

**Vale** <sup>2024</sup> day  
New York



# Disclaimer

"This presentation may include statements that present Vale's expectations about future events or results, including without limitation: (i) iron ore and agglomerates production guidance on slides 10, 16, 37, 48 and 51; (ii) portfolio composition expectations on slides 10, 38 and 50; (iii) expected capacity and start-up of Mega Hubs projects on slide 11; (iv) possibility of acquiring an additional stake in Minas-Rio and potential offtake on slide 11; (v) copper and nickel production guidance and estimates on slides 13, 63, 64, 68 and 70; (vi) fixed spending estimate and costs guidance on slides 15, 74, 75, 76 and 77; (vii) guidance for production from reused tailings on slide 16 and 48; (viii) steel production expectations by region on slide 26; (ix) transoceanic iron ore demand and supply on slides 27 and 28; (x) expectations for the mega-hub business model, with potential demand lock-in on slide 36; (xi) expectation of new agglomeration plants on slide 37; (xii) expected start-up, capacity, product composition and cost for the S11D project on slide 46; (xiii) expectation for increase the use of biodiesel in railways on slide 49; (xiv) expectations for brownfield expansion options on slide 59; (xv) expectations for commissioning, production and obtaining construction permits for the Bacaba project on slide 60; (xvi) expectations for ore milled, lower unit cost after by-product and higher copper production on slide 61; (xvii) full ramp-up of VBME project and by-product unit cost reduction on slide 62; (xviii) nickel production guidance on slides 62 and 63 ; (xix) cobalt production estimate on slide 62; (xx) copper production estimate on slides 62, 64, 69; (xxi) expected capacity and start-up for the Alemão project on slide 64; (xxii) expectations and project capacity on slide 68; (xxiii) expectations for cost efficiency on slide 74; (xxiv) capex guidance on slide 78; (xxv) forecast of cash disbursement schedule on slide 79; (xxvi) forecast extended net debt target on slide 80; (xxvii) expected normalised free cash flow return on slide 85. These risks and uncertainties include factors relating to our ability to perform our production plans and to obtain applicable environmental licenses. It include risks and uncertainties relating to the following: (a) the countries where we operate, especially Brazil, Canada and Indonesia; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; (e) global competition in the markets in which Vale operates; and (f) the estimation of mineral resources and reserves, the exploration of mineral reserves and resources and the development of mining facilities, our ability to obtain or renew licenses, the depletion and exhaustion of mines and mineral reserves and resources. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM) and in particular the factors discussed under "Forward-Looking Statements" and "Risk Factors" in Vale's annual report on Form 20-F."

# Vale<sup>2024</sup> day

New York



# Opening remarks

Gustavo Pimenta



# Safety is our core value



## TRIFR 1.1

Industry leader

*Solid progress in 2024*

### +3 dams

Decharacterized,  
completing 53%  
of the program

### +4 dams

Removed from  
emergency level

### Sul Superior

Lowered from  
level 3 to level 2



**Vale** day<sup>2024</sup>  
New York



[ USO INTERNO ] VALE DAY 2024 – BARRAGENS EN  
<https://vimeo.com/take4content/review/1029351720/01a1f0e3f0>

# Strong deliveries in 2024...



## Mariana

Definitive agreement signed

Brumadinho  
reparation

**73%**  
complete

## ESG

Ratings  
improvements

## Start-up

Vargem Grande,  
Capanema<sup>1</sup> and  
VBME

Expected  
**328**  
Mt

Iron Ore production,  
upper end of  
revised guidance

## Minas-Rio, Sohar

partnerships  
closed

Expected  
**~22**  
US\$/t C1

at the low end of  
iron ore cost  
guidance

## Asset Review

Being executed  
at VBM

**VBM  
Cost**

Nickel and copper  
well-below  
guidance


...paving the way for the  
next phase of success


<sup>1</sup>Commissioning


# Vale 2030:


A trusted partner with the most competitive and resilient portfolio





 Delivering a **high quality**, and **flexible** iron ore portfolio


 Focusing on **customer-oriented** solutions

 Accelerating **copper** growth

 Cultivating **institutional** relationships

 Generating a **positive impact** for people and nature

 Ensuring **greater trust** through **increased transparency**

 Reference in **safety** and **operational** excellence

 Securing competitiveness through a **talent-driven** and **agile** company

 Fostering **innovation** and **digital solutions**





Delivering a **high quality** and **flexible** iron ore portfolio



Focusing on **customer-oriented** solutions

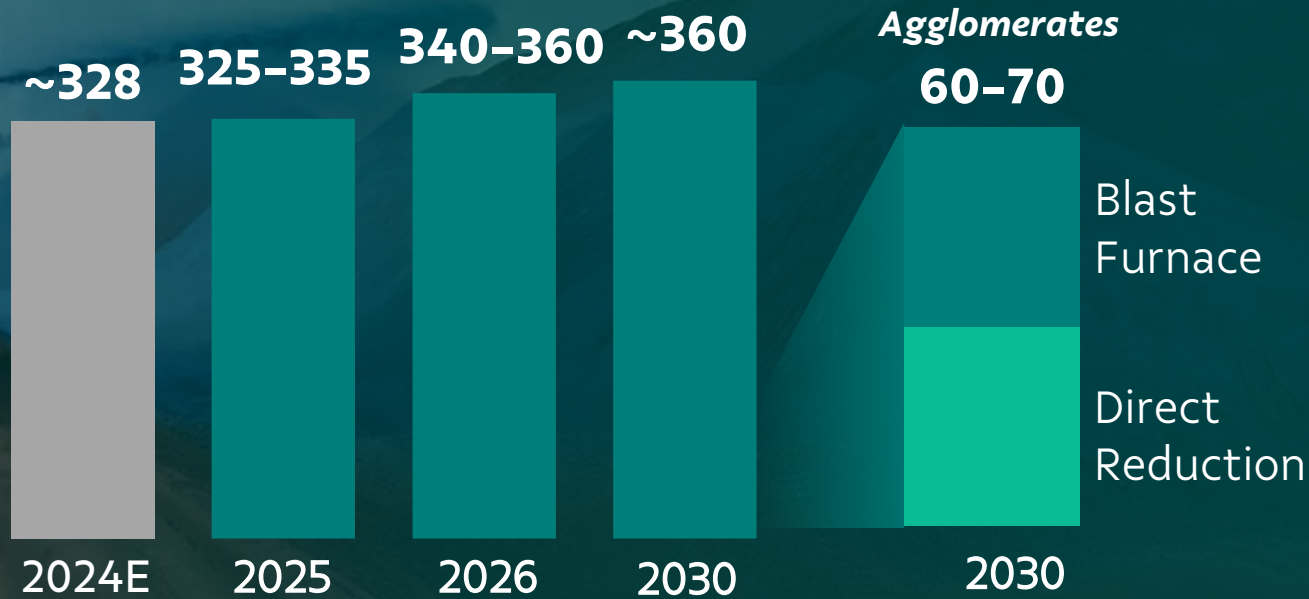


Accelerating **copper** growth

# Growing with flexibility to maximize value through-the-cycle



Vale's production (Mt)



**Average portfolio by 2030**  
**63-64%**  
*Fe content*

# Advancing on our strategy through partnerships



## Mega Hubs

**Iron ore concentration plant in partnership with Jinnan Group**

*~12 Mt of high-grade concentrates  
Start-up by 2027*

**Agreements in 5 countries**



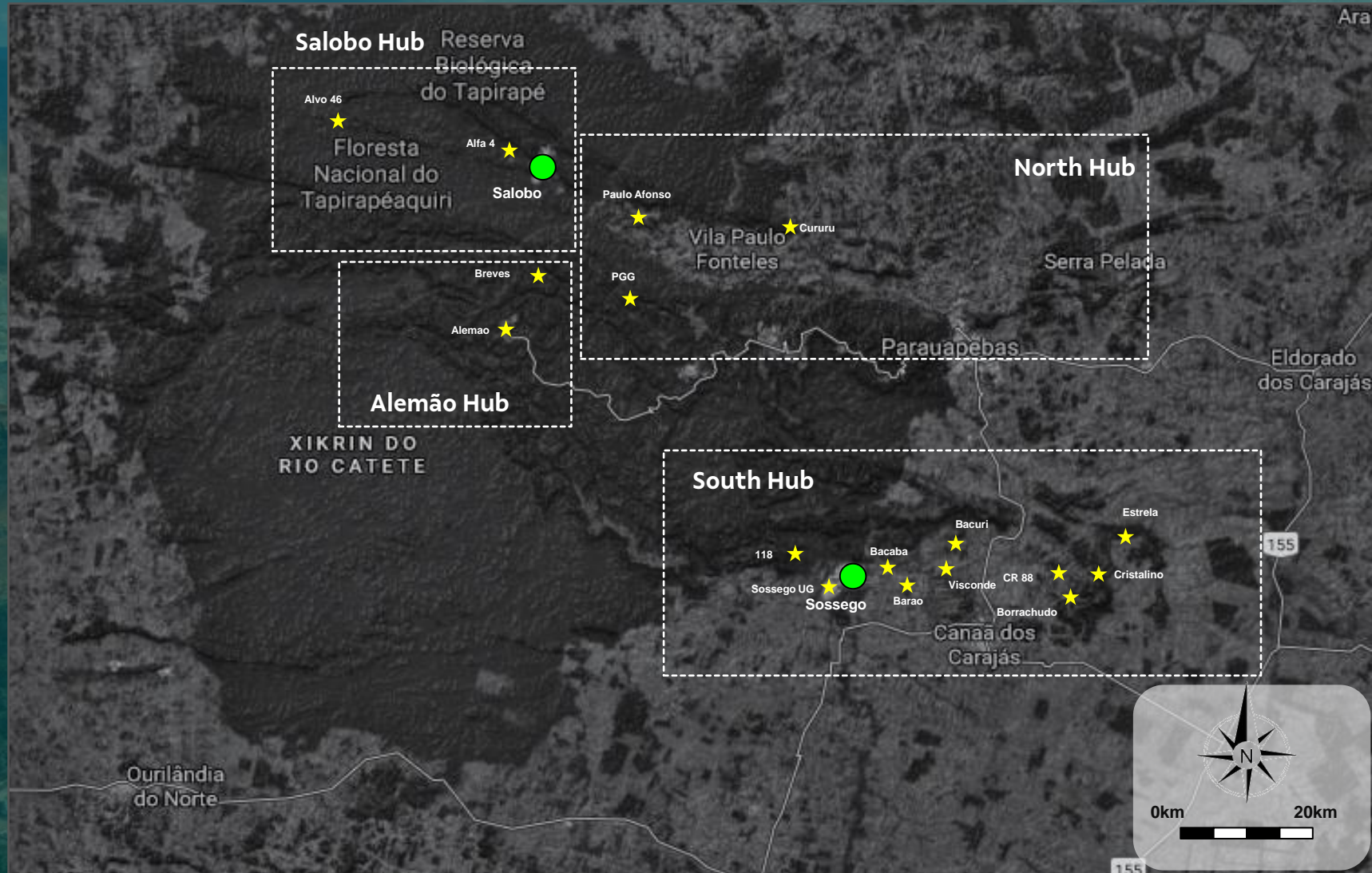
## Minas-Rio

**Access to 3.8 Mt of high-quality pellet feed**

*Option to acquire an additional  
15% interest*

*~15 Mtpy potential offtake in the  
long term*

# Accelerating copper growth in Carajás



**South Hub**  
anticipate the  
development of  
existing projects

**North Hub**  
accelerate the  
development of  
Paulo Afonso

**Small deposits**  
advance projects  
through accretive  
partnerships

# Potential to accelerate copper production

**~350kt**

Current production rate



**420-500kt**

with Bacaba and Alemão by 2030



**~700kt**

2030-35

Accelerated growth with Paulo Afonso, 118 and small deposits (ex-Hu'u)





Reference in **safety** and **operational** excellence



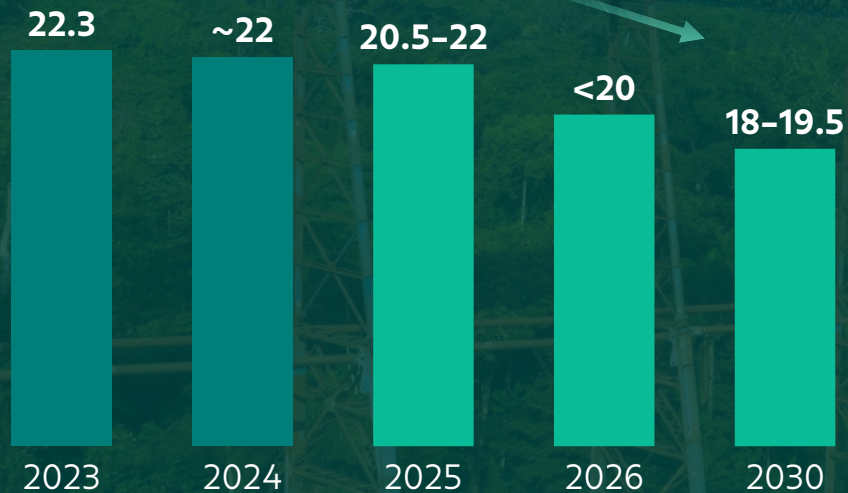
Securing competitiveness through a **talent-driven** and **agile company**



Fostering **innovation** and **digital solutions**

# Laser-focused on securing cost competitiveness

C1 cash cost, nominal terms (US\$/t)<sup>1</sup>



<sup>1</sup>Iron ore fines C1 cash cost – ex. 3rd-party purchase (US\$/t). Considering BRL@5.50 for 2025, 2026 and 2030.

## Key Levers



Digital solutions and efficiency program



Fixed cost dilution as volumes rise



Higher volumes from the Northern System



Higher share of agglomerates



De-specification program



**2030**

**C1: US\$ 18-19.5/t**

**All-in: <US\$ 50/t**



# MINING REINVENTED: creating value through circularity



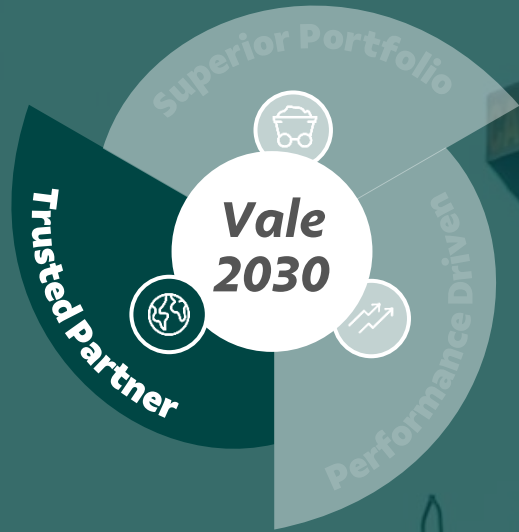
*Production from reused  
tailings in 2024*

**~10 Mt**

*Production from reused  
tailings in 2030*

**30+ Mt**





Cultivating institutional relationships



Leaving a positive impact for people and nature



Ensuring greater trust through increased transparency

# Sharing value with society



Leader in mining decarbonization

**100%**

renewable energy in Brasil

Enabling safer mining

**-60%**

in high-potential injuries vs. 2019

Prompting a talent-based diverse workforce

**26%**

women in the workforce

Supporting indigenous communities

**5 out of 11**

indigenous communities engaged for UNDRIP<sup>1</sup>

Empowering communities

**~50,000**

people benefitted in projects targeting extreme poverty

Fostering biodiversity

**800k ha**

under protection in the Carajás Mosaic

Investments in the last 5 years<sup>2</sup>:

**~R\$ 20 billion**

**in socio-environmental initiatives**

Clique para adicionar uma anotação

**Vale**day<sup>2024</sup>  
New York



[ USO INTERNO ] VALE DAY 2024 - MEIO AMBIENTE EN  
<https://vimeo.com/take4content/review/1029403211/620532c226>

