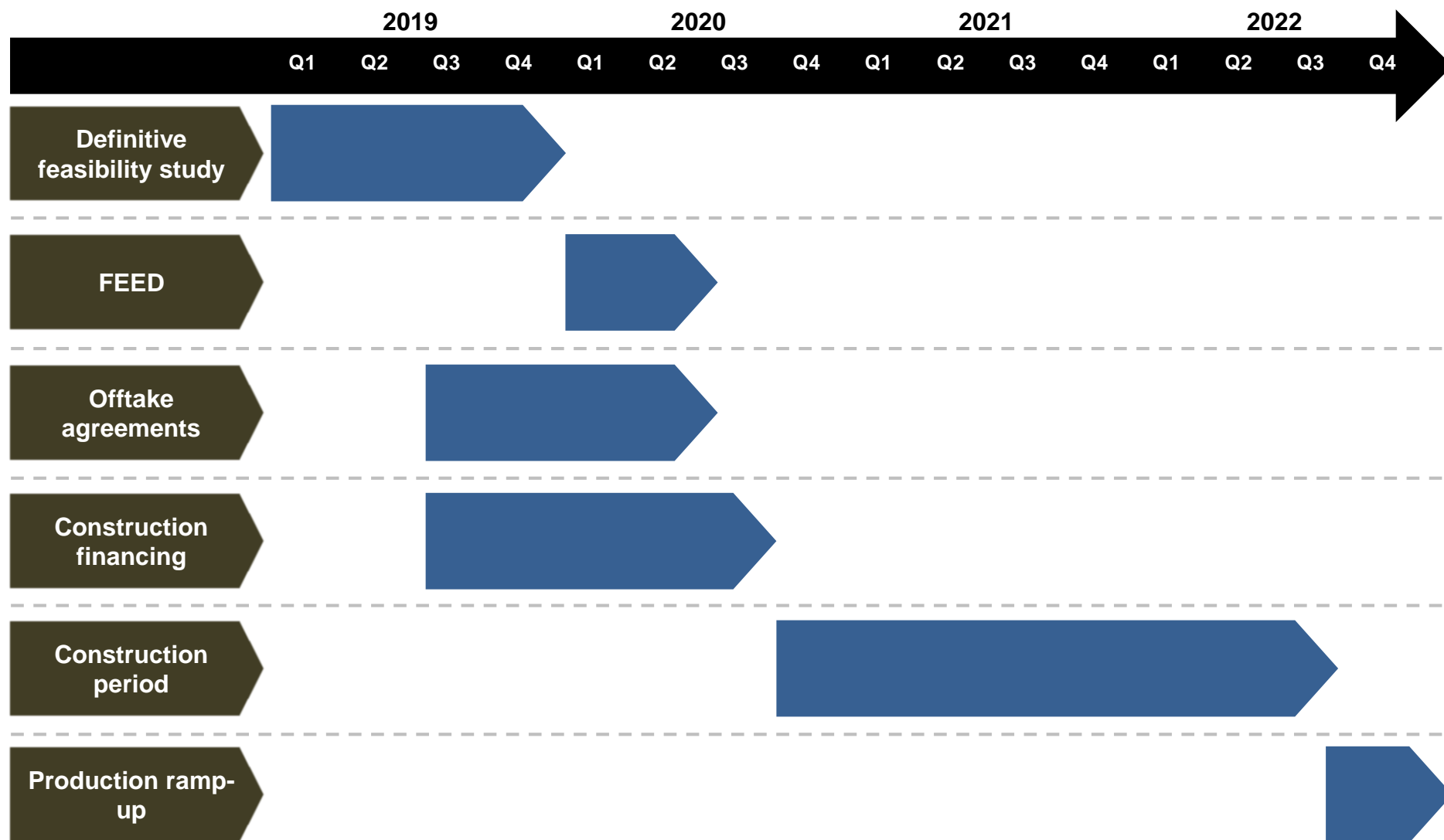
## Key milestones completed – progressing towards construction

Q1 '15	Zoning plan approved and environmental permit granted	
Q4 '17	Prefeasibility study (PFS) completed	
Q4 '17	Strategic partnership with Barton Group on offtake and financing	
Q1 '19	Heads of Agreement with Japanese trading house on offtake and construction financing	
Q3 '19	Application for operational licence on public hearing	
Q4 '19	<b>Completion of definitive feasibility study (DFS)</b>	

Completion of the DFS will be an important milestone for construction financing



# On track towards value inflection points

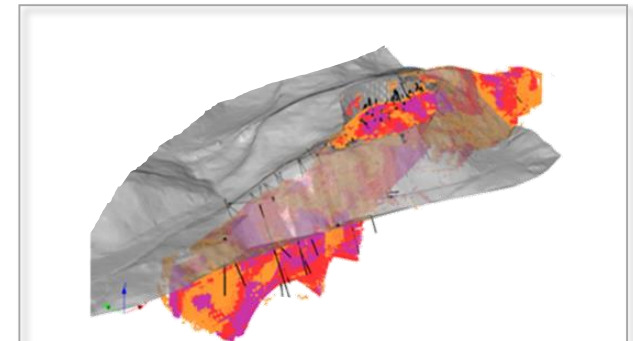
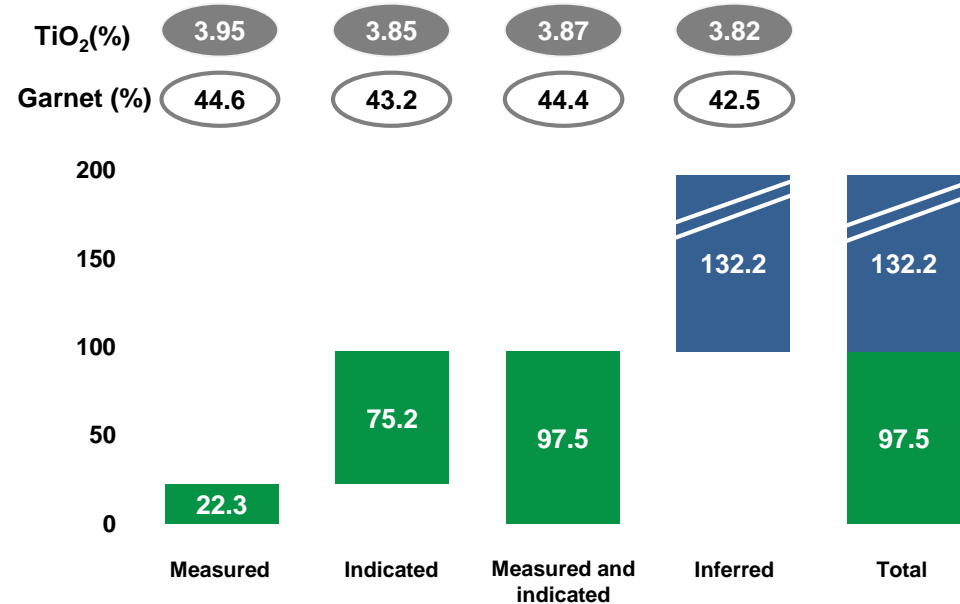


# Unique resource of rutile (titanium dioxide) and garnet

## Key features

- **High grade** rutile and garnet deposit located in western Norway
- One of the **world's largest deposits** of natural rutile with vast amounts of garnet
- Geotechnically stable orebody allows for **effective mining** and resource utilization
- **Outcropping ore** facilitates low-cost initial mining
- Location by the **North Sea** provides advantageous logistics

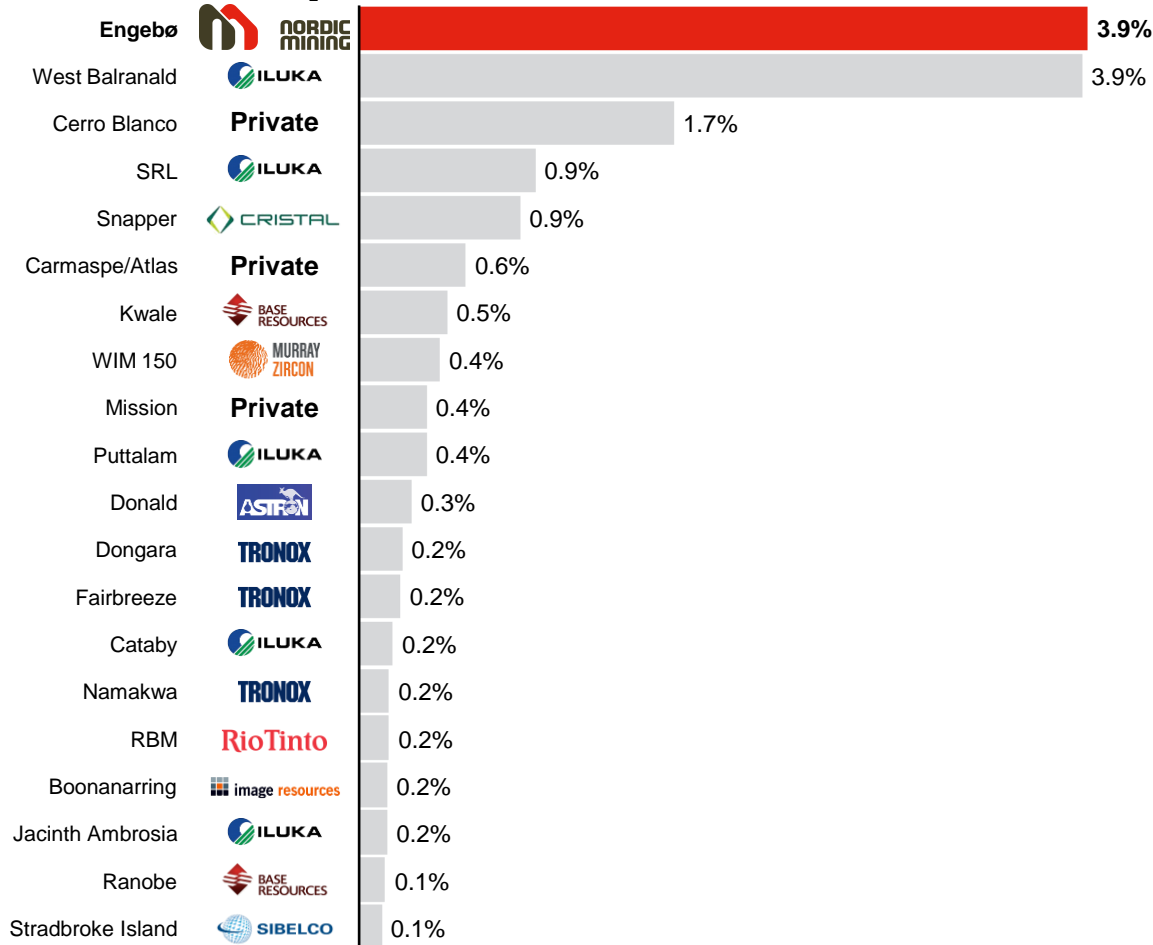
## Large resource potential (Mt)<sup>1</sup>



