

---

# Boliden – Metals for generations to come

Post Q3 2023 General Presentation



---

# Table of contents

- Boliden: Introduction
- Performance up until Q3 2023
- The metals market
  - Key slides
- Boliden's value creation strategy
  - Key focus areas

# This is Boliden

## Our purpose

To provide the metals essential to improve society for generations to come

## Our vision

To be the most climate friendly and respected metal provider in the world

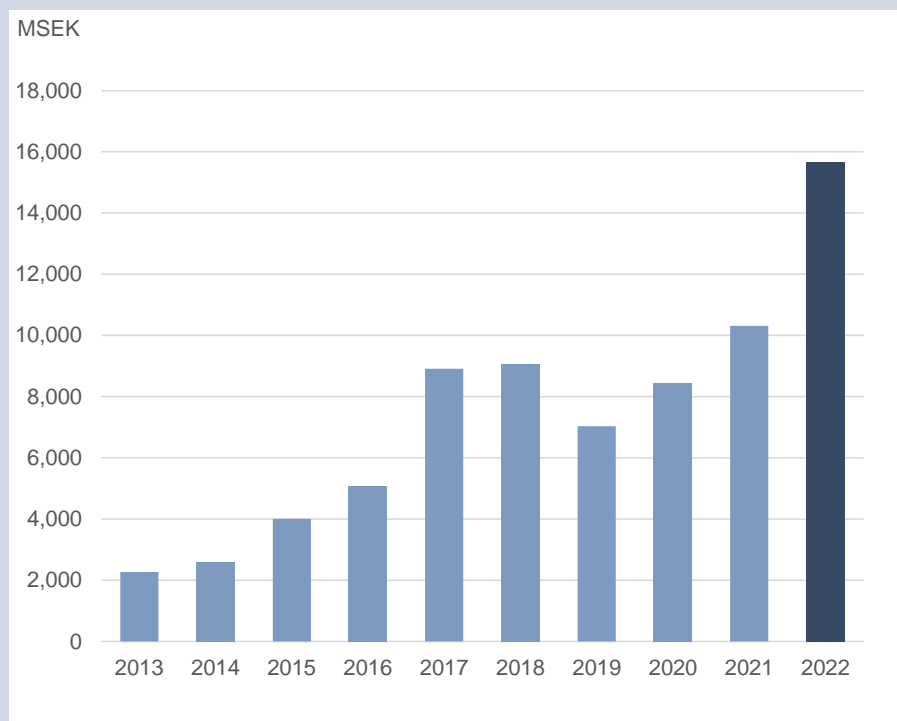
## Our values

Care, courage and responsibility. These describe how we work together in our daily operations as well as combine different competencies and experiences in shaping our company culture



# Boliden – Metals for generations to come

EBIT ex. PIR\*



- Founded in 1924
- ~6,000 employees
- Mines & Smelters
- Most exposure to Zn and Cu
- Industrial customer base in northern Europe

● TARA

ODDA ●

GARPENBERG ●

STOCKHOLM ●

BERGSÖE ●

BOLIDEN AREA ●

RÖNNSKÄR ●

KOKKOLA ●

HARJAVALTA ●

AITIK ●

KEVITSA ●

MINES

SMELTERS

HEAD OFFICE

# Boliden's contradictions are key to our success...

**Small**

~6,000 employees

**Local**

Strong link to local communities

**Conservative**

Preserving and valuing its culture



Co-worker at the Boliden mine in 1936

**Large**

Listed on OMX Large Cap

**Global**

Global network and smelter sourcing

**Cutting edge in technology**

Highly automated



Present electric trolley at the Aitik mine

## ... along decentralized management\*



Thomas  
Sundqvist,  
Boliden Aitik



Jenny Gotthardsson,  
Boliden Garpenberg



Peter Bergman,  
Boliden Area



Henrik Grind,  
Boliden Kevitsa



Gunnar Nyström,  
Boliden Tara



Linn Andersson,  
Boliden Rönnskär



Timo Rautalahti,  
Boliden Harjavalta



Antti Kontiainen,  
Boliden Kokkola



Helen Seim,  
Boliden Odda



Fredrik Kanth  
Boliden Bergsöe

\* On average our 10 General managers have 30 years of work experience from the Metals & Mining industry, whereof 16 years as Boliden employees.



# Q3 2023 – Key investment projects on track

## KEY HIGHLIGHTS

- Challenging prices and terms in Mines
- Stable milled volumes except in Aitik
- Low grades
- Strong nickel production in Harjavalta
- Production at Rönnskär ramped up and operating according to modified business model

## FINANCIAL PERFORMANCE

- EBIT excl. PIR\* 1,940 (3,484) MSEK
- Free cash flow -1,200 (97) MSEK
- Capex 3,591 (2,532) MSEK

## PROJECTS

- The projects in Odda, Kristineberg and Aitik are proceeding according to plan



\*PIR (Process Inventory Revaluation)

# Rönnskär update



- **Transformation of business model**
  - from cathode to anode sales
  - redundancy consultation ongoing
  - Loss of refining charges, free metals and premiums, partly offset by lower variable costs
  
- **Financial impact**
  - 1 BSEK negative impact on EBIT compared to 2022, all things equal
  - Increase in the running working capital level by about 1 BSEK
  
- **Process inventory from burnt-down tank house not yet recovered**
  - Recovery starting Q4 2023
  
- **Insurance claim process ongoing**
  - Cap 3.4 BSEK
  
- **Feasibility study for new tank house ongoing**



# Tara put in care and maintenance

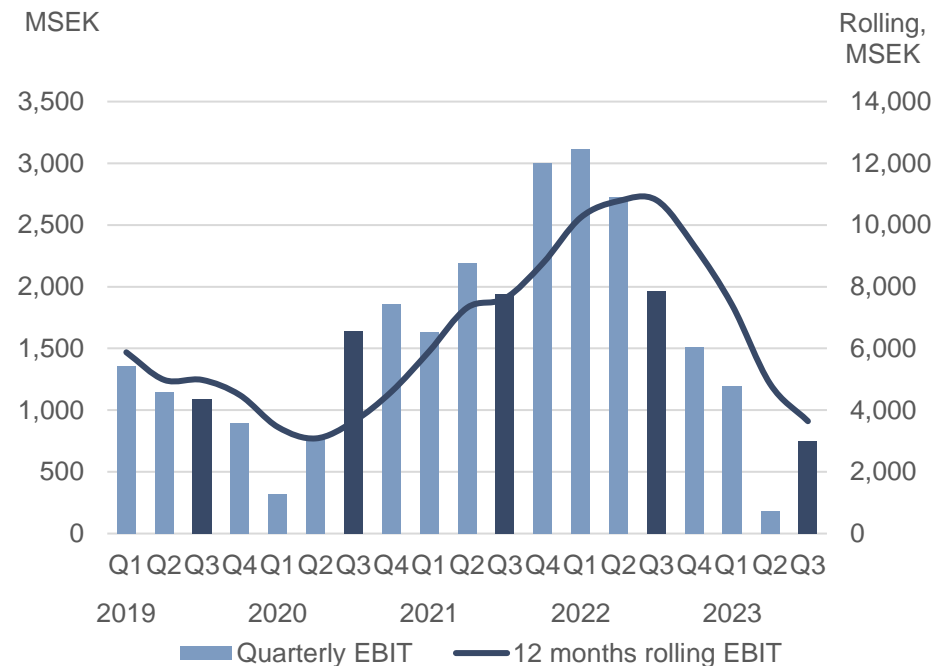


- Decision to put Tara in care and maintenance
  - Low Zn prices
  - High energy costs
  - High Zn treatment charges
  - General cost inflation
- Early retirement cost
  - Q2 2023: Provision -53 MSEK
- Care and maintenance cost
  - EBIT -13 MEUR/quarter
- Exploration at Tara Deep on hold