# Continuously improving our ESG rating



## Vale's ESG rating<sup>1</sup>

	2018	2019	Today <sup>2</sup>
<b>Sustainalytics</b> (the lower, the better)	36.5 <sup>3</sup>	54.5	29.4
<b>ISS Governance</b> (the lower, the better)	8	10	1
<b>MSCI</b> (AAA highest / CCC lowest)	B	CCC	B
<b>DJSI<sup>4</sup></b> (the higher, the better)	45 <sup>5</sup>	45	46
<b>Moody's</b> (the lower, the better)	NA	NA	CIS-2 <sup>6</sup>



***Building success with the  
right people and culture***

**Vale** day<sup>2024</sup>

# Opening remarks

Thank You



# Iron Ore Solutions

Rogério Nogueira



# Iron Ore Solutions



Demand fundamentals



Short-term strategy



Long-term strategy



# Iron Ore Solutions



## Demand fundamentals

*Supported by secular trends*



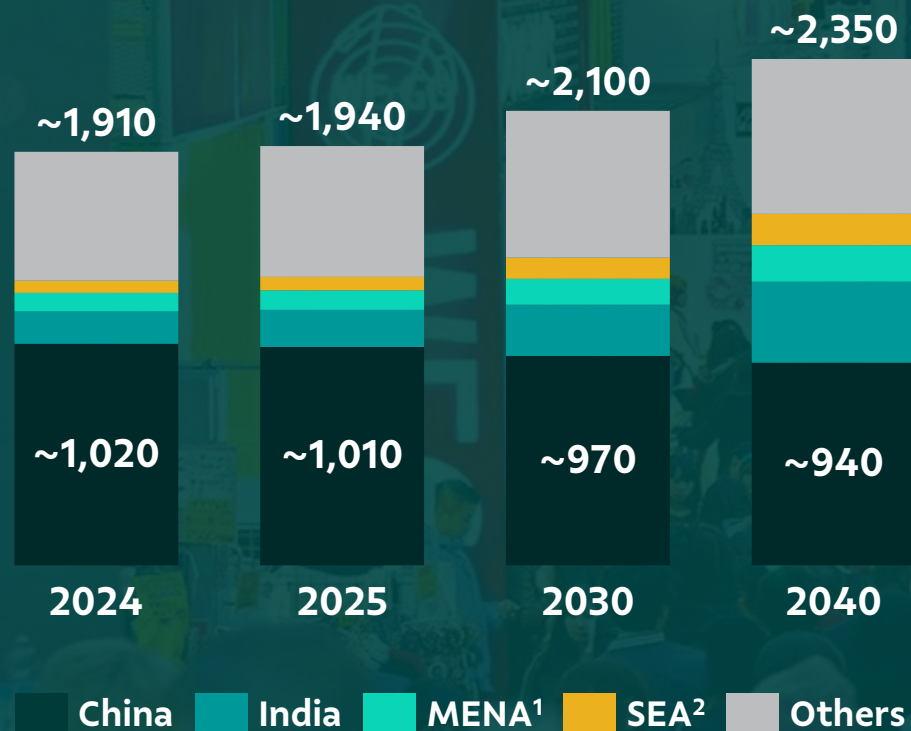
## Short-term strategy





## Long-term strategy

# Steel demand is backed by secular trends

Steel production by region (Mt)



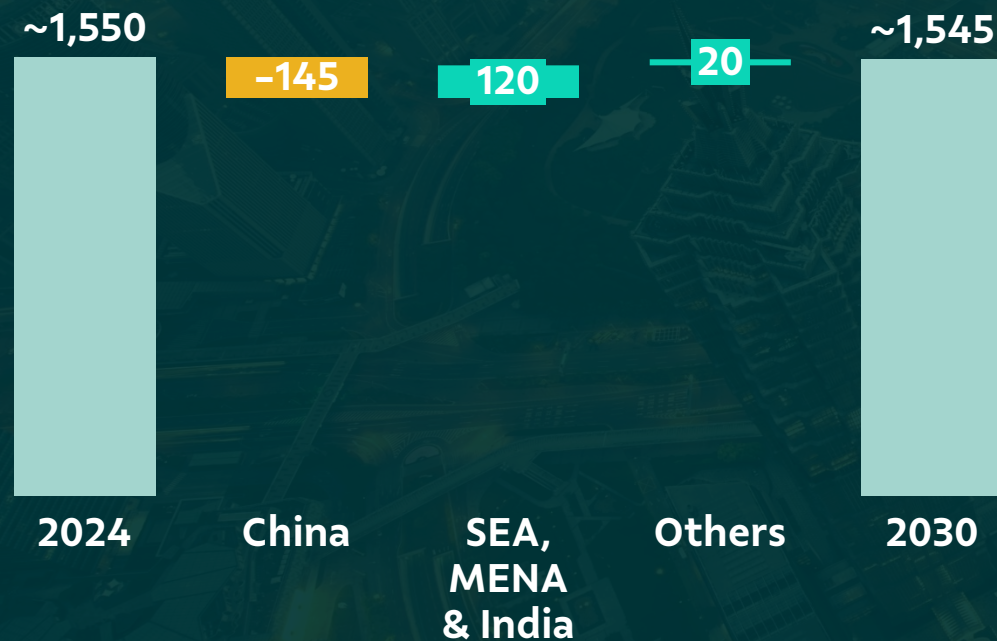
## Steel drivers

-  Urbanization and steel intensity
-  Population & economic growth
-  Energy Transition
-  Reshoring

<sup>1</sup> Middle East and North Africa. <sup>2</sup> Southeast Asia.

# Iron ore demand to hold steady in the coming years

Seaborne iron ore demand (Mt)



## China



Soft decline in seaborne demand ongoing, but still at a high level



Gradual rise of scrap consumption

## SEA, MENA and India



SEA: new blast furnaces start-up, demanding seaborne iron ore



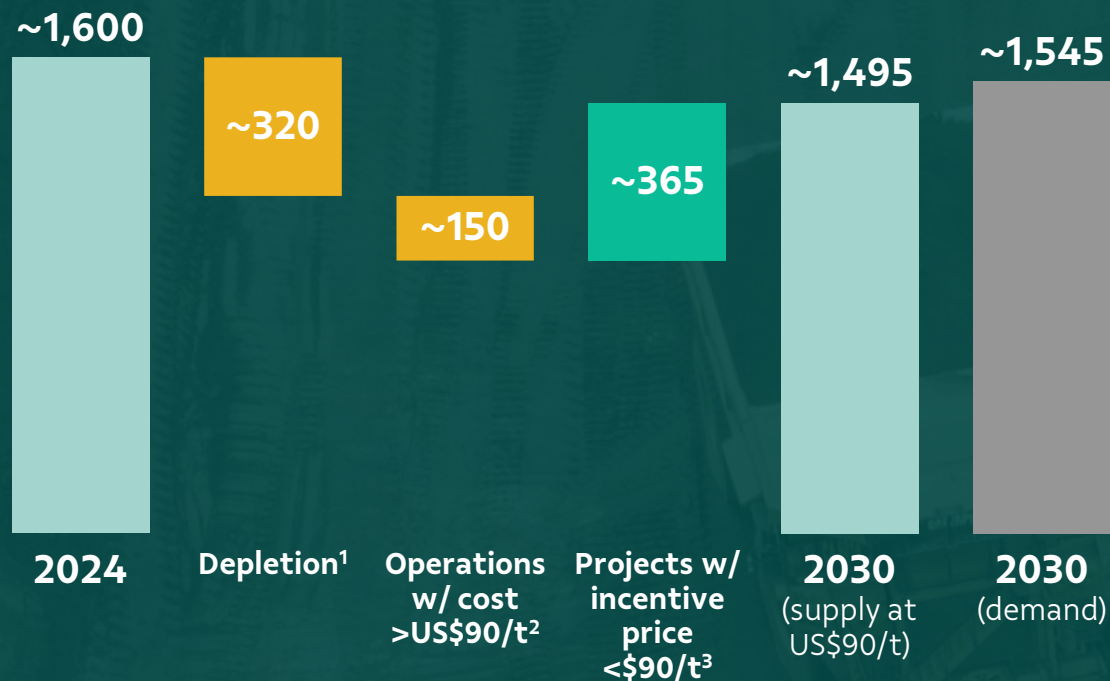
MENA: growing demand for direct reduction feed and agglomerates



India: slight increase in seaborne demand

# Supply challenges are consistently underestimated

Seaborne iron ore supply (Mt)



**Volume and quality depletion**



**Complex licensing processes**



**Higher incentive prices for replacement projects**

<sup>1</sup> Assuming an average annual depletion rate of ~3%, meaning an average Life of Mine (LOM) of 30 years based on the current supply. <sup>2</sup> Including Chinese ores. <sup>3</sup> Including greenfield projects and replacement projects.

# Adjusting the portfolio for value optimization alongside the decarbonization journey

## Phase 1 Traditional steelmaking routes



Adjusting portfolio for market reality and decarbonization pace

Portfolio optimization

## Phase 2 New steelmaking routes



Developing solutions to provide security of supply to new steelmaking processes

Portfolio re-design

Decarbonization journey

# Iron Ore Solutions



Demand  
fundamentals



**Short-term  
strategy**

*Maximizing value  
creation*



Long-term  
strategy

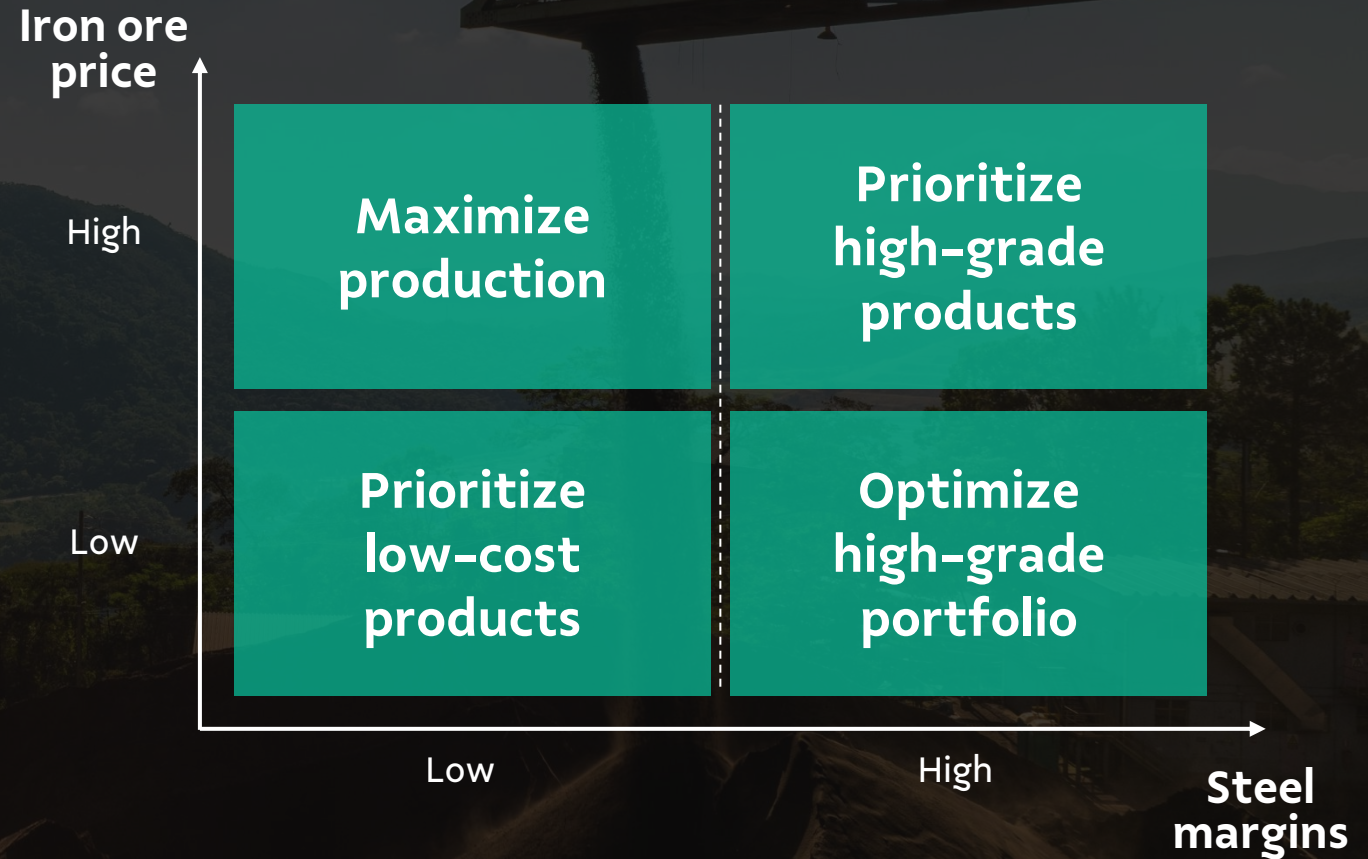
# Optimizing our portfolio in response to market needs

Market dynamics (price and premium) require **different strategies**

**Quality specs should be adjusted** according to market scenarios

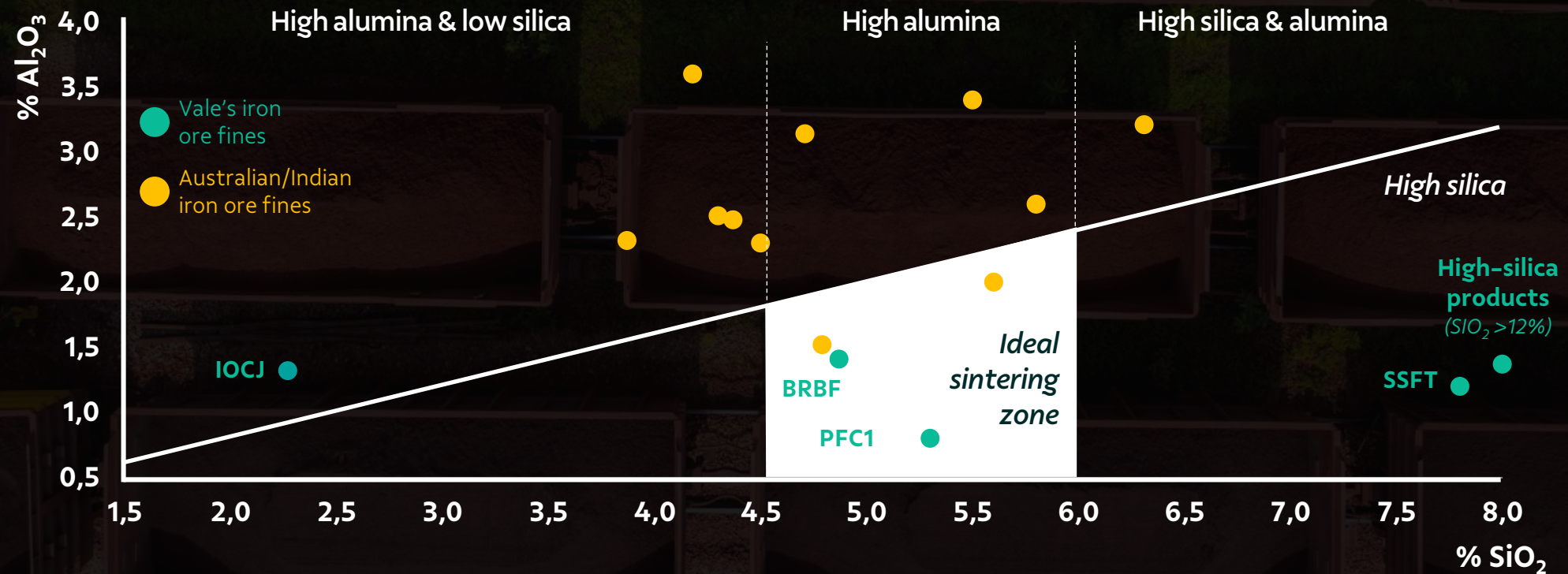
Portfolio decisions should be centered on **value optimization**

