Vale Day
New York 2022
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Opening remarks

Eduardo Bartolomeo, CEO
Strategic roadmap 2019–2022

**De-risking**
- Brumadinho
- Mariana
- Dam safety
- Production resumption

**Reshaping**
- Focus on core business
- Elimination of cash drains
- Accretive growth opportunities
- Cost efficiency

**Re-rating**
- Benchmark in safety
- Best-in-class reliable operator
- Talent-driven organization
- Leader in low carbon mining and ESG practices
- Reference in creating and sharing value

Sound cash flow generation

Discipline in capital allocation
# We have materially de-risked and reshaped Vale

## De-risking

| **Brumadinho** | • Agreement with legal certainty  
• ~58% of Integral Reparation performed |
| **Mariana** | • 346 housing solutions delivered by Nov/2022  
• R$ 24.7 bn disbursed in reparations initiatives since 2015 |
| **Dams’ safety** | • 40% upstream dams in Brazil eliminated by 2022  
• Expects no dams at critical level by 2025 |
| **Capacity resumption** | • Delivering new assets (e.g., four filtration plants, Maravilhas III dam)  
• Creating resilience to improve flexibility |

## Reshaping

| **Portfolio simplification** | • 9 business sold in 5 different countries since 2019  
• Up to US$ 2 bn per year of cash drains eliminated |
| **Cost efficiency** | • Flat fixed costs in 2022 and 2023 (vs. 2021)  
• Gradual C1 reduction as volumes increase |

## Re-rating

| **ESG** | • 2022 ESG rating upgrade (MSCI and Moody’s)  
• Scope 1, 2 and 3 emissions reduction targets defined  
• Green products (e.g., Green briquettes, certified Nickel) |

## Capital allocation

| **Return to shareholders** | • Solid dividend policy (US$ 6.6 bn paid 2022 YTD)  
• Bold buyback programs (~20% of total outstanding shares) |
We have materially de-risked and reshaped Vale

**De-risking**

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### Reshaping

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Opening Remarks

We have materially de-risked and reshaped Vale

Return to shareholders

- Solid dividend policy (US$ 6.6 bn paid 2022 YTD)
- Bold buyback programs (~20% of total outstanding shares)
Strengthening our strategy to the Vale of the future

<table>
<thead>
<tr>
<th>promote sustainable mining</th>
<th>foster low carbon solutions</th>
<th>stay disciplined</th>
</tr>
</thead>
<tbody>
<tr>
<td>People-driven</td>
<td>Focused on high quality products and resources</td>
<td>Efficient capital allocation</td>
</tr>
<tr>
<td>Reliable operator</td>
<td>Iron Solutions</td>
<td>Attractive cash return to shareholders</td>
</tr>
<tr>
<td>Benchmark in safety and dam management</td>
<td>Energy transition materials</td>
<td>Strong balance sheet</td>
</tr>
<tr>
<td>Shared value</td>
<td>Circular mining</td>
<td>Cost and capex efficiency</td>
</tr>
<tr>
<td>Nature positive</td>
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</tbody>
</table>

We exist to improve life and transform the future. Together.
Sustainable Mining
Eduardo Bartolomeo, CEO
We are building a better Vale
Brumadinho: 58% of the agreement is performed

Main progress:

- **58%** of total payments as per the Integral reparation agreement¹
- **+13,500** people with individual indemnification agreements²
- **R$ 3.2 bn** in individual indemnification signed
- Extra-legal claims closed in January 2022 for most territories³

¹ Considers the agreement’s economic value of R$ 37.7 billion in February 2021, adjusted by the inflation until October 2022. Payments include previous disbursements and judicial deposits, as per the agreement. ² Individuals covered by indemnification agreements entered into with Vale until December 01, 2022. ³ Excepted for Antônio Pereira/São Gonçalo territories.
Mariana: Renova speeding up reparation

**Water monitoring**

<table>
<thead>
<tr>
<th>Year</th>
<th>Parque Estadual do Rio Doce</th>
<th>Baixo Guandu (ES)</th>
<th>Governador Valadares</th>
<th>Minimum level required</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-18</td>
<td>67</td>
<td>76</td>
<td>87</td>
<td>75</td>
</tr>
<tr>
<td>2020-21</td>
<td>78</td>
<td>78</td>
<td>87</td>
<td>78</td>
</tr>
<tr>
<td>2021-22YTD</td>
<td>75</td>
<td>78</td>
<td>66</td>
<td></td>
</tr>
</tbody>
</table>

**Renova’s disbursements**

<table>
<thead>
<tr>
<th>Year</th>
<th>Other housing solutions</th>
<th>Houses constructed and refurbished</th>
<th>TotalE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-19</td>
<td>7.8</td>
<td>20.5</td>
<td>28.3</td>
</tr>
<tr>
<td>2020-22E</td>
<td>2.6</td>
<td>8.3</td>
<td>10.9</td>
</tr>
<tr>
<td></td>
<td>2.1</td>
<td>8.7</td>
<td>10.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28.3</td>
</tr>
</tbody>
</table>

**Number of housing solutions**

- Other housing solutions
- Houses constructed and refurbished

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18</td>
<td>126</td>
<td>224</td>
<td>500</td>
<td>566</td>
</tr>
</tbody>
</table>

* Increased significantly since 2020

¹ Compliance index which compares the water quality results obtained in the monitoring with the legislation’s reference values
² As of November 30, 2022.
³ Interrupted Cases and public buildings are not included.
Boosting our culture for a people-driven organization

Our path for building a better work culture in Vale:

2019

- Cultural Diagnosis
  - Review of key behaviors

2020

- Purpose definition
- Culture & VPS integration

2021

- Measurement (Echoes Pulse)
- DE&I scaling up

2022

- Purpose fully linked to the strategy
- Measurement continued

2023

- Sustainable mining strategy development
- Measurement consolidation

Culture as a competitive advantage

Learning together
Ensuring progress by measuring the cultural transformation

Key behaviors – Vale’s employees’ perception (%)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obsession with Safety and Risk Management</td>
<td>82</td>
<td>87</td>
</tr>
<tr>
<td>Active Listening and Engagement with Society</td>
<td>64</td>
<td>70</td>
</tr>
<tr>
<td>Ownership for the Whole</td>
<td>65</td>
<td>73</td>
</tr>
<tr>
<td>Empowerment with Accountability</td>
<td>62</td>
<td>72</td>
</tr>
<tr>
<td>Open and Transparent Dialogue</td>
<td>61</td>
<td>69</td>
</tr>
</tbody>
</table>

