



VPS is the Vale way of doing things.

This guide presents the contents that compose our Management Model.

Practice it in your routine.

# Contents 8. M. 9. Chai 10. Minir

Each chapter presents a dimension of the VPS, its elements and minimum requirements. We suggest you keep it handy and refer to it to answer questions and to guide your team.

### Leadership &

1. Culture and engagement	13
2. Talent management and development	
3. Individual and organizational performance	
Technical 🙆	
4. Risk perception and management	19
5. Health, safety and environment	20
5. Projects and construction	25
7. Operations	28
3. Maintenance	31
9. Change management	
10. Mining planning	37
I1. Sustainability	
12. Emergency, crisis and business continuity	
anna	
Management 🍣	
13. Strategy deployment	44
14. Routine management	
5. Processes and standardization	
16. Problem solving and continuous improvement	
17. Evaluation of the management model and results	
~	

# Learning together

# Our Purpose

We exist to improve life and transform the future.

Together.

Why do we exist?

Values

- Life matters most.
- Act with **integrity**.
- Value the people who build our company.
- Make it happen.
- Respect our **planet and communities**.

### **Key Behaviours**

- Obsession with safety and risk management.
- Open and transparente dialogue.
- Empowerment with accountability.
- Sense of Ownership.
- Active listening and engagement with society.

### Levers

- Safety
- VPS
- People
- Innovation
- Sustainability

### **Ambitions**

A great company recognized by society for being:

- Benchmark in safety.
- Best in class reliable operator.
- Talent driven organization.
- Leader in sustainable mining.
- Reference in creating and sharing value.

What do we look for?

**What** do we believe **in**?

**How** do we act?







- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS Vale's management model The Vale way of doing things

VPS (Vale Production System) is the path we must follow to become a safe, sustainable, reliable and productive company.

Focused on results and aligned with the "Learning Together" approach, VPS is a fundamental lever for our cultural transformation, acting through the development of people, the standardization of best practices, routine compliance and operational discipline. It is the Vale way of doing things and learning together.

VPS has three dimensions – Leadership, Technical and Method – which bring together practices, guidelines and policies to transform our culture, continuously improving and sustaining our results while paying attention to the risks inherent to our business.

Its application is mandatory: it must be adopted globally by all our operating and administrative areas.

Through VPS, we ensure methods and processes that allow us to evolve constantly, with people at the center of decision making. Keeping people at the center means guaranteeing resources and basic conditions for carrying out activities, as well as a safe, healthy and respectful environment for each individual. VPS is made by people and it's made for people.









- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

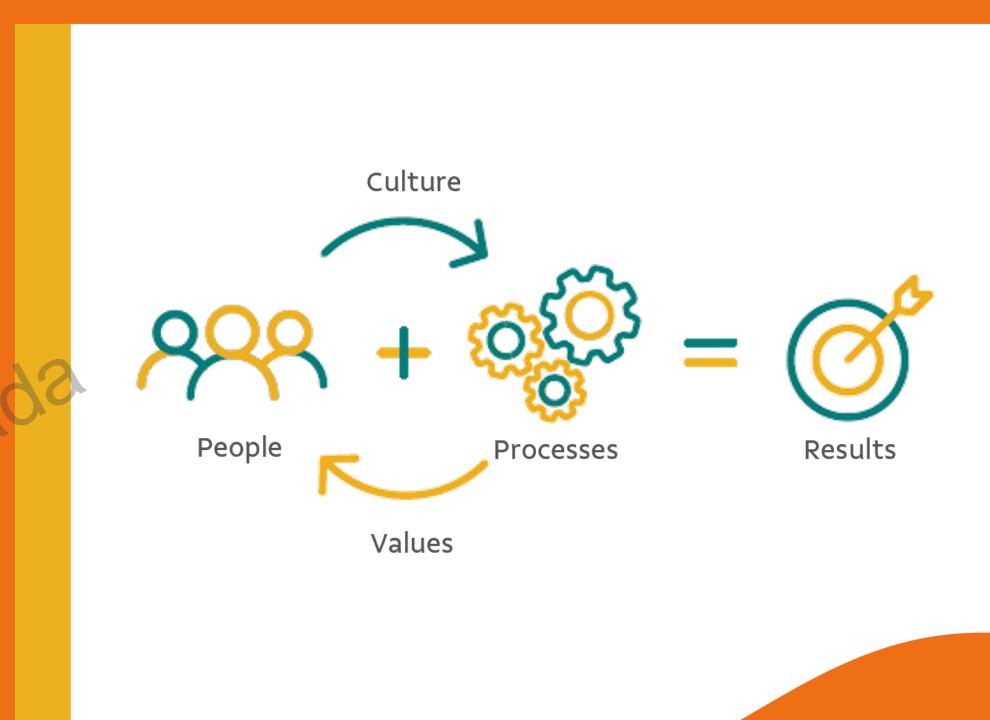
- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

VPS is constantly evolving, continually improving its approach, methods, techniques and tools in line with the lessons learned internally and externally. In this edition, VPS Manual has been updated in order to incorporate learnings, to have the model more focused on strategic issues and the mining industry, and to help making VPS more mature and simpler.

Following these premises, the elements "Systems and Technology" as well as "Procurement and Services" have been incorporated into other existing content, while "Mining Planning" and "Sustainability" have been designed as new elements, now part of the Technical dimension.

Each of us has a fundamental role to play as an agent of change, contributing to the implementation and evolution of VPS at Vale.

We invite you to get to know and use this manual in your daily activities, resourcing to it whenever necessary.









- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# The VPS Fundamentals support this journey, leveraging our cultural transformation.

### People at the Center

We work to ensure safe, peoplecentered operations. Risks and overloads are eliminated, promoting safety and productivity. The resources to carry out activities are present and the basic working conditions are guaranteed.

### **Pursuit of Excellence: Continuous Improvement**

Everyone is engaged in the search for the ideal condition. Improving activities and processes is part of every employee's routine, ensuring quality at every stage, reducing waste and thus improving results.

### **Exposing and Solving** Problems

The environment is proper to make problems be seen as opportunities and be easily visible as soon as they happen. They are tackled at their root cause, based on facts and data, promoting learning and sustainable results.

### Value Chain Integration

Our purpose is clear and directs our efforts through collaboration and synergy. We work with focus on results through a systemic vision, developing people and processes, guaranteeing the generation of value for our clients.

### Presence in Gemba

Leaders are intentionally present on a daily basis, guaranteeing resources, checking references and promoting the help chain for the identified problems. They empower and develop the team with transparency and continuous feedback.











- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results



### Leadership 88

Set of leadership practices expected to reinforce key behaviors and shape organizational culture and discipline.

Common policies, guidelines and technical process requirements for managing assets and dealing with risks inherent to our business.



Routines, methodologies and management tools structured to sustain and improve results.







# Elements

### Leadership

- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# Leadership ?

- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

# **Technical**



- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity



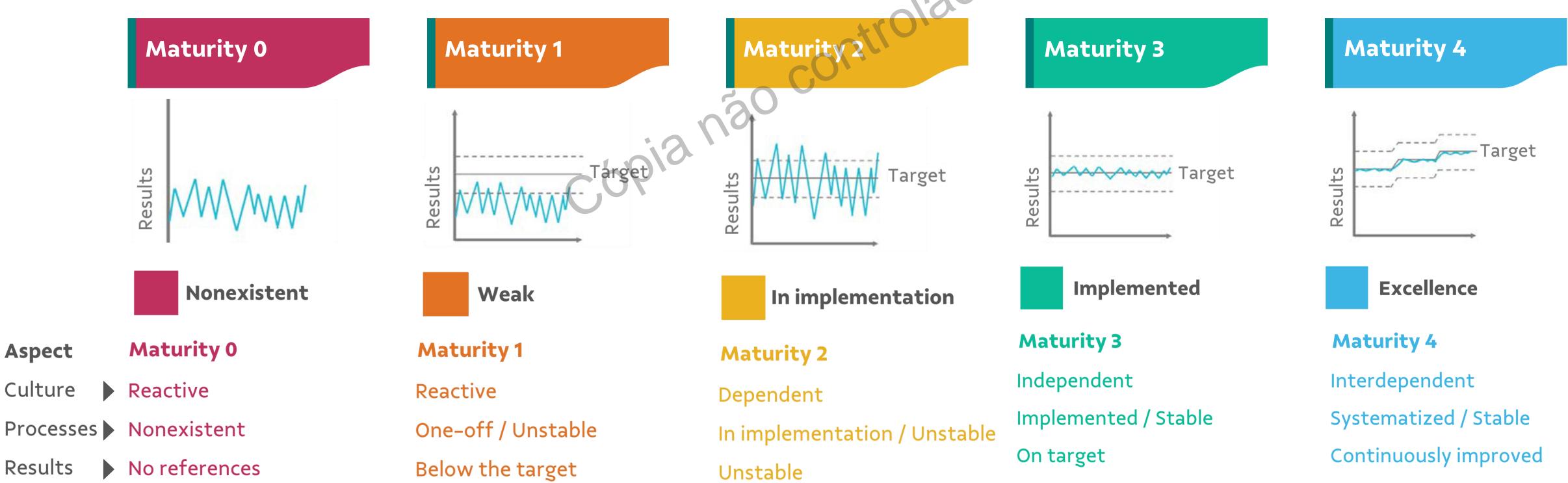


- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# Maturity Curve

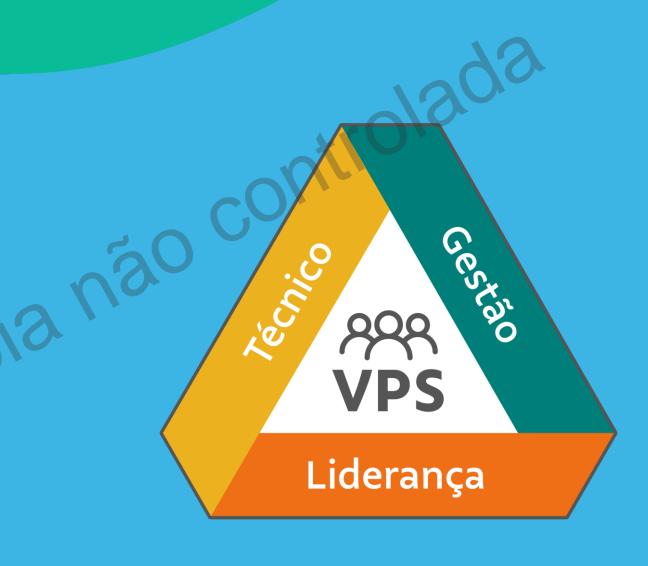
The VPS maturity curve helps people understand what actions and changes in attitude need to happen in order to advance with the implementation of the management model. It was inspired by Dupont's Bradley Curve and demonstrates that a successful safety culture empowers people while promoting sustainable results in terms of health, safety, the environment, communities, risks, quality, productivity and costs.

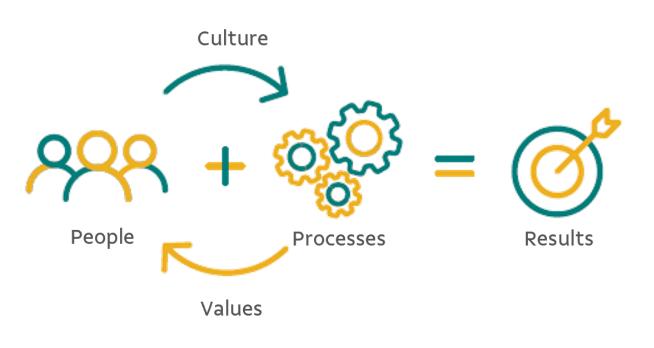
# Expected results at each maturity level



# VPS implementation is successful when:

- People start work with a sense of purpose and finish with a sense of sense of accomplishment.
- The problems are visible and people are engaged in solving them.
- Our assets are operated and maintained with excellence.
- Standards and processes are adhered to with operational discipline.
- We have a good reputation among our communities, suppliers and clients.







# Leadership Dimension

1. Culture and engagement | 2. Talent management and development | 3. Individual and organizational performance



- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS - Leadership Dimension

# 1. Culture and engagement

Leadership practices, encourages and promotes the key behaviors in all day-to-day work interactions, values diversity, equity and inclusion in its teams. Besides, they promote well-being and a safe working environment (physical and psychological) where people feel free to express themselves, respecting local legislation and Vale's Code of Conduct.

### 1.1 - Open and transparent dialog

Open and Transparent Dialog is practiced by everyone. Leadership promotes an environment of humility, respect and psychological safety, exposing problems and mistakes, sharing different opinions and valuing lessons learned.

### 1.2 - Empowerment with accountability

Empowerment with accountability is practiced, through clear requests, defined agreements and with responsibility and commitment for deliveries and results. There is an environment for learning, collaboration and continuous development, with trusting space to give constructive feedback and have difficult conversations.

### 1.3 - Respectful environment

There is an environment of respect for everyone, with a focus on inclusion, with no tolerance to any form of discrimination and prejudice, harassment, microaggressions or offensive comments.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS - Leadership Dimension

# 1. Culture and engagement

### 1.4 – Inclusive work environment

The work environment is inclusive and safe, ensuring accessibility according to the needs of the team and customers.

### 1.5 - Representation of minoritized groups

Leadership promotes actions to ensure diversity commitments are met, according to the references defined by Vale.

### 1.6 - Well-being

Leadership contributes to promoting the team's full well-being, acting preventively in employee health management, directing them to support channels when necessary.

### 1.7 – Frequency

The management of frequency processes is carried out in accordance with pre-established guidelines and orientations, aiming for balance in professional life.

### 1.8 - Ethics and integrity

Leadership plays a leading role in the Ethics & Compliance Program, working to prevent, detect and correct misconduct. The ethical principles of our company's Code of Conduct are put into practice by people in their daily decisions. The topics of ethics and integrity are present in the team's routine.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS - Leadership Dimension

# 2. Talent management and development

Leadership must act responsibly in the selection, training, development and retention of teams, aligned with the People strategy and promoting the Learning Together culture.