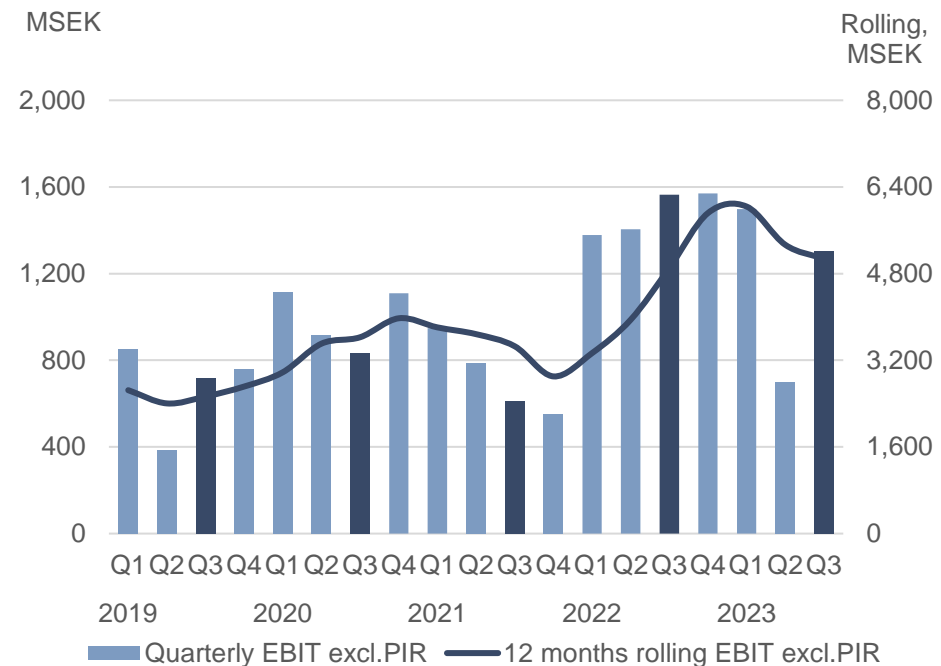
# EBIT excl. PIR by Business Area

MSEK	Q3 2023	Q3 2022	Q2 2023
Mines	750	1,964	178
Smelters	1,303	1,564	700
Other/eliminations	-114	-44	-44
<b>The Group</b>	<b>1,940</b>	<b>3,484</b>	<b>833</b>

## Mines



## Smelters



# Cash flow

MSEK	Q3 2023	Q3 2022	Q2 2023
EBITDA excl. PIR	3,417	4,946	2,478
Cash flow from working capital	-412	-1,696	-1,681
Cash flow from investments	-3,592	-2,516	-4,220
Financial items	-245	-147	-234
Tax paid	-321	-628	-367
Other	-47	137	253
<b>Free cash flow</b>	<b>-1,200</b>	<b>97</b>	<b>-3,770</b>

# Capital structure

SEK bn	30 Sep 2023	30 Sep 2022	31 Dec 2022
Total Assets	98.0	91.5	96.4
Capital Employed	71.7	63.1	62.2
Equity	56.0	55.1	58.3
Net debt	12.3	3.7	0.0
Net debt/equity, %	22	7	0
Net reclamation liability/equity, %	6	5	5
Average interest rate, %	4.1	1.7	2.5
Net payment capacity	12.2	15.8	23.0

## Net debt & Gearing



# Loan structure

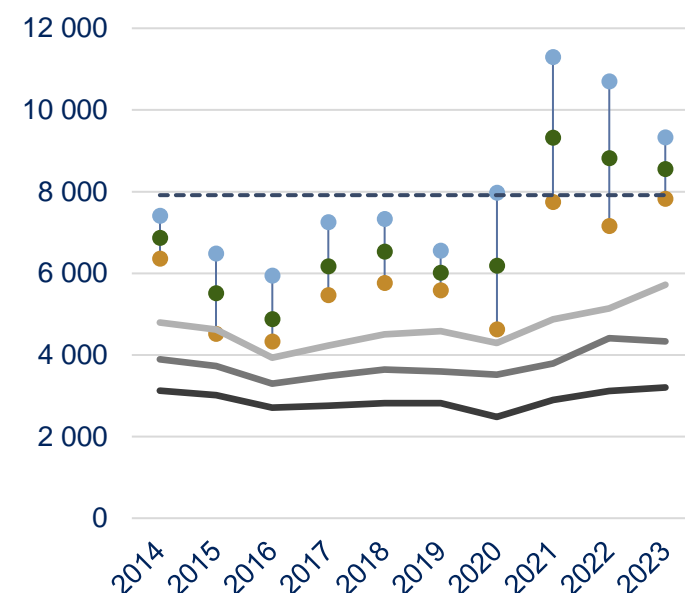
MSEK	Reported value	of which utilized	Maturity		
			< 1 year	1-5 years	> 5 years
Revolving credit facility, not utilized	11,769	-	-	-	-
Bilateral loans	7,778	7,778	1,983	3,912	1,883
Bonds	6,678	6,678	750	4,857	1,071
Commercial papers	985	985	985	-	-
Leases, other	159	159	58	101	-
<b>Total</b>		<b>15,600</b>	<b>3,776</b>	<b>8,870</b>	<b>2,954</b>



# Copper, zinc and nickel prices relative to cash cost

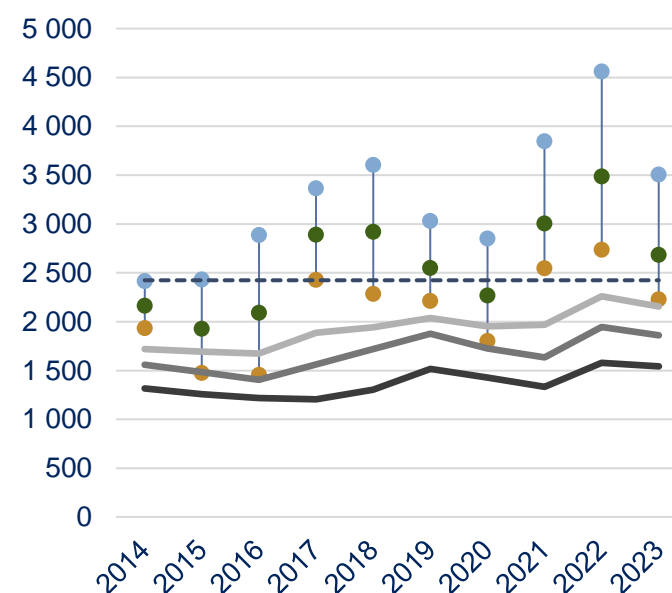
## Copper

USD/tonne



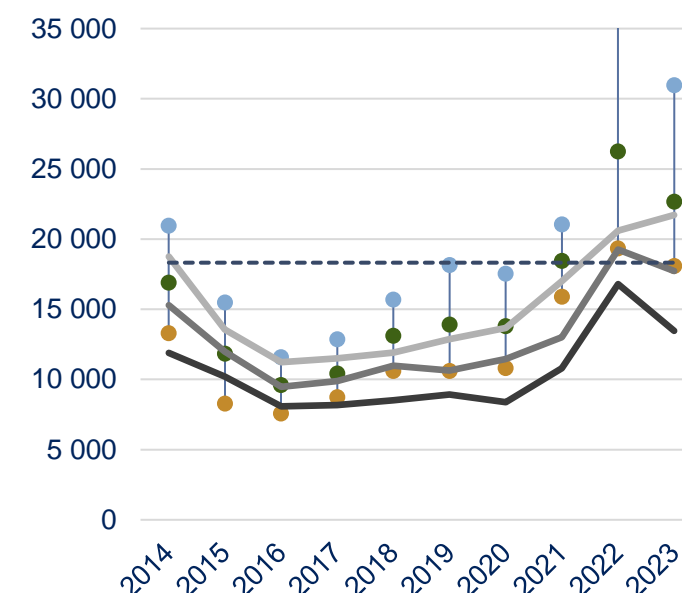
## Zinc

USD/tonne



## Nickel

USD/tonne



● Average price    ● Max price    ● Min price    — 90th perc  
— 75th perc    — 50th perc    - - - Spot price

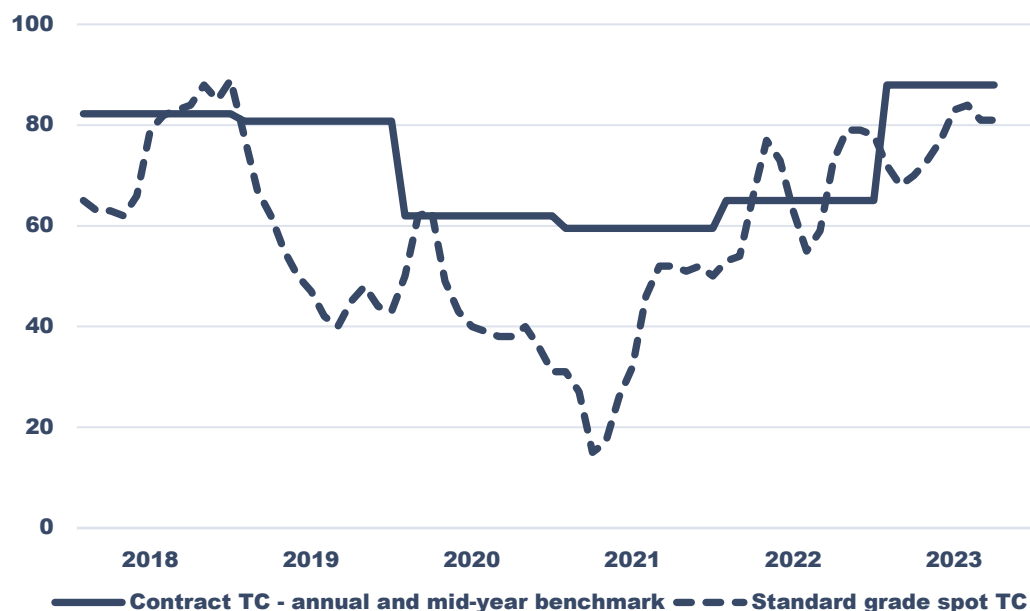
Source: Wood Mackenzie 2023 Composite C1 cash cost\* data, Bloomberg October 16, 2023 price data