Culture favorability: **75%**, increased 5 p.p. vs. 2021

+24,000 employees assessed
**Sustainable Mining**

**Embracing diversity and respectful behaviors**

### Gender equity:
- **Total women representation (%)**
  - 2019: 13.5
  - 2022¹: 21.6
  - 2025E: 26.0

### Gender equity: Women in Senior Leadership roles (%)
  - 2019: 12.4
  - 2022¹: 22.2
  - 2025E: 26.0

### Racial equity:
- **Black employees in Managerial roles (%)**
  - 2021: 28.9
  - 2022¹: 31.9
  - 2026E: 40.0

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**Zero tolerance** with anti-ethical conduct²:
- +3,000 corrective actions
- 157 employee's dismissal

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¹ As of November 2022.
² 2021 figures.
VPS\(^1\) puts culture into practice, enabling the reliable operator

**Maturity evolution:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Maturity</th>
<th>2020–21</th>
<th>2022(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020–21</td>
<td>1.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022YTD</td>
<td>1.98</td>
<td>+30%</td>
<td></td>
</tr>
</tbody>
</table>

**VPS main numbers:**

- **Maturity target:** 3.00
- **52% reduction** in areas below 2.00
- **Maturity average increased 30%** vs. 2021

\(^1\) VPS stands for Vale’s Management System. \(^2\) Data based on Formal Assessments concluded until October 2022.
We are becoming a safer company

**Reduction of high-potential recordable injuries (N2)**

- 2018: 66
- 2019: 57
- 2020: 44
- 2021: 29
- 2022: 15
- 2023: 10
- 2024: 5
- 2025: 0

**Total recordable injury frequency rate (TRIFR)**

- 2018: 2.25
- 2019: 3.48
- 2020: 1.98
- 2021: 1.41
- 2022: 1.19

**Safety Transformation Program**

Number of high-potential recordable injuries (N2) by main critical activity requirements

- **2019**:
  - Automotive Vehicles: 4
  - Mobile Equipment: 11
  - Control of Hazardous Energy: 7

- **2022 (11M22)**:
  - Automotive Vehicles: 1
  - Mobile Equipment: 2
  - Control of Hazardous Energy: 1

**82% reduction since 2019**

- Driver drowsiness detection
- Artificial Intelligence

**TRIFR – 2021 comparison in mining**

- **Vale**: 1.41
- **Peer 1**: 1.98
- **Peer 2**: 2.24
- **Peer 3**: 2.36
- **Peer 4**: 3.89

Peer compared to Vale

- **+40%**: Peer 1
- **+59%**: Peer 2
- **+67%**: Peer 3
- **+176%**: Peer 4

We are becoming a safer company with an 82% reduction since 2019.
Eliminating our upstream dams to ensure zero harm

1. 100% of the population close to risk areas removed and emergency drills performed
2. 4 Backup dams constructed to reduce potential consequences
3. 40% of upstream dams in Brazil eliminated by 2022
De-characterization program
Actively working to improve dam safety

Structures at emergency level¹:

<table>
<thead>
<tr>
<th>Year</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020²</td>
<td>35</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>2022YTD³</td>
<td>23</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>2025</td>
<td>24</td>
<td>14</td>
<td>9</td>
</tr>
</tbody>
</table>

8 dams with emergency level removed since the start of the year

B3/B4 removed from critical safety condition (level 3)

No dam at critical safety condition by 2025

¹Includes tailings and sediments dams, dikes and drained stacks. As per the Brazilian regulation and as provided for in each Mining Dams Emergency Action Plan, considering level 3 as the critical emergency level. ²Considering the maximum number of structures at emergency level in 2020. ³The 23 structures encompass different heightening methods and include 12 upstream structures.
GISTM\(^1\) compliance reached 90%

### What we have done

- **2020–2021**
  - 1st self-assessment (Sep 2020)
  - Gap-assessment (Nov 2021)
  - 60% GISTM adherence\(^2\) for TSFs\(^3\) with “Extreme” and “Very high” consequence classification (Dec 2021)

### 2022

- 90% GISTM adherence\(^4\)
- GISTM 100 Journey Program
- Closing the gaps
- External audit in progress

### Next steps

- **2023–2025**
  - All tailings' facilities with “Extreme” and “Very high” consequence classification must be compliant by Aug 2023
  - All tailings' facilities not in a state of safe closure must be compliant by Aug 2025

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\(^1\)Global Industry Standard on Tailings Management. \(^2\)Based on the results of the self-assessment conducted in December 2021, which had the 77 auditable requirements as main source. Structures held by joint-ventures are not included. \(^3\)TSF stands for Tailings Storage Facility. \(^4\)For TSFs with “Extreme” and “Very high” consequence classification.
Contributing to social and economic development

Our social ambition:
To be a partner company in the development of resilient communities, engaged in relevant issues to humanity and committed to sustainable mining.
Fighting poverty is essential to develop resilient communities

Multidimensional approach to lift 500,000 people out of extreme poverty

Support by partnerships

Target

Education

Health and Nourishment

Income generation

Infrastructure

People living with less than US$2.15 per day, as per the World Bank.
Historical agreement with the Xikrin do Cateté and Kayapós indigenous people

Note: The agreement with the Xikrin community was approved by the court responsible for the Onça Puma, S11D and Salobo projects. Court approval is still pending for the Alemão and Ferro Carajás projects.
Recognizing the climate change urgency and taking action to be nature positive

Our climate change strategic goals:

- Reduce scope 1 and 2 emissions by 33% by 2030
- Reduce net scope 3 emissions by 15% by 2035
- Net zero scope 1 and 2 emissions by 2050
- 100% of renewable electricity in Brazil (2025) and globally by 2030
- Recover and protect +500,000 ha by 2030
We are a nature-based company

