Vale Day 2023

London, December 5th, 2023

Welcome

Thiago Lofiego

Head of Investor Relations, Vale

Good morning, good afternoon, good evening. Wherever you are, thank you for being here, and welcome to the 2023 Vale Day. My name is Thiago Lofiego, and I am the new Head of Investor Relations at Vale. On a quick note, over the last 15 years I have been on the other side of the stage, and it is an honour to be on this stage today alongside the companies' executives. Today we are going to talk about our equity story, and the key levers and initiatives that we see unfolding in the coming years to unlock further value to shareholders and stakeholders, and to create an even greater Vale. For that, today we have here with us Eduardo Bartolomeo, our CEO, Gustavo Pimenta, our CFO, Carlos Medeiros, our VP of Iron Ore Operations, Marcello Spinelli, our VP of Iron Ore Solutions, Deshnee Naidoo, CEO of Vale Base Metals, and Mark Cutifani, the Chairman of the Board of Vale Base Metals. With that, I will hand it over to Eduardo for the opening remarks.

Opening Remarks

Eduardo Bartolomeo

Chief Executive Officer, Vale

Introduction

Thank you, and welcome to the other side. Thank you for coming over here today. It is an honour for us to have you here listening to our story, our narrative, our strategy, so I am sure we are going to have an enjoyable two hours. What is the executive summary of what we are trying to convey today? Let me try to be brief. Since I took over, I think Vale has been extremely disciplined in executing what it promised. A lot of this execution is now bearing fruits and they are around the corner. "What do I mean by 'walk the talk'? If you remember, we had the reshaping, de-risking and rerating. Today, Vale is a much safer company than it was in 2019. When we talk about reshaping, we underestimate what we did. We sold 10 businesses. We just finished the sale of MRN last Friday. We brought Vale to the size that it should be. We have two unique businesses that are irreplicable, namely, of course, Iron Ore and Base Metals. And why do I say that, because I think now, we are set up for success. We talked about that last time we met, and now we see, after one year, what happened.

After one year, we have a full, dedicated organisation for iron ore, and we carved out, we will talk a little bit about that. Mark is here. Welcome to the other side as well – rather, to the same side. We are glad to have Mark with us. Fundamentally, we are set up for success, and that is why I said at the end of the call last year. Everybody leaves when I do my remarks, and I do not prepare, by the way, so I said, what was I feeling at the time, and I said, I´ve never been so optimistic. This company is finally getting through, and that is what we are going to talk about today. And I will go through the levers. I used to use another analogy just to refresh your mind, I always said, because I knew it wouldn´t be something easy, I always said, "Look, this is not a sprint, it is going to be a marathon.' I do not know if I am seeing the finish line, eventually I will see it, but it doesn´t matter, I think there are a lot of things that we "sow" in English I think that´s the word, and we are harvesting now. I will share these with you, and will call your attention to the fact that these are 100% in our hands. So, we do not depend on licences or things like that, so we can capture that. And of course, it´s “through 2026”, not until 2026. That´s what is written there. This is the new frame. Last year, we looked at the future and said, ‘We need to promote sustainable mining. We need to foster low-carbon solutions, and we have to stay disciplined.’

We made some tweaks during the year, because we said, to be sustainable, but what is missing here? We need to truly develop the communities where we are. So, this thing, in black, is the regional social and economic development. When you talk about fostering low-carbon solutions, something that Vale used to be very good at, in the past, we need to bring customers to the centre again, the customer centricity has to come back again to our equation. Although we have a lot of innovation and technology, I think this has to be stressed. And the last one, of course is important to you, we need to have a balanced sheet and to have capital discipline, but we need to have operational discipline to guarantee the capital flow to the company. So, we added these things. But what is the message here? As we did with the reshaping, de-risking and re-rating, we are going to do it. This is our compass. We are going follow strictly what is written here.

II. Key Levers to Unlock Value through to 2026

Safety

We have five levers we are going to share with you. I will give a brief introduction and other members of the team will speak about them in more detail. I was asked yesterday, ‘If you leave ever, and you look back, what would you like to be remembered for?’, and I said, ‘Safety.’ Vale today is a much safer company today and we have the data to prove that. We are a reference in the industry for TRIFR, which is a reference to total recordable injury frequency rate (TRIFR). I am not satisfied with that, but that number means that 1,000 people came to work and went home safely. Although we are very proud of that, but we look at those numbers, the 57 with high injuries that could eventually lead to a fatality. The reduction is 72%. As we are going to talk in the frame between 2024 and 2026, in 2025 we want to zero that, and that is in our goals. That is the first message. We are proud, we are happy, but we are not satisfied.

Substantial Progress in Dam Safety and Tailings Management

The second dimension on process safety are tailings dams. Vale should have started this journey earlier, but eventually, when I started it, we took it very seriously. We profoundly changed the way we manage our tailings dams. As a consequence, when the Global Industry Standard on Tailings Management (GISTM) came, we adhered to it closely, and to the timeframe defined by ICMM. We use technology a lot, we were using already technology, and more importantly, we are accelerating the change to dry-stacking and dry-processing to reduce the number of dams that are needed. Let us hear from some employees about how they see this.

[Video plays]

This video was not made for Vale Day. This is an internal video that we felt was so good we brought it here to share with you. But fundamentally, Without the fear of being arrogant, I think Vale today is a reference in tailings management, but more importantly we need to close the de-characterisation programme and reduce the emergency levels. The goal here is to have no tailings dams with level three by 2025. That´s why it is so important because we have to guarantee no repetition. We are comfortable today that we know what is going on, but fundamentally ‘no repetition’ is the key here.

Designed for Operational Stability

Iron ore is stability. I think this is the first benefit that we saw very strongly when we reorganised Vale. As I mentioned, we used to have 10 businesses. I think we lost focus. When we decided to carve out Base Metals, we had to organise differently, and now Carlos Medeiros, who will talk to you in a moment, has complete focus on the asset. When I first talked publicly in Barcelona, I said, ‘I believe in a management model that we call VPS. I think Vale lacks a management model.’ It takes more than two years to implement – it takes generations – but it really is more mature today. I am extremely comfortable with the guidance this year, but it is 5 December. If I was not by now, it would be a problem. Why? Because our adherence to plan has gone totally differently. We went up to 95% and we are very comfortable for 2024, but Carlos Medeiros can go into details later.

Strategic Projects to Expand Iron Ore Production and Quality

The next one is very important because people ask all the time, 'Where is Vale's growth?' and the growth is contracted. That is the good news. Marcello Spinelli is going to talk about that in more detail as well, but what I wanted to share with you is that we did the largest infrastructure project in the world, called S11D. Salobo III was just delivered on time, on budget, through Covid. All these projects are 60% advanced on physical construction. They do not depend on anything, so our quality and growth is contracted.

Unlocking Value in Energy Transition Metals

I was thinking about how I would approach this. This is my baby. If you say, 'walk the talk', this is walking the talk. We told you that we were going to carve out this business, we would find a partner, and we would only sell if we found the right partner with the right value. I truly believe that we did it, and that allowed us to do exactly what is happening now. It allowed us to attract Mark and Jerome and bring knowledge. Mark is going to explain more about the asset review. I am very happy about that as well. Deshnee and Mark are going to go through these dimensions here, so to stay on time, I will go on to ESG.

ESG Leadership

It is funny because I remember people saying, 'Eduardo does not talk about business. He spends 45 minutes talking about ESG.' Now, I will only talk for five minutes. The problem here is interesting because our ESG journey unfortunately starts with reparation. The commitment we have with Mariana is shown here. We have already disbursed more than R$34 billion. We have compensated more than 400,000 people, 80% of the houses that you see in the picture. The water is cleaner. The message here is that we are committed to repairing Mariana.

Brumadinho Reparation

The same message, I think we are a bit better in the agility and the empathy that we worked out in Brumadinho is translated in numbers and actions. We know exactly the 14,000 people who were impacted, the R$3.4 billion of compensation, and in 2023 64% of our integral reparation agreement was done, and 90% will be done by 2026. What is the message here? Brumadinho was the driving force behind everything we do at Vale. I am sure we have to strive for leadership here, because we were the first to put ESG goals in our long-term variable compensation. We are one of the very few who have scope three goals.

Delivering our Climate Change Agenda

We have extremely aggressive forest biodiversity goals. We have already reached our scope two target for renewables in Brazil, although Brazil has the benefit of being a green country, but let me show you another video about this.
[Video plays]
As you will remember, the first pillar I mentioned at the start of the presentation was 'promote sustainable mining'. I truly believe there is no way that mining is ever going to be accepted, or even re-rated, if we are not really 'walking the talk' when we talk about ESG dimensions.

