This presentation may include statements that present Vale’s expectations about future events or results. All statements, when based upon expectations about the future, involve various risks and uncertainties. Vale cannot guarantee that such statements will prove correct. These risks and uncertainties include factors related to the following: (a) the countries where we operate, especially Brazil and Canada; (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; and (e) global competition in the markets in which Vale operates. 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 the French Autorité des Marchés Financiers (AMF), and in particular the factors discussed under “Forward-Looking Statements” and “Risk Factors” in Vale’s annual report on Form 20-F.
1. Ferrous Minerals Update

2. S11D Operations Overview

3. Video

4. S11D Project Status

5. Closing Remarks

6. Q&A Session
Ferrous Minerals Update
In its first wave of competitiveness recovery in 2015 – 2016, Vale took important steps to improve efficiency

<table>
<thead>
<tr>
<th>C1 cash cost reduction</th>
<th>CFR sales</th>
<th>Valemax</th>
<th>Malaysia Distribution Center</th>
<th>Metal Bulletin 65% Index Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increase the Global Recovery</td>
<td>• Increase the proportion of CFR sales</td>
<td>• Increase the efficiency of iron ore shipping</td>
<td>• Increase the blending and distribution capacity in Asia</td>
<td>• Capture the premium from Carajás iron ore through spot sales and progressive contract renegotiation</td>
</tr>
<tr>
<td>• Implement general cost cuts</td>
<td>• Increase sales to China</td>
<td>• Reduce freight costs through efficiency and scale</td>
<td>• Increase the sales capillarity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Renegotiate FOB netback component</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These initiatives improved Vale’s competitiveness vis-a-vis its peers
These initiatives resulted in productivity gains and better price realization

Global Recovery¹

<table>
<thead>
<tr>
<th>%</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>1H17</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td></td>
<td></td>
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<tr>
<td>45</td>
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</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Price Realization

Premium/discount over Platts 62% Fe, US$/t²

<table>
<thead>
<tr>
<th>Premium/discount over Platts 62% Fe, US$/t²</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>-5</td>
</tr>
<tr>
<td>-10</td>
</tr>
<tr>
<td>-20</td>
</tr>
<tr>
<td>-25</td>
</tr>
</tbody>
</table>

Vale  Peer1  Peer2  Peer3

¹ Global recovery = total production / (waste + ROM)
² Includes pellets’ adjustments

Source: Vale, Woodmac and peers reports
Thus improving Ferrous Minerals EBITDA\(^1\) by US$ 3.3 billion in 2016 vs. 2014

US$ million

\[11.321 \quad 8.536 \quad 8.536 \quad 2.969 \quad 1.393 \quad 1.037 \quad 608 \quad 735 \quad 861 \quad 87 \quad 10.476\]

\(^1\) Adjusted EBITDA of iron ore, pellets, ROM, manganese and other ferrous.
In 2017 Vale started its second wave of competitiveness improvement based on five main interconnected levers

**Global Recovery**
- Improve productivity by increasing the ratio of final product to total mass
- Improve strip ratio
- Increase of dry processing

**Supply chain optimization**
- Increase efficiency through an integrated supply chain
- Optimize sales planning process, ships distribution and response to client demand
- Improve price realization and quality management

**S11D**
- Reduce C1 cash cost
- Improve Global Recovery
- Support supply chain optimization

**Innovation and automation**
- Develop solutions to increase productivity, decrease costs and increase safety
- Develop new technologies to eliminate social, economic and competitiveness gaps
- Monitor and manage all supply chain through an Integrated Operational Center (IOC)

**Structured cost management program**
- Implement a Matrix Cost Management methodology for Iron Ore operations
  - Start with a specific pilot project at Vale’s pelletizing plants and overhead costs across all operations
  - Roll out the methodology across all Vale’s units
Goal of achieving highest global recovery among peers as a result of higher share of dry processing and optimization of strip ratio.

**Global recovery¹ rate %, 2020**

<table>
<thead>
<tr>
<th></th>
<th>Vale</th>
<th>Peer 1</th>
<th>Peer 2</th>
<th>Peer 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>54</td>
<td>37</td>
<td>39</td>
<td>37</td>
</tr>
</tbody>
</table>

**Levers**

- **Strip ratio improvement** by grinding and concentrating compact itabirites and by allowing for some flexibility in the alumina and phosphorous contents of intermediate products and by the start-up of S11D.