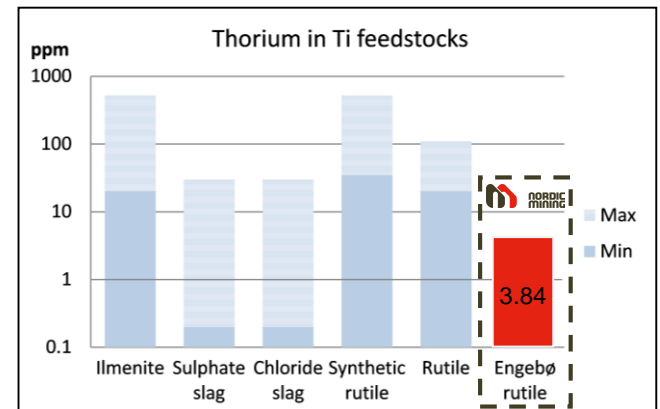
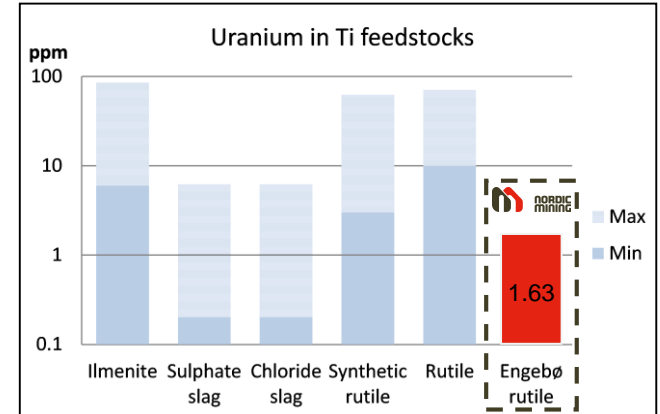
# High grade rutile with low level of impurities

## High rutile grade gives processing advantages

Indicative rutile grades (TiO<sub>2</sub>) for current producers and planned projects



## Low levels of radioactive elements



# Solid market drivers for Nordic Mining's minerals

## Rutile

**Global market:  
~0.7 million tonnes**

### Fundamental drivers

- Titanium has unique properties as oxide and metal
- Rutile is the highest grade titanium feedstock
- Improves efficiency and reduces waste
- Growth of the aerospace industry
- Higher growth in emerging markets

### Applications



Pigment



Titanium



Welding rods

## Garnet

**Global market:  
~1.1 million tonnes**

### Fundamental drivers

- Emerging mineral with strong growth and potential
- No substitutes for garnet in waterjet cutting
- Performance enhancement in advanced blasting applications
- Environmental and health benefits in blasting
- Improved recycling properties

### Applications



Waterjet cutting



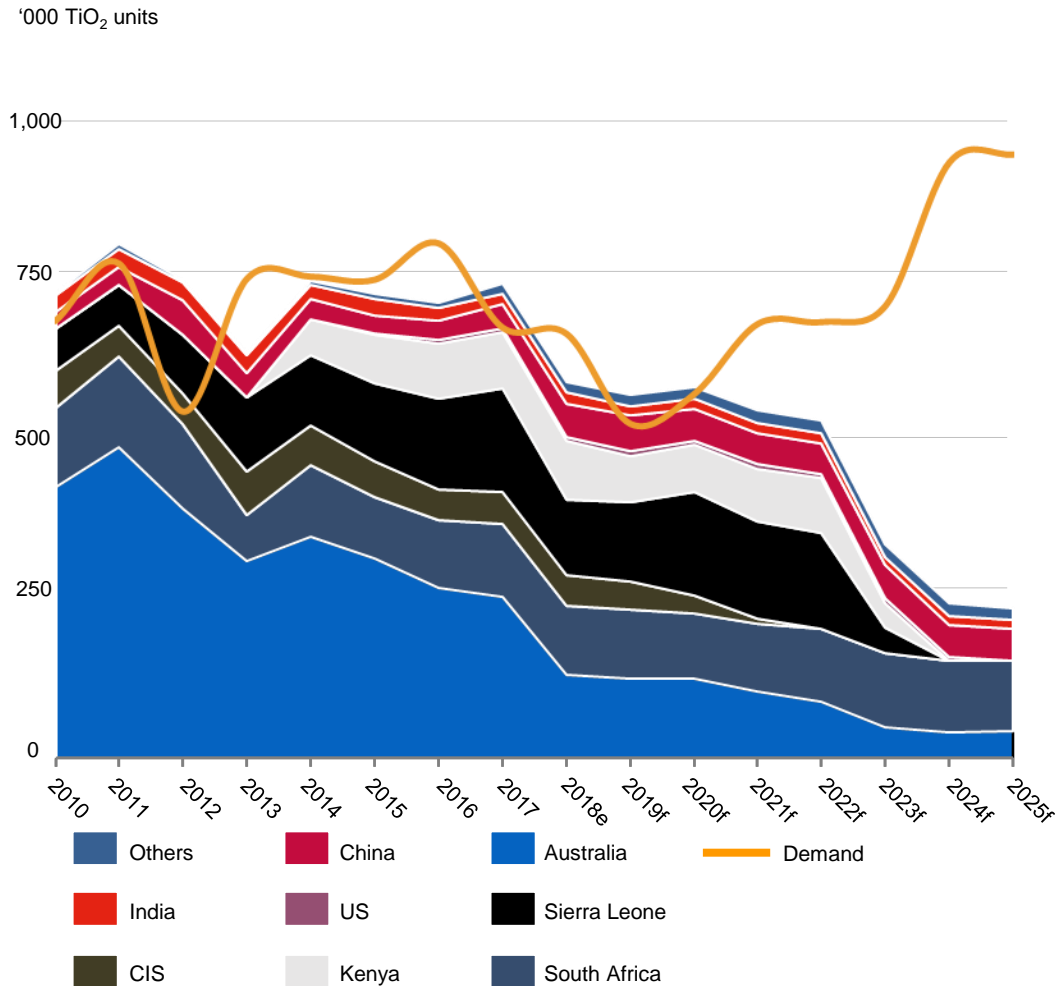
Sand blasting



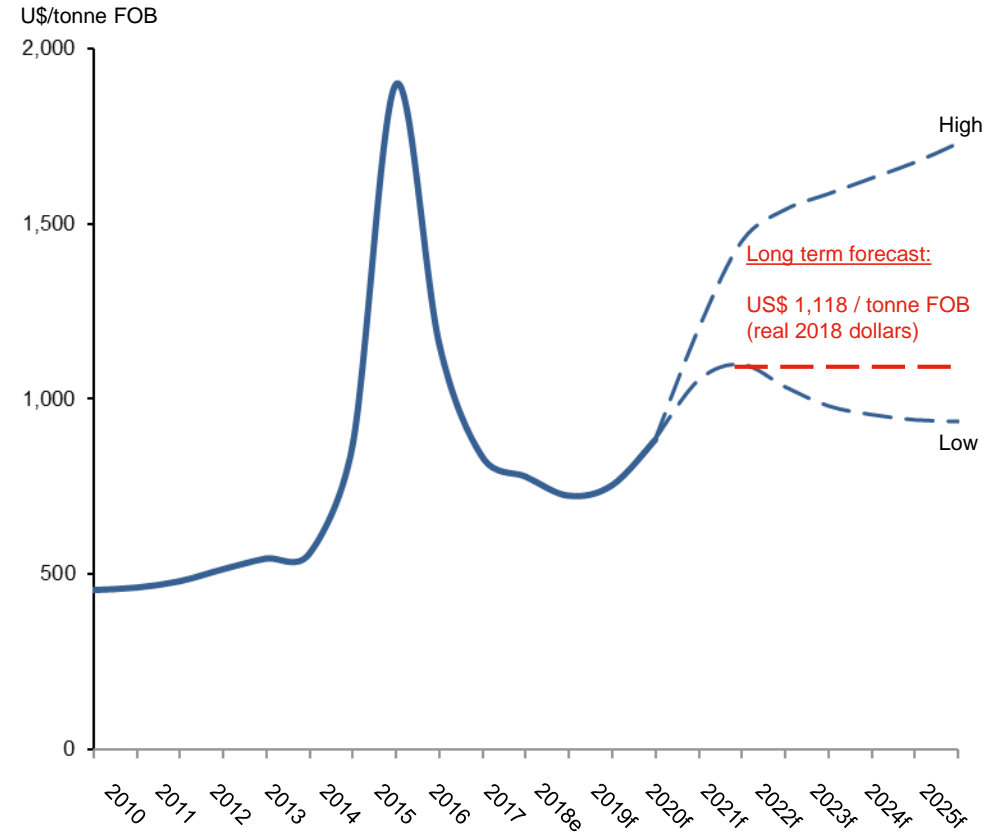
Abrasives

# Rutile prices forecasted to increase with growing demand

Global rutile demand is outpacing supply...