\* Composite costing, C1 cash cost: normal C1 mines for mines with net revenue from one metal > 65 % total net revenue, pro-rata for other mines

# Copper and zinc treatment charges

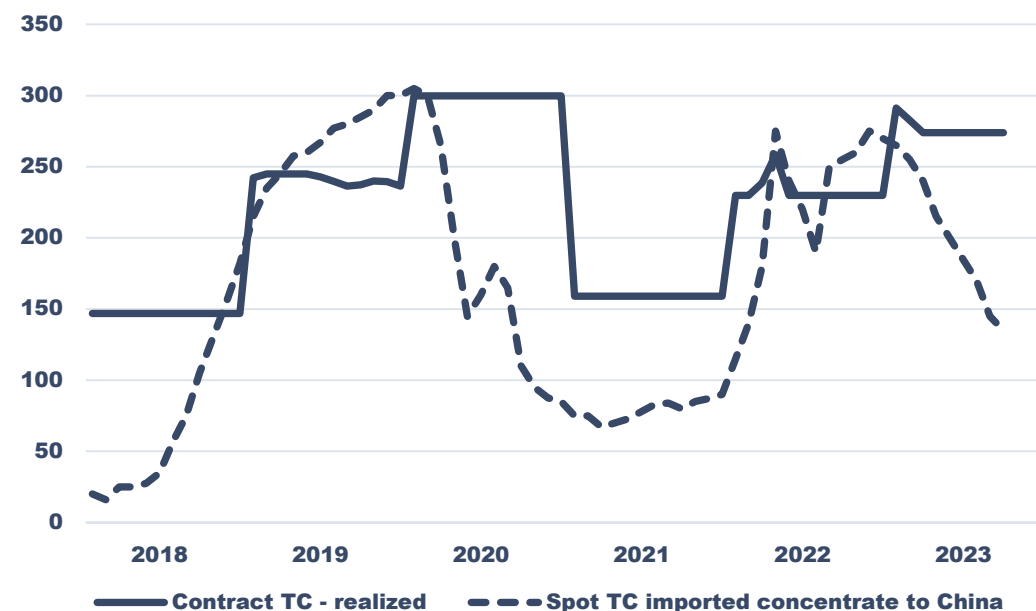
## Copper TC

USD/tonne  
concentrate



## Zinc TC

USD/tonne  
concentrate



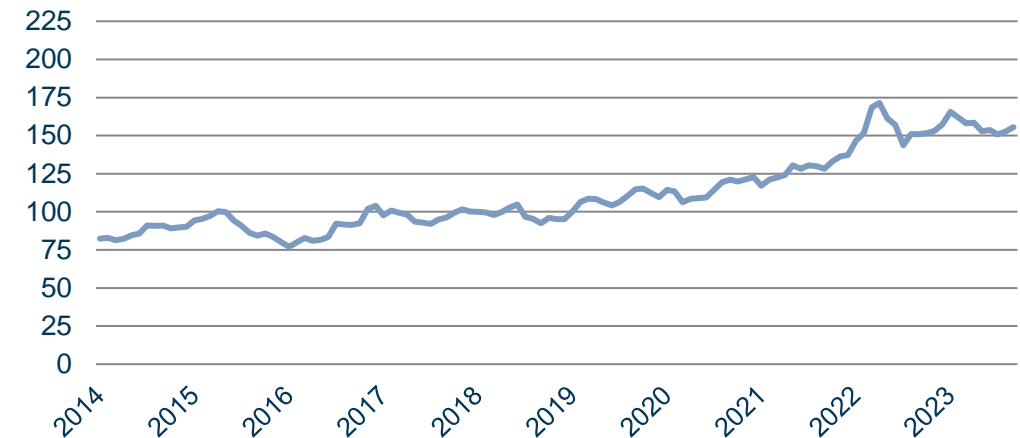
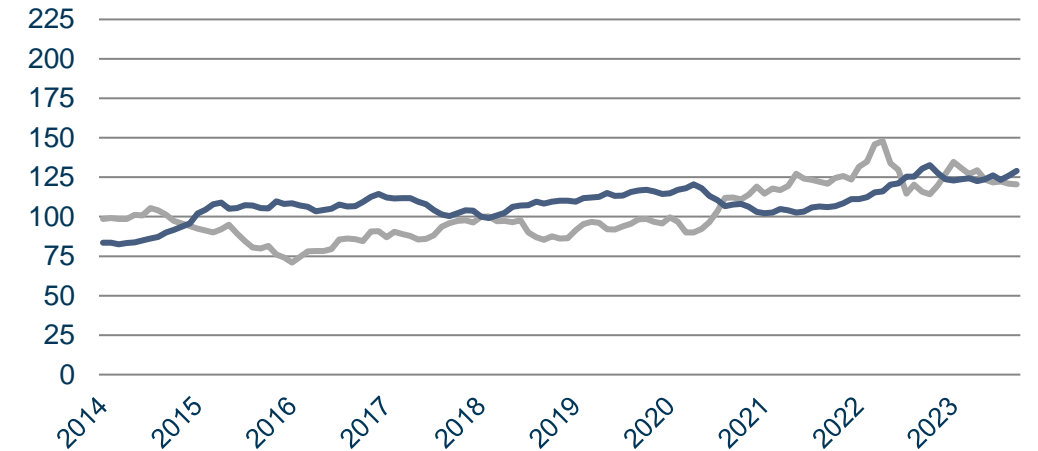
# Market developments

- Decreasing metal prices year-on-year
  - Especially Zn
- Strong premiums and declining by-product prices
- Positive currency development
  - Stronger USD

## Boliden price index\*

**BOLIDEN**

— Metal price/ TC index (USD) — Currency index — Boliden weighted index



\*Index 100 = 1 January 2017

# Long-term commitment to financial targets and dividend policy

**Return on  
investments  
 $\geq 10\%$**

**Dividend policy  
1/3 of  
net profit**

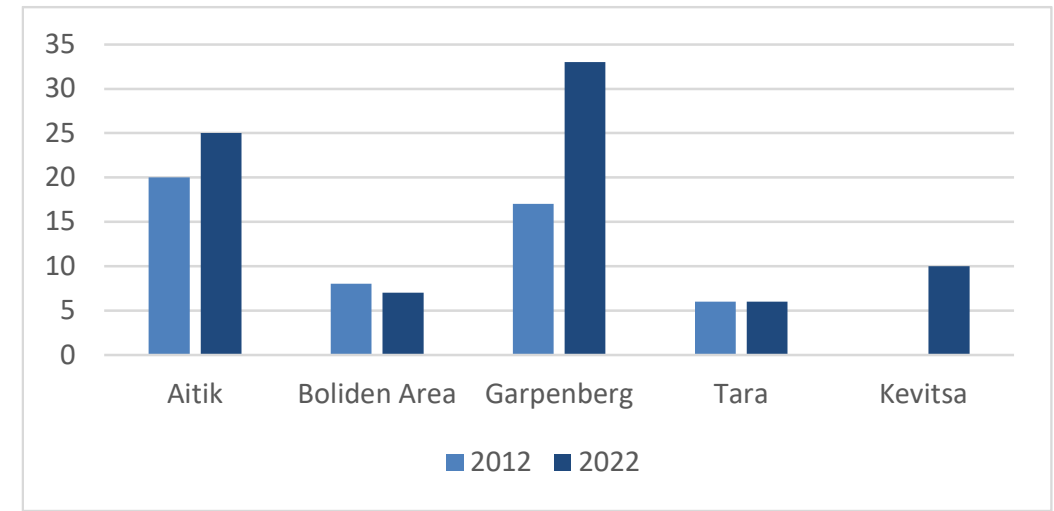
**Net Debt/Equity  
at about 20%  
at economic  
peaks\***

\*The target also includes net reclamation liability

# Mineral Reserves end of 2022

- Aitik
  - Reserves covering full production until 2047 (2050)
    - Cu reserve grade 0.23 (0.22) %
- Boliden Area
  - Reserves covering full production until 2029 (2028)
- Garpenberg
  - Reserves covering full production until 2055 (2049)
    - Zn reserve grade 2.6 (2.8) %
    - Ag reserve grade 87 (93) g/tonne
- Tara
  - Reserves covering full production until 2028 (2027)
- Kevitsa
  - Reserves covering full production until 2032 (2034)
    - Cu reserve grade 0.34 (0.32) %
    - Ni\* reserve grade 0.23 (0.22) %