## Vale's flexible portfolio strategy



# Our portfolio offers flexibility to hit the sweet spot in blast furnace ironmaking

## Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> relation<sup>1</sup>

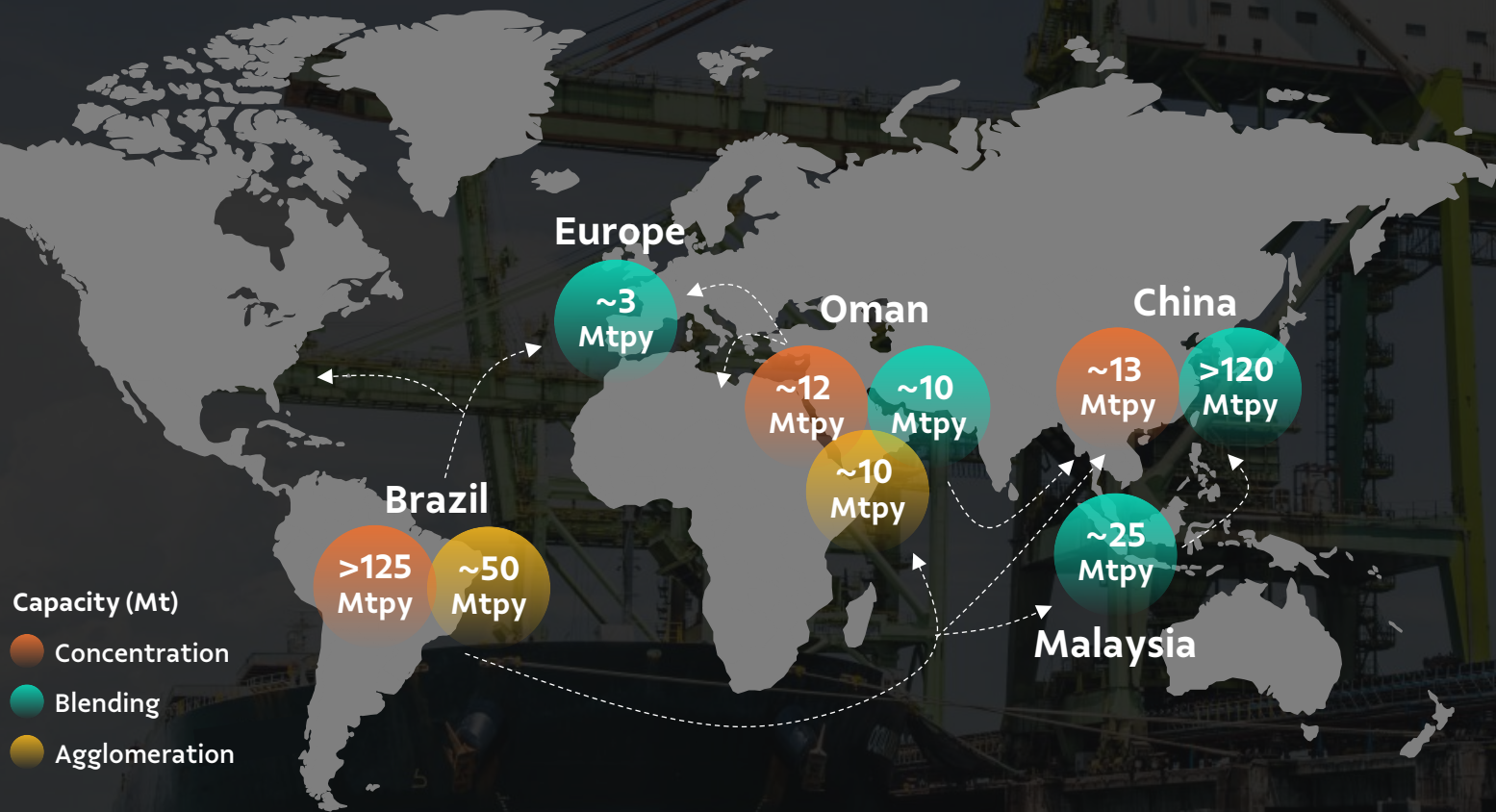


<sup>1</sup> Limit proportion between Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> percentages for an efficient sintering and blast furnace operation.



# Flexibility supported by integrated supply chain, bringing our mines closer to clients

## Vale's extended supply chain



**20 blending ports** world-wide, reducing time to market

**~150 Mtpy of concentration capacity** to offer optimized portfolio

**Leader in agglomerates market** (pellets and briquettes)

# Iron Ore Solutions



Demand  
fundamentals



Short-term  
strategy



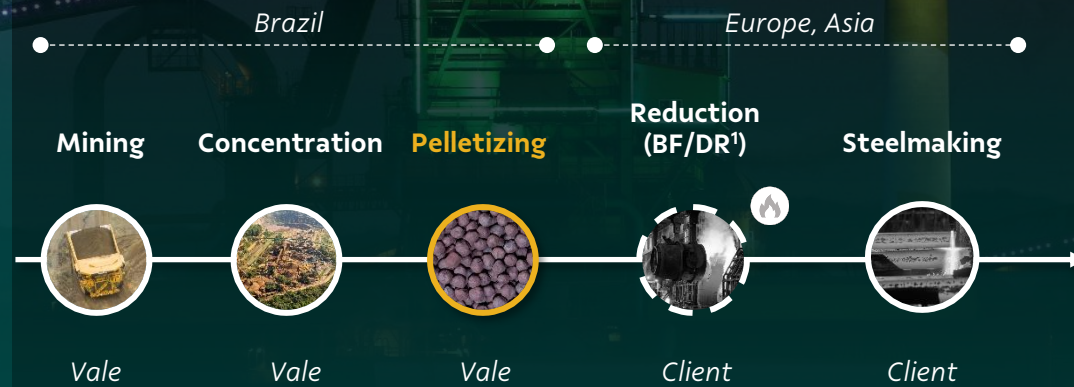
Long-term  
strategy

*Developing solutions to  
new steelmaking  
processes*

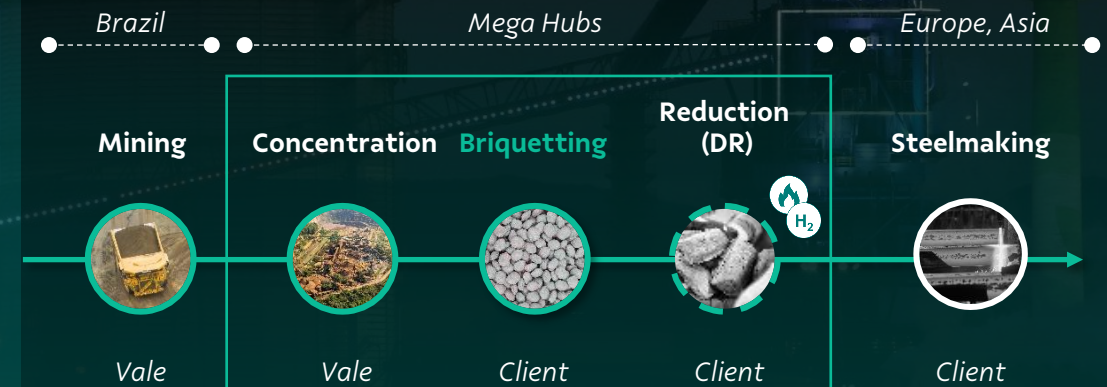
# Part of the upstream steelmaking chain will relocate to regions with cost-competitive energy



## Typical mining and steel chains



## New chain configuration with Mega Hubs



Miners need to provide supply security and solutions to new steelmaking processes

# Mega Hubs business model designed to speed-up implementation and provide capital efficiency



Agreements signed for studies in 5 countries<sup>1</sup>



7 advanced discussions with customers, with 2 FIDs in 2025



Locking-in potential demand of 30+ Mt of DR feed in the next decade

## Asset-light business model

Concentration plants  
4.5 Mtpy

*Partnerships for fast and cost-efficient implementation under tolling model*

Briquetting plants  
3.75 Mtpy

*Partnerships with customers that may invest in and operate, reducing Vale's capital requirements*

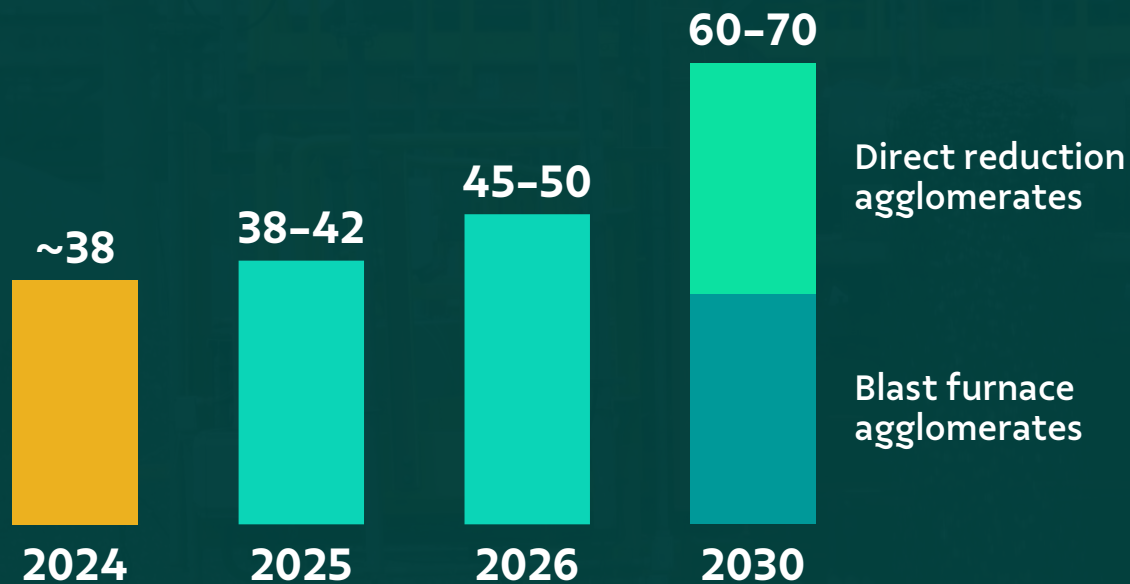
DRI/HBI Plants  
2.5 Mtpy

*Customers investment*

<sup>1</sup> Oman, Saudi Arabia, UAE, US and Brazil.

# Filling agglomerates' supply-demand gap

## Pellets and briquettes production (Mt)



DR agglomerates share will grow as the industry shifts to direct reduction route



### Increasing feed availability

- Production plan adjustments
- Minas-Rio offtake
- New Sohar concentration plant
- Mega Hub concentration plants



### New agglomeration plants

- Tubarão plants ramp-up
- US briquette plant
- Mega Hub briquette plants

# Delivering a flexible and superior portfolio



Iron ore supply will require price above US\$ 90/t to match demand

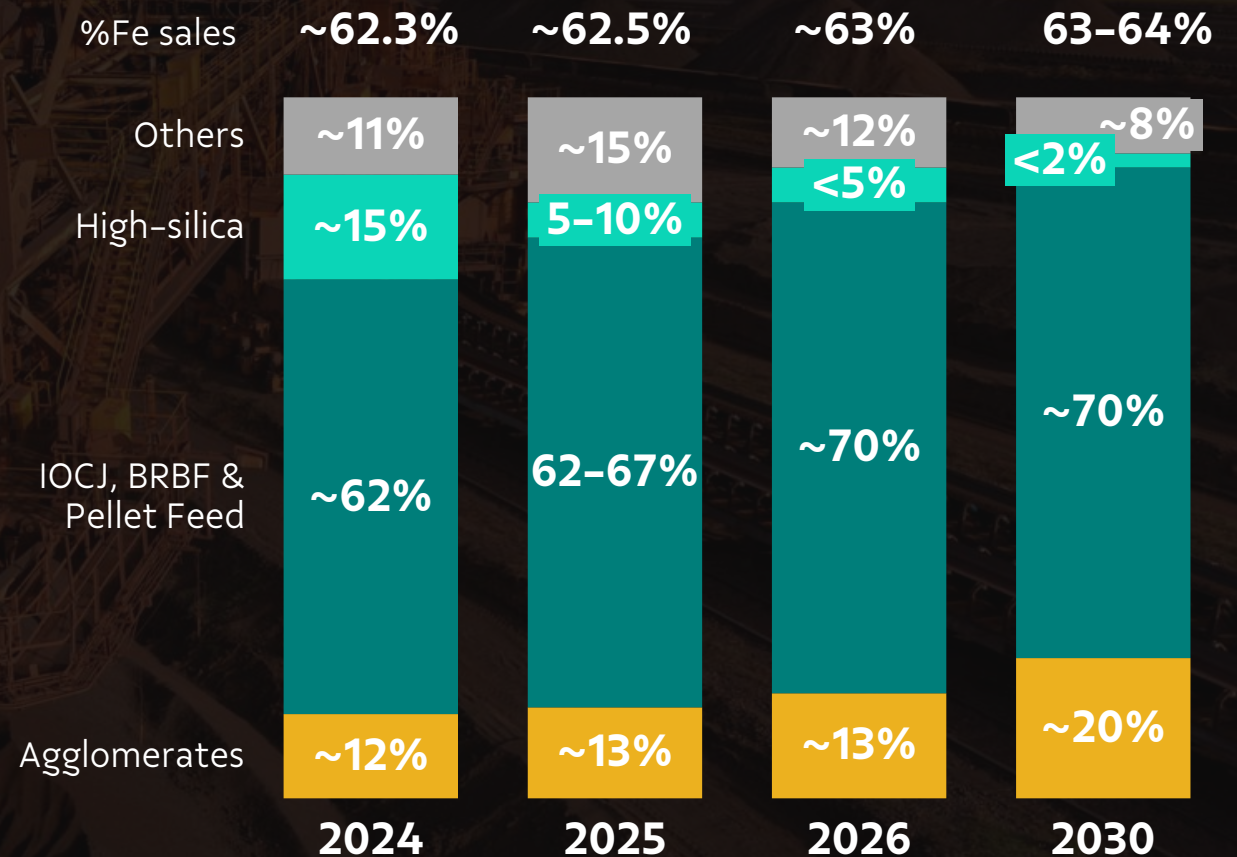


Vale will focus on portfolio and supply chain flexibility to maximize value



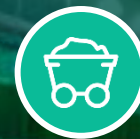
We are partnering with clients for decarbonizing ironmaking through the Mega Hubs strategy

## Vale's product portfolio – Base Case (%)



# Iron Ore Solutions

Thank You



# Iron Ore Operations

Carlos Medeiros





# Safety drives operational excellence

**+423%**  
vs. 2023

## N3<sup>1</sup> record

reinforcing the preventing mindset

**-46%**  
vs. 2023

## Process safety events<sup>2</sup>

through preventive actions and critical controls integrity

**-33%**  
vs. 2022

## LTIFR<sup>3</sup>

focusing on preventing accidents



<sup>1</sup> 10M24 figures compared with 2023. N3 are events with high potential that causes first-aid injuries and/or with no loss. By registering them, Vale learns and carries out preventive actions to avoid N1 and N2 events. <sup>2</sup> 10M24 figures compared with 2023. Process safety events that generate an unplanned or uncontrolled release of hazardous material or energy involving equipment or operating assets. <sup>3</sup> 10M24 figures. Lost Time Injury Frequency Rate measures the number of accidents at work that result in more than three days lost for every million hours worked.