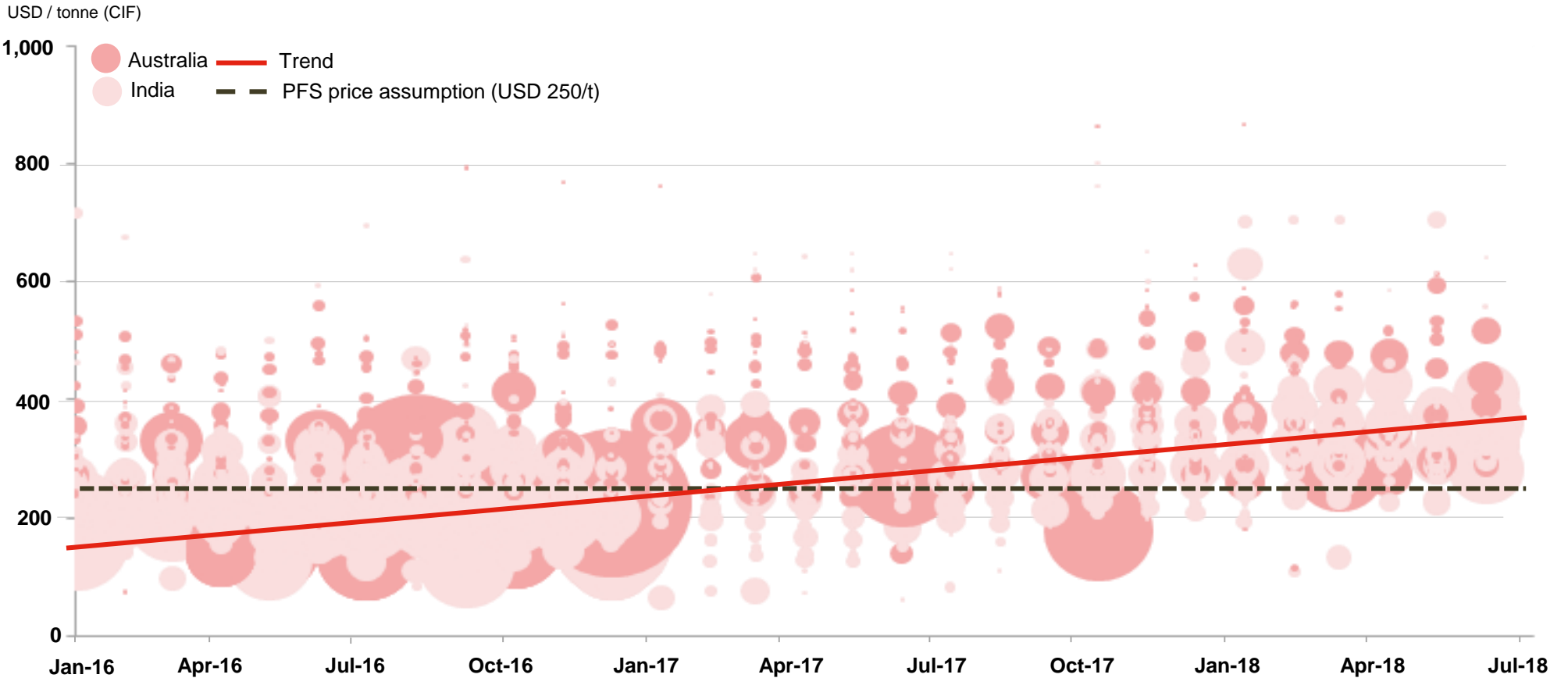


....driving rutile prices up



# Favorable long term price trend for garnet

Price trend of garnet (2016 – H1 2018)



# Quality offtake partners with participation in construction financing

## Rutile offtake



Japanese trading house



- Heads of agreement for rutile offtake and construction financing
- Offtake for a significant portion of the rutile production
- Intention to participate with a substantial portion of the construction financing

## Garnet offtake



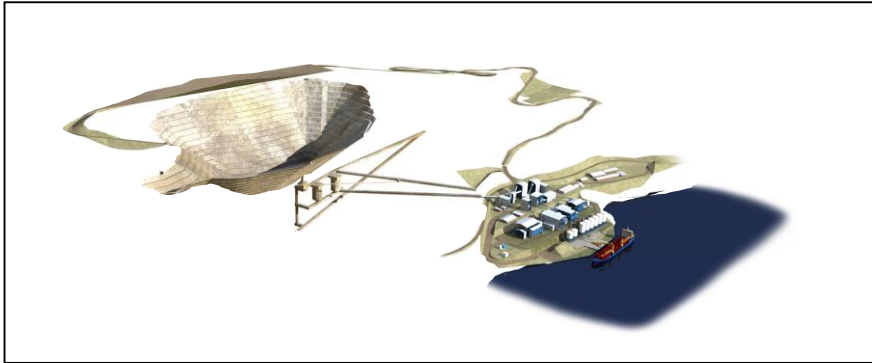
The Barton Group



- Heads of agreement for garnet offtake and financing
- Offtake for garnet to the Americas
- JV for sales and marketing cooperation in Europe
- Intention to participate as an anchor investor in the construction financing
- Barton currently owns 5.8% of NOM

# Attractive mining conditions

## Long term open pit mining with rich ore and low stripping ratio

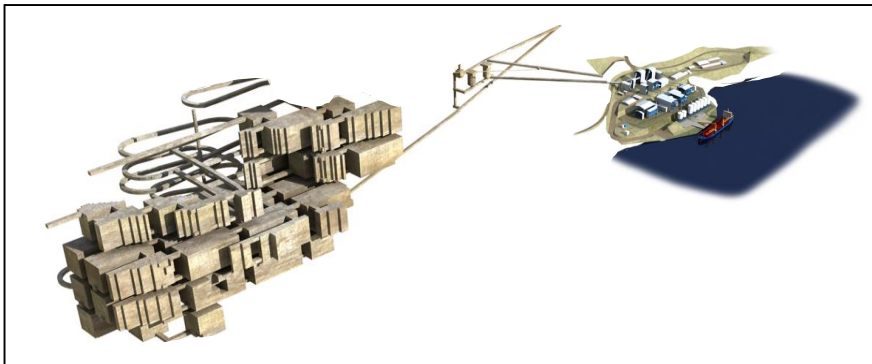


**Mine life of 21 years<sup>1</sup>**

**Run of mine of 1.5 Mtpa**

**Stripping ratio of 1.34**

## Easy transition to underground mining beyond the open pit phase



**Mine life of 13 years**

**Run of mine of 1.5 Mtpa**

**Operational flexibility from underground crushing and silo facilities**

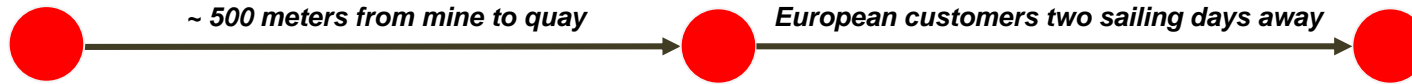


# Logistical and freight cost advantages

**Engerbø mine**

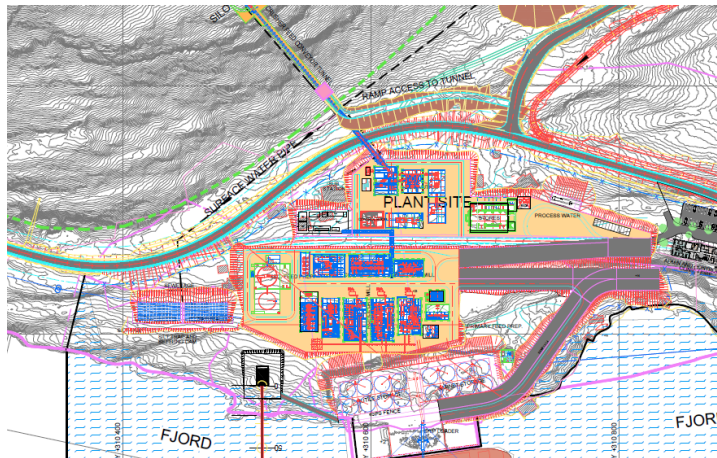
**Process plant and port**

**Markets**



**Process plant with integrated quay**

**Close proximity to European markets**



- Comminution and processing conducted next to the deposit
- Final product shipped from the quay adjacent to the plant