Continuously Improving our ESG Rating

One thing I am very proud of is diversity. We have allocated more than 6,000 women within Vale since 2019. You saw the numbers in the video. The good news here is that people are starting to get that – Sustainalytics, ISS, MSCI – and all our ESG ratings are evolving. There is still a way to go but we are getting there. Just to conclude, I joined Vale in 2004. I have been around Vale for 20 years. I have no doubt that Vale has always been a great company, but I believe that what we are doing today with the support of our Board and our team is building an even greater Vale. Thank you, and I will pass the floor to Carlos Medeiros, with one minute more in your account. I saved one minute.

Operational Excellence

Carlos Medeiros

Executive Vice President, Iron Ore Operations, Vale

Introduction

Thank you, Eduardo. Good morning. It is a pleasure to be here and share with you an update of our operations. We aspire to operate safely and reliably, and can only do that by pursuing operational excellence. In this presentation, I will cover three main elements of operational excellence: how we ensure safety, how we maintain our assets reliably, and how we have made effective changes to the operational models of some of our assets.

Safety

Starting with safety, Eduardo has shared how our total injury rate has declined over the years. The same trend applies to significant injuries that could lead to fatalities. In this slide, I want to highlight the near miss reports, or N3s. They are precursors of accidents. Therefore, the more we have, the better. Year-to-date, we have 35,000 of them reported. They are growing year-on-year, and 81% of them have been addressed. 5S is another important element. It is the basis of safety. In Iron ore we have over 19,000 work areas, and 99% of them have fully implemented 5S. It is a methodology for creating and maintaining clean and organised operational work environments. We have also been keeping track of process accidents. These relate to incidents that could translate into accidents that could cause multiple fatalities or huge financial losses. We have mapped the major unwanted events, defined their critical controls, and we keep monitoring the integrity and the health of these controls. The result is that year-on-year there has been a 70% reduction of these incidents reported.

Asset Reliability

Talking about asset reliability, Vale operates in a capital-intensive industry, and as such we must excel in the optimal utilisation of our assets. Therefore, we have been implementing a maintenance strategy that emphasises the importance of planned and scheduled maintenance interventions, therefore minimising the likelihood of an equipment downtime.

Asset Monitoring Centres

A crucial aspect of our strategy that I would like to underscore today are the 16 asset monitoring centres. These centres keep monitoring variables such as vibration, temperature and speeds of almost 300,000 points. These data points are analysed by an AI algorithm that notifies our team whenever an intervention is needed. The maintenance planning team will then schedule a maintenance activity according to the asset condition.

Increased Reliability of Critical Assets

What are the results we have been obtaining so far? I would like to share some of them with you. In the top left corner, that is the corrective maintenance ratio, the lower the better. That is the ratio of the amount of time we spend doing unplanned maintenance activities over the total amount of time spent doing maintenance. As you see, an almost 30% reduction year-on-year. In the top right corner, that is the mean time between failures. That is the amount of time for our Itabira mining fleet to present some sort of breakage. We also had a significant increase of 25% in three years, so the higher the better here. The bottom left, that is the same mean time between failures, but this time for the truckless system at the S11D. As you see, almost a 100% increase in three years, and this is particularly encouraging because we are planning to

increase production there. The last one, that is the kilometres travelled by our trains before they presented a breakdown, also a 54% increase.
All these results are a consequence of the maturation or the evolution of our management systems that Eduardo referred to in his opening remarks. This also demonstrates that Vale is building a robust and dependable platform that can provide assurance to everyone about our capability to deliver the volumes we have committed with the market.

Operational Models

We have conducted a thorough review of the operational models of some of our assets, implemented some changes, and obtained some interesting results that you will see. Starting with Brucutu mine, I think this is a great example of an integrated plan. It starts with the mining plan and all the activities that follow, such as drilling, blasting, haulage and crushing. At Brucutu, we operate with a high adherence to the mining plan, and pristine infrastructure conditions in terms of access and drainage. This means that we have a highly productive fleet of 18 autonomous trucks, as you see on the slide. The performance of this fleet has been recognised by a third party as one of the most productive in the world. A similar award was also received by our shovels at S11D.

Improved Performance at S11D

Another good example is at S11D, where we are performing better this year. Some elements have contributed to this performance. The first is better geological knowledge, which improves mining plans. With better mining plans, we could also improve our blasting strategy to cope with the occurrence of jaspillite. Although jaspillite is still an issue, we are in a much better position to fragment it and operate our mine effectively. We have also changed the way our mine operates, so it is now running a hybrid approach, combining the truckless with the mobile mining fleet. This is particularly helpful and important because it prevents us having all the production losses previously incurred whenever we had to move the truckless system around. As you have heard, we are also installing new crushers, with the main one being installed in 2026. Marcello Spinelli will shortly present all the details about this project. As you can see, a consequence of this is a better utilisation rate from the truckless system.

Ponta de Madeira Port

Finally, at our northern port, Ponta de Madeira, you all remember the poor performance we had last January, when we only loaded 10 million tonnes. Since then, several important changes have been made at the port, and I would like to highlight a few. In terms of shipping, we have eliminated the smaller vessels, and we are mostly operating with larger vessels that are SCCS (specially constructed cargo ships) certified and capable of transporting more humid ore. We have also made some important changes in our yard, eliminating the slow-moving SKUs, and increased the stockpile height, and improving the drainage conditions, allowing more efficient management of our product yard. We also reviewed the maintenance there and leveraged our reliability. On the right-hand side, you can see the mean time between failures of our ship loaders has also improved substantially. We are using an AI tool to help us manage the total moisture limit for the transported ore. This is particularly important because a well-controlled TML means much smoother operation during the wet season.

Stepping into 2024

Talking about wet season, we know that the weather poses a significant challenge to our operations, particularly in the first quarter where heavy rainfall interferes with our operations. At the same time, it offers the possibility of a resilient structure and robust response, so we are taking some important actions. I would like to highlight just three of them here. The first is on the mine, where it is about keeping the bottom of the pit dry for as long as we can so we can operate there. It is about the water balance, and our hydrological capability. We have reviewed that capability, and we are in a much better position. At the same time we are making a lot more ore available at the top of the pit, so we can use that during the worst days.

The photograph shows an area that was flooded last January. We are taking several flooding prevention measures alongside the railway like in the picture.
At the port, these blue piles here are iron ore, but coated in dry iron ore. So, it is sitting at the port and it should be blended with humid material if and when needed, so we can ensure that our loading will not be stopped. I hope all this information provides peace of mind and assurance about our ability to deliver on the committed volumes, both today and in the future, but also to demonstrate that we are taking concrete steps in accordance with our strategy to fulfil our ambition, which is to be a world-class, safe and reliable operator. Thank you, and I will hand over to Marcello Spinelli.

Iron Ore Growth and Quality

Marcello Spinelli

Executive Vice President for Iron Ore Solutions, Vale

Introduction

Thank you, Carlos, fantastic presentation. Good afternoon. I am glad to be back here in London, for my fifth Vale Day. Today, I will drive you through the third lever that Eduardo mentioned, which is the production growth of premium products, which will gradually increase until 2026. Before we get into the details of the production roadmap, let me share the main elements that are driving the demand today, and why Vale is in a unique position to supply the market. I will remind you of the four main initiatives of Iron Ore Solutions, including the production plan that we are moving forward.

Steel Production and China

Last year we said, steel demand is not over. Human development continues to drive the structural demand, but now we have an additional effect of world decarbonisation. When you think about structural demand, the main question is when and how will China decrease or slow down. We have some people who do not believe that, and probably a month ago I would have taken more time to convince you, but I am very confident that China is much more resilient than we could have expected. A new industry is emerging in China. They are already leading the world energy transformation, producing the EVs, the batteries, the BVs – high quality products. They need more steel, flat steel, and high-quality flat steel. That implies an increase in production of pig iron, and they will need more iron ore.

Steel and Iron Ore Demand Profile

The second driver is reshaping the steel and iron ore demand profile. That is the main impact. We all know that in steelmaking they have the technology to go to zero. They have direct reduction. They can use natural gas or hydrogen and have zero emissions. That is good information, because we have other industries that do not yet have the technology. The pathway is basically two main pillars. The first is the energy transition itself, from coal to natural gas and hydrogen, you can include CCS. And on the other hand, we need to increase the efficiency of energy. To reach those goals, we need high-grade ore. There is no other way. I want to draw your attention to new information here. We talk all the time about the competitiveness of high-grade ore when compared to low-grade. Here is a comparison between high and low grade in each route. This is the cost of the production of metallics, not of iron ore. This is our clients' cost. You can see the gap of almost $100 in competitiveness. If you want to translate this to VIU, you have to divide this by 1.6, so that is the value we can share with our clients. That is the value we can bring to our company.

Exploring Multiple Decarbonisation Solutions

We truly believe that we have growth in iron ore. We brought this information last year. There is a clear segmentation as we need more high-quality ores. We always say that we have energy transitions that require critical minerals, but high-grade ores are critical. There are not enough because we see a gap in the supply and demand, mainly when you talk about direct reduction feed. Why is Vale ready to support that? There are three main elements here. The first is that we have endowment. We have Carajás. We have high-grade ores. Secondly, compared to our peers, we can concentrate our ores economically. Finally, we have been developing a track record of beneficiating ore. We know we dominate all the technology. We have the edge to do this. That is the reason why we can solve the problem. Let us put all these into action.