We protect ~1,191,000 ha¹ and +600 endangered flora and fauna species, 15% of total endangered species in Brazil

Boosting partnerships to go beyond our target:

- Biomas initiative
- PrevisIA
- Supporting startups

¹Considering compensation measures, voluntary initiatives and partnerships.
Climate Change agenda
Solid path to reduce our scope 1 and 2 emissions

Sol do Cerrado full operation

- Biomass based trials to replace fossil fuel in pelletizing and metallurgical processing
- Continue electric trucks pilots

Two pelletizing plants converted to briquetting

- Zero Scope 2 emissions in Brazil
- Voisey’s Bay wind power plant
- End fuel oil consumption in pelletizing and convert two plants to briquetting

GHG emissions 33% reduction

- Zero Scope 2 emissions globally
- Scope 1 reduction using low-emission and renewable fuels

Notes: Emissions reduction based on 2017 baseline disclosed in Vale’s 2021 Integrated Report and data based on the 2022 decarbonization roadmap, which is updated annually and may impact the evolution of the target.
Fostering low-carbon solutions

**Energy transition materials**
- Unique asset
- 1st Quartile in scopes 1 & 2 CO$_2$ emissions$^1$
- Carbon verified by third party

**Iron solutions**
- Best reserves in the industry (Carajás)
- Agglomerates for BF–BOF energy transition
- High-quality tailored solution for DR route

Nickel and copper products. Source: Skarn, Vale.
Sustainable Mining

Strengthening our strategy to the Vale of the future

promote sustainable mining

- People-driven
- Reliable operator
- Benchmark in safety and dams management
- Shared value
- Nature positive

foster low carbon solutions

- Focused on high quality products and resources
- Iron Solutions
- Energy transition materials
- Circular mining

stay disciplined

- Efficient capital allocation
- Attractive cash return to shareholders
- Strong balance sheet
- Cost and capex efficiency

We exist to improve life and transform the future. Together.
Iron solutions

Marcello Spinelli, EVP Iron Ore
Iron Solutions

Developing supply for high-quality growing market segments

Strengthening our portfolio and building iron solutions

Recovering our operational flexibility to deliver quality
Steel demand will grow steadily over the years based on emerging regions and current megatrends

Steel production by region (Mt)

Emerging regions
Others
China

2021 1,955
2026 2,007
2030 2,095

~175 Mt additional steel production from emerging regions

Megatrends for steel demand

Population and economic growth
Urbanization
Onshoring
Energy transition

1Including India, Southeast Asia, Middle East and Africa.
Decarbonization pathway demanding enormous steel production via the DR route

Steel production by metallic source (Mt)

- HBI/DRI
- BF pig iron
- Scrap

<table>
<thead>
<tr>
<th>Year</th>
<th>HBI/DRI</th>
<th>BF pig iron</th>
<th>Scrap</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>1,955</td>
<td>67%</td>
<td>28%</td>
</tr>
<tr>
<td>2026</td>
<td>2,007</td>
<td>64%</td>
<td>30%</td>
</tr>
<tr>
<td>2030</td>
<td>2,095</td>
<td>60%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Ready-to-use technology with 60% less CO₂ emissions

Demand of high-quality feed (~68% Fe)

Higher obsolescence scrap availability
Usage limited by collection rates and energy costs

Decarbonization efforts focused on burden and energy optimization

Demand for high-quality (~65% Fe) and direct charge products

According to IPCC 2019 data, considering scope 1 emissions, assuming the DR-EAF route with natural gas reductant and compared with BF-BOF route. Considering a 75% of sinter and 370kg/t of coke rate in BF-BOF burden mix and not considering carbon capture and storage.
Over 160 Mt of DR and BF agglomerates seaborne demand increase by 2030

Low-grade fines seaborne demand will decrease over the years...

...but demand for BF direct charge products will gradually increase...

...while the roaring DR feed demand will change the industry dynamics

Seaborne iron ore supply/demand (Mt)

<table>
<thead>
<tr>
<th>Supply</th>
<th>Demand</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1175</td>
<td>1049</td>
<td>926</td>
</tr>
<tr>
<td>2021</td>
<td>2026</td>
<td>2030</td>
</tr>
</tbody>
</table>

BF fines and concentrates

Low-grade and 62%Fe fines

Premium fines

Challenge to replace ~400 Mt supply depletion³ until 2030

BF agglomerates² and lump

2021 | 2026 | 2030
---|---|---
414 | 476 | 504

DR agglomerates²

2021 | 2026 | 2030
---|---|---
37 | 58 | 109

~70 Mt S-D gap in 2030

Vale’s new initiatives to close the supply-demand gap

Vale's new initiatives to close the supply-demand gap

³Including concentrates. ²Iron ore pellets and briquettes. ³Including lump.
Demand bifurcation increasing agglomerated premiums even further

Spread over 62%Fe index (US$/dmt)

<table>
<thead>
<tr>
<th>Class 1</th>
<th>2018–2022</th>
<th>2026</th>
<th>2030+</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR agglomerate (68%Fe)</td>
<td>74</td>
<td>~78</td>
<td>~95</td>
</tr>
<tr>
<td>BF agglomerate (65%Fe)</td>
<td>66</td>
<td>~68</td>
<td>~75</td>
</tr>
<tr>
<td>Premium fines (65%Fe)</td>
<td>18</td>
<td>~20</td>
<td>~22</td>
</tr>
<tr>
<td>Low-grade fines (58%Fe)</td>
<td>-27</td>
<td>~-30</td>
<td>~-30</td>
</tr>
</tbody>
</table>

What drives medium and long term?