**Vale** day<sup>2024</sup>  
New York

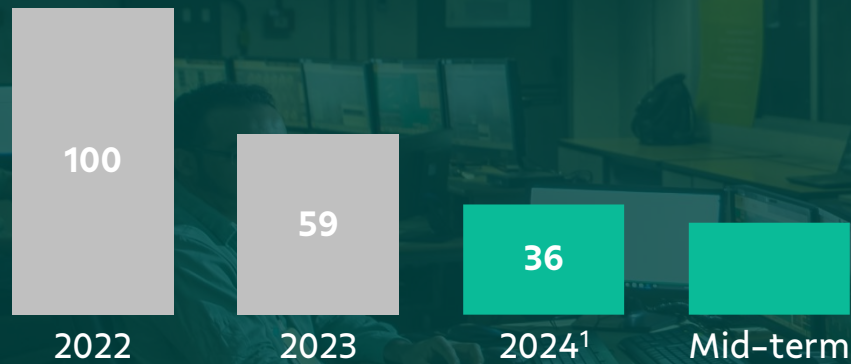


[ USO INTERNO ] VALE DAY 2024 - EXCELENCIA EN  
<https://vimeo.com/take4content/review/1029399993/da58b00866>

# Identifying and monitoring deviations to enhance reliability

## Corrective maintenance ratio

S11D operations, 2022 = 100 (the lower the better)



Early detection of failures through integrated monitoring



Optimizing preventive maintenance planning



# Improving asset integrity strategy to maximize availability

**S11D: Combined assets' maintenance**  
Maintenance interval raised from 4 to 5 weeks

**+6%**

**Truckless physical availability**  
Reduction of planned shutdowns

**+10%**

**Truckless physical productivity**  
Synchronization of shutdowns providing greater system uptime

**+7%**

**Conveyor belt productivity**  
Longer simultaneous operation increasing ore transportation



**Iron ore production (9M24)**  
**+4.5 Mt y/y**

**Vale** day<sup>2024</sup>  
New York




[ USO INTERNO ] VALE DAY 2024 - PROJETOS EN  
<https://vimeo.com/take4content/review/1029350405/135da31b87>




Capanema stockyard

# Capanema commissioning ahead of schedule

4Q23  **Tubarão Briquette Plant +6 Mtpy**  
Commercial production ramping-up

Sep 2024  **Vargem Grande 1 +15 Mtpy**  
Improving iron content by 2% in the Complex  
80% of tailings to be dry-stacked

Nov 2024  **Capanema +15 Mtpy**  
Hot commissioning started in Nov 2024  
Natural moisture production  
Flexible operation with low cost (< US\$20/t)

2H26  **S11D +20 +20 Mtpy**  
65%Fe iron ore production  
Lowest cost operation (US\$ <14/t)

Note: Projects already included in Vale's production plan.



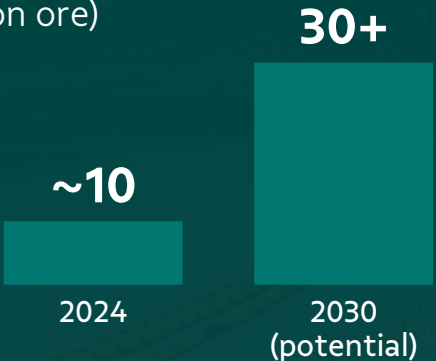
# Superior operational performance

- ✓ **Circular**
- ✓ **Decarbonized**
- ✓ **Client-focused**

**Vale** <sup>2024</sup> day  
New York

# Embracing circularity and creating new business models

Production<sup>1</sup>  
(Mt Iron ore)



*De-risking production plan*



*Clearing licensed operational areas*



*-5% CO<sub>2</sub> emissions vs. usual operations<sup>2</sup>*



## Waste-to-value program

**Tailings reprocessing**

**Gelado:** Producing high-quality pellet feed by reprocessing 37+ years of tailings at Serra Norte

**Waste processing**

**Serrinha:** high-Fe waste processing to produce iron ore and eliminate structures with low cost

**Coproducts**

**Block factory and sustainable sand & cement:** Creating coproducts from waste and transforming tailings into viable high-quality products

<sup>1</sup>Already included in Vale's production plan. Including fines and ROM. <sup>2</sup> Average emission reduction for program initiatives.



# Leveraging Brazil's competitive edge for decarbonizing our operations

## Carbon emission intensity<sup>1</sup> – 2023 kg CO<sub>2</sub> eq./t iron ore



## Ongoing initiatives (non-exhaustive)

### Trucks: ethanol and electric equipment



250+ trucks: High-power engine retrofit technology in development

After 2030: BEVs under development by OEMs, with scalability

### Railways: biodiesel



Pilot tests to increase biodiesel content to 25% by 2028

### Innovative Processes



Improve our furnaces thermal efficiency to reduce the anthracite usage

# Enhancing our portfolio to meet clients' needs through operational upgrades

## Conceição II plant: Orion Project

*Increasing high-quality production*



**Greater predictability of run-of-mine**  
Processing plant setup optimization



**Specialized process control systems**  
Real-time control of mineral treatment process

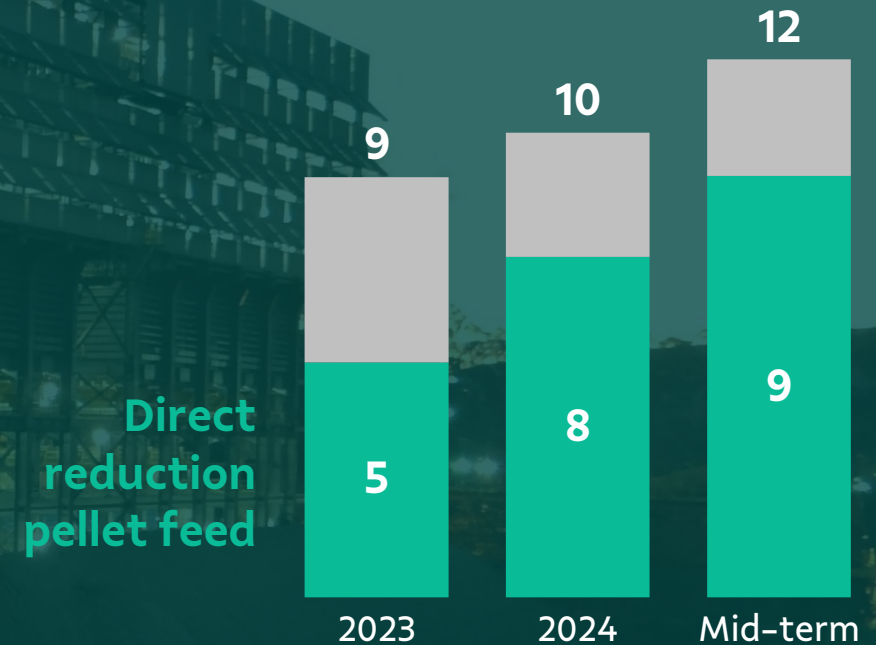


**Standardization and process control**  
Reliable and consistent results combined with innovative solutions



**A model to be replicated**  
Roll out planned for Brucutu's lines

## Conceição II production<sup>1</sup> (Mt)



<sup>1</sup> Already included in Vale's production plan.

# Scaling up operational performance momentum



Management model implementation bearing fruit

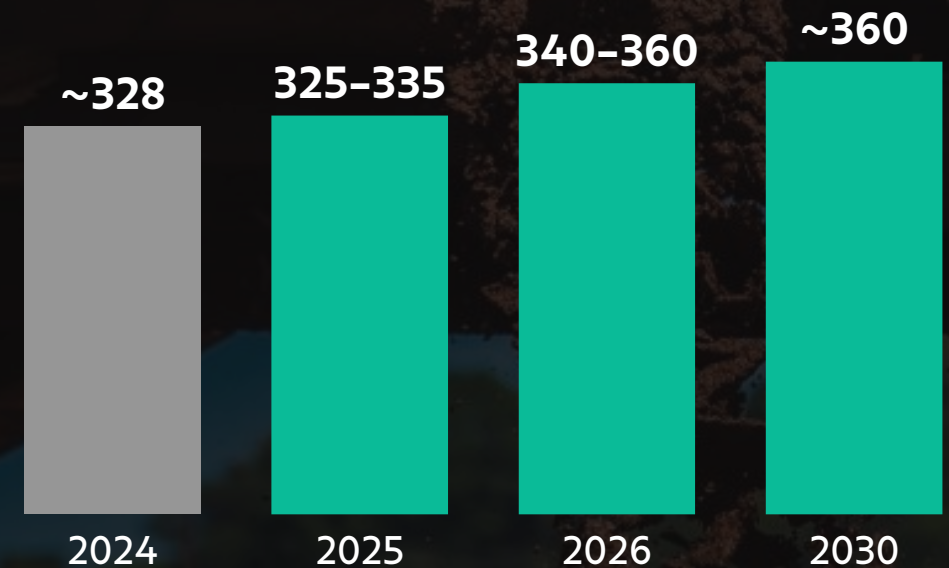


Strategic projects to expand iron ore production and quality



Accelerating initiatives to take our operations to the next level

## Iron ore production (Mt)



# Iron Ore Operations

Thank You



# Energy Transition Metals

Shaun Usmar



# A business with significant potential and optionality

**A differentiated resource endowment**

**Allowing a specific strategic positioning for copper, polymetallics, and nickel**

**Competitiveness improvement**

**With a portfolio of assets in the right path to deliver its potential and provide optionality**

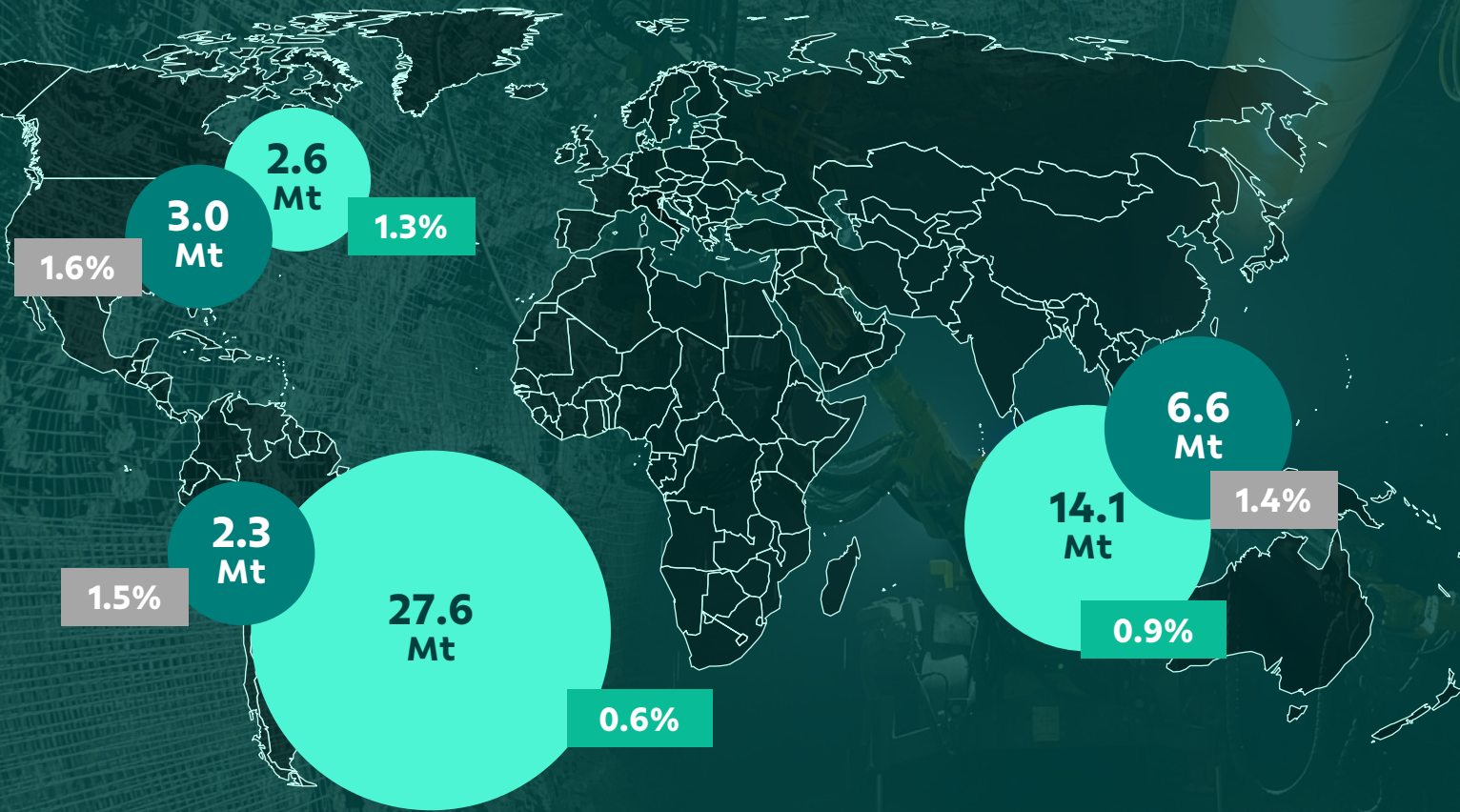
**Focus to deliver our aspiration in copper**

**Leveraging on the pipeline of projects and the potential in Carajás**

**With the organization set to deliver**

**Designed to deliver our priorities and value through an agile organization**

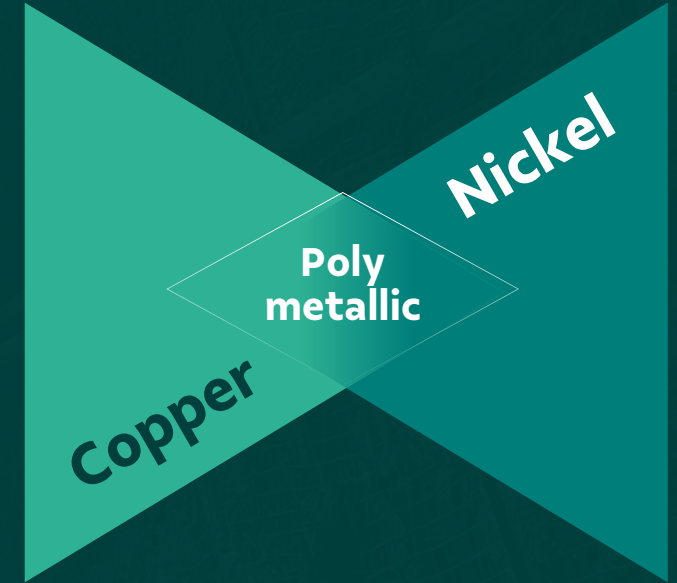
# Significant endowment with substantial value potential



## Mineral Reserves & Resources<sup>1,2,3,4</sup>

- Copper
- Nickel
- Bubble size: contained metal
- % Average metal grade

<sup>1</sup> As of December 31, 2023, as per Vale Form 20-F. <sup>2</sup> Reflecting the total resources (reserve + resource, including inferred). <sup>3</sup> Mineral Resources are not mineral reserves and do not have demonstrated economic viability at this time. <sup>4</sup> Figures refer to VBM's ownership (33.9% of PTVI, 80% Hu'u and 100% for Canadian and Brazilian assets).



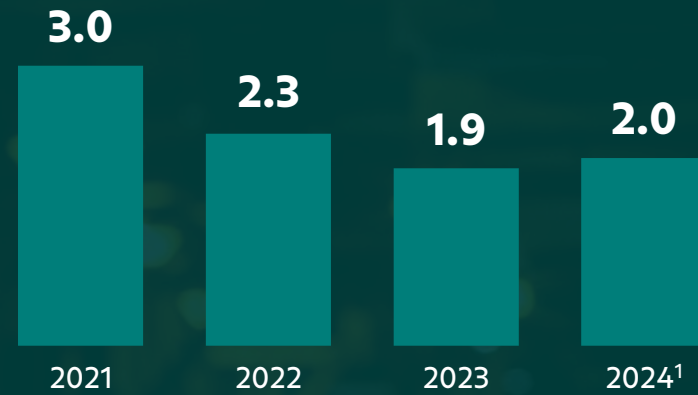
Grant a competitive business...