Building a Customer Centric Company

This is a recap of the customer centric approach of Iron Ore Solutions. There are four solutions here that you already know, but I want to follow up the evolution of them. The first one is mega hubs. Today, we already have a reshoring of the steelmaking industry, seeking for cleaner and more competitive sources of energy, and a mega hub can play a key role in this trend. To support this, you need a globally rated product. So, famous pelletizing plants, but now we have innovation again at Vale bringing the green briquette. High-quality production growth. That is a lever. That is the main source of value of this chart. Later I will get into the details, we are going to bring not only volume but quality. Finally, we need to keep a stable supply of high-grade ores to support the new investments that are coming with our clients. Let us start this follow-up with a video.
[Video plays]

Forging Partnerships to Start Mega Hubs Construction in 2024-5

In a mega hub, we bring high-grade ore. We can agglomerate. We can also increase the production of concentration to feed an HBI plant close to a competitive source of energy. When we do this, we can transport energy inside metallics, to feed downstream steelmaking in every part of the world. What is new here? We just finalised the terms of the first Mega Hub in Duqm, Oman, and we expect to finalise the binding agreement at the beginning of 2024. We expect the first Mega Hub to come online by the end of 2026/beginning of 2027.

Reshaping our Portfolio for a More Tailored Product Offering

The briquette. This is our baby. We are really happy that we have just launched the first industrial plant at 3 million tonnes. We have another plant coming online in the first quarter of next year. Now we have the power to scale up the tests, so we can conduct longer tests with our clients for blast furnace and direct reduction, and we are committed to deliver the 100 million tonnes of agglomerated products – an additional 50 million tonnes of briquettes – by 2032.

On Track to Reach 340-360 Million Tonnes with an Improved Portfolio by 2026

Moving to our production plan. You already know the first information, that our production guidance for next year ranges between 310 to 320 but with a lot of reliability, as Carlos has just mentioned. To reach our mid-term forecast of 340 to 360, Eduardo also said that we must track three projects. It is very simple. There are no major risks in terms of licenses, only the time to deliver the projects – Vargem Grande, Capanema and S11D. In other information, on my right-hand side, we have the possibility to bring 50 million tonnes of high-grade ores with this low level of capex intensity. It is unique in the industry, so we are in a good position to deliver that.

Progress in Licensing Processes to Stabilise Production

Let me update on permitting, which is a big challenge and a global trend. The increase in ESG standards everywhere, including Brazil, makes it much more difficult to develop a mine. We also have higher safety standards, mainly after Brumadinho. But what is new hear, in Minas Gerais state where we have our South and Southern operations, we have more than doubled our licenses in 2023 in cooperation with agencies, bringing them technology and the capacity to process the backlog of licenses, not only for Vale, but for the whole industry, not just for mining. The whole industry of the state is moving much faster, which is very good news. The same approach that we are using in Minas Gerais is being used at the federal level, though

less advanced. We are already committed to the same approach, so we have technology, we are bringing more information, universities, etc. so they will have power to bring more results in the next year.
You ask me about this every time, so I must mention the cave legislation. Brazilian cave legislation is the most stringent in the world, but we are optimistic about its modernisation because it is a fundamental part of the federal government investment growth programme, called PAC, and this is a key solution not only for mining but for agribusiness and for infrastructure, and we expect some good news in the next year.

Project Updates

Moving project by project. Vargem Grande: 60% of accomplishment, 50 million tonnes, coming online at the end of 2024. Capanema: 60% of accomplishment, 50 million tonnes, the beginning of 2025. S11D: 58% of fiscal progress – this is the mine site, the increase of volumes – and as Carlos said, we also have the compact crusher investment that is expected by the end of 2026. That will be important to the health of the mine, because we need to bring down the waste that is already stockpiled at the mine site and remove it. That is the agenda. That is the project that we have to track.

Concentration Capacity

Finally, we have the fourth action, the fourth service that we have in Iron Ore Solutions, that is the capacity to concentrate. Last year we said that we had cracked the code of Carajás, and we can concentrate the largest pool we have – 200 million tonnes – to solve any gaps of direct reduction feed. We have succeeded in the first phase, the pilot studies. Now we have to scale up the solution. We are on track. We are also bringing a concentration plant to Sohar in Oman. Sohar is a pelletising plant with a port that we have had for more than 10 years with a port, and we are going to anticipate the feed and speed up the Mega Hubs in the Middle East. This is expected to bring more than 10 million tonnes of concentrated ore by 2026/2027.

Adding High Quality Capacity to Capture Higher Premiums

To conclude, as Eduardo said, we are 'walking the talk'. We are really committed, and are on track to add more value to our business, to our clients, to our shareholders, and to our society. Gradually, we are increasing the quality of our portfolio. You can see this year by year that we are going to reach the average quality we had in the past. We have a clear segmentation here. Sooner or later we will have the decarbonisation of the industry, and high-grade ore is key. Also, the average premium will increase as we increase the quality of our portfolio. Do not forget that we have 100 million tonnes of agglomerated product, that´s a high-grade production, almost one third of our production. Finally, we are the supplier and the partner of choice for our clients, and we are ready to support them in the challenge to decarbonise the steel industry. Now, I will hand over to Deshnee.

Energy Transition Metals Transformation

Deshnee Naidoo

Chief Executive Officer, Vale Base Metals

Mark Cutifani

Chairman, Vale Base Metals

Market Demand

Deshnee Naidoo

Thank you, Spinelli. Good day, everyone. It is fantastic to be here and sharing the stage with Mark to talk about energy transition metals. Across Base Metals this year, we had a multitude of milestones, not least the one scoring Mark as our Chair. Let us start off with market demand. If I look at global EV sales, they are up 34% year-on-year, slightly below where we thought we would be at the start of the year. That easing is largely on the back of some of the macro headwinds we are seeing in the market, but electrification-backed demand for both nickel and copper continues to be the fastest growing segment, and that is on the back of the commitments we are continuing to see with the OEMs, although some of it delayed, as well as the policy incentivisation within the system, so the long-term fundamentals for nickel and copper continue to be reinforced.

Setting up for Success

Now, we are setting up a carved out Base Metals organisation for success. If I look at the unique attributes we have, which are a top three reserve and resource position in every geography that we operate in, and a very attractive asset base in geographies that matter. If I then look at the unparalleled growth pipeline that we have, and then adding the ESG credentials that the business brings, including things like having more than 90% of our power coming from clean sources which helps us to produce some of the lowest carbon intensity products, all of that, together with the intent of the dedicated vehicle – which includes having partners like Minara and Engine1 as likeminded investors in the business and the access to competitive capital that this vehicle now gives us – all makes for a very compelling case for Base Metals to succeed.

Nickel and Copper Overview

We are absolutely on the right path, given the actions we have taken this year, in line with the commitments that we made last year to all of you. Starting with safety, today our TRIFR rate – total recordable injury frequency rate – is 20% improved year-on-year. That is on the back of the work that we have done on leadership in the field and critical risk management, as well as the work, as Carlos said, on critical control effectiveness. However, on safety the job is never done, and there remains much to do in the business. Looking at copper, our Salobo I and II plants are running at an availability of greater than 90%. That is five percentage points more than at this time last year. That is on the back of the asset recovery work that we started, which targeted the loss profile across all the critical assets, as well as the maintenance backlog we had. I am very happy to say today that our progress is on-plan.

Turning to Salobo III, it is running at 90% of the planned capacity throughput, which is 12 million tonnes. Both lines started in February, and if I look at where we were then to now, this has to be a benchmark ramp-up in action and testament to the teams on the ground, because this also shows us that our work on ops-readiness is in fact bearing fruit. With the performances we were seeing across Salobo plants I, II and III, we were able to complete the first phase of the Wheaten Precious Metals performance test. That test needed us to perform at a 32 million tonne per annum run rate across the entire complex over a period of three months, and by achieving that from August until the middle of November, we were able to achieve the bonus of $370 million. Sossego plant, that had the maintenance challenges last year, I am happy to say that our throughput is 12% up year-on-year to just over 1600 tonnes per hour.

Turning to nickel. In Sudbury, our capital development is up 21% year-on-year, on the back of the work that we are doing on mine planning, as well as productivity, and this will help set up 2024 for success. Voisey's Bay mine extension has just passed the 90% physical completion mark. However, we are experiencing some challenges on the critical path item for Voisey's Bay, which will lead to some delays next year, and we have already embedded those numbers into our forecast. We approved the Pomalaa mining project in Indonesia in October 2023. Pomalaa project will support a 120,000 tonne HPAL plant. That, you will recall, is the three-party JV, including ourselves at PT Vale, Ford, and Huayou Cobalt. Last month in San Francisco, we signed the heads of agreement for the next phase of the PTVI divestment. Recall that this is a regulatory requirement, and having signed this HOA sets up PTVI for success, because it enables us to extend the licenses in the business beyond 2025. What a year!