Reserve life (years)\*\*



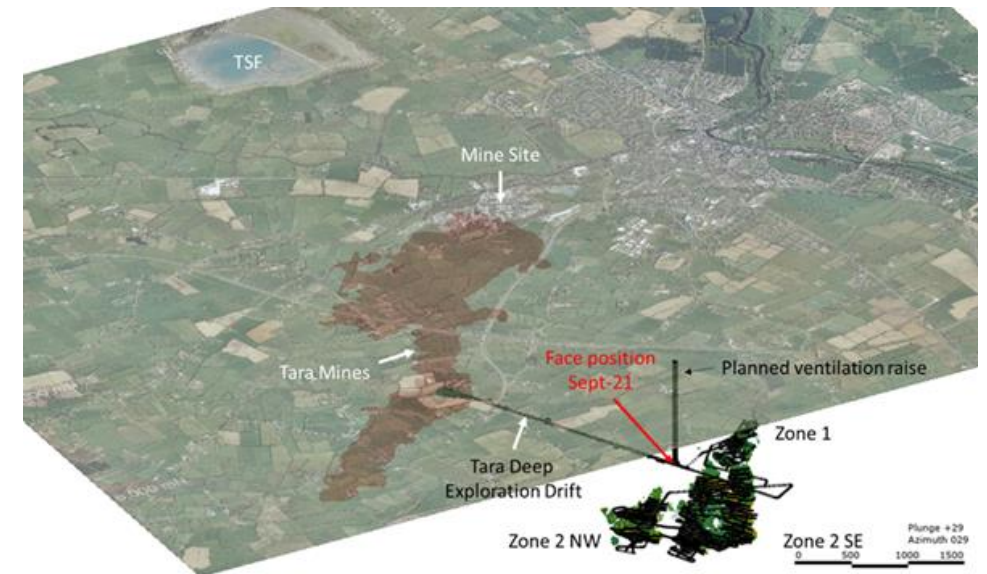
\*Nickel in Sulphides, Ni(S), \*\*2012 and 2022 year end reserves divided by designed full production



# Mineral Resources end of 2022

- Aitik
  - 1 147 (917) Mtonnes
- Boliden Area
  - Strömfors 2.6 (2.6) Mtonnes
  - Mineral Resources 27.2 (26.6) Mtonnes
- Garpenberg
  - New inferred resource “Stationen” discovered 5.5 Mtonnes
  - Mineral Resources 89 (79) Mtonnes
- Tara
  - Tara Mine 13.4 (11.7) Mtonnes
  - Tara Deep
    - Inferred Mineral Resource 27.0 (28.1) Mtonnes
    - Zn grade 8.4 (8.4) %
    - Pb grade 1.6 (1.6) %
- Kevitsa
  - Mineral Resources 142 (139) Mtonnes

Arial view of Tara including Tara Deep



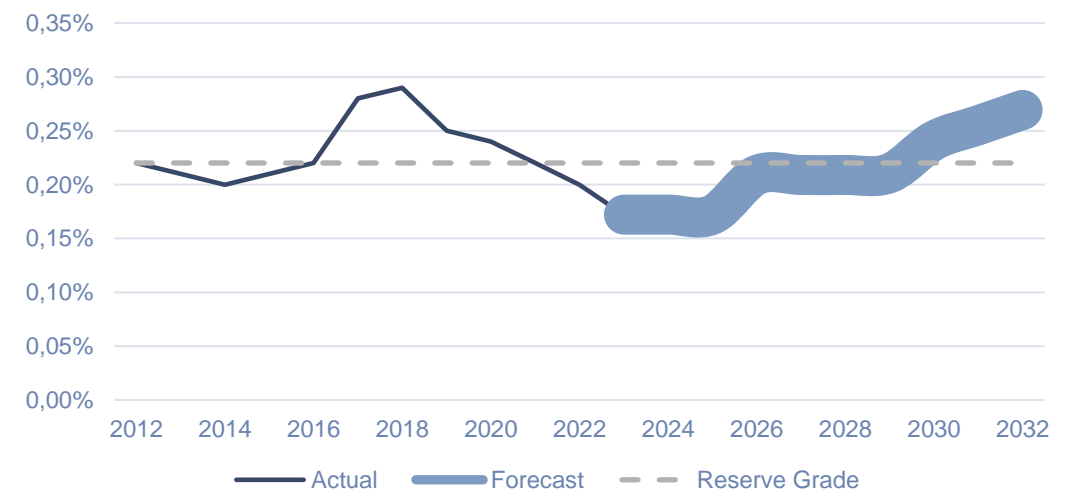
Note! Boliden reports Mineral Resources exclusive of Mineral Reserves to avoid double counting. This means that quantities converted to Mineral Reserve are removed from Mineral Resource.

# Aitik

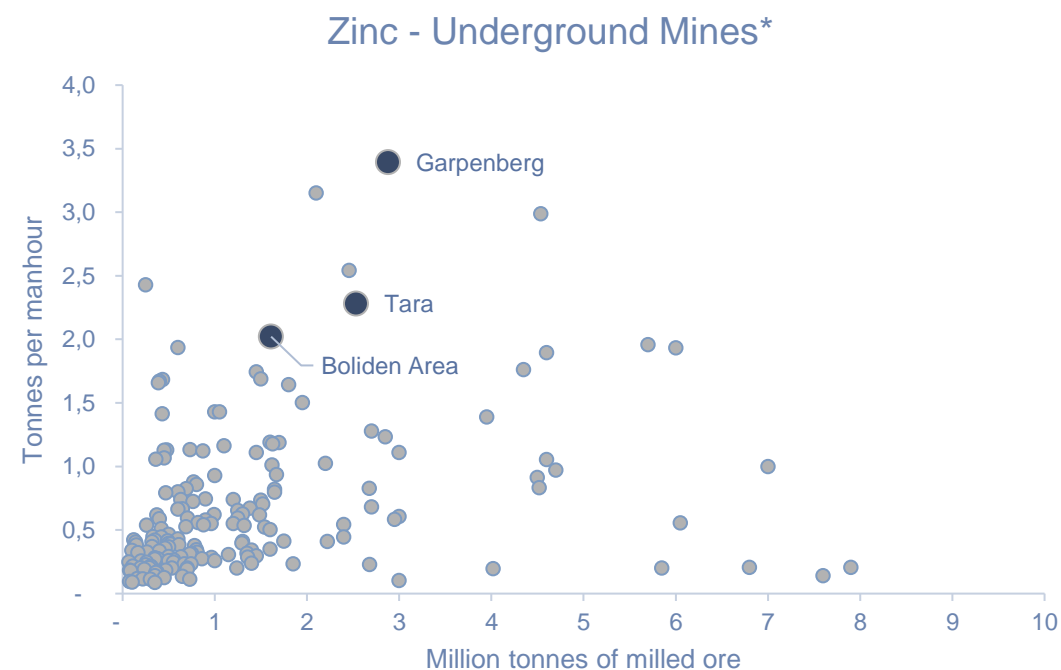
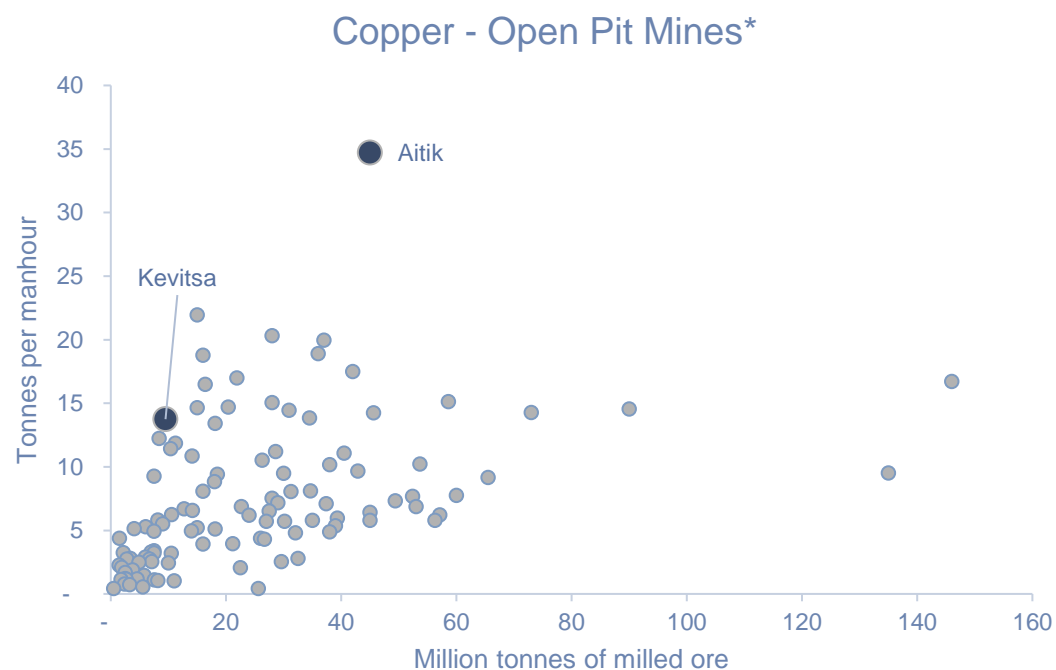
- Low grade period
  - Lower grade than reserve average for several years
- Dam investment 2022-2024
  - Strengthening the current dam construction
- Nautanen
  - Mining concession filed Q2 2022
- Implementation of AHS 2023
- Change of existing permit 2023
- Increased stripping from 2024
- Liikavaara
  - Start of operation 2024
- Main permit renewal 2026
  - Change of dam raising methodology