- Shift to greener and more expensive reductants
- Undersupply of high-grade products, especially agglomerates
- Carbon pricing/taxes
- Aging plants demanding solutions to upgrade lifespan

Assumptions: 62%Fe iron ore price (US$/dmt) = 93 (2026) and 75 (2030+); Steel margins (US$/t) = 19 (2026) and 30 (2030+); CO2 price (US$/t) = 19 (2026) and 30 (2030+); Coke price (US$/t) = 317 (2026) and 335 (2030+); and Natural gas price (US$/MMBtu) = 6 (2026 and 2030+).
Strengthening our portfolio and building iron solutions

- Blast furnace route
- Energy transition
- Growing direct reduction route
Vale will supply ~100 Mt of agglomerated products

Pellets & briquettes production (Mt)

- BF Agglomerates
- DR Agglomerates

~100

-2022
-2023
-2026
-2030+

~33
36-40
50-55

Leader in pelletizing process

- ~25% of global seaborne market share in 2022
- Plants in Brazil and Oman

Increasing supply by briquetting

- First plant start-up in 1H23 (Tubarão)
- 8 plants under evaluation (including co-located plants)
- Environmentally friendly agglomerate: less fossil fuels, particulates and water usage
- Similar VIU to pellets, but half costs and 1/3 Capex

1Two plants are under construction at Tubarão with 6 Mtpy total capacity. First plant is expected to start-up in 1H23 and second plant is expected to start-up in 2H23.
Mega Hubs: supplying green solutions to the steel industry

Mega Hubs concept

- Mining (Brazil)
- Concentration plants
- Agglomeration plants (briquetting and pelletizing)
- Direct reduction plants (HBI)
- Local EAF clients
- EAF clients (ex-Hub)
- BF-BOF clients (ex-Hub)

Volumes (Mt, preliminary estimates):
- HBI: 2027+ 10; 2032+ >20
- DR Briquette: 2027+ 15; 2032+ 15

Geographical diversification with three agreements signed to study the development in the Middle East and others under evaluation in Brazil and US.
How to overcome the high-quality feedstock challenge?

Vale’s concentration solutions

- **Tailings filtration**
  - Usage of wet processing with dry tailings disposal at stockpiles
  - 4 tailings filtration plants at Conceição, Caué, Brucutu and Vargem Grande

- **Dry concentration**
  - First industrial plant under construction at Vargem Grande with start-up in 2024
  - 8 Mtpy plant in Oman expected to be approved in 2023

- **Third-party concentration facilities**
  - Usage of concentration capacity where concentration by-products (sand) have commercial value
  - ~10 Mt concentrated in 2022

- **Northern System ore concentration**
  - Investment to generate DR quality feed from IOCJ to fulfill the newcomers demand from 2027 onwards

Circular mining approach through the recycling of tailings as co-products
Recovering our operational flexibility to deliver quality
Operation resumption: lessons learned in the new way to operate

Iron ore production¹ (Mt)

- Minas Gerais operations¹
- Serra Norte & Leste
- S11D

Reorganization and stabilization after Brumadinho
- Structures under strict geotechnical review
- New regulatory framework
- Start-up of tailings filtration plants in 2021 and 2022
- Ongoing development of tailings/waste stockpile

S11D performance
- Improved orebody knowledge and new asset learning curve
- Jaspilite/waste processing challenges

Serra Norte licensing restrictions
- Mine depletion and licensing is impacting production base
- New orebodies under approval and development

¹Including Midwestern System production in 2018 and 2019.
A more stringent license process requires a new approach

**Licensing challenges**

- **Southeastern and Southern Systems**
  
  Significant regulatory changes after 2019

- **Northern System**
  
  Conservation of the biome supported by extensive studies

**What are we doing to advance?**

- **Sustainable projects:** new way to operate; less water usage; conveyor belts; and electric trucks

- **Supporting studies:** ~US$ 140 million invested by ITV¹ in the Amazon²; cooperation/investments with environmental agencies ~US$ 42 million³ until 2030⁴

- **Institutional front:** project portfolio prioritization; active listening to agencies and communities’ requests

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¹Vale Institute of Technology. ²Considering investments in the last 12 years. ³BRL≥5.20. ⁴Additional to Sustainability and Carajás Forest conservation investments.
Several assets under construction and coming online

Northern System

**Serra Norte**
- **4Q22**: Gelado project start-up
- **2H24**: N3 mining front start-up
- **2023-2026**: Licensing and opening of new mining fronts

**S11D**
- **4Q22**: +10Mt project commissioning
- **2H25**: Serra Sul 120 project start-up
- **2026**: Crusher to process large compact waste/jaspilite

**Serra Leste**
- **2026**: Expansion to 10 Mtpy

Southeastern System

**Brucutu**
- **2Q23**: Torto dam start-up
- **2023-2026**: Tailings/waste areas licensing and development

**Itabira**
- **2Q23**: Itabiruçu dam raising phase 2 works conclusion
- **2023-2026**: Tailings/waste areas licensing and development

**Capanema**
- **1H25**: Project start-up

Southern System

**Vargem Grande**
- **2H23**: Capitão do Mato and Tamanduá mines licensing
- **1H24**: VGR1 plant revamp for wet processing resumption

**Paraopeba**
- **2023**: Capão Xavier mine licensing
- **2023-2026**: Tailings/waste areas licensing and development

---

¹Considering preliminary and installation license granted to develop the project.
Focused on enhancing quality whilst gradually recovering capacity

<table>
<thead>
<tr>
<th>Year</th>
<th>Minas Gerais operations¹</th>
<th>S11D</th>
<th>Serra Norte &amp; Leste</th>
<th>Average sales Fe content</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>191</td>
<td>58</td>
<td>136</td>
<td>~63.5%</td>
</tr>
<tr>
<td>2019</td>
<td>302</td>
<td>113</td>
<td>73</td>
<td>~64%</td>
</tr>
<tr>
<td>2022</td>
<td>385</td>
<td>115</td>
<td>113</td>
<td>~64%</td>
</tr>
<tr>
<td>2023</td>
<td>62.3% 310</td>
<td>62.9% 310-320</td>
<td>~70</td>
<td>~104</td>
</tr>
<tr>
<td>2026</td>
<td>~310</td>
<td>~310-320</td>
<td>~70</td>
<td>~104</td>
</tr>
<tr>
<td>2030+</td>
<td>~310</td>
<td>~310-320</td>
<td>~70</td>
<td>~104</td>
</tr>
</tbody>
</table>

¹Including Midwestern System production in 2018 and 2019.