### 2.1 - Vacancy planning

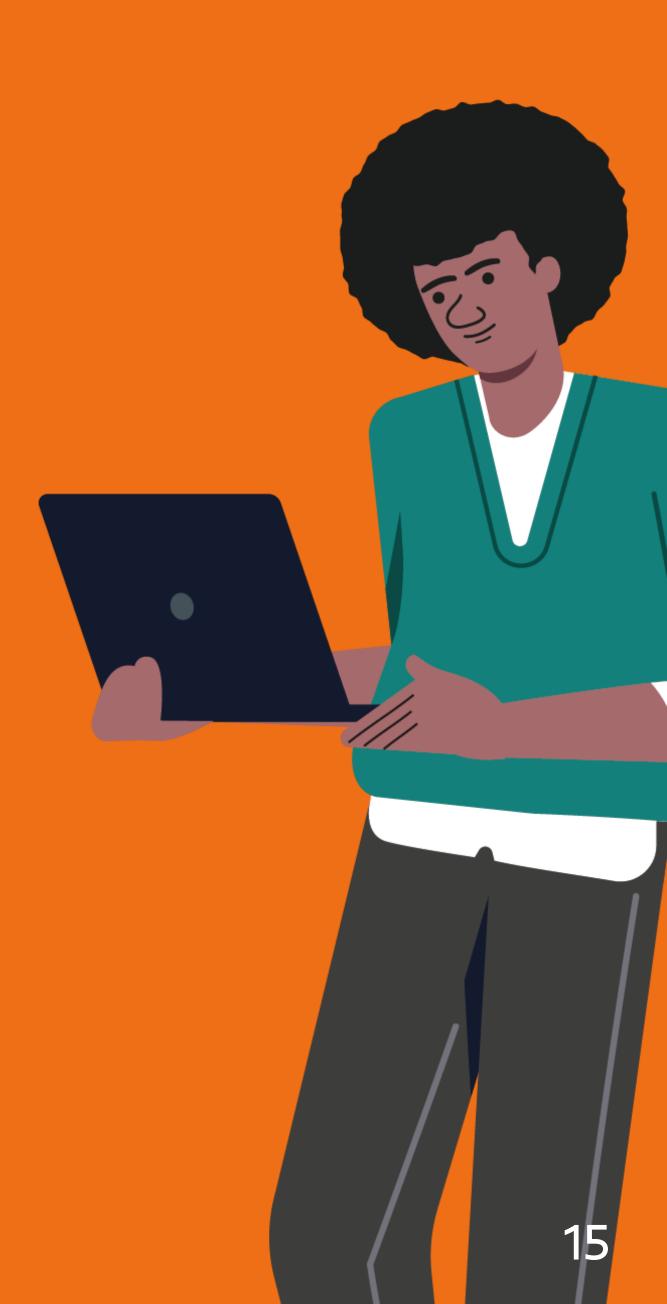
Headcount planning and vacancy openings are carried out in accordance with Vale's guidelines and are adhered to it, mitigating the cancellation of vacancies.

### 2.2 - Internal use

Before starting the selection process, Leadership considers the team's career interests and competencies for possibilities of internal use, including Entry Level Programs participants.

### 2.3 - Adherence to deadlines and recruitment and selection practices

The talent attraction and acquisition process is carried out in accordance with Our Vale Way to Recruit, meeting established deadlines, valuing the candidate's good experience in relation to the selection process and, thus, strengthening Vale's Employer Brand.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS - Leadership Dimension

# 2. Talent management and development

### 2.4 - Employees trained to perform their roles

Mandatory training is completed to ensure that employees are safe and qualified to perform their respective roles.

### 2.5 - Culture of Learning Together

Learning Together is experienced and has its practices supported by leadership, ensuring the environment for sharing, self-development, learning in practice and with others.

### 2.6 - People development

Development conversations between leader and subordinate are held at the frequency recommended in the People Development Cycle, monitoring development, career and performance.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS - Leadership Dimension

# 3. Individual and organizational performance

Leadership is responsible for managing the organizational structure, evaluating and recognizing employees' performance according to their contributions and aligned with key behaviors.

### 3.1 - Organizational design

The organizational structure is respected according to design and sizing guidelines, with the scope and responsibilities of the roles established, to fulfill their deliveries with expected results.

### 3.2 - Budget adherence and sizing

Leadership manages the volume of vacancies and personnel costs, not exceeding the limits established in the budget cycle.

### 3.3 – Performance

Employee performance management is carried out through evaluation of the leader and the definition and monitoring of individual goals, when applicable, based on the delivery of results combined with the experience and application of key behaviors.





# Technical Dimension

- 4. Perception and risk management | 5. Health, safety and environment (HSE) | 6. Projects and constructions |
- 7. Operation | 8. Maintenance | 9. Change management | 10. Mining Planning | 11. Sustainability |
- 12. Emergency, crisis and business continuity



- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 4. Perception and risk management

Vale has an integrated risk management governance system based on the concept of Lines of Defense, which aims to contribute to the prevention of the risks and the mitigation of their possible impacts. The risks must be assessed according to five aspects: personal, environmental, social & human rights, reputational and financial, whenever applicable. The company is committed to managing risks proactively and effectively, always prioritizing the safety of employees and partners, the communities where it operates and care for the environment.

### 4.1 - Risk management methodology

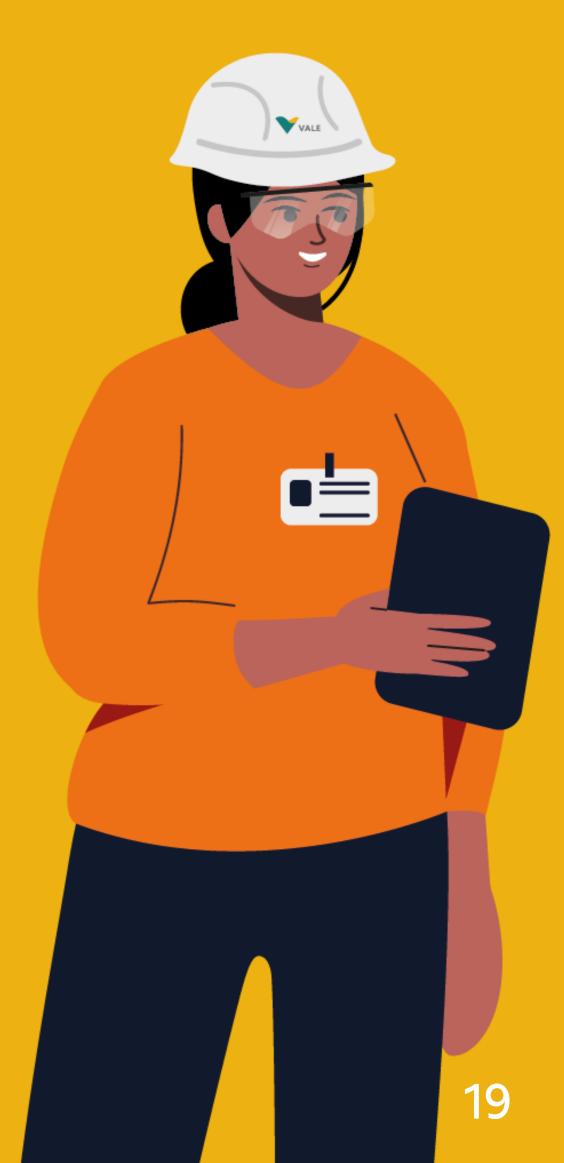
The Risk management takes an approach that assigns roles and responsibilities aligned with Vale's guidelines based on tools and methodology to treat and monitor the risks and controls at appropriate governance level.