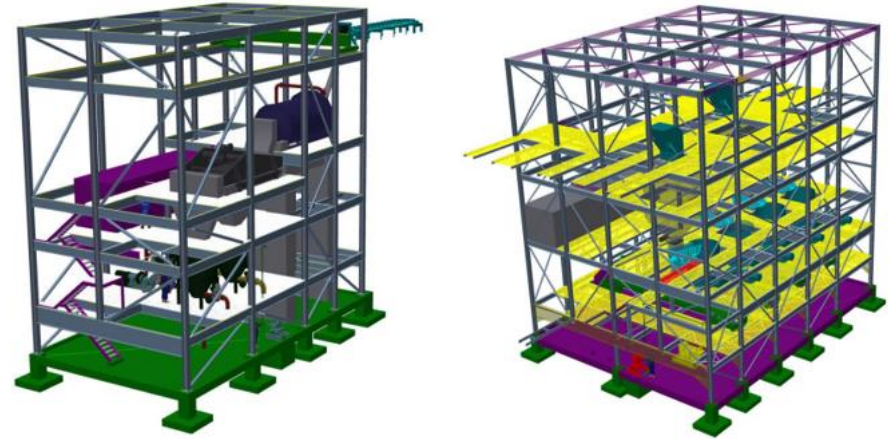
- Deep sea ice-free quay allows for shipments 365 days per year
- Existing quay allows for ship size up to Panamax – well above anticipated freight tonnage

# Existing quay enables modular construction

## Modularized process plant

- Improved schedule with use of offsite modular construction
- Proven technology with high degree of automation
- Yard construction allows for proper quality assurance and pre-commissioning
- Process modules will be barged to Engebø and transported to site by SPMT vehicles

## Process plant units



## Construction contract strategy

- Approximately 80 bid packages issued as RFQs
- Possible bundling to be carried out based on vendor feedback
- EPCM configuration to be evaluated



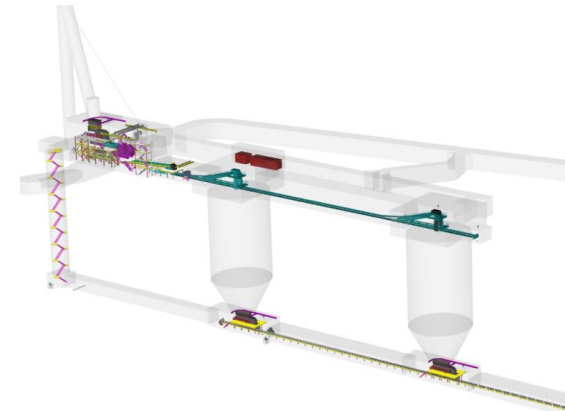
# Sustainable mining – minimizing footprint

## Environmental focus from detail engineering...

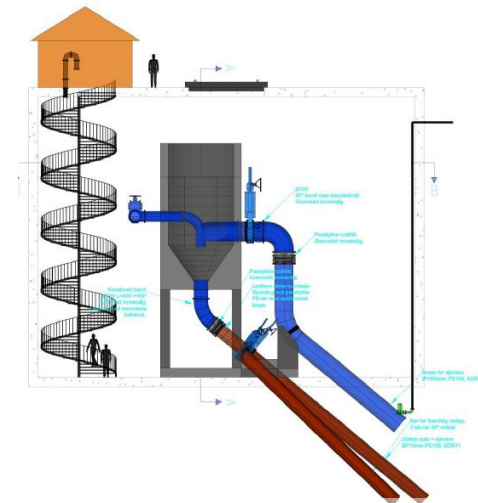
- Energy efficient motors and variable speed drives to be used in comminution and process plant
- Waste heat recovery system on dryers for heating of process plant
- Compact design on process modules reduces civil earthworks requirement in construction phase

## ...all the way to production

- Minimum ore haulage and transportation requirements
- Gravity enhanced concept for transport of ore and tailings
- Underground crushing reduces noise and dust
- Regional hydro power supplies the process plant with renewable energy
- Comprehensive environmental monitoring program, including local stakeholder involvement
- Seabed disposal assessed as the best solution for tailings



**Underground crushing chamber**

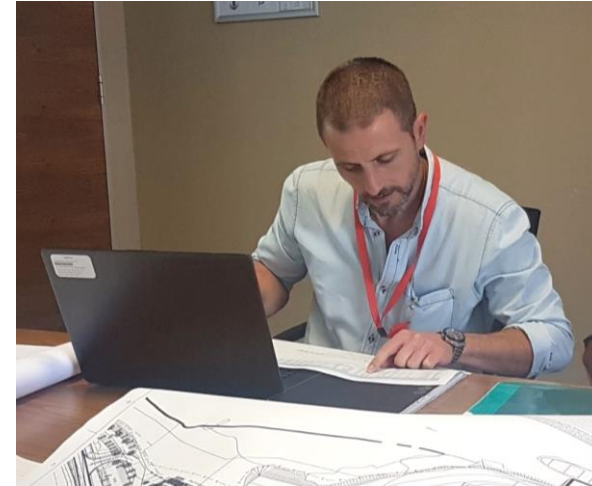
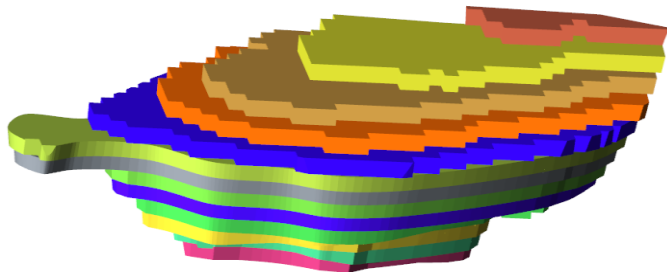


**Seabed disposal system**

# Completion of DFS – a major milestone

## DFS provides key technical outputs...

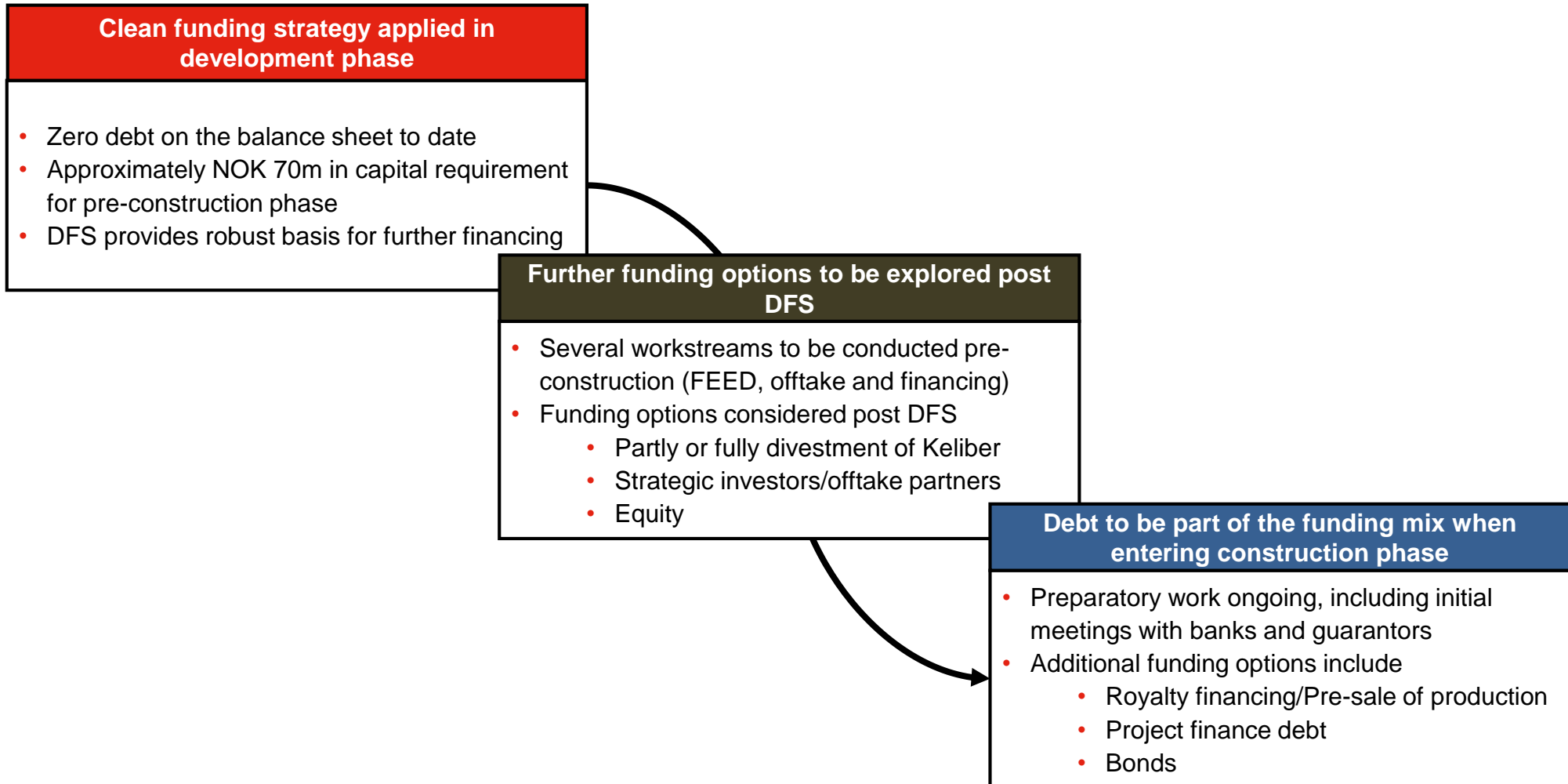
- Engineering and 3D model of facilities
- Engineering and 3D model of process modules
- Detailed specifications of equipment packages
- Detailed description of all key aspects of the Engebø project
- Construction schedule based on critical path of infrastructure requirements
- Solid basis for issuing construction and equipment tenders



## ...and critical commercial information

- Complete documentation for **lender's** project assessment
- Updated economics estimates; **85-90%** accuracy level
- Outlining of construction and operational **strategy**
- Broader scope of **financing** options