- **Increase of dry processing** from **40%** in 2016 to **60%** in 2018 and **70%** in 2023 in conjunction with a revision of mine plans, increasing the life of mines and postponing replacement investments, whilst lowering production costs.

---

¹ Global recovery = total production / (waste + ROM)

Source: Vale, Woodmac and peers reports
Vale is best positioned to reap the benefits of the “flight to quality” in the iron ore market

65% Fe iron ore premium¹ compared to Platts IODEX 62%, US$/t

Contaminants’ discount
US$/t

Pricing system impacts in 3Q17

- 65% Fe premium increased in 3Q17 reaching above US$20/t
- This increase will generate a positive impact in the provisional premium set in 2Q17, which are adjusted based on the actual premium of delivery in 3Q17

¹ Metal Bulletin 65% index
Vale has several initiatives to improve price realization

Sales composition¹

<table>
<thead>
<tr>
<th></th>
<th>2Q17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carajás</td>
<td>38%</td>
</tr>
<tr>
<td>Blend</td>
<td>18%</td>
</tr>
<tr>
<td>Southern</td>
<td>21%</td>
</tr>
<tr>
<td>Southeastern</td>
<td>21%</td>
</tr>
<tr>
<td>Others</td>
<td>2%</td>
</tr>
</tbody>
</table>

Initiatives

- Reduce High Silica production by 19 Mtpy
- Limit the Silica content to 5% in the Brazilian Blend Fines (BRBF)
- Adjust 100% of Carajás sales contracts to be based on MB 65% Index
- Market low alumina products
- Increase pellet production by 10Mtpy
- Expand sales in RMB

¹ Does not include pellets and pellet feed for pelletizing
As a result, Vale’s average price premium is expected to increase in the short-medium term

Vale’s average price premium¹

<table>
<thead>
<tr>
<th></th>
<th>US$/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1.7</td>
</tr>
<tr>
<td>1Q17</td>
<td>2.3</td>
</tr>
<tr>
<td>2Q17</td>
<td>1.2</td>
</tr>
<tr>
<td>2H17</td>
<td>3.7-4.7</td>
</tr>
</tbody>
</table>

The improvement in price realization is expected to result in an additional gain of US$ 400 – 600 million in 2H17 adjusted EBITDA

2018 price realization is expected to be higher than 2017 average

¹ Premium over the index Platts IODEX 62% Fe content (includes VIU and premium/discount, does not include pellets)
S11D will decrease Vale’s costs and sustaining capex

C1 cash cost\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>2017 (US$/t)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Vale(^2)</td>
<td>15.2</td>
<td>-49%</td>
</tr>
<tr>
<td>Current Carajás(^2)</td>
<td>12.9</td>
<td>-40%</td>
</tr>
<tr>
<td>Expected S11D(^3)</td>
<td>7.7</td>
<td></td>
</tr>
</tbody>
</table>

Sustaining capex

<table>
<thead>
<tr>
<th></th>
<th>2017 (US$/t)</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Vale(^2)</td>
<td>2.8</td>
<td>-36%</td>
</tr>
<tr>
<td>Current Carajás(^2)</td>
<td>2.4</td>
<td>-25%</td>
</tr>
<tr>
<td>Expected S11D(^3)</td>
<td>1.8</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) C1 cash cost at the port (mine, plant, railroad and port, excluding royalties)
\(^2\) Vale’s Current and Carajás based on 2Q17
\(^3\) S11D fully ramped up, normalized to the exchange rate of BRL/USD 3.37

S11D will consolidate Vale’s position as the lowest C1 cash cost producer of the industry

Reduction through truckless operation and dry processing
Development and implementation of technological solutions will enhance the productivity of the supply chain
Therefore, EBITDA per ton\(^1\) of Ferrous Minerals is expected to increase by US$ 4-6/t by 2020.