... and accelerate Copper growth



**Safety and risk management are an integral part of our daily routine**

**TRIFR**



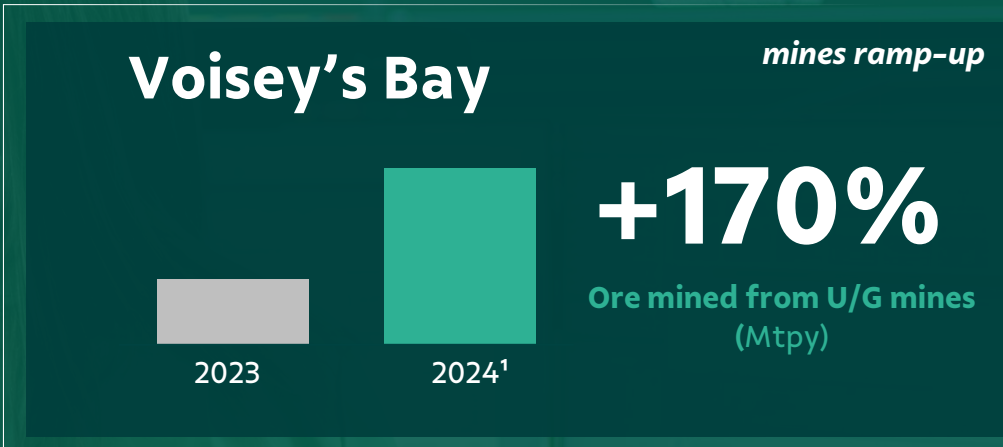
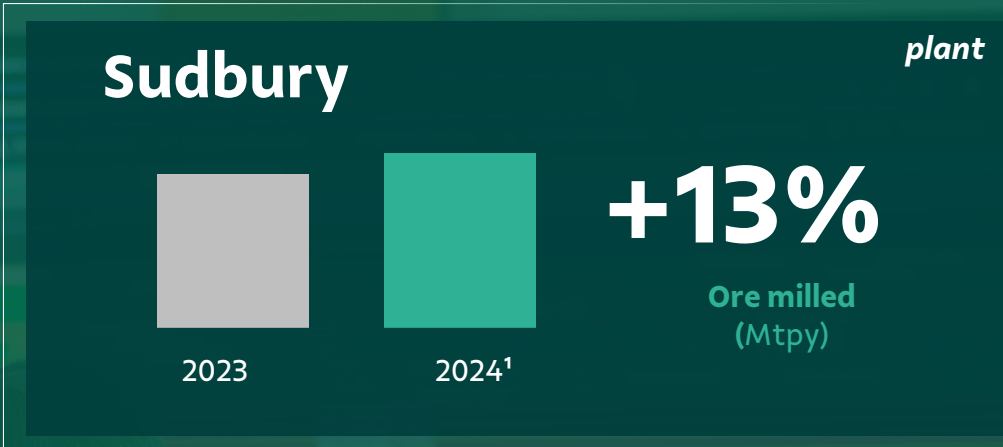
**High Potential Recordable Injuries (N2)<sup>2</sup>**



<sup>1</sup> Year-to-date as of Oct 31. <sup>2</sup> Number of events.



# Capability drives performance...



Note: Projects already included in Vale's production plan  
<sup>1</sup> 2024 year forecast as of October 31<sup>st</sup>, 2024.



# Shaping a competitive business



# Unlocking Salobo copper potential



## Mine & mill productivity

- Ramp-up of Salobo 3 and feed grades stability
- Higher utilization of equipment



## Brownfield expansion options

- Coarse particle flotation: 20–30+ ktpy
- Salobo 3 ½: 20 ktpy



## Resource potential

- Potential to add significant resources through additional in-depth drilling
- Enables further extending the life of the asset – design and optimization



**A long-life, expandable, world-class asset**

# Sossego life extension



## Mine plan review

- Additional ore from Sequeirinho pit, offsetting mine depletion
- Increase in mine equipment productivity



## Bacaba licensing

- Public hearings held in October
- Construction License is expected to be granted in the coming months
- Start-up expected in 2028
- ~60 ktpy of copper – replacement of Sossego mines



## Fill the mill

- Development of near mine deposits to maximize ore to mill
- 1<sup>st</sup> deposit: 8–20 ktpy

# Sudbury “fill the mill”

Ore milled  
Mtpy



From 2024 to 2027

**40% decrease in unit costs**  
after by-products

**~30% increase in copper production**



## Short-term payback projects

- Low CAPEX projects that add lower grade ore tons



## Mining strategy

- Change in cut-off grades and extraction strategies
- Increase in mine development to support increase in production and lower costs



## Clarabelle mill expansion

- Debottleneck to process increased mine production

# Continued ramp-up of VBME

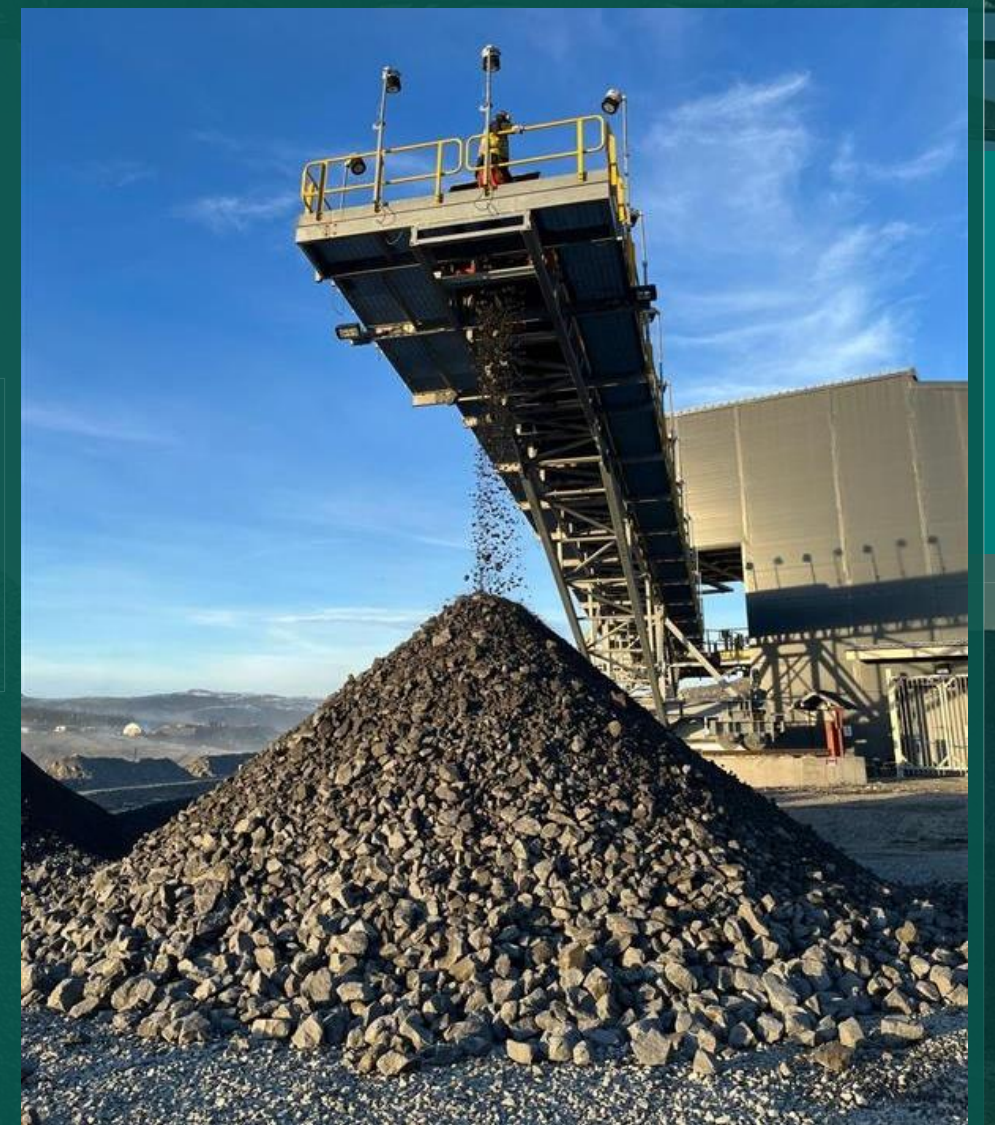
## Start-up of Eastern Deeps

The bulk material handling system has successfully commenced operations

## Full ramp-up of VBME project expected by 2026

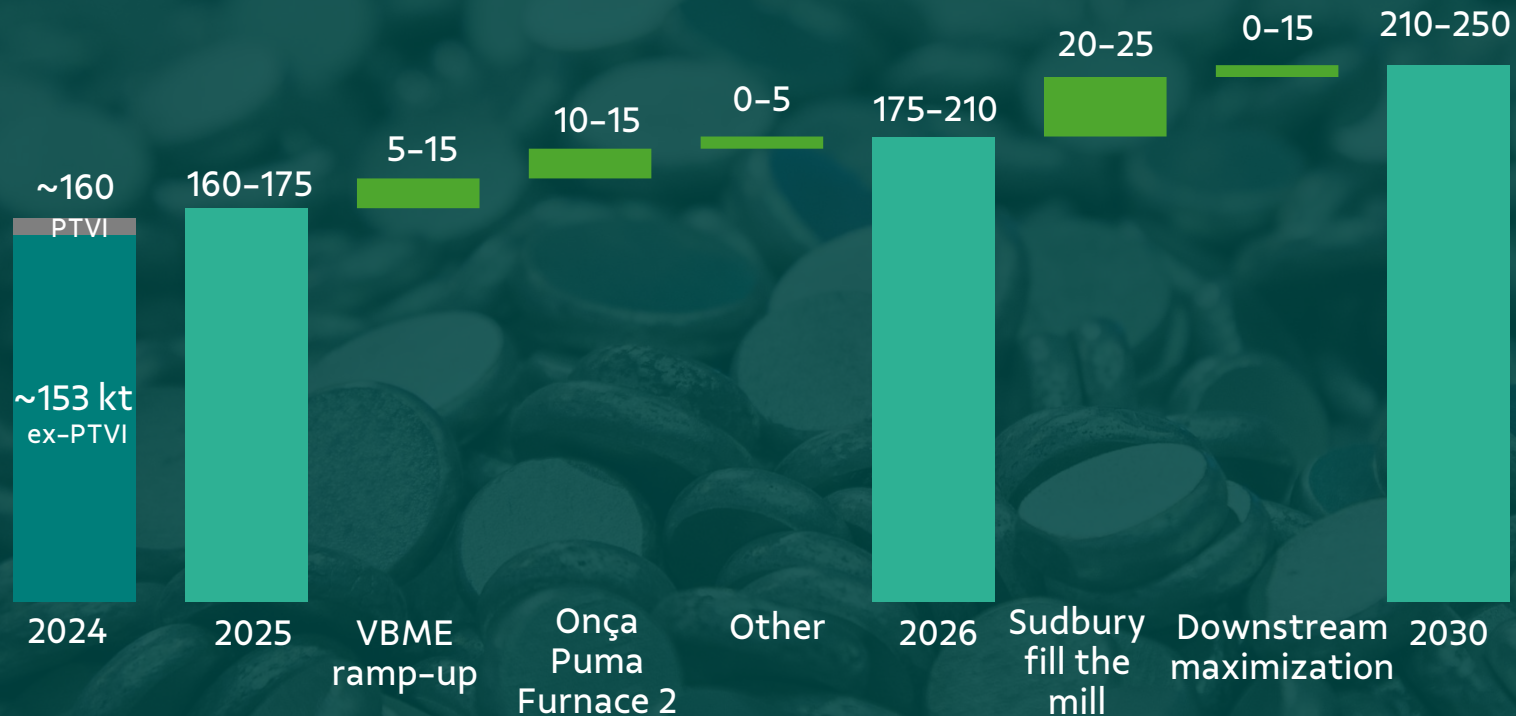
~45 ktpy nickel; ~20ktpy copper; 2.6 ktpy cobalt

~15% reduction in unit costs after by products from 2024 to 2026



# Improving competitiveness in nickel

## Nickel production – ktpy



## Fixed cost dilution

- Unlock own-sourced tons in Sudbury
- Conclude Voisey's Bay transition
- Deliver Onça Puma second furnace

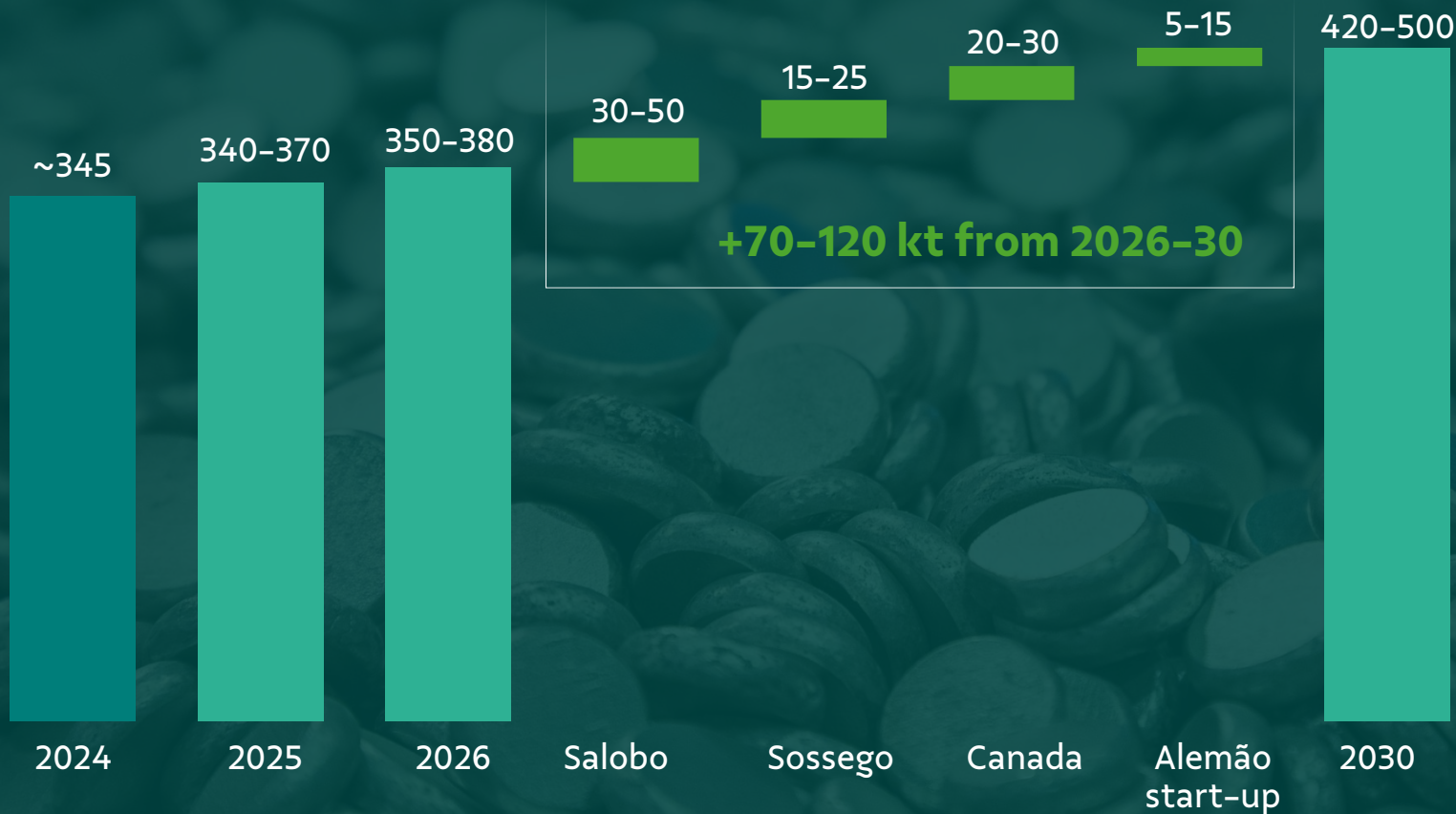


## Maximize downstream utilization

- Additional own-sourced ore
- 3rd-party feed, according to market conditions

# Unlocking copper tons from current assets

## Copper production – ktpy



## Sossego mine replacement

- Bacaba start-up expected in 2028
- Working on mine productivity to offset depletion
- Additional tons from smaller deposits to fill the mill

## Brownfield expansion options at Salobo

- Increase in plants productivity through feed stability
- Increase plant capacity through brownfield options