# Financing plan




# Financial highlights from PFS study

## Base case financial metrics



## With further upside potential



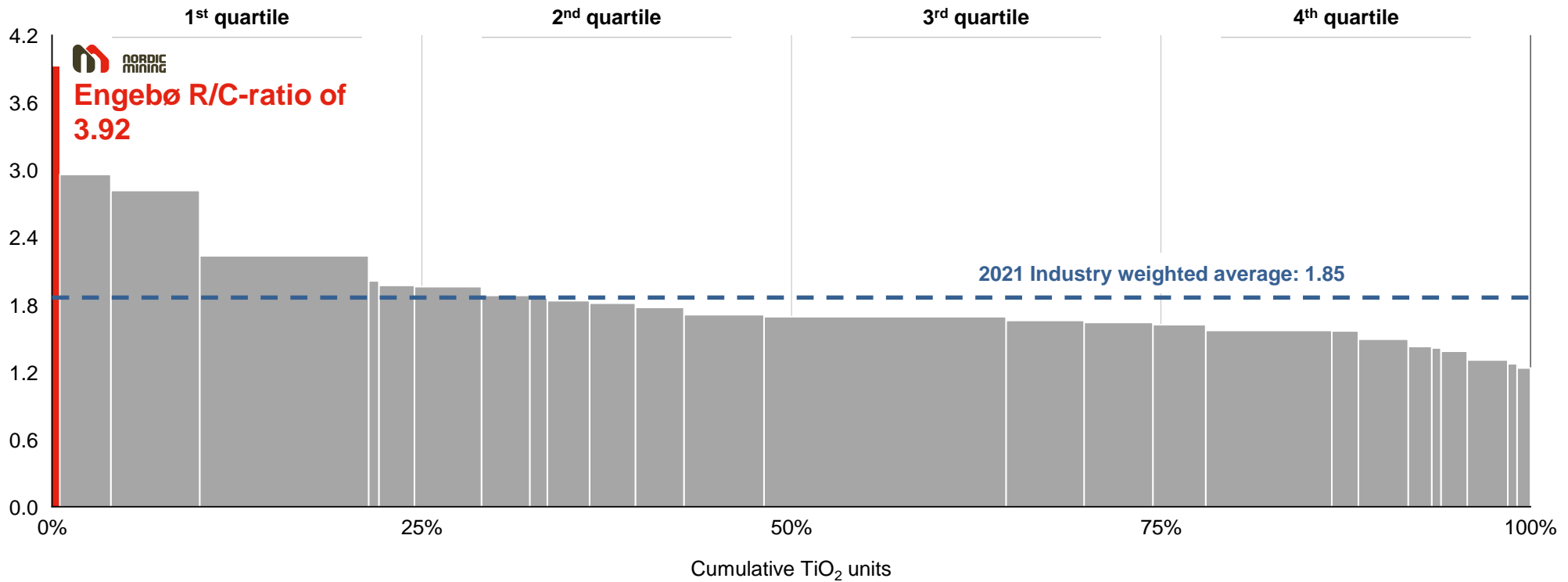
**Life of mine**  
Extension of life of mine by including inferred resources



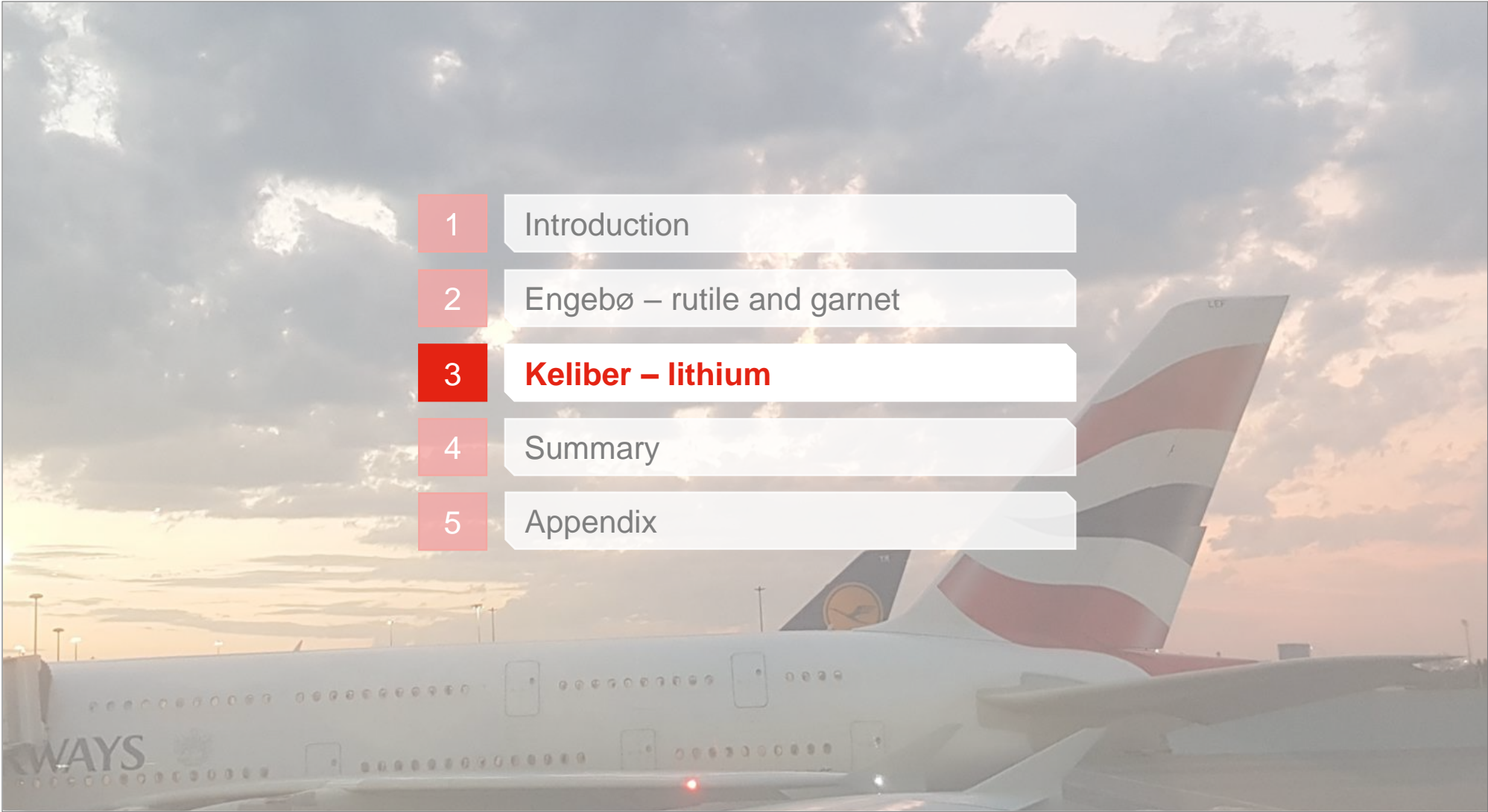
**Sales**  
Increased garnet sales in initial years

# Industry leading revenue-to-cost position for rutile

Industry revenue-to-cash cost<sup>1</sup> curve for TiO<sub>2</sub> feedstock (2021)



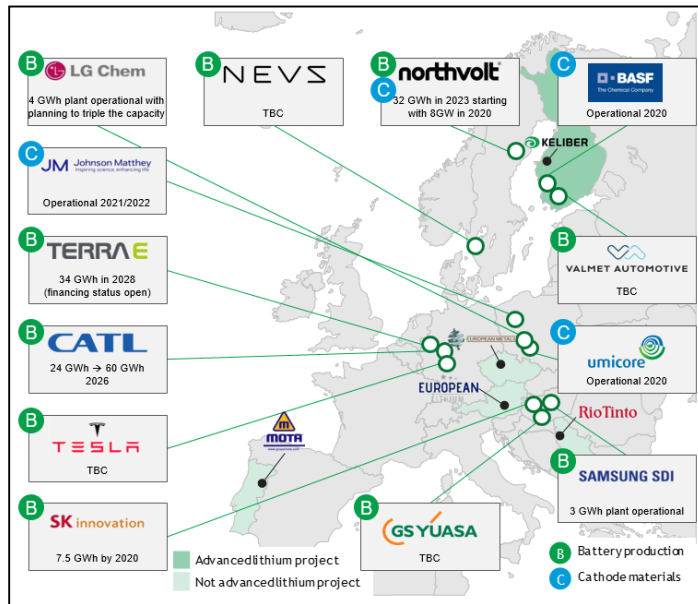
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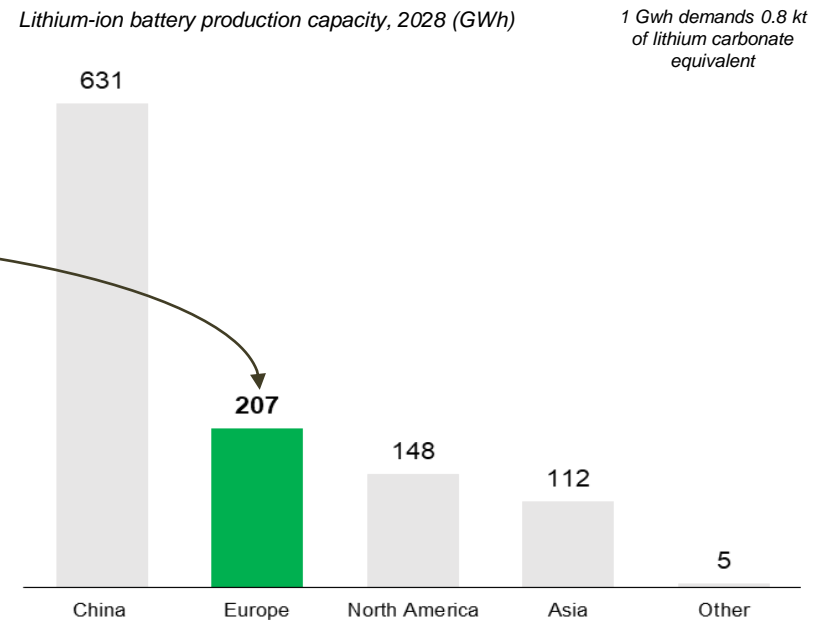