Copper Production

I turn to our copper production. This year, we will end at the upper limit of the guidance of 325,000 tonnes. That is a 28% increase year-on-year. Looking at where we are to where we will be in 2024, we are guiding at 320,000 to 355,000 tonnes. What is the delta? The throughput of Salobo complex will increase by 16% to get us to an average of 31 million tonnes. Remember, the entire complex has a capacity of 36 million tonnes. Given the offset we will have for mining grades, its mining grades will reduce at about 10% next year. That helps us create the delta in Salobo copper next year. Even though the Sossego pit Sequerinho is coming to the end of its life, we will have an uptick because of the mining sequence in grade. In fact, our grade increases about 13% to get us to about 0.76% next year. That will also give us a bump up in our copper.

In North Atlantic, as we have discussed in some of the previous results presentations, although we are seeing the depletion at our Coleman mine, some of the work that we have done – including the development I have just spoken about, as well as the project on CCM South that we commissioned last year – gives us additional tonnes to offset the depletion that we are seeing in Coleman. What happens from 2024 to 2026? As I said, Sossego depletes, and the Bacaba project starts. That Bacaba project is a 60,000-tonne plant that starts to ramp up and ends in full production during the second half of 2026. Salobo complex stabilises, and in North Atlantic we will see the benefits of the VBME ramp up, which is also in the second half of 2026. That is the guidance for 2026 of 375,000 tonnes to 410,000.

Nickel Production

We will deliver our guidance for nickel for the second time in a row. We are guiding a similar level that we started this year with, which is 160,000 to 175,000 tonnes. But there are different production drivers in the nickel numbers, and that is what I want to bring to your attention. Firstly, in Ontario, we will have a two-month shut of our surface plants, and the reason for that is just maintenance-cycle driven. As a result of some of the improvements that we are making in Sudbury specifically, led by the development work, we will reduce our external feed next year. Voisey's Bay continues to ramp up, giving the 160 to 175. If I look at 2024 to 2026, we will be hit by depletion reduction in three areas for nickel. The first being the geological inflation that we will continue to see in North Atlantic, PTVI equity accounting, as well as the planned reduction of external feed as Voisey's Bay ramps up. Remember, we have guided. The only reason we are purchasing more external feed is to create a stopgap as Voisey's Bay ramps up. At Onça Puma, not only do we deliver furnace one that comes in at a better efficiency, but we then ramp up the furnace two project. All of that gives us the 210,000 to 230,000 tonne production. On nickel, I do want to say that next year you will see nickel even more back ended to the second half of the year, and that is because of the increased planned outages we have in H1.

Transitioning to a New Phase

I am not going to go through this slide in detail. All I want to say about this slide, but all of the projects we have across the region and when we spoke about the transaction, we guided that we will need to spend $25-30 billion over the next decade across all of the projects that we have across the region. The work that Mark has started in the business is the asset reviews. Together with the asset reviews and the refresh on the strategy, we will come back to talk you through how this forms the basis of how we can continue to accelerate production across base metals. And all that is left to say is that 2023 was a foundational year for the business.

A lot of the improvements that we have made on safety, on maintenance, development, project execution, and the heads of agreement, definitely set the business up to achieve what we need to, which is the 900,000 tons of copper and greater than 300,000 tons of nickel. Thank you. Mark, over to you.

Asset Review Initial Remarks

Mark Cutifani

Thanks, Deshnee. Ladies and gentlemen, it is great to be here. Eduardo and the team, thank you for the great welcome. Deshnee. We have got the team here, Guga, Emily, John, Mariana – all here as part of the Vale team. In the last two years, when people ask me about the energy transition, I talk about the most important metal and it is steel. I then talk about copper, which I think is a great place to be, and then I talk about nickel, because I do have some personal affinity to the metal, given this is the third time I have been working in a nickel business. All three are really important.

So for me, it is a great place to be with a great group of people and, again, I am really impressed with the work that is being done in iron ore, and also very impressed with the work that the team in the base metals business have done over the last couple of years, stabilising, establishing a foundation and starting to make improvements in the business for the longer term. In terms of starting in the business and doing the work we do, we started with an asset review, which I think is always the right place to start, is understand the asset you have. So I did not expect to come back into a business the way I have, but again, from the Chair role it is a very different perspective.

But also, Tony O'Neal as the leader of the asset review team was not expecting to be doing what he is doing, nor Tony Filmer, who was previously with Rio, INCO and Anglo, or Mick McAleer who was from Nabalco, WMC, Alcoa, Anglo American. Fred Stanford, from INCO, Torex. Andrew Markson, from BHP Anglo. Tim Biggs, previous mining practice partner at Deloitte, and Anne Stevens from BMO. The reason I talk about those individuals across the industry – they are known by those in the industry. They are probably billing right up there amongst the best in their field, if not the best, and that is the quality of the team that we have brought in.

And the great thing about it is the team that we are working with, and on the technical side Luke Mahoney, Deshnee and the rest of the team, have been great in engaging both at the corporate level and in particular at the sites, and it is very much about identifying what we see as opportunities. More importantly, balance that with what the team sees locally and making sure we bring those pieces together to find what we think are the right solutions as we go forward. It is not an easy process. It is always a little clunky when you are bringing so many dispersed people together, but certainly so far the feedback has been great from all of the sites and by the way, we only finished the process last week, so you are getting an early view on what we are thinking and what we are seeing. You certainly will not get to finish product today, but hopefully you will get a sense of what we are seeing, where we think we are going.

Work in Progress

First point, as Deshnee said and Eduardo said, where all are works in progress, but there have been some very specific milestones delivered. In terms of what we see, one resource endowment – exceptional. Copper in Brazil is as good as anything I have seen, and certainly I think out of the next two or three years, a lot of excitement in terms of best of Salobo, what follows Sossego, and also the broader expiration potential. The Sudbury mines and the new opportunities in Sudbury I think are quite significant. And yes, we have been there for 100 years, and in terms of our conversations, we were talking about the next 50 years as that is a great place to be, and there is a lot more work coming out of Sudbury that I think will be very exciting, certainly over the next 12 months. Manitoba, ultramafics, new exploration province in our view, and given the work at Mississauga we think has great potential. When we talk about Voisey's Bay, we look at the project, yes, it is a bit behind, but we also see potential to add the disseminated or to the current feed mix, which we think will materially improve the economics of the project going forward. Mine development in inventory is a big issue, and I will talk about Salobo and what was done in the last six months with the team. There has been a really significant improvement, but to make that improvement sustainable we have to get our mine development right. There is a lot more work to be done on mine development across the group, and also asset integrity and the reliability. And if I took Carlos's presentation as an example of where we need to go, we will be hot on his tail trying to replicate those sorts of improvements in terms of what he has done with the operating models.

The flowsheet is another big issue and another big opportunity. Firstly, making sure we have got the right materials going through the right plants. We still see a lot of opportunity for optimisation, for example, Onça Puma material going up through Long Harbour makes a lot of sense to us in terms of simple changes but is quite a value-accretive step. Marketing products to best customers to realise value and use, we still think is a real potential that we have not fully pushed. And then best prices reflecting quality, value and use we also think is an important point. So for us it is about focusing on margins. So with the existing business, the question is can we improve our margins by 30%? That is both cost and revenue, and that is something we think we can get to with existing operations. And then when we look at projects and new opportunities, what can we do better and make sure that we focus on getting the concepts right and then moving our projects. We think there has been a tendency to push our projects through a little bit too early and not get the right concepts in place, and that is where we think we can make significant improvement as well.

Identifying Opportunities through a Comprehensive Asset Review

In terms of the identified opportunities through the asset review, we have tried to tailor the teams that have been involved for each of the assets, so that whole team was not at every asset but they went through most of the assets, but we made sure the skills were right for the application. Local teams were the key and marrying those perspectives was really important in terms of understanding what is possible and making sure that we got buy-in and support from everybody in the process.

Carajás: Right Potential in Copper

To start with, the first port of call, Carajás. We talk about the right potential. At Salobo, credit to the team to get the project away. Work is now going on to make sure that the operating details are right, and I will show you a chart in a second that gives you a sense of what we were doing over the last six months. But again, the team has done very good work to get us there. We need to do much better on the productivity side, and we think the shovel productivities need to double their current performance for us to build a place where we are comfortable that we are in the right ballpark in terms of performance. There is also significant underground potential, we believe, below the operation, significant footprint that we think needs to be tested over the next year or two.