1. Assuming no change in Platts IODEX 62% reference price, bunker oil prices, and exchange rate of BRL 3.37 / USD.
S11D Operations Overview
S11D is a landmark in Vale’s history
S11D reached important milestones but there are still some challenges ahead

**Positive achievements**

- Delivery and commissioning of project ahead schedule
- Production of individual truckless system higher than planned
- Implementation of high level of automation and technology
- Training on belt operation through a robust and continuous program

**Main challenges**

- Transition from commission to integrated production for several systems
- Predictability of compact materials to reduce downtimes
- Mobility of crushers for compact materials
S11D mine layout encompasses four mine systems operating independently

- Started up
- Commissioning
- Operating until Dec/17
All mine systems initiated operations ahead of schedule

System 3
Start up in March 2017 (scheduled for Jul-17)

System 4
Start up in July 2017 (scheduled for Nov-17)

System 1
Start up in August 2017 (scheduled for Dec-17)

System 2
Start up planned for October 2017 (originally scheduled for Jan-18)
S11D plant layout is based on a simple concept and high throughput

Long Distance Conveyor Belt

Start up in Sept-16 and commissioned with 17kt (nominal capacity)

Product Stockyard

Already moved more than 12Mt of ore

Plant

All areas commissioned and operating

Train Loading Terminal

More than 310 trains with 330 wagons loaded
S11D ramp-up is expected to end by 2020

- Aug/16 – Mine hot commissioning
- Sep/16 – Plant hot commissioning
- Mar/17 – 1st truckless system start up
- Jul/17 – 2nd truckless system start up
- Aug/17 – 3rd truckless system start up
- Oct/17 – 4th truckless system start up
- Dec/17 – 25% of capacity will be reached
- 2020 – 100% of capacity will be reached
The ramp-up of S11D is performing as planned

S11D production in Mt

- Jan-Aug 2017 Realized: 12
- Sept-Dec 2017E: 9-11
- 2017E: 21-23
Truckless system productivity already achieved 81% of its nominal capacity

<table>
<thead>
<tr>
<th>Nominal Capacity</th>
<th>Realized</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,000 Tons/hour</td>
<td>6,500</td>
</tr>
</tbody>
</table>

**Highlights**

- The truckless system operated with higher productivity, thus mining more ore than planned
- Total production with truckless system reached 2.3 Mt up to Aug, 2017
- Workforce trained in companies abroad with long experience in operating mines with conveyor belts
- Nominal capacity to be reached by 2020 in a sustained way
S11D will increase logistics capacity in the Northern System

Mtpy

2016 | 151
2017E¹ | 171
2018E¹ | 200
2019E¹ | 217
2020E¹ | 230

¹ Estimates may change before completion of current planning cycle and are subject to Board’s approval
3 Video
S11D Project Status
S11D project included the development of a new mine, railway and port structures

**Mine and plant**
- Mine capacity of 90 Mtpy with a truckless mining system
- Minimal environmental impact with waste pile and plant built outside the protected area and the use of a dry screening process
- 99% concluded, with start-up in 4Q16

**Railway**
- Construction of 101 km railway spur, linking the S11D ore body to the main railway line
- Duplication of 570 km and revamp of 220 km of railway, increasing its capacity to 230 Mtpy

**Port**
- Construction of a new onshore infrastructure, including 2 car dumpers, 1 stacker, 2 reclaimers, 2 stacker-reclaimers and 4 stockyards
- Enabling of offshore port with the construction of a new berth – North Berth at Pier IV – increasing its capacity to 230 Mtpy
Railway spur started up in 4Q16

Train passage in Carajas National Forest

Railway loop

Bridge over Rio Verde

Tunnel
The duplication of the railway is progressing as planned

EFC duplication

Status

• 75% of physical progress
  - 470 km\(^1\) of 570 km duplicated
  - 43 out of 46 bridges & viaducts delivered
  - 26 out of 46 bridges over railway delivered

• Current railway capacity of 171 Mtpy

\(^1\) As of September 8\(^{th}\), 2017
470 km of the EFC have been duplicated
69 bridges of the EFC duplication have been already delivered

Bridge Estreito dos Mosquitos

Bridge Mineirão

Bridge over railway Km 616

Railway bridge km 014
Port structures are almost completed

Port Onshore

Status
• 91% of physical progress
• Major assets completed and in operation:
  - 2 car dumpers
  - 2 reclaimers
  - 1 stacker
  - conveyor belts
• 2 stacker-reclaimers to be delivered in 2Q18