Aitik Cu grade



# World leading productivity in open pit and underground mines



Source: Wood Mackenzie, 2022 data

\*Copper: open pit mines with both open pit / underground operations and concentrator, Zinc: underground and mixed underground / open pit mines

# Sustainability as a success factor

- Focus on health and safety improves wellbeing and production stability
- Stringent emission standards lower environmental risk
- Strong know-how in waste management from exploration to closure and reclamation
- Responsible operations through supply chain control
- Dialogs and long-term collaborations with local communities



# ESG is key in our purpose, vision and values



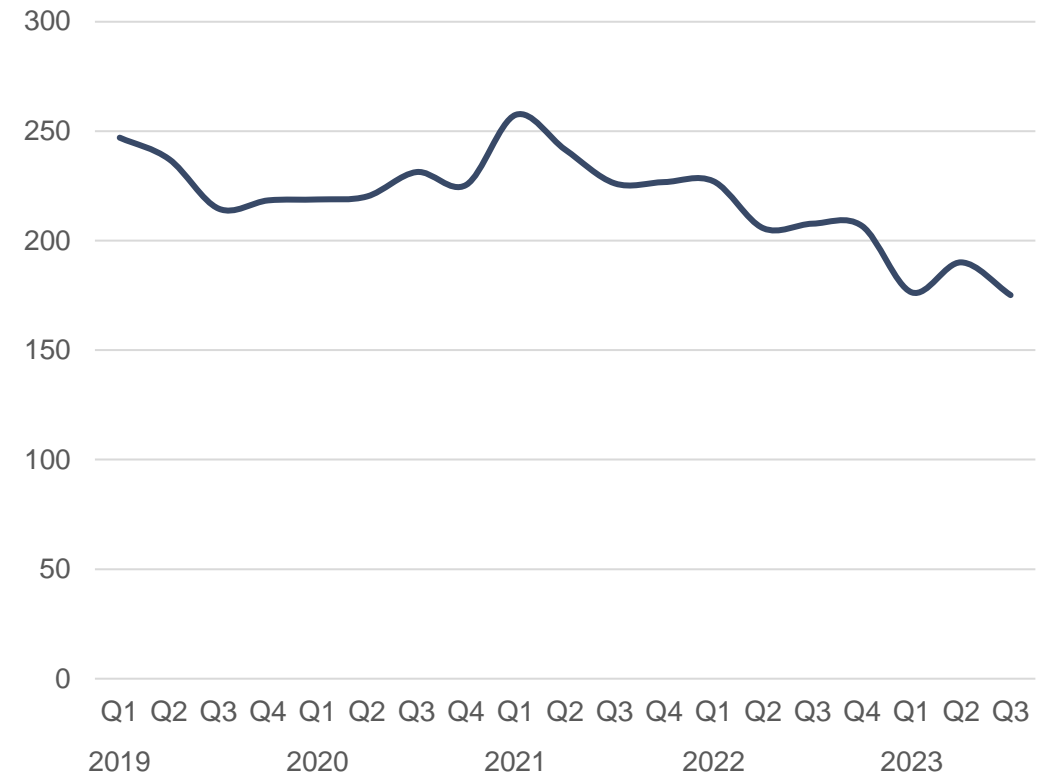
## Q3 2023

- Lost Time Injury\* 3.5 (6.7)
- Sick leave, 4.6 (4.6) %
- CO<sub>2</sub> emissions\*\* 175 (208) Ktonnes

\*Per million hours worked, including contractors

\*\*Scope 1 and 2

CO<sub>2</sub> emissions Ktonnes

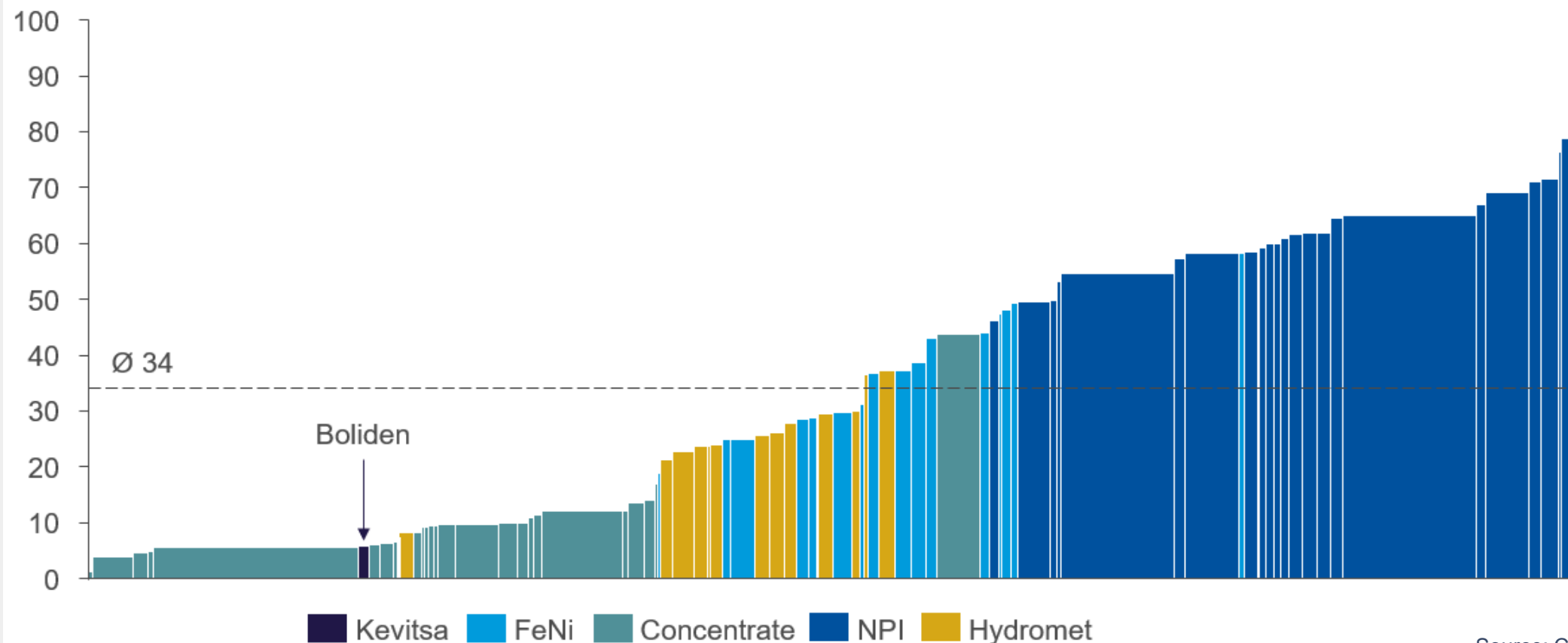




# Boliden's nickel has world leading climate performance (Scope 1, 2 and 3)

Estimated emissions intensity to produce finished nickel metal products in 2022 by CRU