Sossego – getting the satellites in – we also see underground potential there, so there is a bit more drilling there required. And Alemao, we have worked with the team and with the team identified slight changes to the mining effort. It is still being a sublevel mining system, but we believe we can use the tailings back in the system, or 70% of the tailings, to change both the economics and the ability to create a very different footprint for the project. So it certainly enhances its potential.

Salobo: Improve Performance through Debottlenecking

At Salobo, it was really important to just make a couple of observations. We started at Salobo on 2 July, so we started in around the 1 July. The asset review started on 2 July. Salobo was a first point of call, and over the first week the team looked at the improvements that had been delivered and that was really encouraging, particularly on the reliability side. But then if you look at July 2023 through to September 2023, the improvement in the production rate was a function of focus on the quality of drill and blast, making sure that we are getting the right feed to the stockpile, managing the stockpile, and now we are having bridging on the primary crush.

I will mention these points because I wanted to show the degree of detail the teams went into. So change the way we fed the primary, the crush out behind the primary in front of the mill was then managed quite differently, so we maintained a consistent feed to the mill. And over that time, we progressively improved production by up to nearly 30%. So, the focus on the detail is absolutely critical, building off the work that had already been done. And for me that is really important, and basically we said, 'It is great. Over 2021 to 2023 you have improved 5% a year.' But when you are 50% below, what I would see is a minimum expectation on the shovels, we have got to go to a different place. You have got to change the conversation. So we are changing the conversations. We are changing expectations, and over the next year or two that is where we believe you will see potential for significant and continuing and significant improvement.

Canada: Balancing Potential and Mature Assets

In Canada, we talked about the title of this slide, the 'Balancing potential and mature assets.' Somebody had 'Despite mature assets.' We put 'And mature assets.' Yes, they are mature, but they have got lots of potential. There is lots of experience. We should be doing a lot better. And through Covid and those periods we ran our development down.

We are now pretty well hand-to-mouth on development, so we have got to push development, again focus on the basics. And there is certainly, we think, a lot more potential to be had from Sudbury in particular. And we have also questioned and asked lots of questions around geology and what we should be doing on the exploration front, and we think there is a lot more potential that again we will unpack during the course of the next 12 months. In Manitoba, we see again the ultramafics as the key, and that is where the team is pushing now in Mississauga and looking at the test work. We are trying to see if we could bring something together as we did back in Western Mining around Mount Keith for those that can remember, a very large ultramafic deposit that was turned into a real winner, a three-year payback back in the 1990s. Doug Upton will remember that extremely well, I think. At Voisey's Bay and Long Harbour, the fact that we can add the disseminated ore to increase the production from Voisey's Bay helps fill Long Harbour, and by bringing Onça Puma up and looking at other free sources, we can fill that facility producing high-quality nickel, which again also helps us leverage our price position and our margins across the business as well.

Sudbury: Opportunities to Unlock Mill Feed through a Bolder Cut-Off Grade Strategy

Now in terms of optimising Sudbury just a little more granular detail, we looked at every mine. We looked at every mining method. We looked at every cut-off grade conversation and strategy. And for example at Garson, by dropping the cut-off grade in the ore body by 0.3%, we literally double the resource. The cost of mining that incremental ore which is shown in yellow again, the previous designs, actually allows you to produce that material at a lower net cost or a lower average cost than the average cost of the mine production that is currently being produced. Now it is only about 15-20% of the total area feed, but we are doing that type of analysis at every site, looking to optimise and improve each of those resources.

And that is why I said there is a lot more we can do and a lot more we can do on the process side. We are currently processing 3.4 million tonnes. We believe we can get to 6 million tonnes. Creighton, Copper Cliff – those operations have got tremendous potential, and with an improvement in the development and better balancing and more reliable operations, we think we can get to 6 million tonnes. We have also got a couple of small open pits that can help bridge us there as well. So again, we are very excited about what we see at Sudbury in terms of potential.

Indonesia: Great Assets for the Future

In Indonesia, I will not spend too much time, because you are aware of the projects and the push. Today Indonesia represents 48% of the world's nickel. It is a critical country for nickel production and we will be participating in that growth. There is more improvements we can make to Sorowako in terms of operating practices, as you would expect. The investment in the new development at Pomalaa looks pretty good. We think the Chinese approach is pretty impressive and we have got the copper potential at Hu'u. Now Hu'u is one of those things that we have gone back a bit into concept to make sure we solve some of the technical issues before we drive too hard into developing the project. So a bit more work is required there but it certainly is a great resource.

Global Flowsheet: Opportunities for Optimisation

On the global flowsheet, what I did want to do is just take a step back and say, if you look at what we have got on the ground in terms of capital employed, and across the whole business it is a tad less than 20 billion. There is so much we think we can do with where the molecules are going and who we are sending our material to and the price we are getting, that we look at cost reduction as a key strategy. But running a very close second is making sure we are processing the right materials, taking as much as far downstream as we can to create better margins.

And so when I talk about a 30% improvement in the business, it is a 30% margin improvement we are chasing. So we are looking at both cost and revenue in driving that improvement from the existing business, and that is critical. In this approach, we also think about recycle circularity, also playing in a very different space in terms of sustainability and making sure that we have got a full picture on the business as we go forward.

The Pathway to Value

And then finally, just to wrap it up, it is good place to be, copper and nickel are great partners to steal in the longer term, and obviously iron ore. The business needs to focus on what we can control better than we have, and that we believe is a key part of the transformation that we are going through. But I must acknowledge the good work that has been done so far. In terms of opportunities, in my 47 years in the industry, I have not seen a better set of endowment opportunities in an existing business. It will take us a little bit of time to unpack it, but in my view it is material and it is significant.
And over the next year or two, you will see a lot more information come out from whether it is in copper in Brazil, whether it is in Sudbury, or whether it is in other parts of the business. We have got the right assets, we understand the jurisdictions and at this stage I think we are in a very good place. From our point of view, it is a great foundation for achieving superior performance, and again I acknowledge the iron ore team for the good work they have done, and we certainly will be hoping to give Eduardo a few more headaches in terms of capital allocation over the short, medium and longer term. And we think the new vehicle that is being set up provides us with the scope and the flexibility to chart a course that is appropriate for the nature of this business.

And with that, I would like to say one other thing. I would like to acknowledge Deshnee's wonderful contribution in the business, both our CFO and the CEO. The work she has done in the hard yards she has taken in the carveout and other work has been significant. I know Eduardo might want to say a few words later as well, but for me, Deshnee, thank you very much for the great work you have done.

Stay Disciplined

Gustavo Pimenta

Executive Vice President, Finance and Investor Relations, Vale

Value Drivers through 2026

Good afternoon, everybody. Thank you, Mark. I have to tell you that we are thrilled to have you joining the family and really looking forward to this partnership. So, what I would like to do is to start with a summary of everything we have heard and what does that mean in terms of potential value unlock. So this slide covers each one of the key topics that we discussed earlier today and I want to give you the perspective from the value potential.
The first one is safety, and particularly regarding the dams at level three. We are doing a lot on ESG and I will talk later about it, but the dams at level three we know are a significant constraint for a lot of investors to be positioned at Vale. It is a current restriction that we have. It does put us outside several of the key indexes globally. We are out of the UN global compact, so the fact that we will be out of having two dams at level three by 2025, we think it is going to be a substantial de-risk in the overall story.
The second one is about operational stability. We have heard you guys over the years. This has been a topic of concern. I think Medeiros has highlighted all the improvements we have done over the last several years. I think today we have a much more predictable business. When you look at the leading indicators meantime between failures, availability of equipment, everything is substantially better this year versus last year. That is what Eduardo was saying. It does give us a lot more comfort and confidence about the ability to deliver this year's guidance and the next year's guidance as well.

The third one is the capital growth and the potential to add 50 million tons over the next couple of years, especially in iron ore. I think Spinelli highlighted how low those projects were in terms of capital intensity. It is a very unique competitive advantage of Vale. We will be able to bring 50 million tonnes of high-grade iron ore within the $6.5 billion capex programme. So I think that is one of the unique advantages and competitive advantages of Vale, with a side benefit of driving and bringing our C1 below $20 per ton. We are also going to have, as we highlighted, an improvement in the iron content as a result of bringing those higher quality projects in the next couple of years. So I will show you how that looks in the next couple of slides.

And as a transition, we just heard from Mark a lot of exciting news. This year was very important for us, bringing this business to where it is today, creating the vehicle, and I think we are set for success there. Just in the next couple of years, there will be more volume coming. We are highlighting as Deshnee covered, 70 kilotons of additional copper production and 55 kilotons of additional nickel production. So, this is already contracted and you are going to see these in the numbers going forward.

The last one, the ESG agenda of value is broader, but one particular element, especially when you look at cash flow, is regarding the capital commitments for us to perform on the reparations, right?

We have been spending around $3 billion every year on those commitments. The next two years will be along the same lines. I will have a chart about that. But going forwards when we look at on an average basis from 2026 to 2030, that $3 billion should come below $1 billion which will help us free up cash, potentially, for our shareholders.