Production plan revised
- Adjusted to licensing challenges

Delivering quality
- Focus on increasing high-quality volumes

Gradual capacity increase
- More flexibility to offset setbacks
Potential contribution of ~US$ 4 billion EBITDA¹ from higher premiums and volumes by 2026

Vale’s product portfolio (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Others</th>
<th>IOCJ + BRBF</th>
<th>BF Agglomerates</th>
<th>DR Agglomerates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>25%</td>
<td>63%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>2023</td>
<td>23%</td>
<td>63%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>2026</td>
<td>15%</td>
<td>70%</td>
<td>7%</td>
<td>9%</td>
</tr>
<tr>
<td>2030+</td>
<td>10%</td>
<td>64%</td>
<td>11%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Vale’s all-in premiums² (US$/t)

- ~7
- ~8
- 8–12
- 18–25

Better quality premiums due to the impact of decarbonization trends

Increase of 70 Mt in high-quality agglomerate production by 2030+

All-in premiums increasing to ~US$ 12/t by 2026 and ~US$ 25/t by 2030+

Substantial EBITDA creation by volumes and premium portfolio combined¹

¹Considering the delta all-in premium and sales volumes increase (2026 vs. 2022) and based on 3Q22 EBITDA margin of ~US$50/t. ²Including iron ore fines quality adjustment and iron ore fines pellet adjustment. Forecasts depend on market conditions.
Key takeaways

- **Decarbonization** will create a market segmentation with increased volume demand and **superior premiums**

- Accelerating implementation of **breakthrough iron solutions** to attend more stringent demands of steelmakers

- Optimized portfolio to reach **100 Mt of agglomerated products** by 2030+ with geographical diversification

- **Iron solutions will create substantial value** to clients, society and shareholders
Energy Transition Materials

Deshnee Naidoo, EVP Base Metals

Questions?
valeday@vale.com
Energy transition offers once in a lifetime opportunity

**Total demand**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ni (million tonnes of finished metal)</th>
<th>Cu (million tonnes of finished metal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>4.0</td>
<td>29.9</td>
</tr>
<tr>
<td>2025E</td>
<td>5.1</td>
<td>33.2</td>
</tr>
<tr>
<td>2030E</td>
<td>6.2</td>
<td>37.4</td>
</tr>
</tbody>
</table>

- **Ni**
  - ~50% increase in total demand
- **Cu**
  - ~19% py growth in demand in EV segment
  - ~10% py growth in demand in renewables

---

**Multi-decade shift in demand driven by decarbonization and energy transition**

**Supply-demand imbalance attracting interest across the industry**

**EV supply chain development and critical minerals security**

**ESG driving product and price differentiation**
The right set of assets placed in the right jurisdictions to succeed

Well-positioned to support and supply North America EV growth

A Tier 1 mining complex with growth optionality

Canada
- Thompson
- Sudbury
- Port Colborne
- Voisey’s Bay
- Long Harbour
- Onça Puma
- Salobo
- Sossego

Brazil
- Salobo
- Sossego

Indonesia
- Matsusaka
- PTVI
- Hu’u

Canada
- Ni: 3.0 Mt
- Cu: 2.6 Mt

Brazil
- Ni: 2.2 Mt
- Cu: 15.6 Mt

Indonesia
- Ni: 8.4 Mt
- Cu: 17.6 Mt

1. Mineral Resources contained metal (Measured, Indicated and Inferred categories), inclusive of Mineral Reserve, reflects our disclosure on Form 20-F as of December 31, 2021 and shown in 100% basis, not reflecting Vale’s interest. Values have been rounded and does not include metallurgical recovery.
The right approach to foster a sustainable economy

**Strong ESG standard products...**
- Verified low-carbon products
- >90% of Base Metals electricity from clean sources
- Sustainable relationships with communities

**Pivoting towards Electric Vehicles...**
- Contracts with key OEMs: Tesla, Northvolt and GM
- Advancing studies for a Nickel Sulfate project in Quebec – 25kt Ni in NiSO₄ with LT commercial agreement signed with GM
- Currently 5% of our Class I is sold to EV, LT contract with GM redirects further 15–20%

**Building a virtuous circle...**
- Improving capabilities for recycling battery e-waste
- 2ktpy of Ni from waste
- 60ktpa Indonesian HPAL project using ore diverted from waste
- 5ktpy of Cu from Thompson precipitates
- ~2 ktpy of Ni recycled from slags
Building stable foundations to succeed
Integrated Remote Operating Center (iROC)
iROC today

**PRODUCTIVITY**
10% overall productivity uplift achieved in Coleman and Creighton mines in 2022

**CONNECTIVITY**
Largest private underground LTE network in the world, 45km of LTE cables.

**SAFETY**
55 Mobile Equipment connected with IOT
84 Mobile Equipment with live Telemetry
1,200 Location Awareness Beacons installed
Progressing on the path of improvement in North Atlantic...

- More productive underground operations through iROC & VPS
- Delivered CCM 1 and continued to ramp up VBME
- Mine maintenance with enlarged scope to improve ground controls
- Progressing on mid-term mine plan with >100% increase in mine development ACD¹ in 2022

North Atlantic Mines: Daily Ore Production Rate
kilotonnes per day

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Q1 2022</th>
<th>Q2 2022</th>
<th>Q3 2022</th>
<th>Q4 2022e</th>
<th>2023e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>17</td>
<td>18 - 20</td>
</tr>
</tbody>
</table>

¹Annual capital development.
Energy Transition Materials

... while improving stability in South Atlantic

Salobo mine: Total material moved

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Material Moved (million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>137</td>
</tr>
<tr>
<td>2020</td>
<td>112</td>
</tr>
<tr>
<td>2021</td>
<td>105</td>
</tr>
<tr>
<td>2022e</td>
<td>124</td>
</tr>
<tr>
<td>2023e</td>
<td>140</td>
</tr>
</tbody>
</table>

- Debottleneck of Salobo mine – pit redesign, mine pumping system repowering, two-side loading and excavation
- Concluded extended maintenance at Sossego SAG mill
- Revised maintenance program to improve plant reliability in South Atlantic Copper
## Growing copper production; nickel impacted by planned overhaul and VBME