## Alemão

- Start-up expected in 2030
- Capacity: 60-70 ktpy of copper; 105 kozpy of gold in copper concentrates



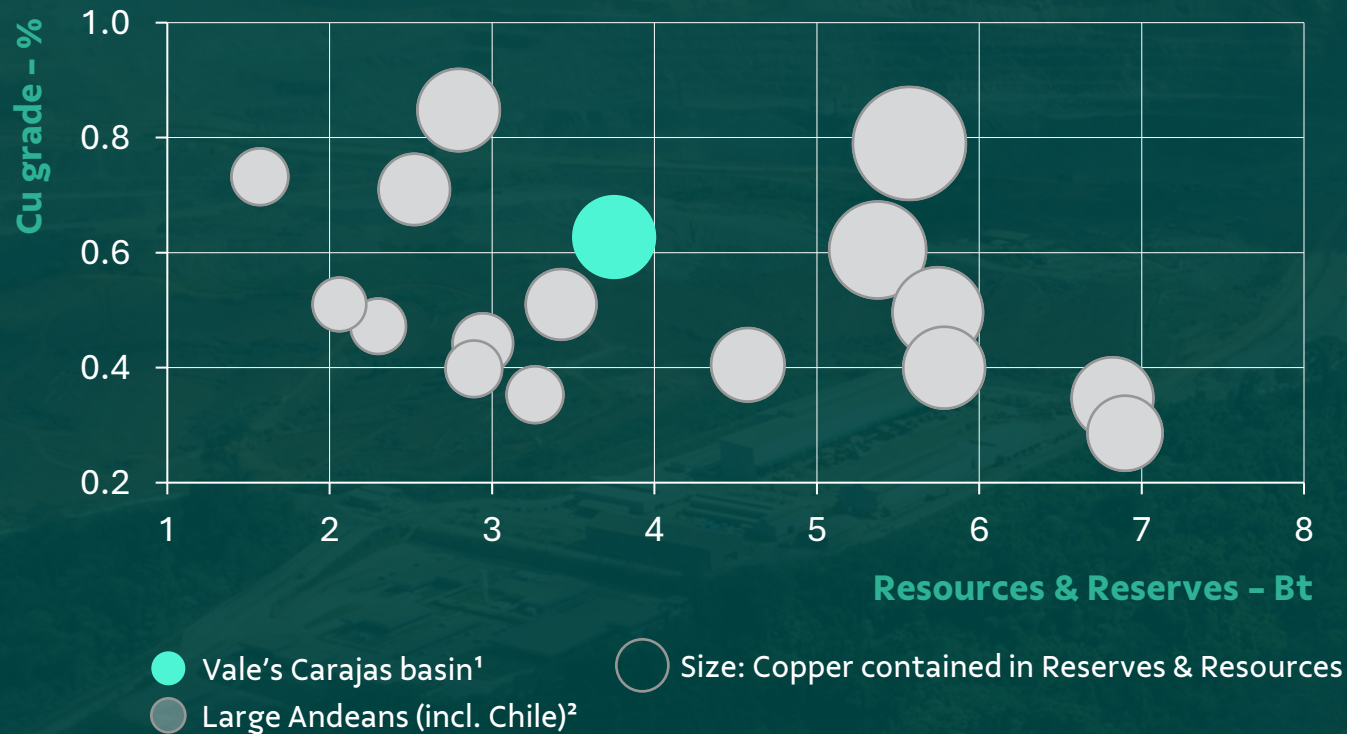


# Fast-tracking copper growth

*Creating the right  
pathway for  
accelerated expansion*

# Carajás basin compares relatively well to large Andean deposits

## Copper Mineral Reserves & Resources



**> 20 Mt copper contained at competitive grades**

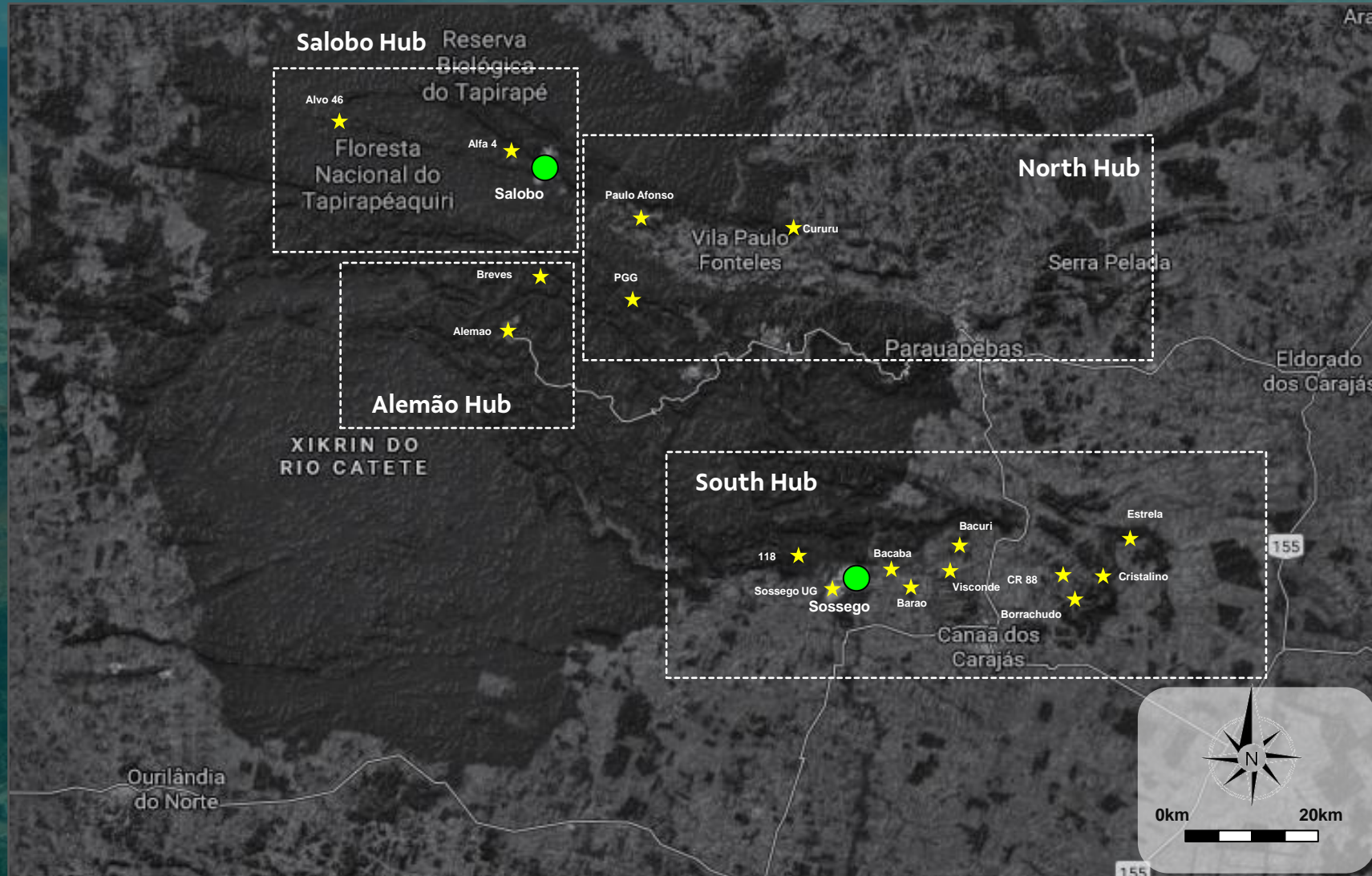
0.63% Cu vs. 0.46% industry average

**Bulk logistics infrastructure**  
mine-railway-port

**Resources potential**  
for further project development

<sup>1</sup> Comprises current Carajás Basin resources including Salobo, Sossego, Alemão and Paulo Afonso deposits, as of December 31, 2023, as per Vale Form 20-F. <sup>2</sup> Refers to deposits with more than 10 Mt of contained copper, comprising Collahuasi, Escondida, El Teniente, Queblada Blanca, Cerro Verde, Los Bronces (including underground), Toquepala, El Abra, Andina, Los Pelambres, Radomiro Tomic, Nueva Union, Chuquicamata, Centinela and Quellaveco.  
Source: Vale and S&P Capital IQ.

# Accelerating copper growth in Carajás

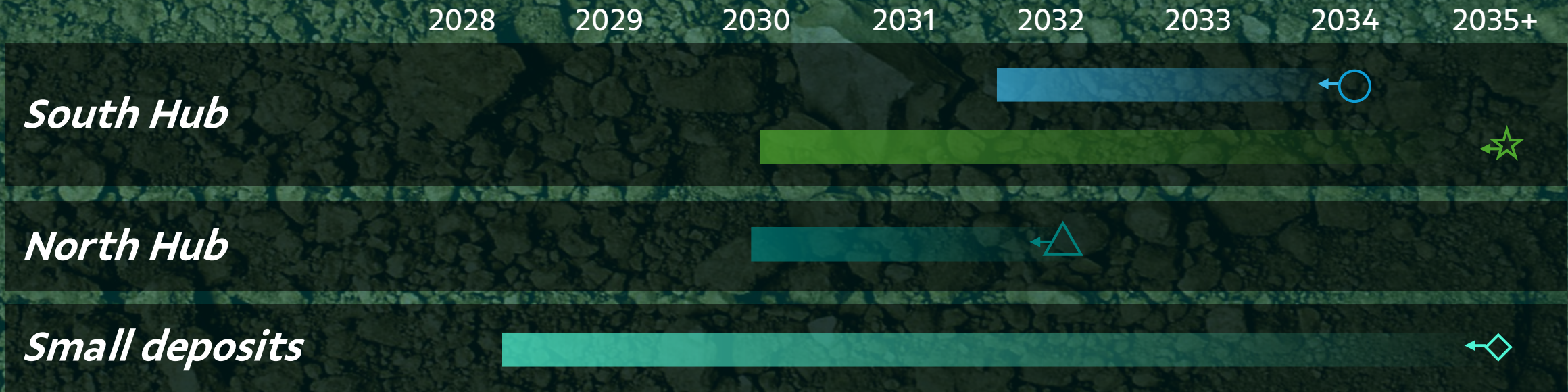


**South Hub**  
anticipate the  
development of  
existing projects


**North Hub**  
accelerate the  
development of  
Paulo Afonso

**Small deposits**  
advance projects  
through accretive  
partnerships

# Bringing projects forward




**Cristalino<sup>1</sup>**  
60-70 ktpy  
LOM: ~20 Years




**118 Project<sup>1</sup>**  
60-70 ktpy  
LOM: ~10 Years



**Paulo Afonso**  
70-100 ktpy  
LOM: ~20 Years



**Small deposits**  
35-45 ktpy  
LOM: 5-10 Years



Note: LOM as known as life of mine.  
<sup>1</sup> Additional plant capacity supported by 118 and/or Cristalino.

# Potential to accelerate copper production

## Copper production – ktpy

420–500

Current plan  
2030

Ramp-up of  
Alemão and  
brownfield  
initiatives

70–100

Paulo Afonso

60–70

Additional  
plant capacity  
supported by  
118 and/or  
Cristalino

35–45

Small  
deposits

~700

Accelerated  
growth

Target to  
achieve new plan  
capacity before  
**2035**

Accelerated strategy

North Hub

South Hub

# Copper ambition enablers



## Exploration Drilling and R&D

- Advance on drilling and scoping studies
- Define deposits suitable for partnership strategy
- Accelerate the engineering development



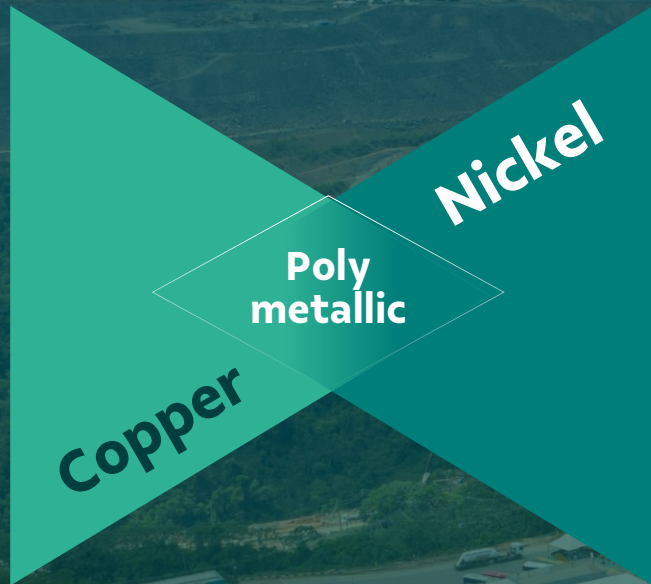
## Processing capacity

- Develop additional processing capacity



## Licensing

- Obtain license & permits on time for all projects



**Vale** <sup>2024</sup> day  
New York

## Copper

Baseline of  
420–500 ktpy by 2030

Accelerate copper growth in Carajás  
region

## Polymetallic

Pursue additional copper tons...

...while contributing for  
all-in cost reduction

## Nickel

Stable production at  
210–250 ktpy by 2030

Pursue a competitive business  
through-the-cycle

# Energy Transition Metals

Thank You





# Finance

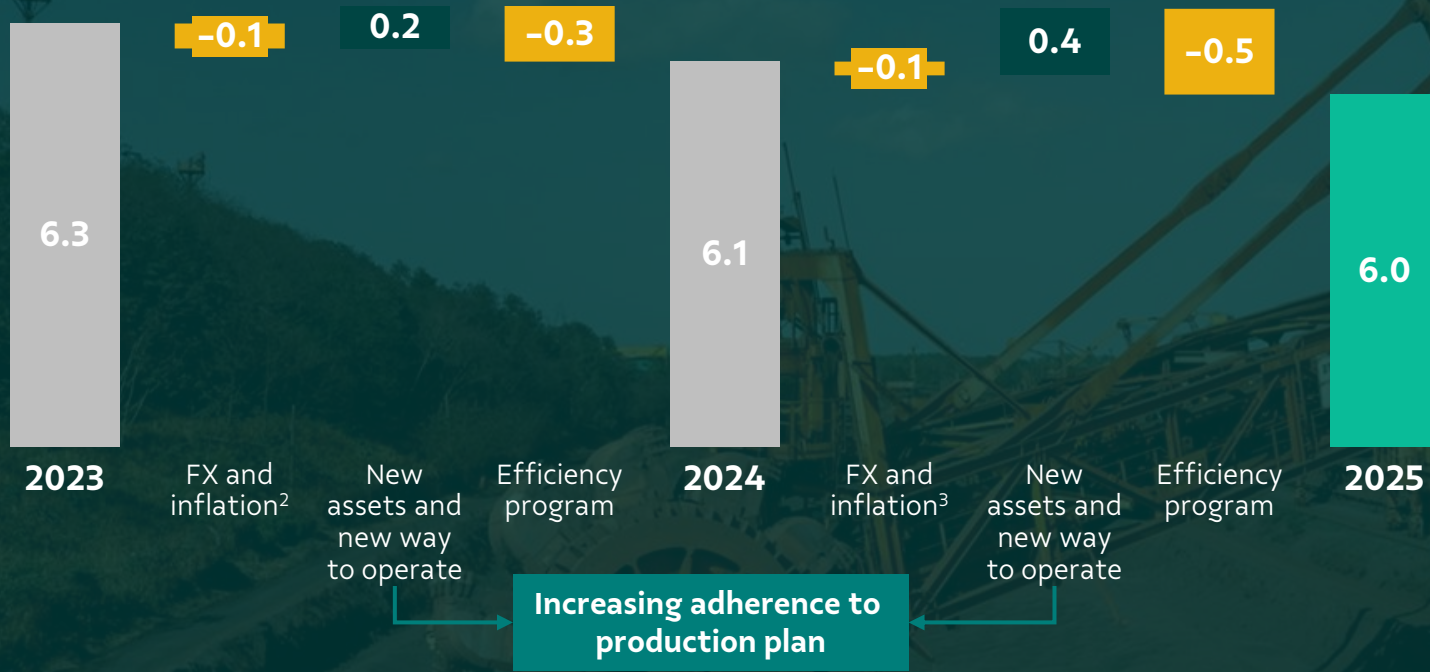
---

Murilo Muller



# Securing cost discipline through efficiency program

## Fixed spending – Iron Ore Solutions (US\$ bn)<sup>1</sup>



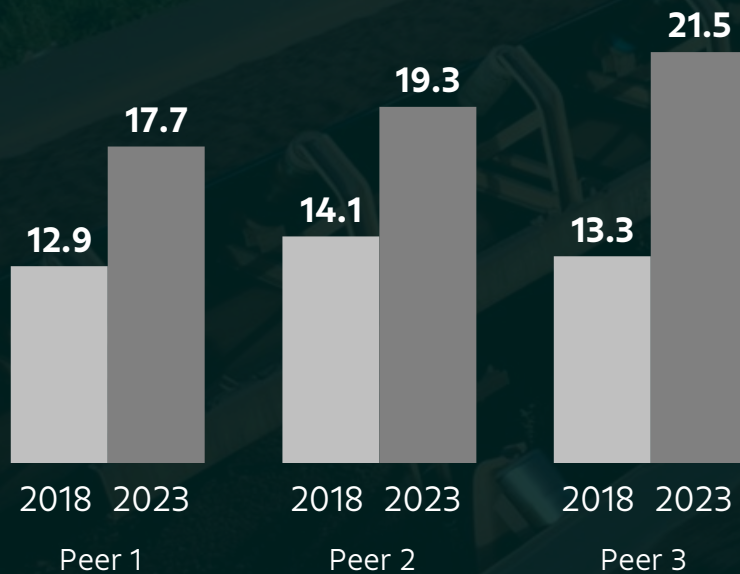
## Cost Efficiency Program

-  Accelerated cost savings
-  Optimization of purchase specifications
-  Digital solutions for a leaner organization
-  Continued overhead efficiency