Delivering Cost Efficiency and Offsetting Inflationary Effects

So let us get into cost in more detail. So starting with 2020, this is a picture of the total fixed cost of iron ore. It is a proxy. It does not reconcile entirely, but it is a good proxy in terms of the C1 cost, because we also have fuel costs and other things in total in C1. But just to give a sense of how we are thinking about managing our overall fixed costs in the company. Starting from the left, $5.7 billion, we had some external effect, primarily FX, which was 0.2 there. And then we have what we have been talking about, new way of operating. So those are new stages or steps in the processes or facilities of Vale today. We are talking about filtration processes and dry stacking. Those added costs to our base.

And what we have been doing over the last several years, the last three years especially, is to work to offset inflation with the initiatives that we have been implementing internally at Vale to pursue more productivity. So there is a series of initiatives with better source in specification reviews, overhead reduction and for the next year you should see us being able to capture even greater value from those initiatives, being able to offset from our perspective and our expectations, to actually do better and have a lower cost as compared to the inflationary impact in the year.

New Volumes and Efficiency Programme Resulting in Lower C1

So what does that mean in terms of C1? C1, for this year is expected to close at 22.5 for iron ore. We are guiding at 22.5-23. This is as a result of volumes being flat, and us being able to offset inflation. Going forward, as we look at 2026, you see the mature improvements, especially as we bring the 50 million tonnes net of depletion for the next two to three years, which will improve not only from a dilution effect but also from a better mix. Products that will come will come with lower cost.

Competitive Operations Across all Three Businesses

From an all-in standpoint, first iron ore – we are expecting to close iron ore this year at an all-in cost at $56. We are guiding next year between 53 and 57, so this is a similar story to the C1. So being able to offset inflation in the year, and the real benefit will come as we bring those additional volumes by 2026. There is also an assumption here which I think is important to highlight. We are assuming premiums flat year-on-year. So this year has been challenging on premiums. We are assuming the same scenario for next year, potentially as Spinelli highlighted, there could be an upside to the case here. Let us see how it evolves. For the 2026, then we have the benefit of greater dilution.

Copper, $3,400 per tonne is expected for this year. Next year, 4,000-4,500. It is mostly as a result of lower grade expected in Salobo in 2024, and the associated revenues or lower revenues on byproducts. There is also

some incremental investments that we are doing to continue to enhance the performance of Salobo. We are getting to an end of the asset integrity program there. In 2026 then, we should have a better performance with dilution effect. We are also bringing Bacaba. Deshnee highlighted some of those projects in her presentation.
Nickel – better next year. Especially as we bring VBME. VBMEs come around August timeframe, so we do not capture the full benefit and you are going to see the full benefit, especially in 2025 and onwards.

Accretive Projects, Additional ~$4bn in EBITDA

I will not go into all of these projects. This is the pipeline of projects being implemented at Vale. As we speak today, we are building ten projects in the company. What is important in this slide is that everything else constant, those projects should be bringing $4 billion of incremental EBITDA as they reach conclusion and commercial operations. We are bringing here this year new information that we have not shared in detail with the market, which is the weighted average return of those investments, assuming competitive curves, price curves going forward. So, iron ore, 30+% IRR, ETM or Energy Transition Metals, 15%+ IRR. And you see that there is a pipeline of projects that we are very excited about and we will talk about that at its due time.

Controlled CAPEX in the Coming Years

Capex controlled. We want to maintain, as I said before, a capex of around $6.5 billion. This is a new breakdown, the first time that I think we are sharing this, where we give the breakdown between iron ore and base metals, so iron ore $3.5-4 billion, base metals $2.5-3 billion. We want to start to bring more information about base metals as a standalone company. So you are going to hear more from us about those details. So that is one piece of the information.

Performing on our Commitments

I will not go into detail here. This is just a table that I am sure helps you to think about and understand what is our expectation of cash commitments. As I said before, over time this should be reduced, and we should have lower cash burden or cash impact as the result of the reparations. They are being performed, Eduardo highlighted all the initiatives and all the investments we are doing on those fronts.

Solid Value Creation in Different Scenarios

This is a simulation of potential EBITDA by then. As Eduardo highlighted and it is important to reenforce, a lot of those actions that we have talked about will come between now and then, not in 2026. So we will capture some of that $4 billion EBITDA, Vargem Grande for example. It is coming online by the end of next year, so a lot of that EBITDA will come over time. We wanted to focus this for an illustrative purpose here to focus on 2026. This is in real terms. So our expectation is that under different prices, you can pick the one that makes more sense for you. We see that the company generates a very strong EBITDA and the different prices even more conservative accommodated prices. And in a free cash flow yield, you see the same story. The company in most of the cases from our perspective will be able to generate double digit free cash flow yield in the following years, especially in 2026.

Continuing to Focus on Returning Values to Shareholders

So before I hand back to Eduardo, I just want to highlight how we are thinking in terms of capital allocation. You probably know this information, but we have paid the highest dividend in the industry from 2020-2023. Those are our peers – real data, actual data. So, you should expect us to continue to be extremely disciplined in terms of how we allocate our capital. We have paid $29 billion of dividends. We have paid incremental and additional dividends and we have been performing consistently on our share buyback program. You probably know this information, but since 2021 we repurchased 17% of our share count, and we have a new program approved recently with our board for 150 million shares, and we perform and execute on those programs, as we have been doing over the years. So with that, I would like to invite Eduardo back for his closing remarks.

Closing Remarks

Eduardo Bartolomeo

Thank you, Gustavo. I will not go over this, but of course we are building a strong foundation to capture the endowment that we have within iron ore solutions and base metals. I was thinking while I was listening to the presentation, what a great team that we had built in Vale. I am really proud of it. I think there is only half of our team here. The other ones are in Brazil. There are friends as well in Canada, where we run base metals, but I would really like to thank them for their hard work, to thank our 180,000 employees for their hard work, because as I said before, we are building a great Vale. We have been building, we are building this great Vale, but I am truly confident that we can build an even greater Vale. With that, I would like to thank you for your attention, and of course take your questions and answers. Thank you very much.

Questions and Answers

Daniel Sasson, Itaú BBA

Hi everyone. Thank you so much for the presentation. Good afternoon, everyone. My first question is regarding the supply and demand dynamics. I think it became very clear that with your guidance, often changed volumes for 2024 and some of your peers did not differ that much that the supply side of the equation really seems clear, but you could come in a bit on the demand side, especially in a year, that demand has surprised on the positive side, even with a rather weak property sector in China, iron ore demand throughout the year has been pretty resilient, and iron ore prices have stayed or have been higher than what most analysts forecasted by the end of last year. So if you could comment on your views for 2024 and maybe more specifically, if you have been feeling any impacts at all from the centralised entity that is now coordinating part of the procurement or buying efforts from Chinese steelmakers.

And my second question on capex is if you could comment a bit on your expectations, especially for capex expected to be deployed for the base metals division, or the main drivers behind the implied increase in 2024 versus 2023? Given that, if I am not mistaken, you have only a total of two that have been approved to be delivered then, and what is behind those levels? Thank you so much.

Marcello Spinelli

Thank you, Daniel. So supply-demand is tight, so supply side is tight. When we think about that, we have some players that are moving out of the seaborne market. I mentioned the last conference call, India is focusing on their own development, and this is not specific, but we see a supply lower than demand, 10 million, 15 million. So that is the overall picture.

Demand side – China – we could believe in the stability, but we have two very powerful actions that will emerge less in the next year, so $1 trillion for infrastructure, $1 trillion Renminbi for the property. So we will see this impact in the demand side. I mentioned a China resilience. It is funny because we saw the five-year plan and they mentioned, 'There will be a quality development.' Quality development – what does it mean? What does it mean, quality development? Now, we can see what you are doing there. A fantastic industry is emerging, a very high-end industry, and they need more quality in the steel mill. So we have seen shifting from rebar to flat and high-quality flat that is implying a more pig iron production. So, take a look at this gap that is widening when we have pig iron production and also the rebar and the EAF production.

On the other hand, we expect China to be much better than this year, so we expect a growth of 2% or 3% more. It is worst-based in 2023, and our forecast for China next year in terms of CSP production, it is above $1 billion less than this year, something around $1.10 billion, but again with more iron ore, with more pig iron than EAF. So when you see all this, the market is really tight.

Gustavo Pimenta

So on the capex, the delta is mostly growth projects. The ones we talked about were celebrating some of those investments. It is a minor increase versus where we are performing, the six versus six and a half. So, we think it is reasonable.
For base metals, what we announced publicly is the $25-30 billion of total capex. If we were to do the entire program to get to 900 kilotons of copper, what we have been saying is that this is probably not in the shorter term. It will depend a lot on how the team develops and accelerates those initiatives, so in the next two to three years probably will stay at those levels, and then if we have further opportunities, we will assess the best way to fund them.