### Copper production (kt)

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Value (kt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>Salobo 3</td>
<td>~260</td>
</tr>
<tr>
<td></td>
<td>Stability in South Atlantic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ramp-up CCM1 + Sudbury productivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waste-to-value</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td></td>
<td>335 – 370</td>
</tr>
</tbody>
</table>

### Nickel production (kt)

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Value (kt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>VBME transition</td>
<td>~180</td>
</tr>
<tr>
<td>2022</td>
<td>Onça Puma furnace rebuild</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>Creighton shaft overhaul</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>Ramp-up CCM1 + Sudbury productivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3rd party feed</td>
<td>160 – 175</td>
</tr>
</tbody>
</table>

### Key planned events

- **Salobo 3 ramp-up**
- **Continued stabilization of Salobo 1 & 2 and Sossego**
- **Depletion of Ovoid and ramp-up of VBME**
- **Creighton shaft overhaul in Q3 Onça Puma 6-month furnace rebuild starting in Q4**
Accelerating the next wave of growth
Accelerating exploration of our strong resource base

>60% increase in drilling since 2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Exploration Drilling – km per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>382 km</td>
</tr>
<tr>
<td>2020</td>
<td>397 km</td>
</tr>
<tr>
<td>2021</td>
<td>527 km</td>
</tr>
<tr>
<td>2022</td>
<td>631 km</td>
</tr>
</tbody>
</table>

Increasing our high-grade, polymetallic sulfide resources while replenishing reserves

Supporting our copper growth pipeline: Hu-u, Salobo and South Hub

1Mineral reserves and mineral resources preliminary expectations. Values have been rounded and do not include metallurgical recovery. ²Mineral Resources contained metal, exclusive of Mineral Reserve, reflects our disclosure on Form 20-F as of December 31, 2021 and shown in 100% basis, not reflecting Vale’s interest. Values have been rounded.
Advancing our project pipeline

<table>
<thead>
<tr>
<th>Exploration / Conceptual</th>
<th>Scoping Study</th>
<th>Prefeasibility Study</th>
<th>Definitive Feasibility Study</th>
<th>Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipe Pit</td>
<td>Cryderman</td>
<td>CCM 4</td>
<td>Victor</td>
<td>CCM 1</td>
</tr>
<tr>
<td>SN Ella</td>
<td>Blizard</td>
<td>Blezard</td>
<td>Sorowako Limonites</td>
<td>Manitoba Ext. Ph 1</td>
</tr>
<tr>
<td>South Mystery</td>
<td></td>
<td>Stobie Pit</td>
<td>Creighton Ph S</td>
<td>Pomalaa</td>
</tr>
<tr>
<td>Manitoba Ultramafics</td>
<td></td>
<td>Manitoba Ext Ph 2</td>
<td>CCM Pit</td>
<td>Bahodopi</td>
</tr>
<tr>
<td>Sudbury Exp. Targets</td>
<td></td>
<td></td>
<td>CCM 3</td>
<td>Onça Puma</td>
</tr>
<tr>
<td>Voisey’s Bay Exp. Targets</td>
<td></td>
<td></td>
<td></td>
<td>2nd furnace</td>
</tr>
<tr>
<td>South Hub Exp. Targets</td>
<td>North Hub</td>
<td></td>
<td></td>
<td>Salobo 3</td>
</tr>
<tr>
<td>Salobo Satellite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Carajas Exp. Targets</td>
<td>Salobo IV</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

North Atlantic | South Atlantic | Indonesia

**Expected capacity from projects**
- Ni Equivalent kt
  - 20
  - 40
  - 50
  - 100
- Cu Equivalent kt

¹Victor is expected to produce ~20kt of copper. It is allocated to the nickel business as it should feed into the North Atlantic nickel flowsheet. ²Includes both replacement and growth projects capacity. ³Includes indirect share of Vale in Indonesian JVs. ⁴Includes copper produced as by-product of nickel projects. Includes gold produced as by-product of copper projects. Nickel and Copper equivalent calculations based on long term price assumptions. ⁵Hu'u added at 100% basis. Hu'u is 100% owned by PT Sumbawa Timur Mining (STM), an Indonesian private joint-venture company owned by Eastern Star Resources Pty Ltd (80%) and PT Aneka Tambang (20%). Eastern Star Resources Pty Ltd is 100% owned by Vale.
Delivering successfully the Salobo 3 project

- Start-up on Nov 30th
- World class operational readiness program
- 30–40 ktpy additional copper production
- Improved plant reliability vs. Salobo I&II
- 10–15% reduction in overall unit cost
- Over 40% female workforce
- Full capacity to be achieved in Q4 2024
Approval of Onça Puma 2nd furnace

+12-15 ktpy Ni in FeNi
>50y LOM and additional resource upside
More stable and efficient operations: 15% reduction in overall unit cost
CAPEX: US$ 555 million | Startup: 1H25

Approval of Bahodopi project

73 ktpy Ni in FeNi (49% PTVI)
Mine (100% PTVI): ~US$ 400 million
RKEF JV (49% PTVI): US$ 2.3 billion (of which PTVI: US$ 1.1 billion), including 600MW Natural Gas Power Plant

Pomalaa agreement signed

Up to 120 ktpy Ni in MHP
Call option to acquire up to 30% equity of the HPAL once completed
PTVI to own 100% of the mine
MoC¹ with Huayou and Ford for a 3-party relationship to process PTVI’s nickel ores from Pomalaa block

¹MoC = Memorandum of Cooperation
## Advancing replacement projects through feasibility study

**Creighton Ph 5**
- **Start-up:** 2027-2029
- **Ni:** 20 – 24 ktpy
- **Cu:** 17 – 20 ktpy
- High-grade polymetallic ores at Creighton deeps
- 15-year life of mine
- Advanced to FS/FEL 3 in 2022

**CCM Pit**
- **Start-up:** 2026-2027
- **Ni:** 12 – 15 ktpy
- **Cu:** 7 – 9 ktpy
- Recommissioning of a high-volume open pit mine in Sudbury
- ~7-year life of mine
- Advanced to FS/FEL 3 in 2022