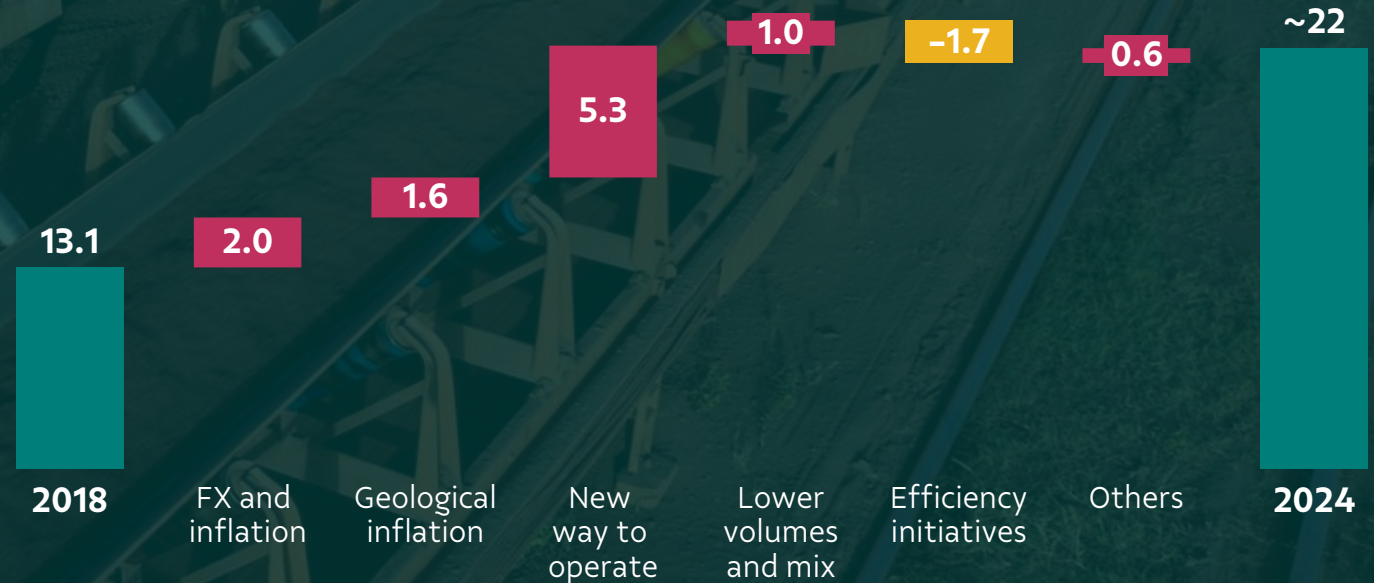
<sup>1</sup> Assuming BRL FX @5.28 in 2024 and @5.50 in 2025. <sup>2</sup> Including FX (US\$ -0.3 bn) and inflation (US\$ 0.2 bn). <sup>3</sup> Including FX (US\$ -0.2 bn) and inflation (US\$ 0.1 bn).

# Costs have gone up across the iron ore industry in the past years

## Peers' C1 cash cost (US\$/t)<sup>1</sup>



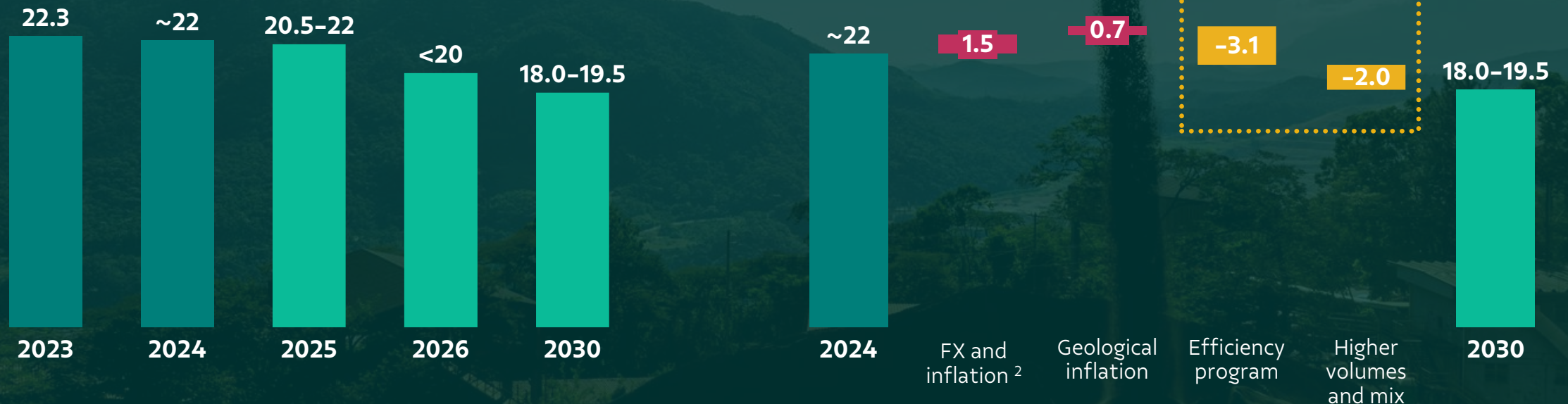
## Vale's C1 cash cost (US\$/t)<sup>1</sup>



<sup>1</sup> Iron ore fines C1 cash cost – ex. 3rd-party purchases (US\$/t). <sup>2</sup> Considers the net effect of FX (US\$ -3.7t) and inflation (US\$ 5.7/t) between 2018 and 2024.

# Our goal is to deliver C1 in the US\$ 18–19.5/t range by 2030

## Vale's C1 cash cost, nominal terms (US\$/t)<sup>1</sup>



<sup>1</sup> Iron ore fines C1 cash cost – ex. 3<sup>rd</sup>-party purchase (US\$/t). Considering BRL@5.50 for 2025, 2026 and 2030. <sup>2</sup> Considering an annual inflation rate of ~3% for Vale's average basket and an exchange rate of BRL 5.50 to USD in 2030 (real terms), adjusted for long-term inflation differentials between US and Brazil.

# Competitiveness through the cycle

## Costs guidance (US\$/t)<sup>1</sup>

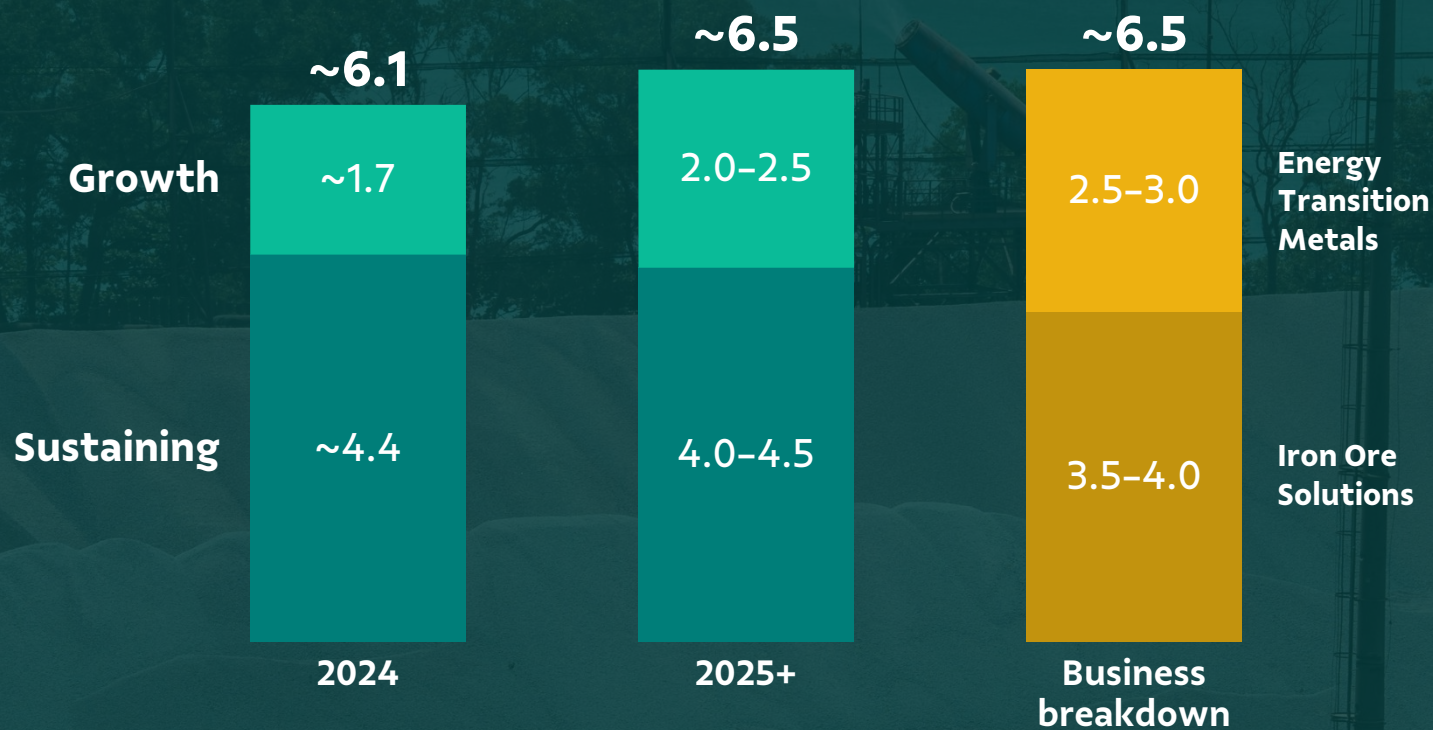
		2024	2025	2026	Main assumptions for 2026
Iron ore	C1	~22	20.5-22	< 20	<ul style="list-style-type: none"> <li>Higher volumes and fixed cost dilution</li> <li>Efficiency program</li> <li>Better portfolio mix<sup>2</sup></li> </ul>
	All-in	~57	53-57	50-54	
Copper <sup>3</sup>	All-in	~2,900	2,800-3,300	3,200-3,700	<ul style="list-style-type: none"> <li>Asset review initiatives in place</li> <li>Postponed Bacaba start-up and Sossego depletion</li> <li>Lower grades at Salobo</li> </ul>
Nickel	All-in	~15,900	14,000-15,500	12,500-14,000	<ul style="list-style-type: none"> <li>Asset review initiatives in place</li> <li>VBME ramp-up and decrease in 3<sup>rd</sup>-party purchase</li> <li>Portfolio optimization</li> </ul>

<sup>1</sup> Assuming BRL FX @5.50 in 2025 and 2026. <sup>2</sup> Considering all-in premium of US\$ 3-4/t in 2025 and US\$ 4-6/t in 2026.

<sup>3</sup> Considering the gold prices of US\$ 2,470/tr. oz. for 2024, US\$ 2,485/tr. oz. for 2025 and US\$ 2,211/tr. oz. for 2026

# Stable capex while balancing accretive growth

## CAPEX (US\$ bn)



**Controlled and efficient capex to sustain production**



**Assets optimization**



**Accretive growth opportunities**

# Performing on our commitments

## Expected cash disbursement schedule (US\$ bn) <sup>1, 2</sup>

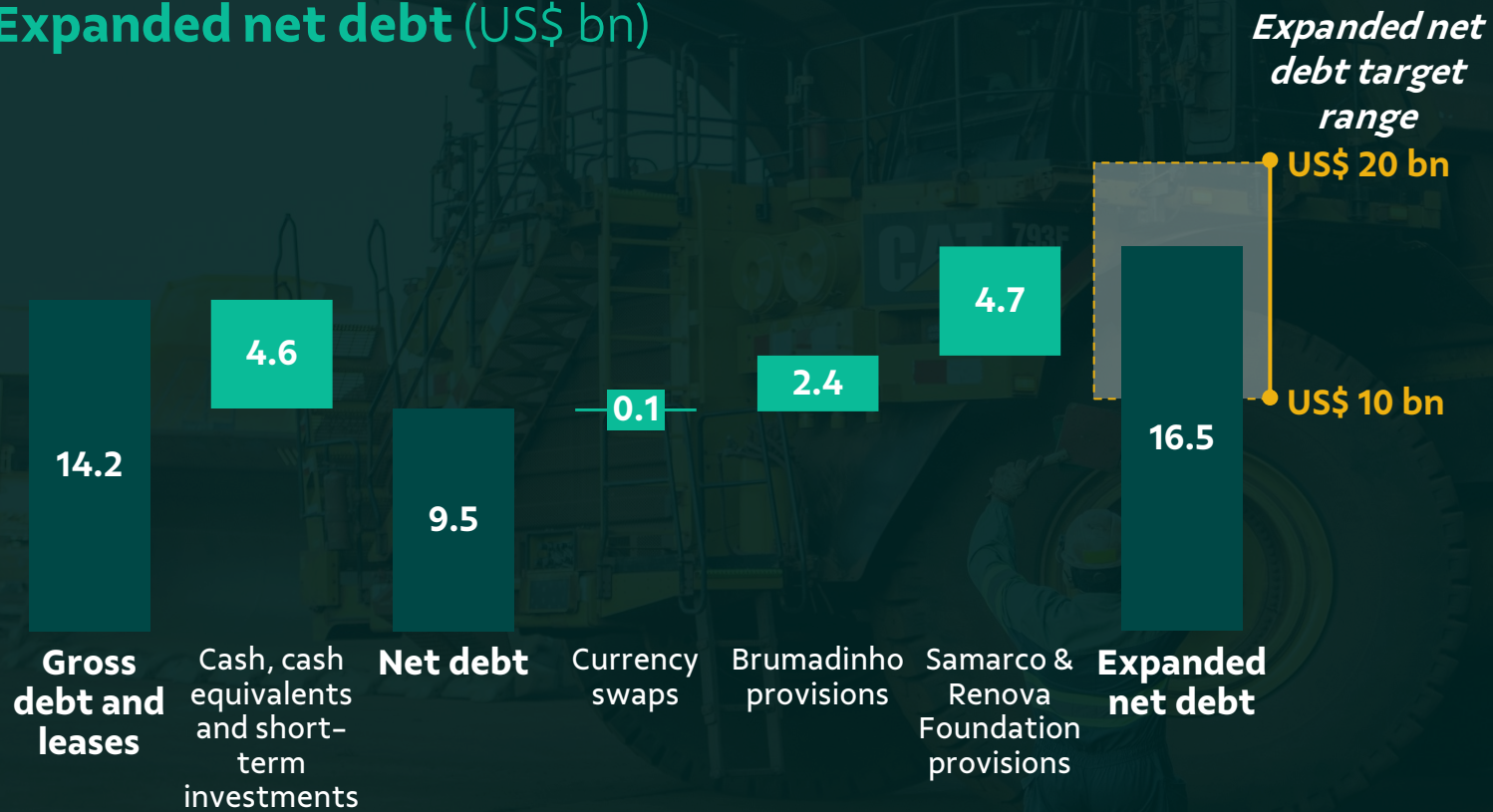
	4Q24	2025	2026	2027	2028	2029	2030	'31-35 Avg.	
<b>Decharacterization<sup>3</sup></b>	0.1	0.5	0.5	0.4	0.3	0.2	0.3	0.2	Stable cash outlays
<b>Brumadinho agreements<sup>4</sup></b>	0.5	0.8	0.7	0.3	0.2	0.1	0.1	<0.1	73% of Reparation Agreement completed by Nov/24
<b>Samarco agreement<sup>5</sup></b>	0.7	2.0	1.1	0.5	0.4	0.3	0.3	-	Considering Samarco will fully fund the reparation from 2031 onwards
<b>Incurred expenses</b>	0.3	0.4	0.4	0.3	0.4	-	-	-	Gradual reduction throughout the years
<b>Total</b>	1.6	3.7	2.6	1.6	1.3	0.7	0.7	0.2	

<sup>1</sup> Estimated cash outflow for 2024–2035 period, given BRL–USD exchange rates of 5.4481 and amounts stated in real terms. <sup>2</sup> Amounts stated without discount to present value, net of judicial deposits and inflation adjustments.