tCO<sub>2</sub>e/ t Ni eq

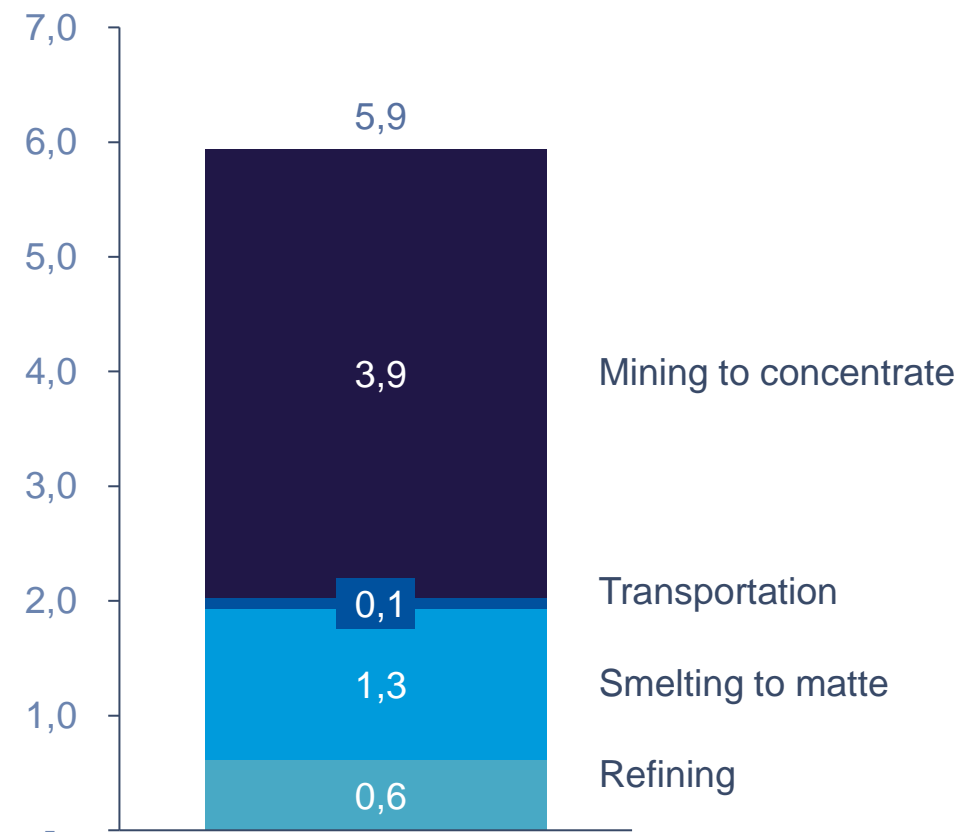


Source: CRU

# Boliden's nickel value chain has low carbon footprint

- Low Scope 1: Concentrate from Kevitsa mine to Harjavalta smelter
  - Kevitsa: Trolley assist, mine to mill fragmentation
  - Harjavalta: Unique smelting technology and recovery of waste heat
- Low Scope 2: Finnish grid mix with low CO<sub>2</sub>
- Low Scope 3: Boliden nickel matte is processed by refineries with low CO<sub>2</sub> footprint

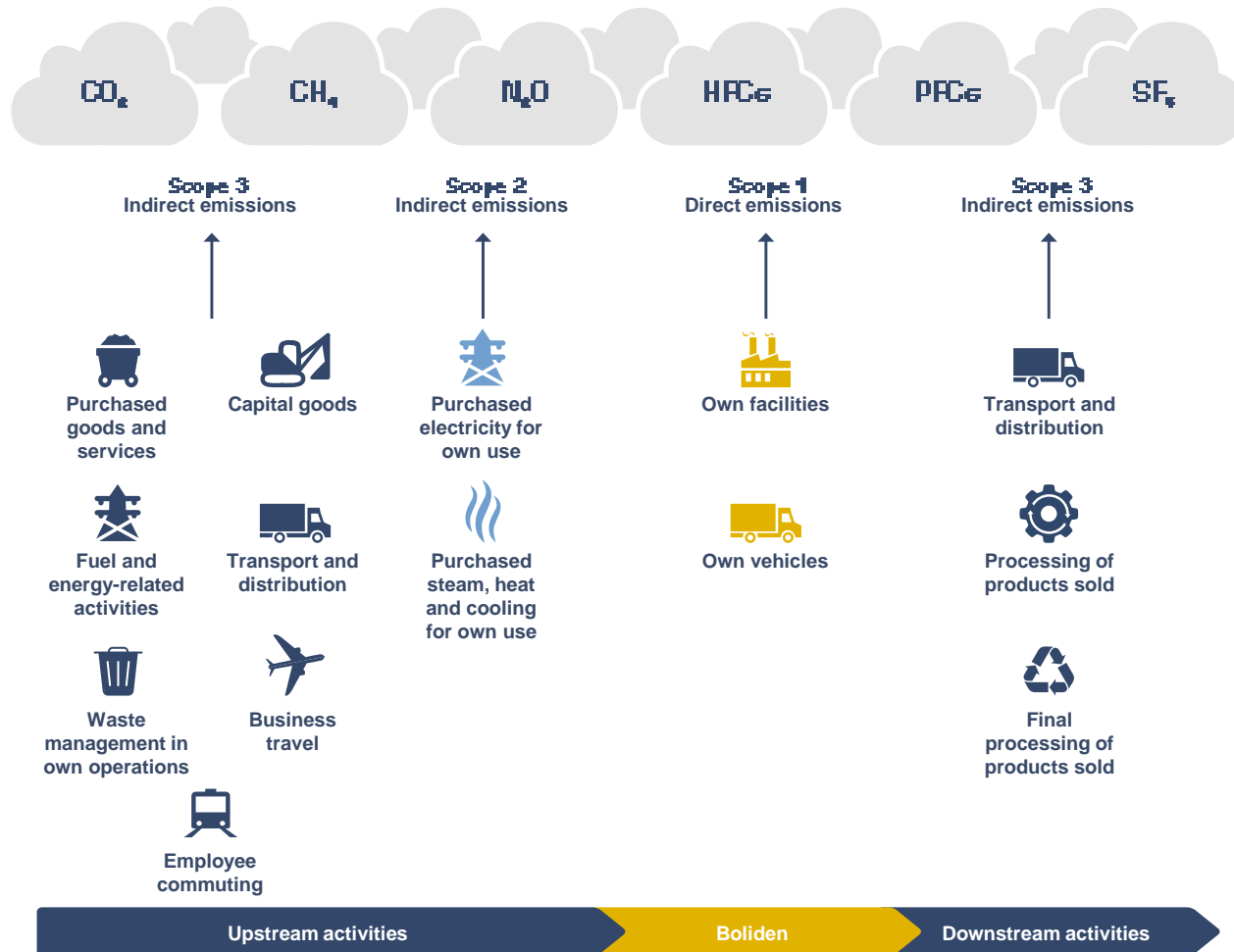
**Boliden 2022 Scope 1, 2 and 3 GHG Emissions**  
tCO<sub>2</sub>e/t Ni eq



Source: CRU

Note: Above is based on mining at Boliden Kevitsa, smelting at Boliden Harjavalta and smelter and refining by external refineries

# Climate target: mines and smelters



- 40 percent reduction of CO<sub>2</sub>e emissions by 2030
  - Scope 1 and 2\*, base year 2021
- 30 percent reduction of CO<sub>2</sub>e emissions from supply chain and distribution by 2030
  - Scope 3, base year 2021
- Long-term target
  - Net-zero CO<sub>2</sub> emissions by 2050\*

\* Scope 1 and 2 according to the Greenhouse Gas Protocol.

# Climate target: products

- The average of our entire copper production should be in line with the limit value for Low-Carbon Copper;  $<1.5 \text{ kg CO}_2 \text{ per kg Cu}$
- The average of our entire zinc production should be in line with the limit value for Low-Carbon Zinc;  $<1.0 \text{ kg CO}_2 \text{ per kg Zn}$



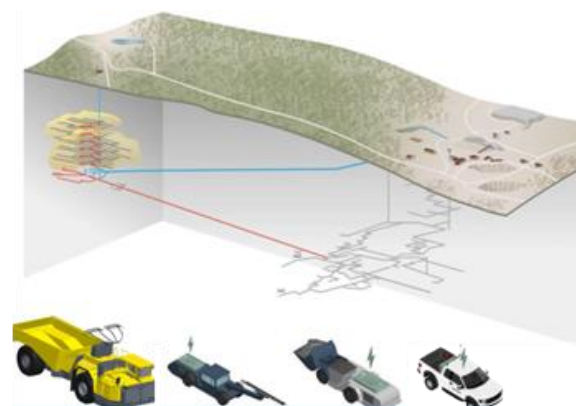


# New SBTi CO<sub>2</sub> for Mines

Electric Trolley



Fossil free mining in Kristineberg expansion



Battery truck



Electric transport on public road

- On track to reach the new 2030 target
  - Significant effects seen from 2025
- Good progress on electrification
  - Underground and on public roads
- Increased use of electric trollies in open pits
- Focus on future battery trucks in open pits
  - Supplier dependent
- Test of low CO<sub>2</sub> explosives
  - Nitrate free