### 4.2 - Identification, registration and updating

The Risks are identified, registered, and periodically reviewed according to deadlines and standards.

### 4.3 - Controls, indicators and action plans

The Registered risks have appropriate controls, indicators and action plans to ensure the effectiveness of prevention and mitigation measures.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 5. Health, safety and environment (HSE)

Health, safety and environmental management considers impacts, risks and legal requirements related to Vale's activities and establishes appropriate criteria for the safety of people and processes, the health of those involved and environmental impacts, with measures and controls for our processes.

### 5.1 - Work, cleanliness and comfort conditions

Adequate physical and sanitary working conditions are maintained, meeting established health, safety and environmental standards.

### 5.2 - Occupational hygiene

Risks associated with Occupational Hygiene, related to employee exposure to chemical, physical and biological agents, are anticipated, recognized and managed with controls implemented to mitigate or eliminate them.

### 5.3 – Ergonomics

Risks associated with ergonomics are identified and managed, and controls are implemented to mitigate or eliminate them, providing working conditions compatible with employee needs.

### 5.4 - Fatigue

Risks associated with fatigue are identified and the necessary controls to effectively prevent and mitigate these risks are managed, in order to promote employee health and safety.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 5. Health, safety and environment (HSE)

### 5.5 - Integral health care

Integral health care processes are implemented in a way that ensures their promotion, prevention and treatment of risks to employees and contractors.

### 5.6 - Personal protective equipment (PPE)

Personal Protective Equipment (PPE) is appropriate to the risks and controls are managed, for employees, contractors and visitors alike.

### 5.7 – Safe behavior

Behavioral guidelines and programs are implemented to encourage people to value safe behaviors, intolerance to unsafe behaviors, risk perception, understanding and compliance with procedures and rules for safe decision–making.

### 5.8 - Critical Activity Requirements (CAR)

The Critical Activity Requirements (CAR) are implemented in a way that prevents and mitigates the risks associated with tasks execution.

### 5.9 – Job safety analysis (JSA)

Tasks are preceded by a Job Safety Analysis (JSA), including unprocedural activities, when applicable.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 5. Health, safety and environment (HSE)

### 5.10 – Safe work permit (SWP)

The Safe Work Permit (SWP) process, when applicable, is implemented by assessing risks in the field and defining control actions to carry out tasks safely.

### 5.11 - Environmental aspects, impacts and controls

Environmental aspects from processes, activities and products are identified and evaluated through the Env Aspects and Impacts Assessment (EAIA). From this, control measures and actions to reduce or mitigate their n impacts are implemented.



### 5.12 - Chemical products

The control of chemical products is structured, since the time of acquisition throughout use and even disposal, and mitigates or eliminates impacts on people, the environment, facilities and operations.

### 5.13 - Legal requirements

There is a process to evaluate and manage compliance with legal requirements and other HSE requirements applicable to its activities.



- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 5. Health, safety and environment (HSE)

### 5.14 - Communication, participation and consultation

The process of communication, participation and consultation, involving interested parties on HSE topics, is established and implemented, in order to reveal relevant information and related policies.

### 5.15 - Reporting and investigation of events and non-conformities

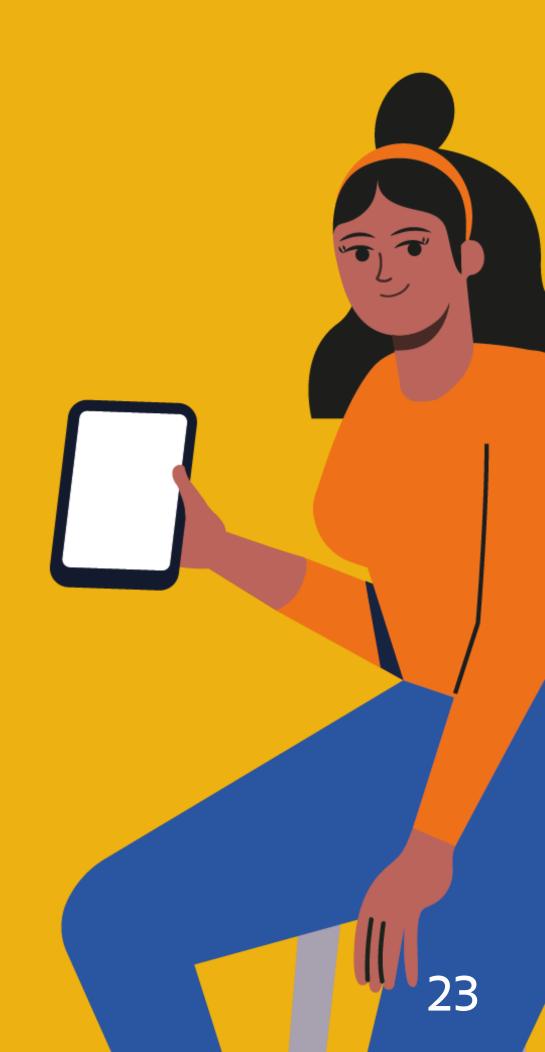
Events and non-conformities related to Occupational Safety, Operational Process Safety, Environment and Communities are reported, investigated and communicated, in order to address the root causes and contributing factors, with corrective and preventive actions to promote organizational learning.

### 5.16 - HSE management for contractors

Health, Safety and Environmental standards are established, maintained and verified in the phases of the supplier management process, in order to prevent and mitigate the risks associated with the execution of tasks and ensure the fulfillment of contractual requirements.

### 5.17 – HSE inspections

The HSE inspection process identifies gaps in compliance with internal and legal requirements, and the results of these inspections are recorded, analyzed and processed.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 6. Projects and constructions

To ensure the correct allocation of resources, Vale prioritizes, develops and executes projects and constructions according to technical and business processes, applying the best market practices, and achieves, through a multidisciplinary approach, safe and sustainable operations, with predictability and competitiveness.

### 6.1 – Portfolio

The portfolio is prioritized on a multi-year basis, guided by the expected benefits and aligned with the company's strategic business and financial guidelines.

### 6.2 – Scope

The project's scope of the projects is developed and monitored based on technical and business requirements. Changes are evaluated, approved, controlled and disclosed in order to ensure the assumptions of the projects.

### 6.3 - Engineering

Engineering is developed applying solutions that meet internal and external technical requirements, with a focus on process optimization, constructive feasibility, sustainability, productivity and competitiveness.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 6. Projects and constructions

### 6.4 – Planning

The schedule reflects the main activities, durations, milestones, resources and sequencing of the project execution.