Marcello Spinelli

You mentioned CMRG. China is a long-term partner for us, so we rely on them. So we are really engaged, and I think we are the provider or the supplier that is more engaged with them in terms of services, blending, concentration. We are very innovative. They mentioned once that they call us the Tesla of iron ore. We had this feedback from them, so really close to them. When you talk about CMRG, we have a common problem that we can reduce the cost. So it is a win-win cooperation, but we have to do it together. So, we are already doing it actually. We can reduce the cost of ports, inventories and supply chain, planning. So we have sometimes the reselling of iron ore coming from the steel mills. That makes some noise in the market. So they are organising all of this. And then we are looking to them. So we see it as a win-win cooperation. Price is market supply, demand, market basis. But we see a potential efficiency coming from them, and we can add a lot of initiatives.

Leonardo Correa, BTG Pactual

Good afternoon, everyone. Thank you very much for the presentation, Vale. Leonardo Correa from BTG Pactual. So, Mark, I think the first question to you, thank you for the presentation. You started out by talking a lot about what you have been doing over the past weeks with the team. You talked about management changes. You talked about the asset review, which is currently underway. I just wanted to hear you a bit more on what are your key objectives for 2024? Nickel markets have been very challenging over the past year. Prices are down 40 percent%. Many people are questioning the energy transition theme behind nickel. So if you can also talk about your view on nickel longer term and if you still are a believer, I think that would be very helpful.
And the second question is just on the iron ore production story, right? I think Eduardo talked about this. Spinelli, you talked about this, Medeiros and Gustavo, everyone talking about the iron ore growth story back at Vale, but the reality is is that in 2024 there is no growth, right? It is pretty flattish, even though high conviction. We know that in 2026 you are aiming 340-360, but the project that is S11D is only expected for the second semester of 2026. So how can we view 2025, just the buildup? I know it is very early for guidance. We are going to have to wait another year for that, but just thinking conceptually right, I mean if we can run through those building blocks, given Vargem Grande and Capanema, would it be reasonable to assume that the 2025 story would be a transition with some growth, maybe 10, 15, maybe 20 million tons? Does that seem okay for you guys? Thank you very much.

Mark Cutifani

Thank you for the question. I know the key things that we are talking about for 2024 is firstly, every team has to understand the resource, and so we are taking everyone through the understanding and understanding what endowment looks like. That is, what is beyond resource, what is potential?
Because if I use Salobo as an example, if the endowment is what we think it is, there is an opportunity to continue to push on the production base, so we have to get the shovels up first point, so we can improve volumes, but we can also work with cutoff grades and start pushing higher grade through, which is an important issue for Salobo but because its grades drop off in the next two or three years. So that is a real

game changer. And so understanding what you have got and what you can do inside that resource is absolutely critical and I would say that story for every asset.
The second point is that we have tended post-Covid to be driven by the budget conversations and getting our cashflow balanced, which Pimenta is absolutely right pushing. But what I am saying is there is a cost to some of the things we have done in the business on development and we are sharing some data from the review that is saying if we can push out our development a little bit further, get our buffer stocks right, there is a 20-30% percent improvement in productivity we can drive over the next 12 months, which makes a very different proposition for the business.
So the question is how much can you afford to spend and invest, and how do you get yourself in that position over the next 12 months? And that is the right debate, getting that decision-making right and getting each team to justify where they are going to put the money and what they are going to show as part of the delivery. So that is a process.
Now the third point is planning and scheduling. Carlos actually said it today. On the reliability side, most people understand what a plan is, but they fall down when they try and schedule, which is the detail, and we have lost some of those skills. So rebuilding that skillset. So by the end of 2024 I am hoping to see that we will certainly have improved our understanding. We will improve performance. We will set a platform so that by 2026 we really are starting to hit some, I hope, very positive numbers compared to what we are even forecasting today. So that is it.
On nickel, I am still a believer. There is no doubt it might take a little bit longer to get to the prices we would all like to see, but I think the fundamentals are stronger. Copper is just outstanding and I think with what we are seeing in the world today, that is really going to kick. But nickel will be a bit slower, but I am still a believer in the fundamentals in terms of the industry, and I think the changes in China are also helpful for nickel as well.

Deshnee Nadoo

Maybe just to add on that, Leonardo, on nickel, the majority of our sales are class one. So we are still banking the premiums that come with a class one market, and we have not transitioned as fast into the EV sales because we always said that we will do it for value. And I think just touching on Mark's point nickel, we do believe that this year on the back of what we have seen out of China's recovery and some of the surpluses that I believe have already been priced into this year should unlock a little bit next year. So I hear you, but I think we are in a better position than some of the other producers, given our product mix.

Gustavo Pimenta

Maybe to close, on the guidance, good try. We will not give you the 2025 guidance, but what I can say is that in 2026, when we see the depletion/delays/others that we have there, we already account for the plus 20 to come substantially later in the year. So that is in our assumption already, but certainly, without giving you a number for 2025, Vargem Grande is coming by the end of 2024. For us, we are less concerned with detailing specific numbers, but very concerned and very focused on the degree of certainty of the plans that we lay out.
So just to make sure what Carlos reiterated today which is important – even though the guidance next year is similar to the production of this year, it was done with a higher degree of certainty based on all the elements we know about the production. So that is the way we have been operating, the way we want to continue to portray the guidance going forward. So that is what you should expect from us.

Tyler Broda, RBC

Thank you very much, and thank you very much, Eduardo, for bringing Vale Day to London. That is nice to see. Thank you from here. I have got two questions. Mark, it feels a bit like we have gone through a bit of a time machine here and I am sitting here in 2017. I might be a few pounds heavier, you might have a little less hair, but we´re basically feels so much like the start of what it was with the Anglo journey. How do you characterise the differences? Obviously you were successful at Anglo in terms of turning that company around from a position where it needed a lot of help to and it seems like the value base metals business,

despite the great work Deshnee has done, that you have still got that path to go. So what are the key differences that you see?
And then the second question is for Spinelli. In terms of the iron ore market right now, one thing that has been beleaguering the Chinese industry this year has been relatively low margins. If you look at the inventories in China, the Brazilian inventories are a lot higher than the Australian ones, which is clearly because they want to use a lower quality product to help their margins. How do you see that developing over the next 12 or 24 months, and has the structural change shifted the margin position for China, do you see? Thank you very much.

Mark Cutifani

So, Tyler, I am pleased to see you observed that I had a haircut for today. It always very diverse to compare one against the other, so I will steer around that a little bit, but we have significant opportunities and the team has done really good. We are coming out of Covid. I think everybody has had lots of issues. We are no different, and particularly on that development reliability front. So we have got to boldly step out and address those issues with the team.
And I think that is what the asset review team has helped do with the young team members, in particular across the board, and I think that is an important step. I guess we did learn from some of the processes we used in Anglo, but what I would say is I think every business should go through a similar process every five years. And in fact we have been talking about the same sort of exercise. And so I think it would be fair to say the next year or so will be bumpy. And I am drawing on 47 years of experience, is while you are tight with development, you are not going to have the reliability you would like.
We understand that we are in that debate, but each year as we go forward, we will get better and more reliable and I think we are probably three years behind, Carlos, would be my guess, in that journey. And the question for us is how quickly can we bridge it. And as I said with the asset review team, with the teams that we have got and with the work we are doing, we think we can close that off a lot quicker – a year to two years. I would think that 2026 will be a true expression of what we think we can do. And not only will you see what we can do, you will see where we see lots of value, and I think that conversation next year will be important in terms of what we can see in terms of the look ahead.

Marcello Spinelli

Tyler, we see this 18 months almost with this low margin in the market. The last time we had this, it was less than that. We had that supply side reform that we do not expect to happen this time. So the problem is in the demand side, so price of steel is the key point here. In the demand, as I mentioned in the previous question, we believe that there will be a recovery while you have these stimuli in place, mainly in properties that is declining but almost stabilising with, with the offset of SOE's investments and also the social housing. There is a decline.
On the other hand, in infrastructure we should see some balance in the market, so pressure should be expected at least in the second half. You see the premiums are now a little bit better than two months ago. There is now a pattern of seasonality that we have an increase of the cost of coke that is seasonal in China, so you have a peak now, but we see readily a recovery of that by the end of the first half and the second half we go back. At least we see that.
The other point that you may consider is the Chinese behaviour. They have goals, so they have to finalise the year, so they will have another set of goals for next year that probably adjust the necessity to produce or keep the machine running. Then we adjust the size of that, even the export. So we see more organised business for next year.

Alfonso Salazar, Scotiabank

Thank you. We have not heard that much about value over volume lately, so the question that I have is let us just assume, for argument's sake, that the demand for iron ore three years from now, is not as strong as you expect. So what can Vale do to adjust to those market conditions? That will be the question that I have.