# First European producer of battery grade lithium hydroxide

## Lithium-ion giga factories planned in Europe



## Planned Li-ion production capacity by 2028<sup>1</sup>

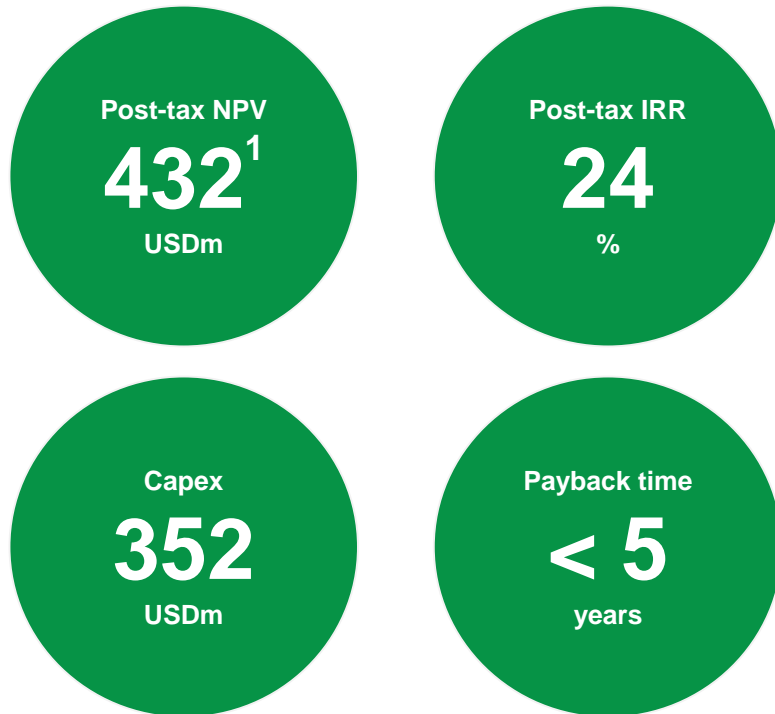


## Project progress

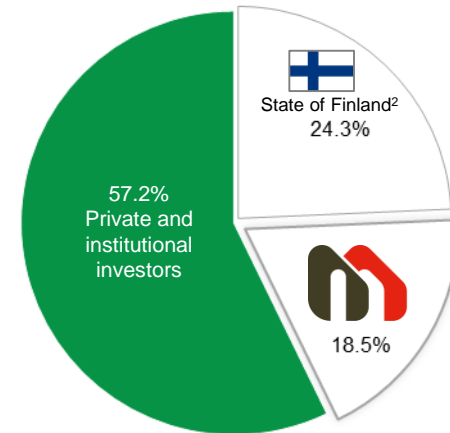
- By 2023 Giga-factories are expected to demand **73 kt LCE per year, nearly 6x Keliber's nameplate capacity**
- Recent equity issue, conducted pre publishing of updated DFS valued Keliber at approx. NOK 614m<sup>2</sup>
- Updated DFS published in February 2019
- Detailed engineering and tendering process ongoing
- Offtake discussions and financing preparations ongoing
- Target to start construction by end of 2019

# Solid project economics in updated DFS

## Key financials - updated DFS (Feb. 2019)

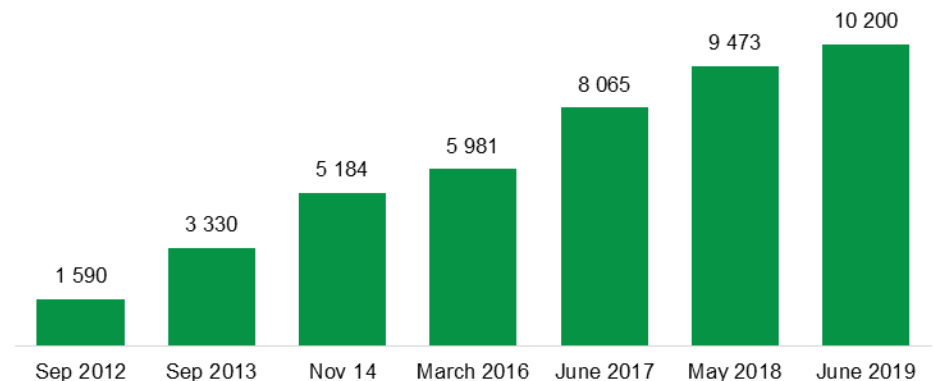


## Keliber ownership as of May 2019

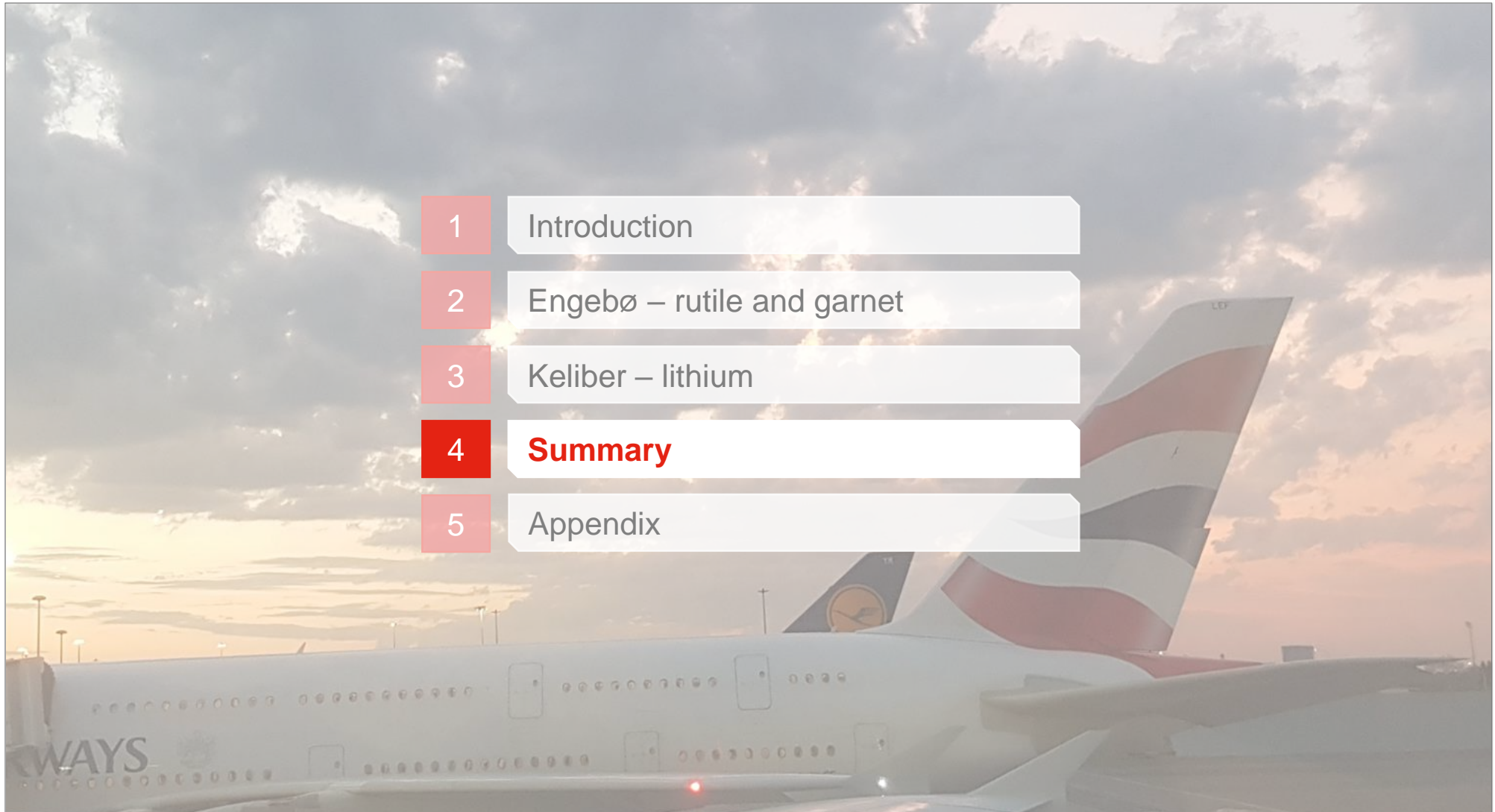


## Development of mineral resources<sup>3</sup>

Thousand metric tonnes, measured and indicated



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# Key investment highlights – two attractive mineral projects

Engebø  
(100%)

Keliber  
(18.5%)