### 6.5 – Budget

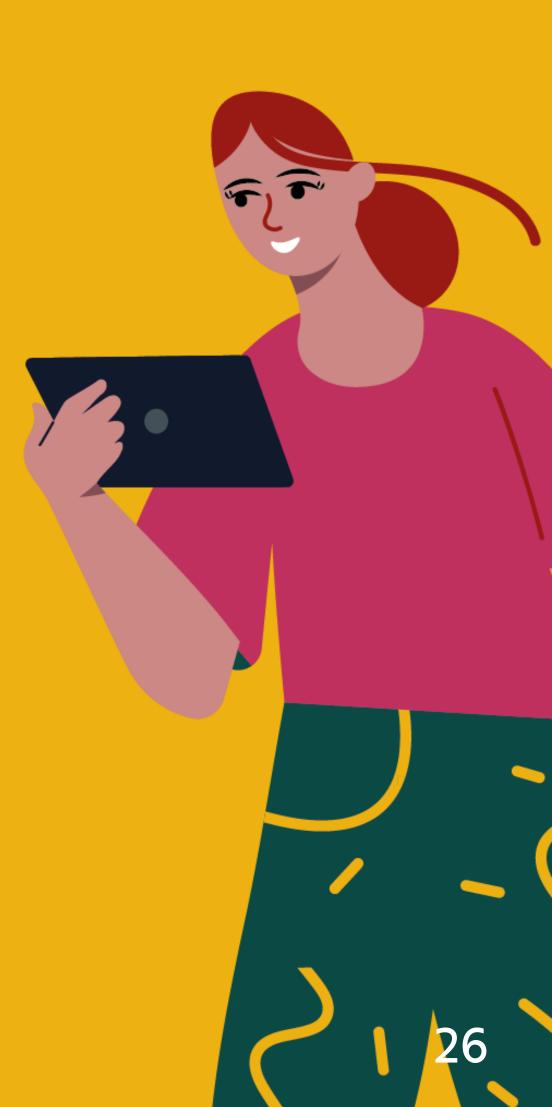
Project budgeting is based on engineering, planning, construction and procurement strategies appropriate to the development phase.

### 6.6 - Construction

The construction is planned, executed and controlled to assure the project deliverables, with people and assets safety.

### 6.7 - Completion

At the end of each project phase, documents and obligations are transferred, while lessons learned are identified. Projects are delivered in accordance with the expected scope, deadline and budget, with benefits measured and properly aligned with the client.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 6. Projects and constructions

### 6.8 - Deliveries and maturity

In each phase, the team develops the expected deliverables, and at the end of the phase, they are submitted to an assessment to support the decision making regarding the next steps.

### 6.9 – Project risks

The integrated project risk management identifies, evaluates, and monitors the risks related to the achievement of the project goals, acting preventively to minimize potential impacts and reduce the probability of risks materialization.

### 6.10 - Operational readiness

Representatives of the operational areas participate during the entire life cycle of the projects to ensure that operational requirements are met.

### 6.11 - Quality

Quality assurance processes ensure that the facilities and materials received meet project requirements and specifications and the construction complies with applicable standards.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 7. Operation

It aims to operate the facilities within pre-established technical standards and parameters in a reliable manner with a focus on the safety of people and their assets.

### 7.1 - Short-term mine planning

The short-term mining plan is designed to meet production requirements, operational stability and maximize revenue. It considers technical and economic feasibility to optimize the use of assets and reserves.

### 7.2 - Value chain planning

The plan is designed to satisfy production requirements, operational stability and maximize revenue. It considers technical assumptions, risks and opportunities and is broken down from GVC (Value Chain Management) horizon to the daily Horizon to optimize the use of assets and ensure the connection to the supply chain.

### 7.3 - Execution planning and scheduling

The operational activities as well as inputs and services associated with production are planned, scheduled, monitored and controlled to enable efficient and safe execution.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 7. Operation

### 7.4 - Execution

The assets are operated, and the activities are performed in accordance with technical procedures and parameters.

### 7.5 - Priority variables

The priority variables of the processes are identified, controlled and have their limits defined and deviations treated.

### 7.6 - Basic operations guidelines (DBO)

A DBO (Diretrizes Básicas de Operação – Basic Operation Guidelines) process defines a minimum routine for checking operational standards and regulations to guarantee and monitor compliance and to address deviations.

### 7.7 - Quality management

The area monitors the compliance of its inputs, raw material, intermediate materials, final product and services. The controls and actions necessary to ensure their quality are managed to meet client (internal e external) satisfaction and adherence to the production plan.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 7. Operation

### 7.8 - Inventory management

Strategies for inputs, raw material, intermediate material, and final product inventory are stablished and managed.

### 7.9 - Operational reliability

The area has a reliability process that is based on structured analyses to mitigate and correct operational losses generated by events.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

### 8. Maintenance

Vale maintains it's facilities within standards, parameters, norms and legal requirements established with a focus on the safety of people and assets, in a reliable way.

### 8.1 - Maintenance strategy

The assets are registered with an established taxonomy, classified by criticality and priority, and have a defined and updated maintenance strategy.

### 8.2 - Asset modification

The modification of assets is considered in the multiannual planning for resource sizing by applying a Change Management process and ensuring its feasibility and proposed return.

### 8.3 - Multiannual and medium-term plan

The multiannual plan is unfolded for the medium term, with sizing of resources and necessary budget to comply with the maintenance strategy and aligned to the production plan.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

### 8. Maintenance

### 8.4 - Maintenance organization

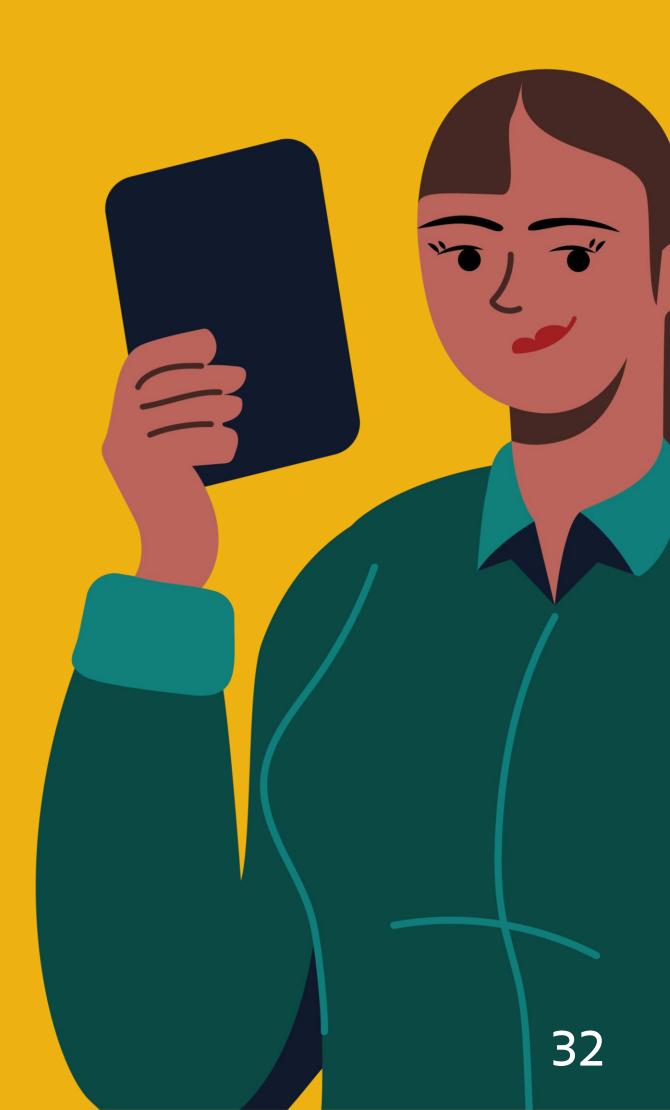
The organization of maintenance is defined by a minimal structure of engineering, reliability, planning, control, inspection and execution processes, ensuring independence of their functions and the fulfillment of their responsibilities.