Marcello Spinelli

The answer is segmentation. So, when you talk about an additional 50 million tons, we are always emphasising that regarding the quality, so we see a growth market for pellets, briquettes, or high-grade ores. So that is the key point here. If you do not see this market or if there is a delay in the Mega Hubs, we are only going to bring briquette plants or increase this volume if you have... And actually, it is very important because it is a new way to define the relationship with the clients. We are not building Hubs like we have in Tubarão and produce into the world. So we are building together. We are together defining the investment in any place in MENA or in the US or in Brazil. So that part is really adjusted to the market. And if you do not see a market to this level of volume, but you need to think about what low-grade, mid-grade and high-grade is and what is pellets and what is briquette, we have to adjust, so we do not have any problem. And we can do this, because we have flexibility in our business. Carajas in one point, we can blend. So we can see this more and more flexibly because we have a very sophisticated supply chain.
We are open to other markets that can spread the risk. So, we are moving to the Middle East, that is feeding Europe or feeding the Asian market. So that is another point: spread the risk and open other markets and balance the spread.

Eduardo Bartolomeo

Just to add one thing, Leonardo, to the point when we are really going to release capacity actually is when the pressure is going to come on, the big pressure on S11D. So, then we would do actually the value over volume, when we have volume. So that is the point. And we would have to have the hard decisions. We have high cost margins that we can shut. So there are things that we could do eventually if the market does not show up. But we truly believe that demand is coming, but if not, we still have a lot of levers inside Vale to do it. We cannot do it today as we speak because the flexibility we do not have, as we get predictability on and of course the projects are executed, then we can do the decisions that we do not want to take, but we could take.

Caio Ribeiro, Bank of America

Thanks for the opportunity. So I have a couple questions, you know, first of all on the Samarco renegotiation process. We know that negotiations are ongoing. Some press reports indicate a final number, even upwards of 100 billion reais, but at the same time you guys showed a slide where you show that there has already been 34 billion reais spent. You have over $3 billion worth of provisions and Samarco itself is expected to double production in 2025. With these higher iron ore prices, cash flow generation should be higher as well. So I am just wondering if you can help us reconcile these different moving parts. How should we think about these things, particularly in the context of additional provisions, that the company could end up booking.
And then secondly on iron ore, I have a question that is more of a short-term, but also long-term perspective here. Short-term we saw that this year the mandatory production cuts in China were not really enforced. So I just wanted to get your perspective as we look to the years ahead, whether you see this playing out in a similar way. Do you see any fundamental reasons to believe that they will not enforce these production cuts at least as rigorously as before. And then in a more long-term perspective, you did touch on the point, Spinelli, of India. They do have plans in the next ten years to double steel production. So I just wanted to see whether you see that as an opportunity or not. Thank you.

Eduardo Bartolomeo

I will start with Samarco and then Gustavo can complete. What we want to do with Samarco as we are on the table. We do truly, as I mentioned, want to get to an agreement. But an agreement that has to have the same similarities that Brumadinho had. We need discharge, we need to transform obligations “to do” to “to pay”, and we are still on the phase of negotiating the architecture of the legal agreement. And as Gustavo is negotiating that, he could give some more colour and go after the fact that it is true, Samarco will be very healthy in 2026.

Gustavo Pimenta

The focus has been performing on the 42 programs, and that is more than 400,000 people indemnified and that the water is in the same condition as it was before. So all of that is moving along. In parallel as Eduardo said, we are working hard to finalise the agreement, which is complex because it involves several parts. After that, we will then engage in negotiations to finalise the numbers. I think what we always say, it has to be a text that works for everybody – for us, but also for the governments, and the governments in this case and all the stakeholders. And that applies to the value as well. So, our belief is what we have in our books is the right amount to fulfil their obligations, assuming remember that at Samarco the agreement we have with the creditors has a cap of $1 billion, so that constrains a little bit, although it has some cash sweep opportunities, but that is too specific. I think for us it has to be a value that works. It has to work for the government for sure, but also it has to work for the sponsors, and it has to be a number that we can stand behind and defend in front of our shareholders. All of that is to say that we believe that what we have in our books is the right number, but we continue to be constructive because we think and we understand that a resolution here is good for everybody. So we are going to work very hard to be able to reach a final resolution.

Marcello Spinelli

China is much more resilient than we could expect. This is amazing because even as all of us here, analysts, investors used to track China in a way, they are changing so fast. One example is about properties. We expected something to go really down, close to -10%. It is not that because we are tracking wrong numbers. They are changing their manufacturing from toys to machines to electrify the world. We did not track that. They are improving their quality.
So we have all the micro information, microeconomic information that is really good. So where are the still, because they are doing something. We need to reshape this and check this again, because we are not tracking. We have this problem because the reconcile is not working. So that is the resilience that we should pay attention to. But what I see is that it probably will decrease next year is the export. So as the level of 90 million tons, our forecasts probably go back to 60 million tons. We do not see a mandatory cut, but actually the rebalance of the internal demand when you consider all this had a better increase or a better level of price in the first year that can rebalance the market again. So that is what to expect.

Amos Fletcher, Barclays

Thank you very much. It is Amos Fletcher at Barclays. I just had a question on the base metal business. Looking at the EBITDA breakeven numbers you are presenting for the nickel business, and using spot nickel prices at the moment and obviously there is a bit of a risk that those would come down over the next couple of years, implies not a lot of EBITDA generation coming out of nickel. And if we then layer over 2.5-3 billion of capex as you are guiding, the business does not look likely to generate much if any free cash flow over the next few years. So I want to ask how do you propose to fund that negative free cash flow, given value based metals now has to operate with its own standalone balance sheet?

Gustava Pimenta

Vale Base Metals also has Salobo, so your statement is correct for the nickel business which is a lot tighter, and it will depend on how prices recover if they do recover and by when they recover. But copper continues to be a very healthy cash generation business, so when you look at the overall Base Metals organisation, it does have a very healthy capital structure, cash generation, which will be able to to accommodate even stricter price projections. So, remember when we announced the transaction with Manara and Engine No. 1, we have also agreed to leave $1 billion at the business, so the business will be starting with a net cash position of $1 billion. So, there is plenty of room for us to accommodate temporary market conditions, especially given this strength of Salobo and Sossego.

Eduardo Bartolomeo

And do not forget the strength of copper.

Deshnee Nadoo

And Base Metals starts with a generally unleveraged balanced sheet from day one.

Grant Sporre, Bloomberg Intelligence

Thank you very for the presentation. It is Grant Sporre from Bloomberg Intelligence. It is a follow-up question probably for Spinelli. It just seems to me that the quality premiums on iron ore are still cyclical and we are not really seeing that sort of upward trajectory that certainly I expected, and I think you expected as well. So what needs to change? Is it more consolidation in the Chinese steel industry or is it your strategy of switching to the Middle East and not being so dependent on China for your premiums? What needs to change for that structural increase?

Marcello Spinelli

What are the main elements that make our clients decide for a high grade ore and increase the premiums? Cost of energy is the first one. Coke. Cost of coke. When you increase this you have to save energy and you do this. The other point is when you have to improve your efficiency, you want to produce more, and to produce more you need price. You need to make money. So that is the problem today that you have. Sometimes you can have more because of the cost of energy, more because you can make more money so you can do this.
But mainly what is the fundamental long-term view that we remain really confident about? Energy transition is the key for that. So if you need to decarbonise, you need to save energy. That is mandatory. Otherwise, you cannot do this. If you need to move from blast furnace to the direct reduction, you need to use high grade ores. There is a melter, but you could see the difference when you use the melter over the direct reduction that we have today. This is a structural thing. That is already happening, but it may take some time, because you need all the CBAM that has started to be measured in Europe. We have a lot of clients – Chinese, Japanese, Koreans, going to the Middle East. Europeans going to the US. Europeans going to Brazil for greener business. So there is a roadmap to get there. That is the way we saw. That is the way we showed. So from now, probably more short-term variation as you mentioned, cost of coke and the profitability, but in the longer term, you have a structural transformation, cost of CO_2, the necessity to have a transition.

Eduardo Bartolomeo

I have two remarks to make. First of all, it is great to be in London. I think it is always nice. I remember the last time we were here. But of the two remarks I want to make, the first is to thank Deshnee, who has had lived through what we lived through the last two years, knows how the hard work was, how hard it was to do and how successful the carve-out was even in the values dimension. So thank very much and I wish you all the best in your new challenges.
And secondly, my team and I are truly committed. I do not like to think of the idea of the 2026, but I will never want to not see what is going to happen in 2026. So, we are working extremely hard on all the foundations, and I think we are just there, just very close to, to capturing all the hard work that has been done in iron ore and all the hard work, and I want to see what Mark is going to deliver for the second time, like rumble #2. And again, thanks a lot for your attention. Thanks for coming. And of course, the ones that are watching us through the streaming, all the best. And I will be here for a little bit to answer questions that we did not have the chance to answer. Thank you very much.

This Full Transcript was produced by Ubiqus (Acolad UK Ltd)
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