**Victor**
- **Start-up:** 2028
- **Ni:** ~5 ktpy
- **Cu:** ~20 ktpy
- Set of high-grade polymetallic deposits with a focus on copper
- Studies with Glencore

**South Hub**
- **Start-up:** 2026+
- **Cu:** ~60 ktpy
- Extending the life of Sossego plant
- Bacaba and Cristalino projects most advanced: FS/FEL 3 stage
- Planned anticipation of Bacaba development
- Investment decision expected in 2023

---

*Clarabelle mill, Sudbury*

*Sossego mill, Carajas*
Strong growth opportunities at the right jurisdictions

Well-positioned to support and supply North America EV and renewables growth

North Atlantic

Carajas
Alemão (60 ktpy)
High grade copper deposit
Mine life: ~ 22 years
Start-up: 2027+
Stage: FEL 3 / DFS

North Hub (70 – 100 ktpy)
Development of Northern deposits
Start-up: 2030+
Stage: FEL 1 / Scoping

Thompson Ultramafic
Large nickel ultramafic-hosted deposit
Stage: Exploration

Voisey’s Bay Exploration targets
Recent drill results confirm exploration potential for new discoveries and extended life of mine
Stage: Exploration

Indonesia

Hu’u (up to 350 ktpy)
World class copper project with predicted mine life of >45 years
Startup: 2030+
Stage: FEL 2 / PFS

Sorowako HPAL (60 ktpy)
Convert already mined limonite into revenue.
Signed Heads of Agreement with Huayou for same commercial structure as Pomalaa HPAL with 30% call option
Startup: 2027
Stage: FEL 3

Attractive exposure to Indonesia

A Tier 1 mining complex with growth optionality

Voisey’s Bay Exploration targets
Recent drill results confirm exploration potential for new discoveries and extended life of mine
Stage: Exploration
### Energy Transition Materials

**Actioning a plan to meet the needs of the Energy Transition**

#### Copper production

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (ktpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>335–370</td>
</tr>
<tr>
<td>2026</td>
<td>390–420</td>
</tr>
<tr>
<td>2030+</td>
<td>~900</td>
</tr>
</tbody>
</table>

**Mid-term projects**
- + Salobo 3
- R South Hub extension

**Long-term potential**
- + Alemão
- + North Hub
- R Carajas additional optionalities
- + Hu’u

#### Nickel production

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (ktpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>160–175</td>
</tr>
<tr>
<td>2026</td>
<td>200–220</td>
</tr>
<tr>
<td>2030+</td>
<td>&gt;300</td>
</tr>
</tbody>
</table>

**Mid-term projects**
- R Replacement capacity in Canada
- + Pomalaa and Bahodopi exposure
- + Onça Puma 2nd furnace

**Long-term potential**
- + Thompson Ultramafics
- + Sorowako HPAL exposure
- + Joint Venture projects and offtakes

#### Indonesian JV’s exposure

<table>
<thead>
<tr>
<th>Year</th>
<th>Production (ktpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>230–245</td>
</tr>
<tr>
<td>2026</td>
<td>200–220</td>
</tr>
</tbody>
</table>

**Other projects**
- + Thompson Ultramafics
- + Sorowako HPAL exposure
- + Joint Venture projects and offtakes

**Replacement project**
- R Replacement capacity in Canada

**Growth project**
- + Pomalaa and Bahodopi exposure
- + Onça Puma 2nd furnace
- + Joint Venture projects and offtakes
Key takeaways

- Energy transition provides **once in a lifetime opportunity**

- High-quality **low-carbon products** to support the energy transition

- Strong social and environmental practices, having **circular mining as a pillar** of our business

- Taking the **right actions** for improved performance

- Advancing development of our **robust pipeline of project** to support accretive **growth opportunities**
Stay disciplined

Gustavo Pimenta, CFO
Non-replicable future-facing commodities platform

Unique attributes...

- Largest pure future-facing commodity player
- Ring-fenced governance with a dedicated Board
- Access to competitive capital to fund US$ 20 bn+ capex
- Readiness to attract and retain top talent in the industry

...generating high interest from potential partners

- Long-term and strategic partners engaged
- Use of proceeds: finance accretive growth opportunities

...with a dedicated vehicle

- Minority Investor (up to 10%)
- Vale S.A.
- Vale Base Metals (VBM)
- Iron Solutions Business
- VCL (Nickel Canada)
- JV’s (Hu’u)
- Onça Puma (Nickel Brazil)
- Salobo Metais (Copper Brazil)
- PTVI

Vale’s equity share including sustaining and growth.
## Promoting strong ESG practices for a more sustainable mining while driving perception changes

### Vale’s ESG rating

<table>
<thead>
<tr>
<th></th>
<th>End of 2019</th>
<th>End of 2021</th>
<th>Today</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainalytics</strong></td>
<td>54.5</td>
<td>39.1</td>
<td>39.1²</td>
<td></td>
</tr>
<tr>
<td><em>(the lower, the better)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ISS Governance</strong></td>
<td>10</td>
<td>6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>(the lower, the better)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MSCI</strong></td>
<td>CCC</td>
<td>CCC</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td><strong>DJSI¹</strong></td>
<td>45</td>
<td>63</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td><em>(the higher, the better)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moody’s</strong></td>
<td>–</td>
<td>CIS–4³</td>
<td>CIS–2⁴</td>
<td></td>
</tr>
</tbody>
</table>

1. Dow Jones Sustainability Index World. Also known by CSA (S&P Global’s Corporate Sustainability Assessment).
2. Sustainalytics last annual review was in 2021.
3. Highly negative.