Port Offshore

Status
• Offshore port and maritime terminal concluded
• Start-up in November 2016
• 20.8 Mt of iron ore shipped
Port onshore is being developed according to plan

Onshore overview

Conveyors

Stackers and reclaimer

Stockyard
Port offshore and railway terminal were delivered in 2016

Port offshore

Wheelset change and maintenance center

Port offshore – night vision

Locomotive inspection & fuel supply
S11D Project is expected to be delivered on time and below the original budget

US$ billion

Original Budget: 19.7
- Logistics: 11.6
- Mine and Plant: 8.1

Total: 14.5
- Logistics: 7.9
- Mine and Plant: 6.5

Cumulative (until Aug-17): 12.7
- Logistics: 6.5
- Mine and Plant: 6.2

Sep-Dec 2017: 0.5
- Logistics: 0.9
- Mine and Plant: 0.4

2018: 1.8
- Logistics: 0.9
- Mine and Plant: 0.4

2019: 0.4
- Logistics: 0.9
- Mine and Plant: 0.4

1 Exchange rate used: BRL / USD 3.35. About 90% of future expenditure in S11D is BRL denominated.
S11D is already benefiting local communities

**Construction of health centers & municipal hospital renovation**

- Implementation of infrastructure and urbanization civil construction works in Pará and Maranhão, including schools, hospitals, health centers, court of justice, fire department and communal areas

**Construction of schools**

- Construction of 48 viaducts for the railway to provide safe crossing points for the communities

**Income generation programs & dialogue with communities**

- Development of social programs focused on education, promotion of health and income generation

- Focus on continuously improving our relationship with local communities, including indigenous people

---

**Investments**

- Construction of health centers & municipal hospital renovation
- Construction of schools
- Income generation programs & dialogue with communities

---

S11D is already benefiting local communities
Closing remarks
Value generation strategy will be based on four main pillars

**Performance**
- Turnaround of assets with low returns
- Matrix-approach for cost management
- Elimination of silos

**Governance**
- Transformation of Vale into a corporation
- Changes in the Board of Directors for better decision-making
- Better EV/EBITDA multiples

**Sustainability**
- Develop a broader strategy for communities and environment
- Define strategy for climate changes and carbon pricing
- Become a reference in sustainability

**Strategy**
- Deleveraging and derisking of the balance sheet
- Strict capital allocation policies to focus on projects with robust return on capital employed
- Diversification of cash generation from operations building on core competencies
**Vale is changing its approach on nickel given challenging market conditions and high capital investments**

**Priority actions**

- **Evaluate nickel operations and projects at current nickel prices**
- **Pursue partnership at VNC**
- **Preserve optionality to capture EV’s proliferation**
- **Improve competitiveness of our operations**

**Forecasts for 2018 @ US$ 10,500/t**

<table>
<thead>
<tr>
<th></th>
<th>EBITDA</th>
<th>Capex</th>
<th>Simplified Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US$ million</strong></td>
<td><strong>900 – 1,000</strong></td>
<td><strong>800 – 900</strong></td>
<td><strong>0 – 200</strong></td>
</tr>
</tbody>
</table>

¹ LME price forecast. Estimates may change before completion of current planning cycle and are subject to Board’s approval.
The copper business is delivering positive returns and has options to increase its share in Vale’s cash generation.

Priority actions

- Evaluate Salobo 3 brownfield expansion
- Improve Salobo’s operational flexibility
- Evaluate growth options
- Study alternatives to replace Sossego

Forecasts in 2018 @ US$ 5,600/t¹

<table>
<thead>
<tr>
<th>EBITDA</th>
<th>Capex</th>
<th>Simplified Cash Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 – 800</td>
<td>150 – 180</td>
<td>550 – 620</td>
</tr>
</tbody>
</table>

US$ million

¹ LME price forecast. Estimates may change before completion of current planning cycle and are subject to Board’s approval.
Moatize operations are similar to Carajás thus enabling the coal business to successfully explore growth options.