▪ OAX: NOM

**NORDIC  
MINING**

**Minerals for a sustainable future**



Large deposit with unique location



Quality offtake partners for rutile and garnet



Robust project economics

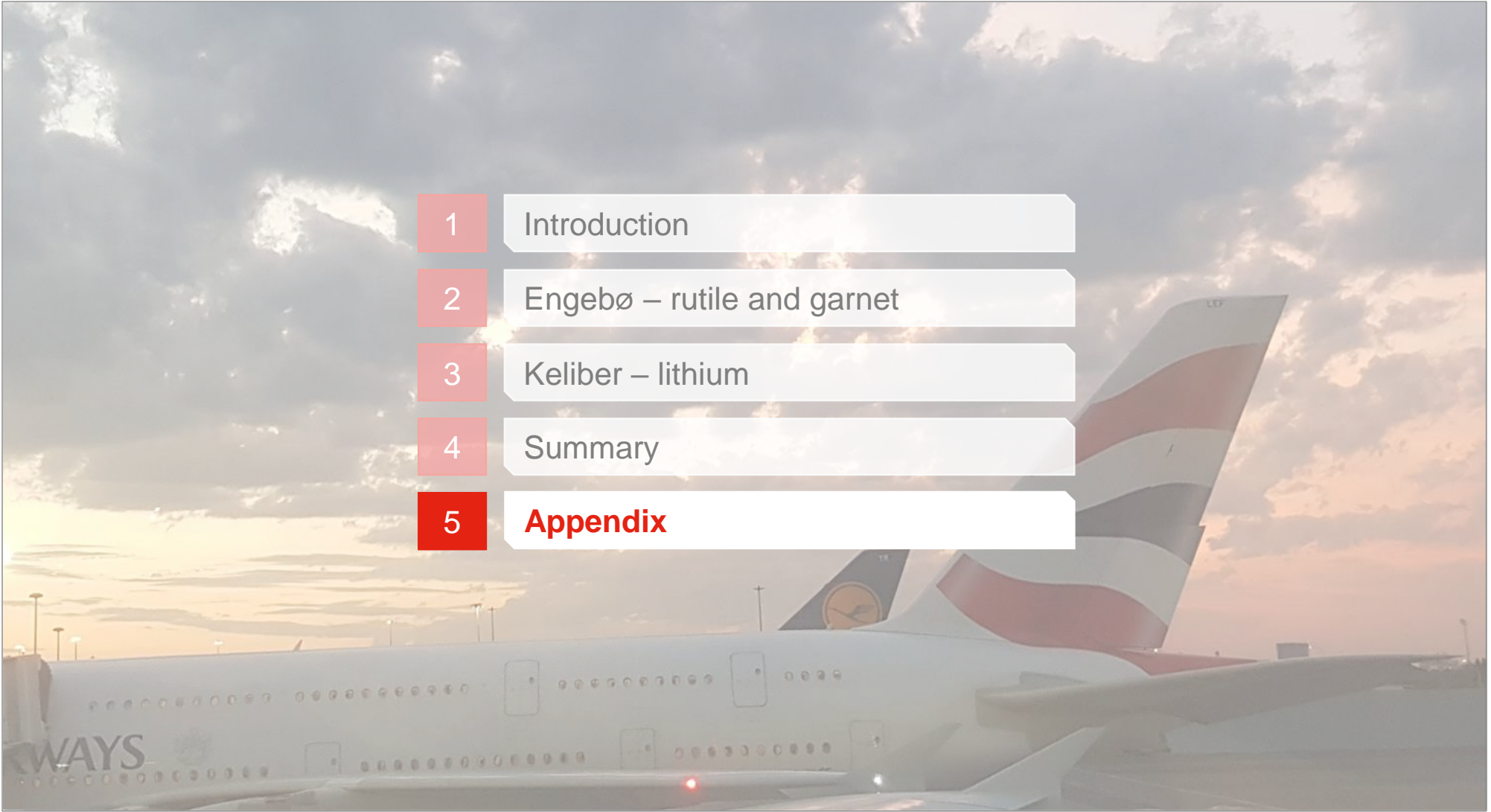


Strong competitive position

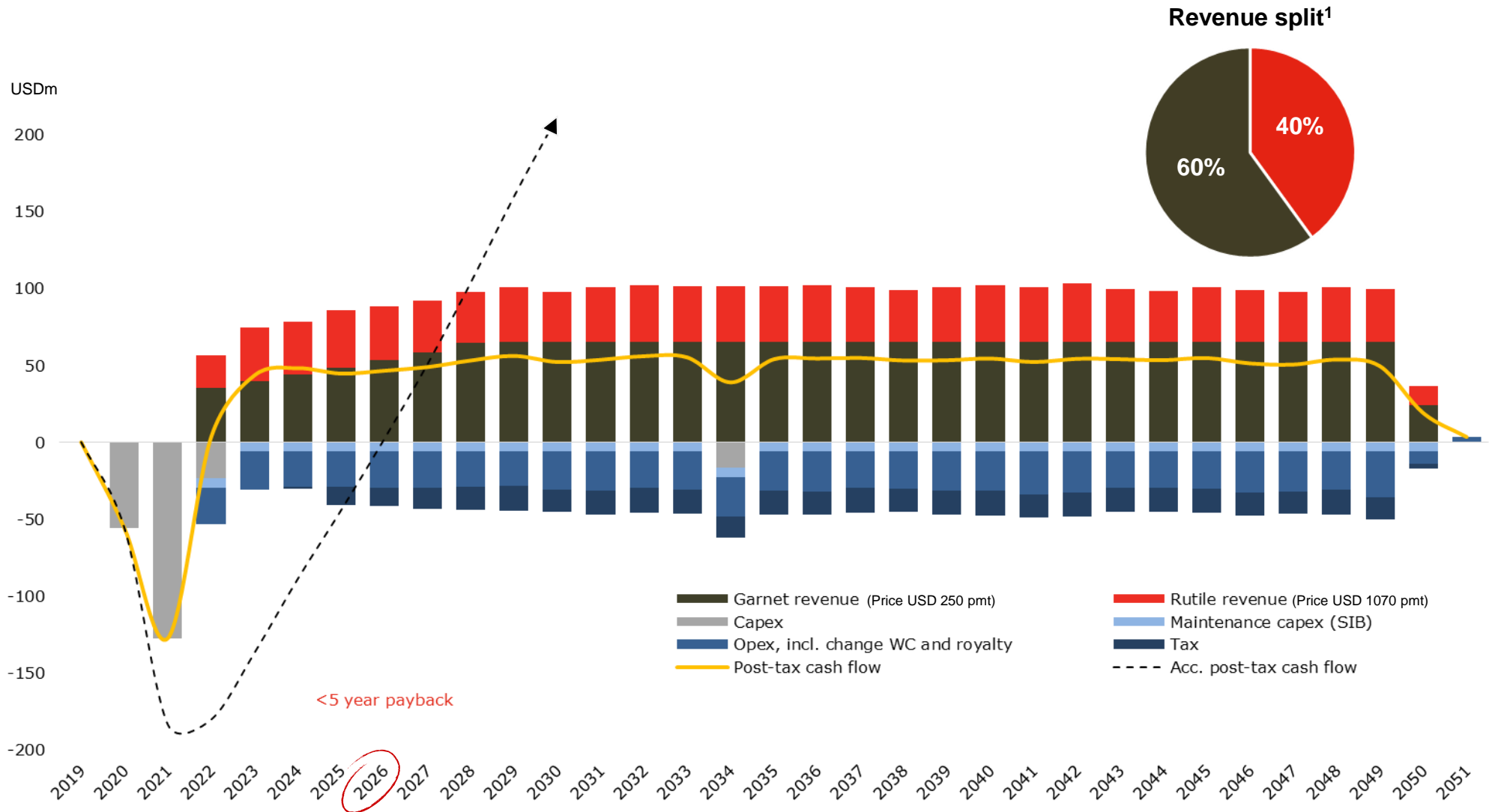


Valuable investment in lithium

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# Short payback period and long term cash flow