### What we are doing to enhance perception

- **Closing ESG gaps**
- **Active engagement** with key stakeholders
- **Closing major legacy controversies**
- **Transparency evolution**
- **UNGC Principles** continuous commitment
Investing in exploration to foster optionality and sustain long-life mine

Increasing exploration activities to meet our strategic goals

Mineral exploration R&D expenses (US$ million)

- **Iron ore**: Support high quality production with lower all-in costs, replenishing reserves
- **Nickel**: Increase production and grow reserves while reducing costs
- **Copper**: Substantially increase exposure to the copper industry
Remaining focused on cost efficiency

Iron ore fines C1 cash cost – ex. 3rd party purchase (US$/t)

2022’s fixed cost inflation totally offset

Mainly diesel

Mainly higher strip ratio at Serra Norte

~US$ 800 million savings in 2022-2023

Net of inflation. 2022 BRL/USD exchange rate of 5.16 and 2023 BRL/USD exchange rate of 5.20. Including tailings filtration plants ramp-up, health & safety, dam management, geotechnics, risk and sustainability costs. In Ferrous business, including fixed costs initiatives already captured in 2022 and mapped for 2023.
## Among the lowest cost producers in the industry

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2023</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iron Ore</strong></td>
<td>US$ 49/t</td>
<td>US$ 47/t</td>
<td>US$ 42/t</td>
</tr>
<tr>
<td><strong>Nickel</strong></td>
<td>US$ 13,000/t</td>
<td>US$ 13,000/t</td>
<td>US$ 10,000/t</td>
</tr>
<tr>
<td><strong>Copper³</strong></td>
<td>US$ 4,000/t</td>
<td>US$ 3,200/t</td>
<td>US$ 2,600/t</td>
</tr>
</tbody>
</table>

- **Iron Ore**
  - All-in costs
  - Higher premiums and share of agglomerated products, lower bunker costs and higher volumes / fixed cost dilution

- **Nickel**
  - Higher volume of premium materials in the mix², and fixed cost dilution (VBME and CCM 1 ramp-up), Onça Puma 2nd Furnace

- **Copper³**
  - Higher volumes and fixed cost dilution, Salobo 3 ramp-up and productivity improvements

---

¹Approximately all-in costs after by-products before sustaining investment. ²Including by-products. ³Excludes Hu'u R&D.
Stable and disciplined capex program supporting operational reliability and accretive growth opportunities

Capital expenditure (US$ billion)

- **Growth**
- **Sustaining**

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth</th>
<th>Sustaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>~5.5</td>
<td>~5.5</td>
</tr>
<tr>
<td>2023</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Next years (average)</td>
<td>6.0-6.5</td>
<td>6.0-6.5</td>
</tr>
</tbody>
</table>

- **Controlled and efficient capex to sustain production level**
- **Low carbon agenda initiatives**
- **Accretive growth opportunity**

¹Includes replacement investment. ²Related to 2024-2027.
Ensuring reparation and fulfilling our commitments

Brumadinho & Mariana commitments (US$ billion)\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decharacterization</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>2.4(^4)</td>
</tr>
<tr>
<td>Brumadinho agreements(^2)</td>
<td>1.4</td>
<td>1.1</td>
<td>0.9</td>
<td>0.6</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Incurred expenses</td>
<td>0.6</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3(^5)</td>
</tr>
<tr>
<td>Samarco &amp; Renova(^3)</td>
<td>0.4</td>
<td>1.9</td>
<td>1.0</td>
<td>0.3</td>
<td>0.1</td>
<td>0.16</td>
</tr>
<tr>
<td>Total</td>
<td>2.8</td>
<td>3.9</td>
<td>2.9</td>
<td>1.8</td>
<td>1.8</td>
<td>2.8</td>
</tr>
</tbody>
</table>

More stable and longer annual cash outlays

58% of Reparation Agreement completed by 2022\(^7\)

Gradual reduction throughout the years

Performing on TTAC

---

\(^1\) Amounts stated include inflation adjustments, net of judicial deposits and without discount to present value, considering average BRL/USD exchange rate of 5.4066. 
\(^2\) Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works. 
\(^3\) Includes Germano dam decharacterization provision. 
\(^4\) Related to 2027-2035. 
\(^5\) Related to 2027. 
\(^6\) Mainly related to 2027. 
\(^7\) As of November 28th, 2022.
A highly disciplined capital allocation framework

Shareholder remuneration
US$ billion
- Share buyback
- Extraordinary dividends¹
- Dividends¹
- Free cash flow returned to shareholder (%)

Vale returned US$ 34 billion to shareholders since 2020, ~50% of market cap²

¹Includes interest on capital. ²Market capitalization of Nov 29th, 2022.
### Free cash flow 2026¹

<table>
<thead>
<tr>
<th>Iron ore price (US$/dmt)</th>
<th>Nickel / Copper price (’000 US$/t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>20 / 7.5</td>
</tr>
<tr>
<td></td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>22 / 9.0</td>
</tr>
<tr>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>24 / 10.5</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>100</td>
<td>20 / 7.5</td>
</tr>
<tr>
<td></td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>22 / 9.0</td>
</tr>
<tr>
<td></td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>24 / 10.5</td>
</tr>
<tr>
<td></td>
<td>9.9</td>
</tr>
<tr>
<td>110</td>
<td>20 / 7.5</td>
</tr>
<tr>
<td></td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>22 / 9.0</td>
</tr>
<tr>
<td></td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>24 / 10.5</td>
</tr>
<tr>
<td></td>
<td>12.4</td>
</tr>
</tbody>
</table>

¹Sensitive analysis. The free cash flow estimated does not consider dividends, buybacks and other capital allocation options. ²As of December 5th, 2022

#### Expected to generate significant cash for distributions

- **Stay Disciplined**
- **Free cash flow 2026**
  - US$ billion

- **Nickel / Copper price (’000 US$/t)**
  - 20 / 7.5
  - 22 / 9.0
  - 24 / 10.5

- **Iron ore price (US$/dmt)**
  - 90
  - 100
  - 110

- **~7–16% of free cash flow yield**

Excess cash will be allocated among share buybacks and extraordinary dividends.
Closing remarks

Eduardo, CEO
Strengthening our strategy to the Vale of the future

**promote sustainable mining**
- People-driven
- Reliable operator
- Benchmark in safety and dam management
- Shared value
- Nature positive

**foster low carbon solutions**
- Focused on high quality products and resources
- Iron Solutions
- Energy transition materials
- Circular mining

**stay disciplined**
- Efficient capital allocation
- Attractive cash return to shareholders
- Strong balance sheet
- Cost and capex efficiency

We exist to improve life and transform the future. Together.