Priority actions:

- Conclude Project Finance
- Successfully conclude ramp-up of Moatize and Nacala
- Foster exploration to increase reserves and potential expansion
- Leverage rail and port infrastructure

Forecasts in 2018 @ Met Coal US$ 128/t:

<table>
<thead>
<tr>
<th></th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBITDA(^2)</td>
<td>200 – 400</td>
</tr>
<tr>
<td>Capex</td>
<td>100 – 150</td>
</tr>
<tr>
<td>Simplified Cash Flow</td>
<td>50 – 300</td>
</tr>
</tbody>
</table>

\(^1\) Platts Premium Hard Coking Coal Low Volatile FOB Australia. Thermal coal reference price @ US$ 71/t. Estimates may change before completion of current planning cycle and are subject to Board’s approval.

\(^2\) EBITDA includes the repayment of shareholder loans from the Nacala Logistics companies to Vale.
The new approved corporate structure will result in a Board of Directors empowered to make better decisions

- **More active participation** of the Board in the strategic planning process
- **Empowerment** of the Board in the decision process
- Focus on more **relevant themes** for Board discussions
- Implementation of a process to **evaluate the Board’s performance**
- **Change in Committees** structure, composition and roles to improve support for Board decisions and focus on key themes
Re-rating of Vale’s shares is already happening on the back of the new corporate structure, but expect more to come

Share performance, Jan 2nd, 2017 = 100

**EV/EBITDA¹**

¹ Current enterprise value / last twelve months EBITDA

Source: Bloomberg data on 09/15/2017
Deleveraging is another important lever to boost Vale’s re-rating

Net debt, US$ billion

- 2016 year end: 25.0
- 2Q17: 22.1
- 2017E year end: 14 - 16
- 2018: ?
FCF¹ generation will be strong enough to create optionality of dividend distribution beyond debt reduction

<table>
<thead>
<tr>
<th>Iron Ore Platts (US$/t) Average 2018</th>
<th>Dividends of US$ 1 billion</th>
<th>Dividends of US$ 1.5 billion</th>
<th>Dividends of US$ 2 billion</th>
<th>Dividends of US$ 2.5 billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>3.8</td>
<td>4.3</td>
<td>4.8</td>
<td>5.3</td>
</tr>
<tr>
<td>70</td>
<td>5.4</td>
<td>5.9</td>
<td>6.4</td>
<td>6.9</td>
</tr>
<tr>
<td>65</td>
<td>7.2</td>
<td>7.7</td>
<td>8.2</td>
<td>8.7</td>
</tr>
<tr>
<td>60</td>
<td>8.8</td>
<td>9.3</td>
<td>9.8</td>
<td>10.3</td>
</tr>
</tbody>
</table>

¹ Considers that the following events will be concluded: Fertilizers sales, vessels sales and Coal Project Finance. Assumes nickel price of US$10,500/t in 2018, copper price of US$5,600/t in 2018, bunker oil price of US$270/t in 2018 and exchange rate of BRL/US$ 3.37. Estimates may change before completion of current planning cycle and are subject to Board’s approval.
Stricter capital allocation policy will lead to a lower Capex profile

<table>
<thead>
<tr>
<th>Capex</th>
<th>US$ billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>5.5</td>
</tr>
<tr>
<td>2017E</td>
<td>4.2</td>
</tr>
<tr>
<td>2018E</td>
<td>3.5–4.0</td>
</tr>
<tr>
<td>2019E</td>
<td>3.2–3.7</td>
</tr>
<tr>
<td>2020E</td>
<td>2.9–3.5</td>
</tr>
<tr>
<td>2021E</td>
<td>2.6–3.2</td>
</tr>
</tbody>
</table>

**Initiatives**

- Improve governance for capital allocation
- Challenge growth and replacement projects price assumptions
- Postpone replacement projects with low returns
- Improve decision making process for budget allocation and performance management of sustaining investments
- Foster post investment reviews for all projects

---

1 BRL/USD Exchange rate of BRL/USD 3.37 from 2017 onwards. Does not include investments in Fertilizers and projects not approved by the Board of Directors. Estimates may change before completion of current planning cycle and are subject to Board’s approval.
A leaner and stronger company will allow future growth

Enablers

Better Governance

Greater competitiveness

Lower leverage

Higher multiples

Future equity-based diversification centered on Vale’s core competencies:

• Quality and flexibility of its assets
• Technical knowledge in iron ore and nickel
• Outstanding project implementation skills
• Unparalleled bulk logistics expertise
• Capacity for doing business in Brazil