### 8.5 - Major shutdowns

Major Shutdowns are defined and managed through specific planning, considering necessary contingencies, health, safety and environment requirements to comply the estimated scope, time, and cost.

### 8.6 - Planning, scheduling and control

The processes of planning and scheduling are applied to maintenance activities, considering health, safety, environmental requirements, and technical specifications. Additionally, a controlling process is used to measure and monitor maintenance health indicators, aiding in the identification of deviations and improvement opportunities.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

### 8. Maintenance

### 8.7 - Materials and components management

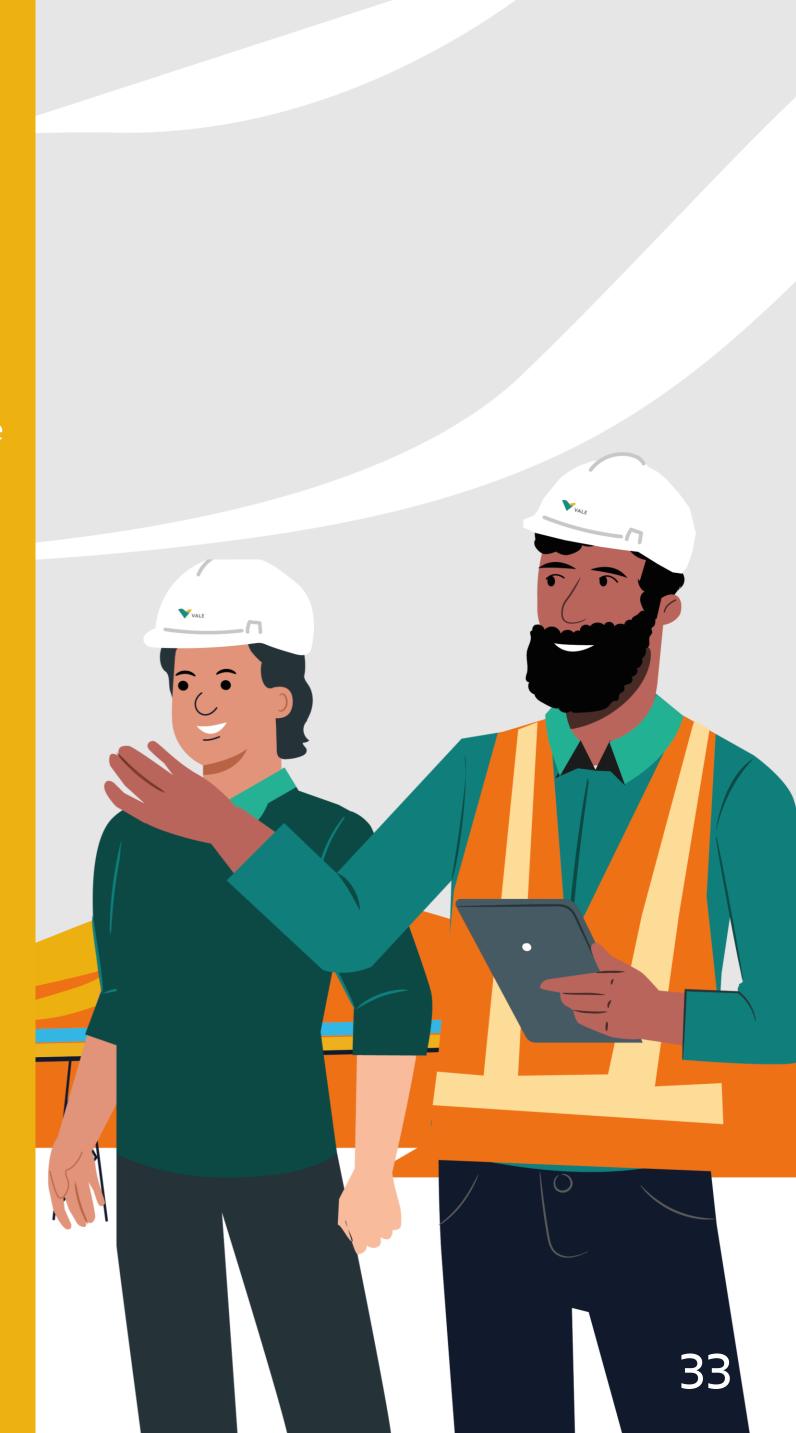
Materials and components are planned and managed to ensure they are available in the appropriate quantity, at the right time, and with assured quality to support maintenance executions.

### 8.8 - Tools and auxiliary resources management

Tools and support resources are planned and managed to ensure they are available in the appropriate quantity, at the right time, and in a condition of assured usability to support maintenance operations.

### 8.9 - Inspection and execution

Maintenance activities, whether they are execution or sensitive and predictive inspection, are carried out in a standardized manner, within the agreed-upon timeframe, meeting health, safety, environmental requirements, and technical specifications. These activities are recorded in the computerized maintenance system.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

### 8. Maintenance

### 8.10- Analysis, loss treatment and failure prevention

A process for identifying gaps, analyzing, treating losses, and preventing failures is applied based on defined failure modes and triggers.

### 8.11 - Reliability analysis

Reliability analysis using statistical tools are done to contribute to continuously improve asset performance.

### 8.12 – Life-cycle cost analysis

A life cycle cost analysis of the assets is routinely used to analyze cost and performance scenarios, assisting in decision making and feeding back into the maintenance strategy.

### 8.13 - Temporary inactive status of assets

Temporary inactive status of assets is considered in the multiannual planning process for resource sizing, applying Change Management process.

### 8.14 - Basic maintenance standards (DBM)

A DBM ([Diretrizes Básicas de Manutenção - Basic Maintenance Standards) process is applied to define a minimum routine for checking maintenance standards and regulations, ensuring compliance and monitoring.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 9. Change management

The Change management is a leader's role, which aims at guaranteeing that any alterations be elaborated and carried out accordingly, safe and appropriately in order to avoid possible loss or impact events due to these changes, minimizing, therefore, any incidents.

### 9.1 - Change management governance

The Change management governance is integrated with the area's management and performance routine and ensures a consistent and effective approach.

### 9.2 - Change proposal

The Change proposals are developed with a comprehensive understanding of associated impacts and benefits, aiming for decisions aligned with Vale's goals and its developments.

### 9.3 - Hazard identification and risk analysis

The dangers and risk levels of the change are identified and assessed, to allow the implementation of measures that guarantee safety and operational integrity.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 9. Change management

### 9.4 - Change implementation

The change implementation is based on planning and management elements and ensures that planned actions are carried out effectively and within the agreed deadline.

### 9.5 - Pre-startup safety review

A safety review process is conducted before the start or return to operation of the asset or process, with the objective of ensuring that the planned actions were completed, and risks were eliminated or mitigated, when applicable.

### 9.6 - Change effectiveness

After the change implementation, the effectiveness of the change is verified, to analyze the achievement of expected results.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 10. Mining planning

Vale optimizes, plans, and enables its mineral deposits and other assets within preestablished standards, parameters, norms, and legal requirements, aiming for the best use with a focus on safety, sustainability, and reliability.

### 10.1 – Geology

Geological information is provided in an integrated manner, with the appropriate level of detail and risk for the different decision–making processes. The activities, inputs, and services necessary to adhere to the principles of good practices, standards, norms, and national and international requirements are identified, ensuring the sustainability of the business through the replacement and addition of mineral resources.