# Electrifying the open pits

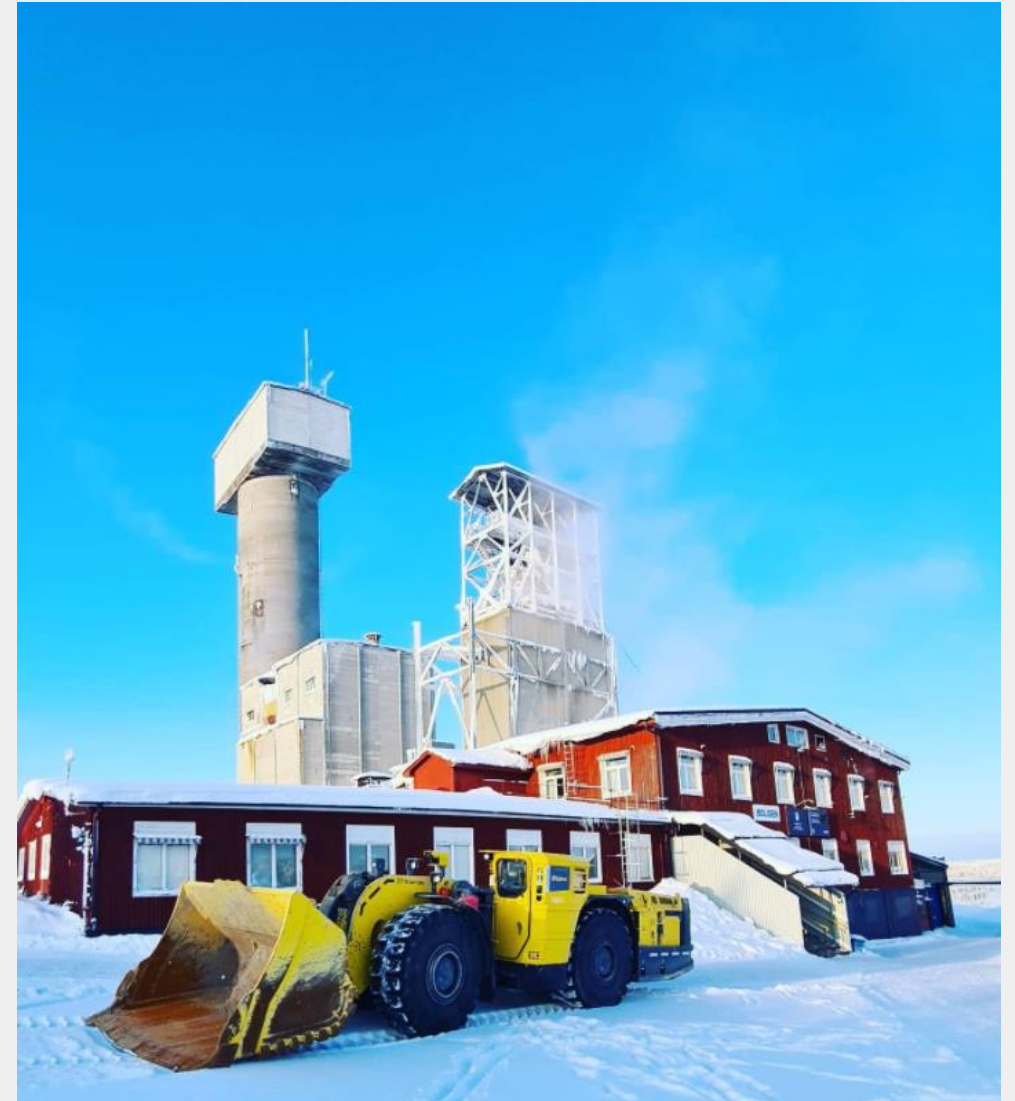
- Successful trolley expansion in Aitik
- Kevitsa trolley ramp-up
- Next steps supplemented by battery power
  - Dynamic recharge with trolley
- Liikavaara
  - Ambition to be fossil free satellite to Aitik



Electric trolley line, Aitik

# Electrifying the Boliden Area

- Kristineberg extension – Boliden's first fossil free mine
- 1.25 BSEK Capex
- 2H 2023: planned production start
  - 200 kt increased annual milled volume from the Boliden Area
  - Highly automated production
- Development of fossil free transports between mine and mill



Battery driven loader, Kristineberg



# Responsible tailings management of highest priority

- Change of direction and continuous improvements
  - The implementation of the Global Industry Standard of Tailings Management framework has led to an overall change in processes with an increased focus on tailings management
  - Continuous improvements ensure further progress in the right direction
- Safety management system for tailings dams
  - Key roles with clear responsibility and required expertise
  - Resources for continuous support of life-cycle control and management
  - Identification, assessment and management of changes and risks
  - Preparedness for prevention and handling of emergency situations
  - Recurring internal and external inspections, evaluations, reviews and audits



# Implementation of the *Global Industry Standard on Tailings Management (GISTM)*

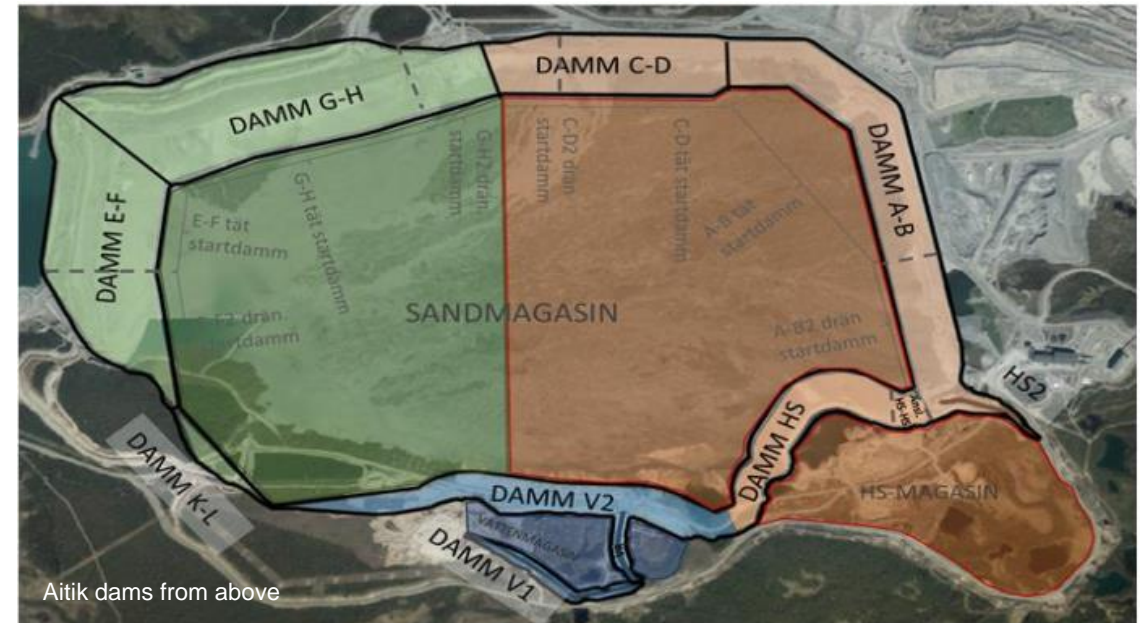


- Several measures to reach full compliance have been implemented/are in progress
- Current status of implementation of the GISTM-standard was publicly disclosed on August 5, 2023
- Boliden fully committed and well underway to be in conformance, report is available at [www.boliden.com](http://www.boliden.com)

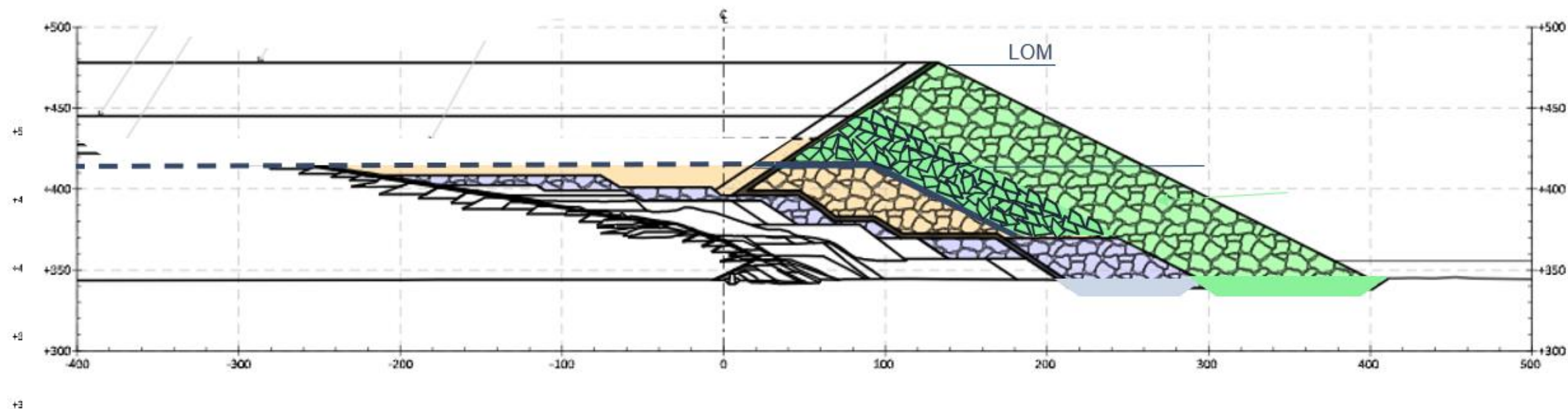


# Aitik dams

- Static liquefaction need to be included
  - Global tailings standard
- New geotechnical information
  - Layers prone to static liquefaction detected
- Dams E-F and G-H affected
  - Raising of dam and depositing stopped
- Continued production with depositing in other areas
  - 24 months
- Need to stabilize dams
  - Increased ground work
  - Build of supporting structure
  - Move of infrastructure
- Prepare for long term move to down-stream dam construction
- 5 BSEK Capex
- Permit process
  - Work is allowed to be carried out during permit process



# Dam section principle





# Mines Major permits

## ■ Aitik

- 2022: Liikavaara environmental permit granted
- 2023 - 2024: Permitting for increased waste rock storage and the ongoing dam safety measures and infrastructure changes
- 2023 - 2024: Application for mining concession for the Nautanen deposit
- 2026: Main permit renewal