<sup>3</sup> Estimated annual average cash flow for Decharacterization provisions in the 2028–2035 period is US\$ 248 million per year. <sup>4</sup> Disbursements related to the Integral Reparation Agreement ending in 2031. <sup>5</sup> Includes estimates of Samarco's contribution to the Mariana settlement

# Comfortable with our current expanded net debt target

## Expanded net debt (US\$ bn)



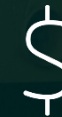
## Disciplined capital allocation



Current target will continue to guide the company in the next cycle



Remaining committed to dividend policy



Extraordinary dividend subject to cash generation and expanded net debt



# Finance

---

Thank You



**CFO**

---

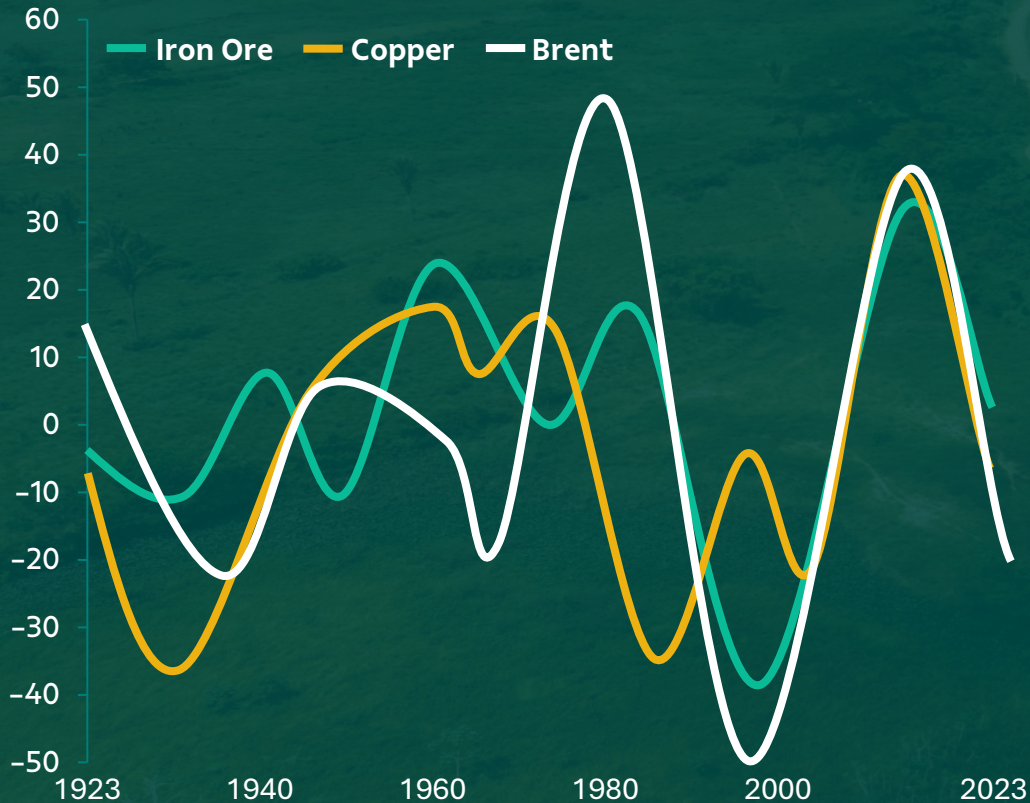
Marcelo Bacci



# Navigating the waves: *ensuring competitiveness through-the-cycle*

## Commodities across major sectors

% deviation from long-term trend



Source: World Bank



**Solid position in the 1<sup>st</sup> quartile of the global cost curve**

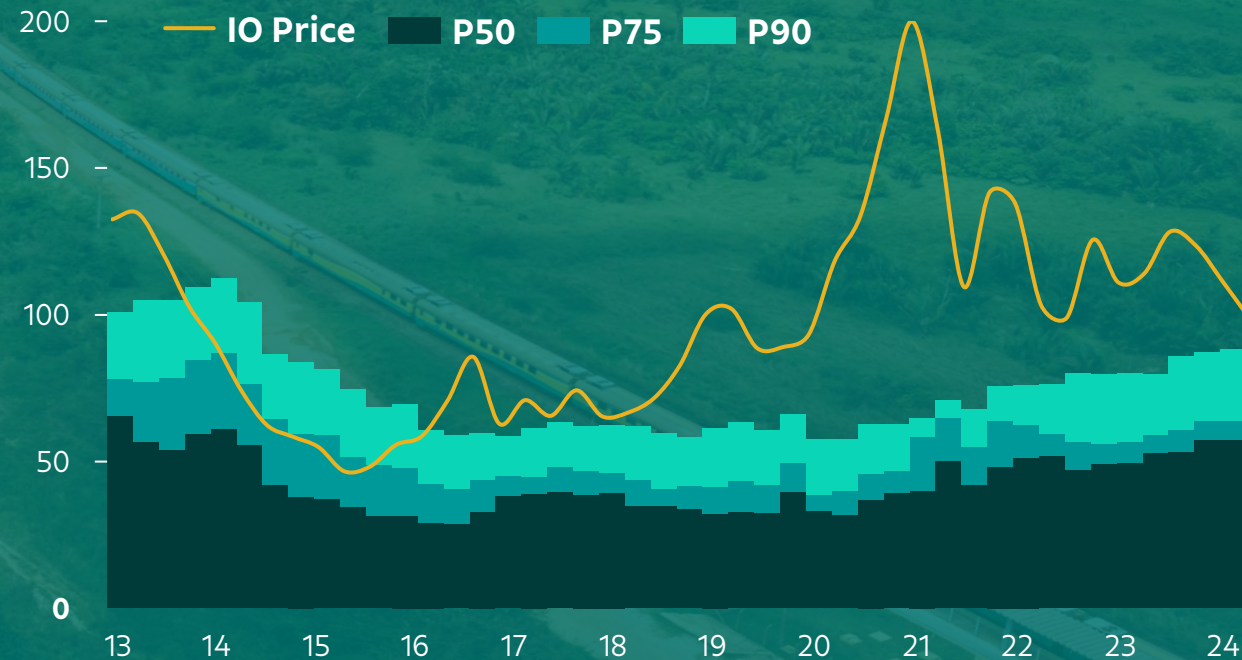


**Technology and innovation as essential enablers**



**Right incentives shaping performance culture**

## Iron ore cost curve (US\$/t)



Source: Woodmac

# Disciplined approach to capital allocation

## Balancing growth and shareholder returns



### Investments

- Efficient capex execution
- Right boundaries for growth
- Solid returns through-the-cycle



### Shareholder returns

- Adequate risk-adjusted shareholder remuneration
- Dividends and buybacks



### Balance sheet

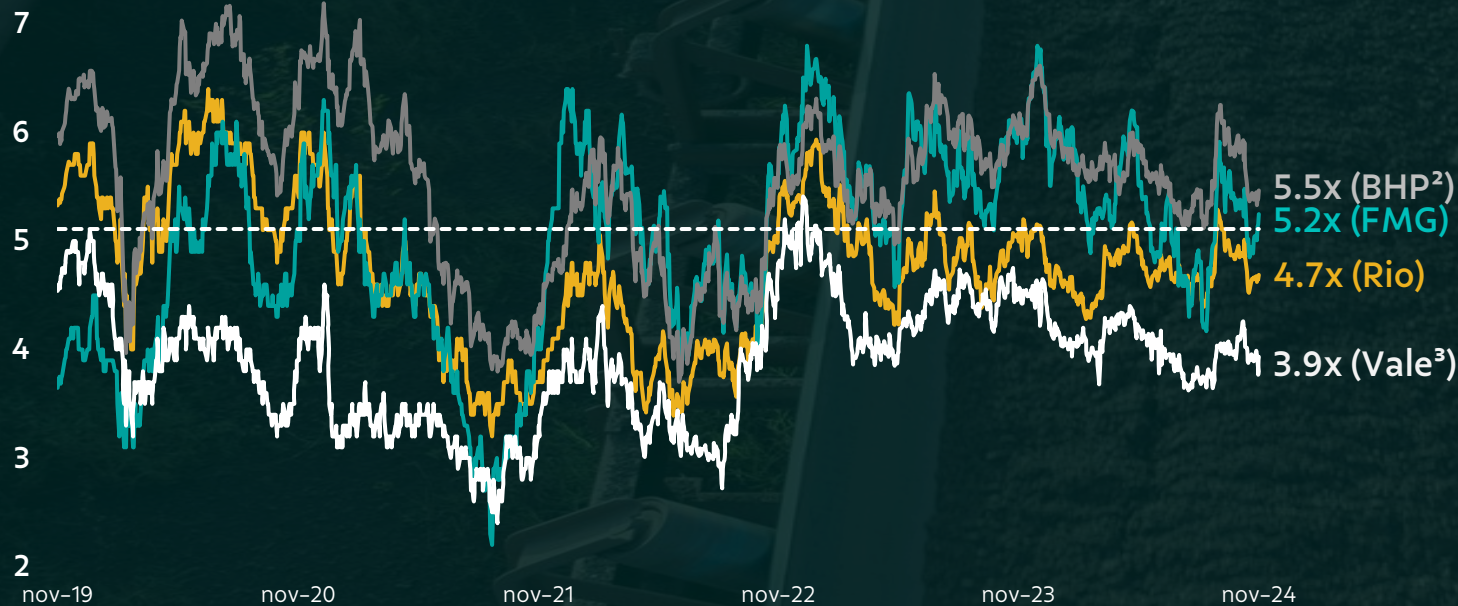
- Strong liquidity
- Target leverage to consider challenging cycle moments

# Vale trades at a sizable discount vs peers

*Well positioned to deliver significant returns*

## EV/EBITDA F12M<sup>1</sup>

--- 5 Years peers avg. (5.1)x



## 2030 normalized Free Cash Flow yield, real terms (%)<sup>3, 4</sup>

		Iron ore price (US\$/t)		
		90	100	120
Nickel / Copper price (US\$/t)	14k / 7k	6%	12%	23%
	16k / 9k	8%	14%	25%
	18k / 11k	11%	16%	28%

Source: Bloomberg, November 29<sup>th</sup>, 2024.

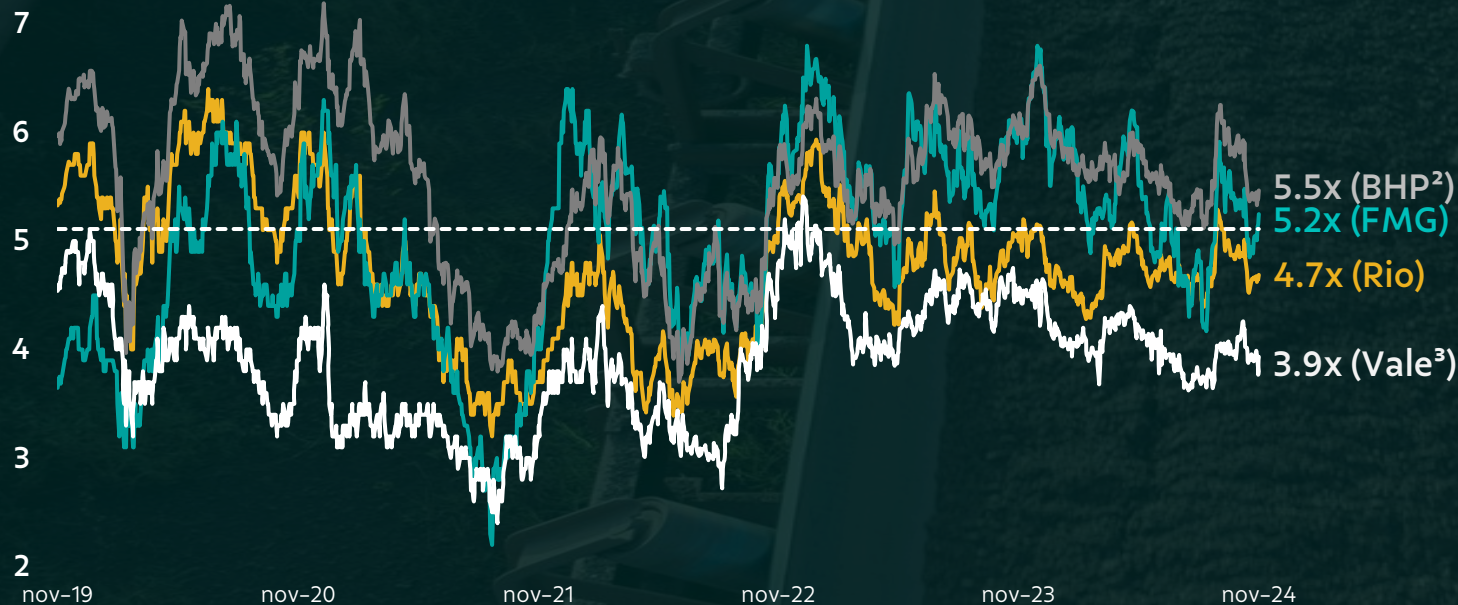
<sup>1</sup> Analysts consensus EBITDA F12M <sup>2</sup> Including Samarco provisions <sup>3</sup> Including provisions for Samarco and Brumadinho <sup>4</sup> Using market cap of November 29<sup>th</sup>, 2024

# Vale trades at a sizable discount vs peers

*Well positioned to deliver significant returns*

## EV/EBITDA F12M<sup>1</sup>

--- 5 Years peers avg. (5.1)x



## Closing the gap

-  Cost competitiveness
-  Consistent deliveries
-  Accretive growth
-  Healthy shareholder remuneration
-  Right ESG credentials

Source: Bloomberg, November 29<sup>th</sup>, 2024.

<sup>1</sup> Analysts consensus EBITDA F12M <sup>2</sup> Including Samarco provisions <sup>3</sup> Including provisions for Samarco and Brumadinho.

**CFO**

---

Thank You



# Closing

---

Gustavo Pimenta





# Key takeaways



Safety is our core value



Securing cost competitiveness across all businesses, through the cycle



Flexible iron ore portfolio to maximize value



Fast-tracking copper growth with accretive projects



Be a trusted partner for key stakeholders and society

# Thank you

---

# Q&A

---

# We value your feedback

---