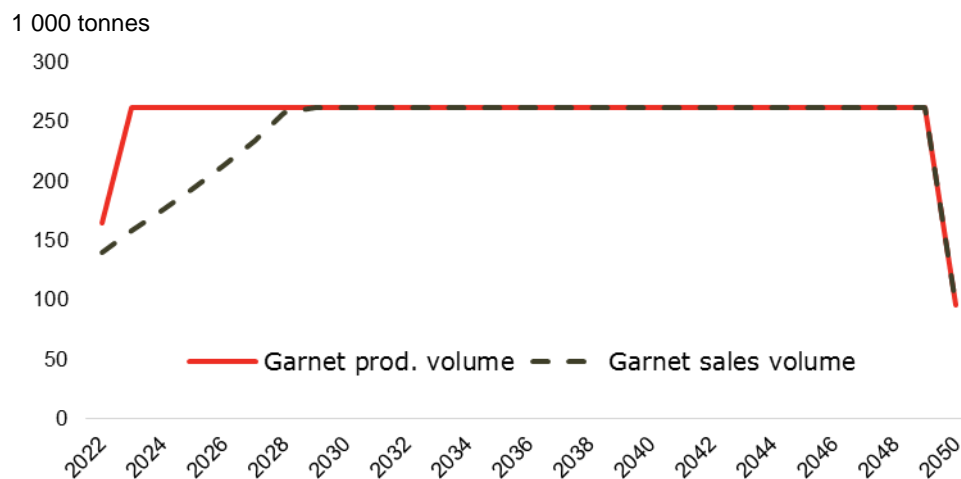


# PFS - Engebø

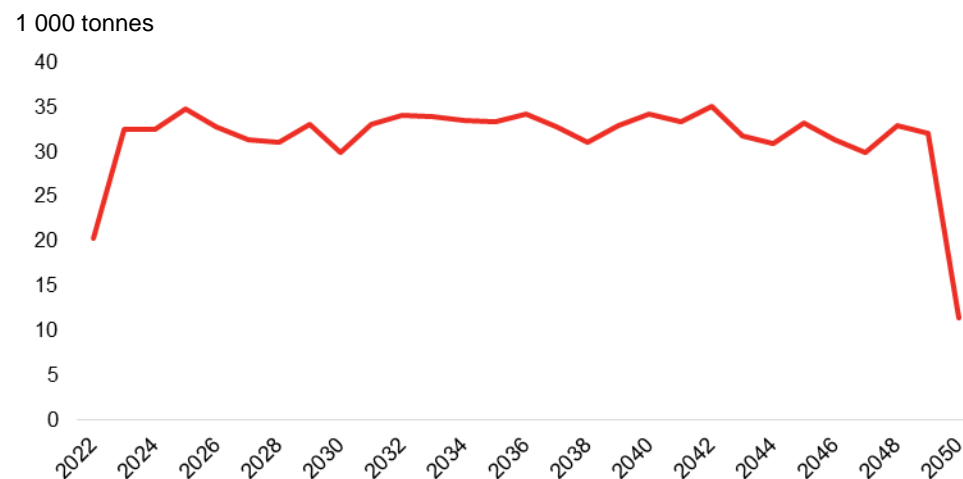
Assumptions	Value	Unit
Garnet price	250	USD/tonne
Rutile price	1 070	USD/tonne
Garnet sales (from ~2027)	261 000	Tonnes per annum
Rutile sales (average)	32 500	Tonnes per annum
Opex per sales tonne <sup>1</sup>	87	USD/tonne
Construction capex	207	USDm
Deferred capex	17	USDm

Output	Value	Unit
Pre-tax NPV @ 8%	332	USDm
Pre-tax IRR	23.8	%
Life of mine	29	years
Payback period	Less than 5	years
<b>Post-tax NPV @ 6.8%</b>	<b>305</b>	<b>USDm</b>
<b>Post-tax IRR</b>	<b>20.8</b>	<b>%</b>

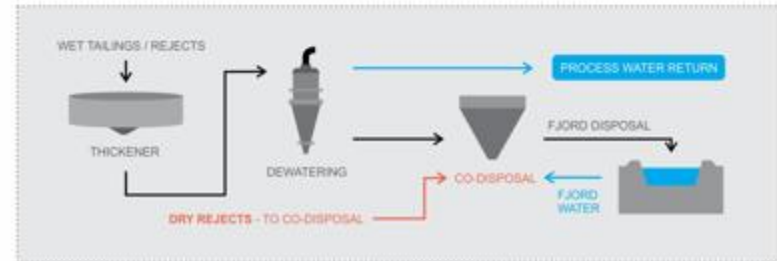
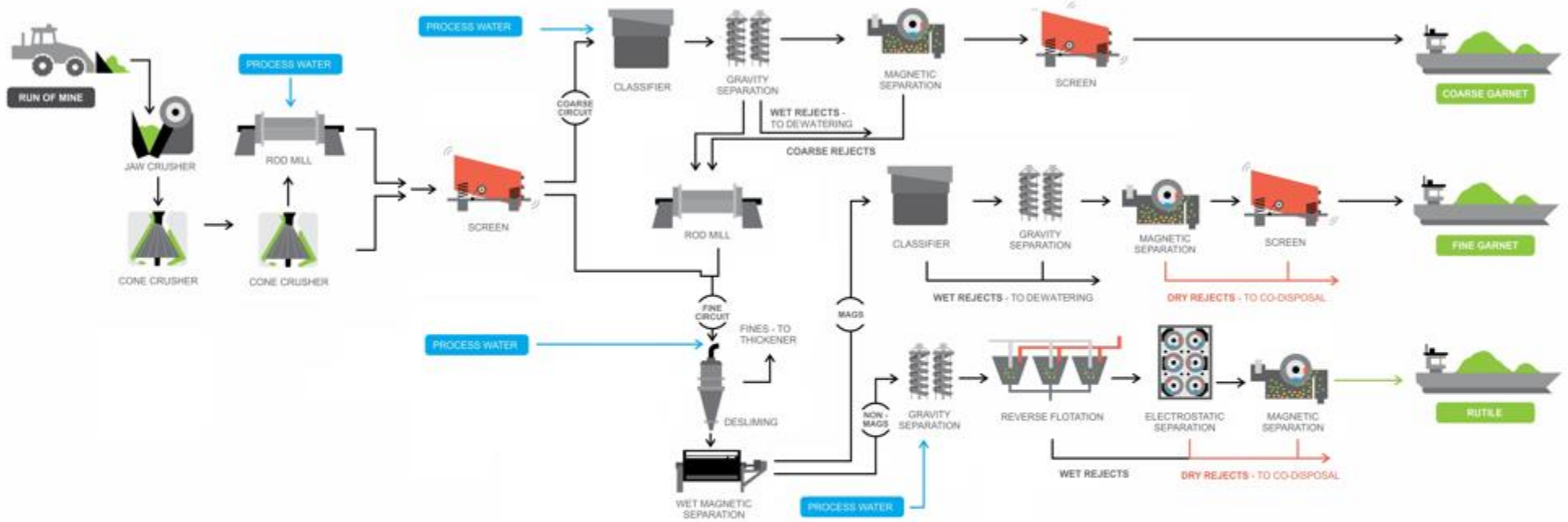
### Garnet sales and production volume



### Rutile sales and production volume



# Flowsheet of rutile and garnet process





# Shareholder information

## Shareholder overview (as of 16 September 2019)

#	Shareholder	Country	# of shares	% of total
1	Nordnet Bank AB	Sweden	12,343,545	8.58%
2	VPF Nordea Avkastning	Norway	8,654,817	6.02%
3	B-L Holding Company	United States	8,403,654	5.84%
4	Nordea Bank ABP	Finland	5,034,028	3.50%
5	Danske Bank A/S	Denmark	2,839,502	1.97%
6	Citibank N.A.	Ireland	2,779,229	1.93%
7	Nordnet Livsforsikring As	Norway	2,710,159	1.88%
8	Knut Fosse As	Norway	2,403,747	1.67%
9	Viola As	Norway	2,197,163	1.53%
10	Adurna As	Norway	1,853,358	1.29%
11	Infosave As	Norway	1,740,000	1.21%
12	Naturlig Valg As	Norway	1,720,000	1.20%
13	Magil As	Norway	1,550,000	1.08%
14	Dybvad Consulting As	Norway	1,504,049	1.05%
15	Cross As	Norway	1,450,000	1.01%
16	Ove Klungeland Holding As	Norway	1,437,654	1.00%
17	Lithinon As	Norway	1,405,977	0.98%
18	Solberg Tore	Norway	1,318,188	0.92%
19	Snati As	Norway	1,222,672	0.85%
20	IME Holding As	Norway	1,188,461	0.83%
Other shareholders			80,035,569	55.66%
<b>Total shareholdings</b>			<b>143,791,772</b>	<b>100.0%</b>

## Key shareholder information

Current # of shares outstanding:	143 791 772
Share price (as of 16 September 2019):	NOK 1.53
Market capitalisation <sup>1</sup> :	USD ~24 <sup>1</sup> m
Authorized to award in 2018 options up to	4,500,000
Awarded options in 2018 to employees for	3,000,000
Exercise price (expire 2022)	NOK 2.63

## Share price development Sep 2016 – Sep 2019



# Income statement reflecting project progress and gain in Keliber

Income Statement (NOKm)	H1 2019	H1 2018
Operating expenses	-7.4	-4.7
Other operating expenses	-28.5	-21.1
<b>EBIT</b>	<b>1 -35.9</b>	<b>-25.8</b>
Share of result of an associate	-0.8	-3.8
Gains/losses on investments	<b>2 98.3</b>	-
Financial income	-	0.2
Financial cost	-0.3	-0.2
<b>Result for the period</b>	<b>61.4</b>	<b>-29.6</b>

## Comments

1

### EBIT

- Operating loss reflects the cost of ongoing DFS activities

2

### Financial Income

- Gain on investment of NOK 98m due to reclassification of Keliber
- Valuation based on recent share issue in Keliber which implies a value of EUR 63m for Keliber Oy

## Balance sheet with no interest bearing debt

Balance Sheet (NOKm)	31.06.2019	31.12.2018
Evaluation and exploration assets	25.8	25.6
PP&E	0.2	0.2
Investment in associate	-	21.3
Financial assets <span style="color: red; font-weight: bold;">1</span>	113.1	-
<b>Total non-current assets</b>	<b>139.7</b>	<b>47.1</b>
Trade and other receivables	2.2	2.5
Cash and cash equivalents <span style="color: red; font-weight: bold;">2</span>	42.5	49.9
<b>Total current assets</b>	<b>44.7</b>	<b>52.4</b>
<b>Total assets</b>	<b>184.4</b>	<b>99.6</b>
Total liabilities <span style="color: red; font-weight: bold;">3</span>	12.8	10.0
Shareholder equity <span style="color: red; font-weight: bold;">4</span>	171.6	89.5
<b>Total liabilities &amp; equity</b>	<b>184.4</b>	<b>99.6</b>

### Comments

- 1 **Financial assets**
  - Financial assets comprise investment in Keliber Oy
- 2 **Cash and cash equivalents**
  - NOK 42.5m of cash at hand
- 3 **Total liabilities**
  - Zero interest bearing debt
- 4 **Total equity**
  - Equity increased to NOK 172m mainly due to gain on reclassification of the Keliber investment and private placement. Partly offset by operational losses.