### 10.2 - Resource and mining reserve

The management of resources and reserves complies with the basic principles required by national and international standards and requirements, ensuring the materiality of relevant information, transparency, consistency of public reports and the competence of professionals responsible for declaring mineral resources and reserves.

### 10.3 – Master plan

The long-term strategic plan is fulfilled by consolidating and managing strategic assumptions and connecting actions, deadlines, and targets to maximize asset returns.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 10. Mining planning

### 10.4 - Long-term planning

Mine plan strategies are cascaded down to the Life of Mine (LOM) in a multi-year plan according to production targets, investment schedules and sales strategies to strategically size the resources required to ensure operational safety, reliability of results and business sustainability.

# 10.5 - Medium-term planning

The medium-term plan details the operating production scenario, including the intermediate-level sizing of resources required for mining operation. It also conducts an integrated assessment of this plan, thus ensuring a more reliable, safe, and sustainable operation.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 11. Sustainability

Social and environmental dimensions are integrated into all the company's practices and decisions to ensure business viability and unlocking value, aligned with the established functions in Value Added Chain in Vale's business.

# 11.1 - Environmental impacts on communities

Environmental aspects on communities are monitored in order to eliminate, mitigate and/or compensate for nuisances perceived by communities, according to the company's values.

# 11.2 - Biodiversity

Indirect and/or cumulative impacts on biodiversity (species and habitats) are monitored and actions to enhance positive impacts/gains are established.

# 11.3 – Climate change

Manages and reports all sources of greenhouse gas emissions (GHG), as well as exposure to physical risks, aiming to promote greater resilience at Vale to the effects of Climate Change and contribute to Vale's Net Zero journey.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 11. Sustainability

# 11.4 – Human rights

The Human Rights are respected and promoted. Actions are carried out periodically and contribute to the prevention, mitigation and/or remediation of negative impacts and Human Rights violations.

# 11.5 - Territorial performance

Actions are carried out to transform the territories, to promote positive socioeconomic impacts and address relevant issues that may generate controversies and/or impacts on Vale's reputation.

# 11.6 - Listening and response mechanism

The Listening channels and the whistleblowing channel are known and disclosed, and the complaints from communities and other stakeholders are managed in order to meet the deadlines and to incorporates process improvement.

# 11.7 - Social-environmental repair

A socio-environmental Repair Plan is elaborate with the participation of those involved in the process and it's implemented for events with impacts on communities, in order to ensure that the measures adopted are effective.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 12. Emergency, crisis and business continuity

Vale has prevention as a priority, yet It seeks to always be prepared to respond effectively to all unwanted events. In that way, emergency, crisis and business continuity response plans are developed and maintained to meet varied situations, based on the inherent risks to our activities, minimizing impacts on people, environment, social and human rights, reputational and financial.

### 12.1 - Emergency

Emergency Response Plans are implemented, for risk scenarios of the processes, and ensure readiness in emergency situations, to protect the health and safety of employees and communities, as well as prevent and remedy environmental impacts and asset impacts at the company.

#### 12.2 – Crisis

Crisis management plans are implemented and ensure the organization's readiness for events that pose a serious threat to Vale's reputation and ambitions.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Technical Dimension

# 12. Emergency, crisis and business continuity

# 12.3 – Business continuity

Business continuity plans are implemented, with contingency strategies defined, which ensures the stability of critical processes.

### 12.4 – Drills

Drills are carried out periodically with the purpose of preparing and evaluating readiness for emergency situations, crises and operational discontinuity events.





# Method Dimension

13. Strategy deployment | 14. Routine management | 15. Processes and standardization |

16. Problem solving and continuous improvement | 17. Evaluation of the management model and results



- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 13. Strategy deployment

Strategy deployment and communication allow everyone to understand their role and know how their activities contribute to the achievement of Vale's results.

### 13.1 – Vale's purpose

Employees understand Vale's purpose and how their activities contribute to its achievement.

# 13.2 - Strategy alignment

The strategy is translated and communicated at all levels, promoting the alignment of everyone in the same direction.

# 13.3 - Goals deployment

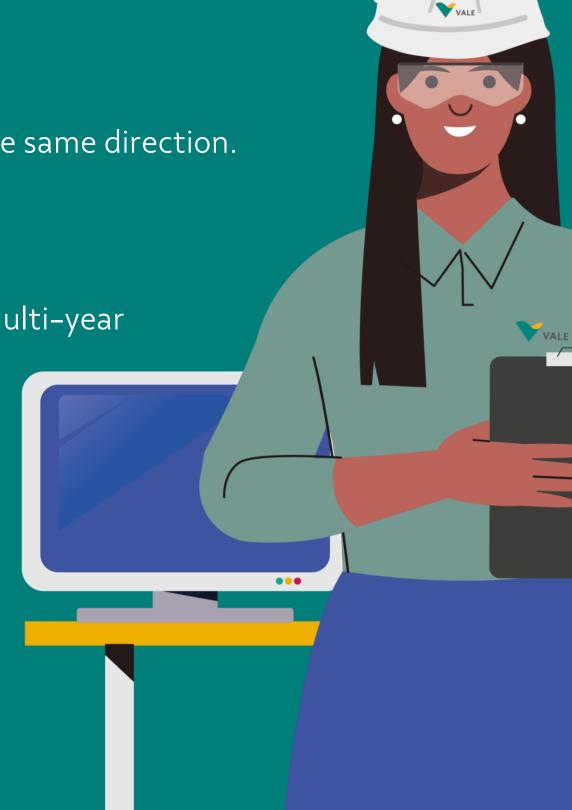
The goals are cascaded and aligned to support the achievement of short and long-term results in a multi-year perspective.

# 13.4 - Strategic initiatives and plans to achieve goals

Strategic initiatives and/or plans to achieve goals are established and followed in the routine.

# 13.5 - Budget

The budgets for cost and capital are developed according to the strategy, considering efficiency, margin optimization, execution capability, prioritization and discipline in allocation. Forecasts are made, ensuring a view of risks and impacts to effectively plan and control the process.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 14. Routine management

Management routines create discipline and ensure that all areas continuously analyze indicators, expose problems, align priorities and take the necessary actions to achieve results, making ethical and responsible decisions.