## ■ Garpenberg

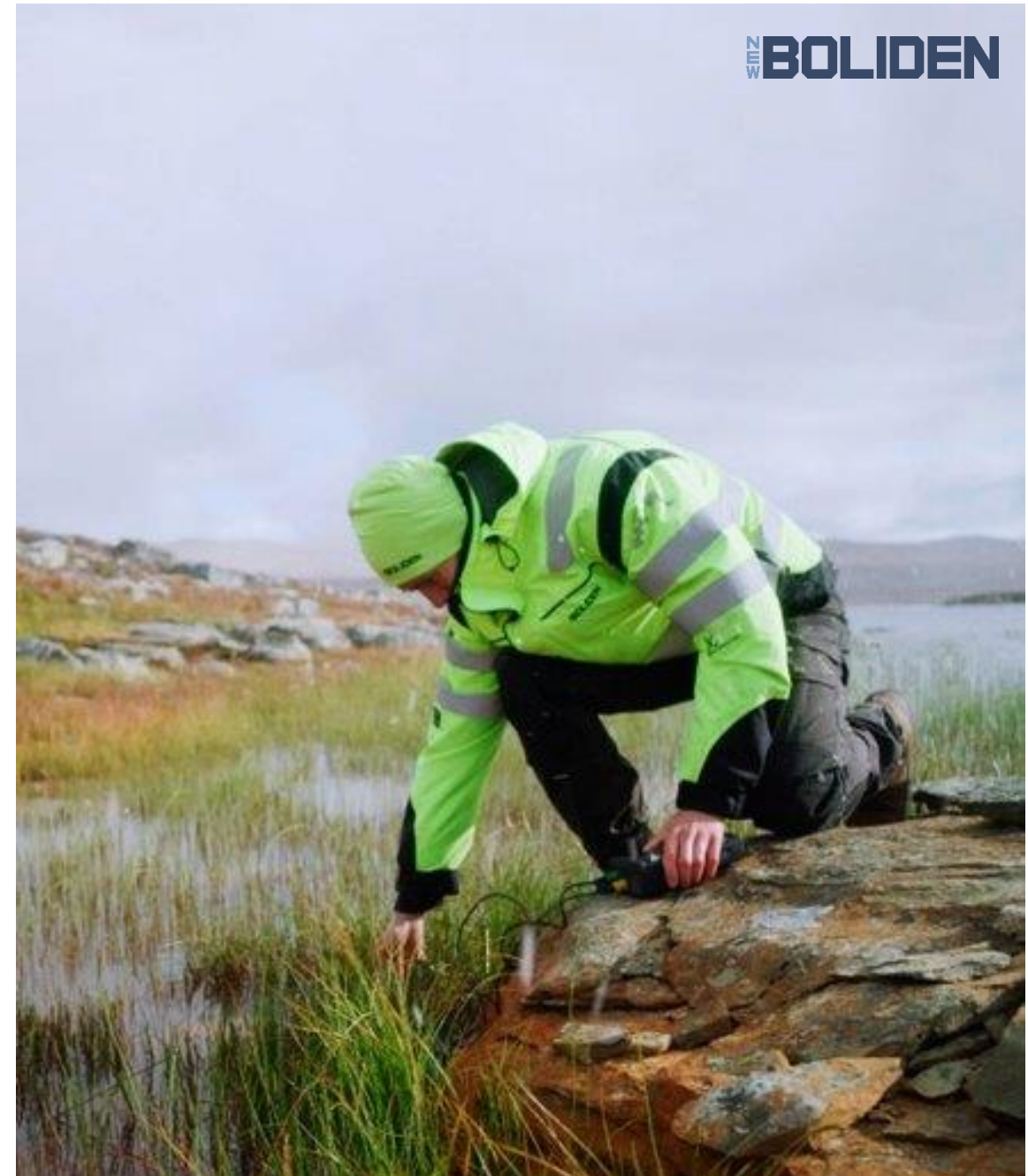
- Permit granted for a new dam construction method

## ■ Boliden Area

- 2023: Main permit renewal for Kankberg ongoing, allowing increased production and extended production areas

## ■ Laver

- Boliden holds exploration licence
- Re-application for a mining concession planned before expiry of exploration license in 2024



# SBTi CO<sub>2</sub> for Smelters

- By 2030 100% Cu and Zn production on average lower than
  - Low-Carbon Copper < 1,5 tonne CO<sub>2</sub>e / tonne Cu
  - Low-Carbon Zinc < 1,0 tonne CO<sub>2</sub>e / tonne Zn
- Includes internal and external concentrates
- Boliden's statement when calculating product CO<sub>2</sub> footprint
  - “Cradle to gate, no credits, no offsets”



Acid plant Harjavalta

# Decarbonization roadmap at Boliden Smelters

- Recycling Zn from Electric arc furnace dust a CO<sub>2</sub> challenge
- Zinc smelting otherwise with low carbon footprint
  - Excellent climate footprint in Odda
  - Improved grid mix and energy savings in steam/heat benefit Kokkola
- Copper and nickel smelting improve further
  - Utilization of waste heat streams replace fuel oil
- Improvements in lead production
  - Desulphurization process in Bergsöe



Zinc smelter Odda

# Boliden Smelters CO<sub>2</sub> footprint reduction targets by 2030 from baseline 2021

## SCOPE 1



42% Absolute

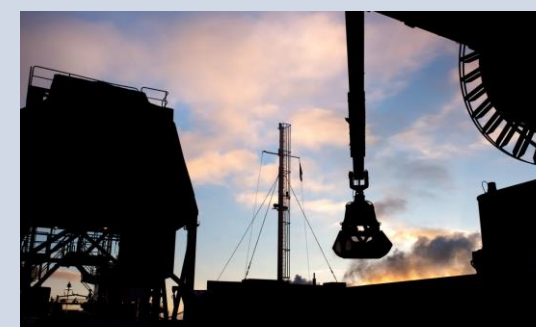
Reduction agents and auxiliaries  
Raw material handling  
Fuel and internal transport

## SCOPE 2



Electricity  
Steam  
Heat

## SCOPE 3



30% Absolute

Concentrates and secondaries  
Auxiliaries and others  
Fuel and transport



# Odda 4.0 – leveraging existing advantages



Odda zinc smelter, Norway

- **Leading environmental footprint**
  - World class CO<sub>2</sub>-intensity reduced even further
  - Long term sustainable waste solution
- **State of the art efficiency**
  - New metal recoveries and byproducts
  - High capability to handle complex materials
  - Scale, digitalization and automation
- **Favorable market outlook**
  - Stable increase in Zn demand
  - Limited new Zn smelting capacity
- **Financial return well above Boliden's targets**
  - 850 MEUR investment
  - Improved cash margin
  - Maintenance capex avoidance

# Green Framework supporting Boliden's climate roadmap

High level use of proceeds:

- ✓ Investments in Odda for the increased production of Low-Carbon Zink
- ✓ Investments to improve energy efficiency and reduce pollution to water and air
- ✓ R&D including piloting of alternative reduction agents and CCS
- ✓ Recycling, recovery and reuse of waste
- ✓ Low carbon machinery and infrastructure

**BOLIDEN**





# Outlook



- **Aitik**
  - 2023: Cu 0.17%, Au 0.08 g/tonne
  - 2024: Cu 0.17%, Au 0.08 g/tonne
- **Garpenberg**
  - 2023: Zn 3.3%, Ag 90 g/tonne
  - 2024: Zn 3.5%, Ag 100 g/tonne
- **Kevitsa**
  - 2023: Cu 0.25%, Ni\* 0.18%
  - 2024: Cu 0.28%, Ni\* 0.20%
- **Tara**
  - Care and maintenance cost: EBIT -13 MEUR/quarter
- **Maintenance shutdowns**
  - Q4 2023: -30 (-60) MSEK
- **Capex**
  - 2023: close to 15 BSEK
  - 2024: 14 BSEK

# Boliden – Investment Case



- **Stable value chain**

- Technical know-how
- Mines and Smelters
- Base metals and precious metals
- High corporate responsibility
- Stable jurisdictions

- **Strong capability to deliver results**

- High productivity
- Solid financials
- Long cultural heritage
- Own project development
- Long life for key mines

- **Competitive portfolio**

- Metals for generations to come
- Cu, Zn, Ni and Pb
- Biproducts like Au, Ag, Pt and Pd



This presentation has been prepared by Boliden for information purposes only and as per the indicated date. Boliden does not undertake any obligation to correct or update the information or any statements made therein. Certain statements in this presentation are forward-looking and are subject to risks and uncertainties.

Nothing contained herein shall constitute any representation or warranty as to accuracy or completeness. Boliden has not made any independent verification of the information obtained from third parties.

Nothing in this material shall be construed as an offer or solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction.

Boliden does not accept any liability whatsoever arising from or in connection with the use of this information.

Save as by prior approval in writing, this material may not be copied, transmitted or disclosed, whether in print, electronic or any other format. All rights to the material are reserved.