#### 14.1 - KPIs definition

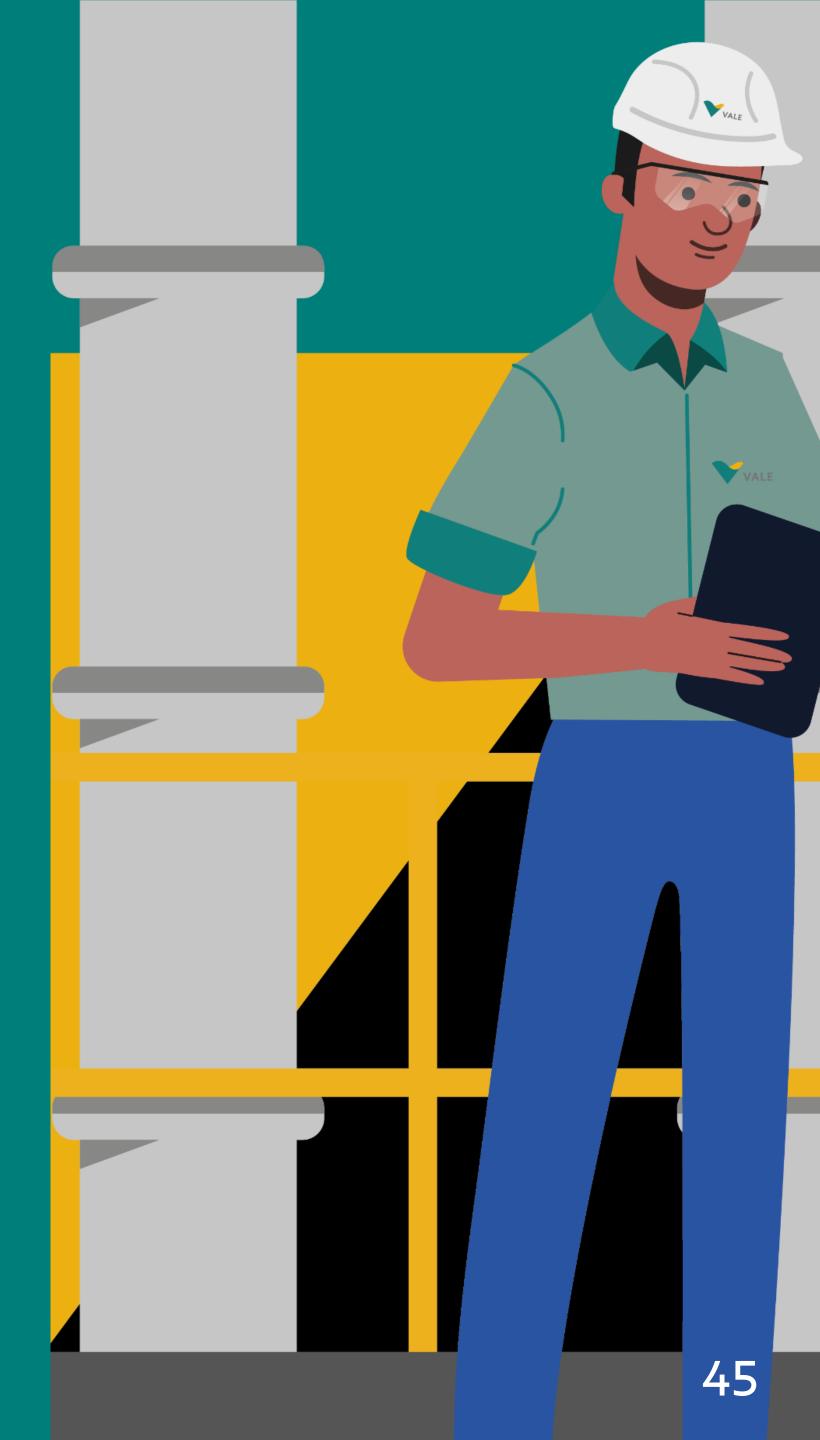
Result and process KPIs are established, according to customer and business needs, guiding daily decision-making.

#### 14.2 - KPIs standardization

KPIs have a standardized measuring method and a single accountable person defined, according to processes responsibilities.

### 14.3 - Performance routines

A routine is in place to measure processes performance, promoting a problem-solving environment and an information flow between different levels.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 14. Routine management

# 14.4- Visual management

Information is visually available, and there are references that enable results tracking and quick problem identification.

# 14.5 - Priority routines - Management Routine Agenda

The Management Routine Agenda includes the minimal routines that are necessary for performing the role, and it is fulfilled with discipline.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 15. Process and standardization

Processes and procedure standardization ensure the safety of activities, the predictability of results and enables the implementation of best practices.

#### 15.1 **–** 5S

Implemented 5S contributes to promote and sustain safe, healthy and productive environments for all employees.

# 15.2 - Process structuring

The processes are structured based on customer needs, in an optimal way, with defined roles and responsibilities.

# 15.3 – Standardization of priority tasks

Priority tasks are identified and standardized in a simple and clear way to support the correct execution of all their steps, considering the minimal Health, Safety, Environment and technical requirements.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 15. Process and standardization

### 15.4 - Documents and records management

The standards, documents, and records area accessible and properly controlled enabling the use of correct and up-to-date information.

### 15.5 - Execution of standards

Employees perform activities according to the training and/or established standards.

#### 15.6 - Verification and review of standards

Routines to check the execution of standards are established. When necessary, the deviations are addressed, and the standards reviewed.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 16. Problem solving and continuous improvement

Problems are identified and reported as soon as they occur and are solved through structured methods that motivate continuous improvement.

# 16.1 - Visible leadership in the field (Gemba)

Leadership is present in the routine of processes, helping to identify and solve problems on a daily basis.

# 16.2 - Problem solving methods and tools

In the occurrence of deviations, PDCA-based methods and tools are used to ensure the identification of root causes, using data and facts, and the development of actions.

# 16.3 – Action follow-up

Action plans are tracked until their implementation, and the deviations are addressed.

# 16.4 - Effectiveness analysis

Effectiveness analysis are performed to verify whether the implemented actions have achieved the expected results.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 16. Problem solving and continuous improvement

### 16.5 - Standardization and replication of solutions

The implemented solutions are standardized and replicated in the applicable processes.

#### 16.6 - Wastes elimination

Wastes are identified and reduced in order to optimize processes and results.

# 16.7 - Engagement and continuous improvement

Employees are engaged to propose solutions to improve their activities, either individually or in groups, aligned with the needs of the customers and of the business.





- 1. Culture and engagement
- 2. Talent management and development
- 3. Individual and organizational performance

#### **Technical**

- 4. Risk perception and management
- 5. Health, safety and environment
- 6. Projects and constructions
- 7. Operations
- 8. Maintenance
- 9. Change management
- 10. Mining planning
- 11. Sustainability
- 12. Emergency, crisis and business continuity

#### Management

- 13. Strategy deployment
- 14. Routine management
- 15. Processes and standardization
- 16. Problem solving and continuous improvement
- 17. Evaluation of the management model and results

# VPS – Method Dimension

# 17. Assessment of management system and results

Assessments are performed based on process and result indicators ensuring model compliance, and help the leader to identify problems, providing information to improve the implementation of VPS and the area results.

### 17.1 - Assessments and VPS implementation plans

Formal assessments and/or self-assessments are conducted to identify opportunities for improvement in the implementation and use of VPS, as well as in the results. Implementation plans are developed to address the identified opportunities.

#### 17.2 – Results

The expected results (goals) are achieved.

In an assessment it is very important to consider both results and processes:

















- 1. When results are achieved but there are no structured processes, the results are not sustainable.
- 2. Poor results from apparently good processes indicate that efforts are being directed towards what is not relevant. In this case, it is necessary to review processes and indicators.
- 3. If the results and processes are poor, the process needs to be improved.
- 4. Positive results through well-structured processes is what VPS seeks.

CQDis Uso Cours



If you want to know more or if you didn't find the information you are looking for, visit the VPS intranet page or send an email to vps@vale.com.

All rights reserved. This content is for exclusive use in Vale's activities, whether by employees, suppliers, subcontractors and other agents (if any). It may not be copied, adapted, reproduced, distributed, sold, licensed or exploited for any purpose whatsoever, without Vale's prior and express consent.