

mininghub.

I NOTICE

M-START

CYCLE 9



CHAPTER I - THE PROGRAM

Article 1 - The M-START program is an initiative of the **MINING HUB** and aims to build a direct channel between mining companies and applied innovation initiatives (startups, academic projects, and technology-based companies). The program seeks to connect these enterprises to the associated mining companies mainly for, the development of solutions for challenges in the following themes: (1) Decarbonization, (2) Social Development, (3) Operational Efficiency, (4) Alternative Energy Sources, (5) Water Management, (6) Tailings and Waste Management, and (7) Safety and Occupational Health.

Sole Paragraph - The purpose of this Public Notice is to define the rules and conditions for participation in the **M-START CYCLE 9** program.

Article 2 - In order to seek innovative solutions for the mining industry, the main objective of **M-START** is to prospect and select ("STARTUPS"), as defined in Article 3 (i) and (ii) of this chapter, and support the development of Proofs of Concept ("PoCs") of such startups with the Mining Companies associated with the Mining Hub.

(i) Proof of Concept: Proof of Concept (PoC) is understood to be the project that aims to demonstrate the feasibility of an idea for a potential project or product. It also corresponds to a small-scale project carried out to prove that the technology has the potential to solve a given problem, being carried out on a small scale and within a previously established schedule.

Article 3 - Participation in the M-START program is targeted at:

(i) STARTUPS and technology-based companies that preferably fit the definition of Startup in accordance with Complementary Law 146/2019, which in its Article 4 defines:

Startups are defined as business or corporate organizations, newly created or in recent operation, whose performance is characterized by innovation applied to the business model or the products or services offered.

§ 1st For the purposes of applying this Complementary Law, the individual entrepreneur, the individual limited liability company, the business companies, the cooperatives and the simple (civil) companies are eligible for framing in the special treatment mode intended for the promotion of startups:

I - With gross revenue of up to R\$ 16,000,000.00 (sixteen million reais)¹ in the previous calendar year or of R\$ 1,333,334.00 (one million, three hundred and thirty-three thousand, three hundred and thirty-four reais) multiplied by the number of months of activity in the previous calendar year, when less than 12 (twelve) months, regardless of the corporate form adopted;

II - With up to 10 (ten) years of registration in the National Register of Legal Entities (CNPJ) of the Special Secretariat of the Federal Revenue of Brazil of the Ministry of Economy.

(ii) SPIN-OFFS, as companies derived from another organization, whose purpose is dedicated to innovation and that meet items I and II set out above.

(a) For purposes of this Public Notice, hereinafter, these companies will also be referred to as STARTUP.

(iii) MINING COMPANIES associated with the Mining Hub.

Article 4 - The right to become a “SPONSOR MINING COMPANY” to the MINING COMPANIES associated with the Mining Hub is exclusive. A SPONSOR MINING COMPANY is the one that directly supports the development of one or more Proofs of Concept in the M-Start Cycle 9.

CHAPTER II - PROGRAM STAGES

Article 5 - The main stages of the **M-START CYCLE 9** are shown and detailed below:

- Applications: from 07/11/2022 to 16/12/2022, at 23:59 BRT:

The candidate STARTUP must submit its proposal using the online form available through the website www.mininghub.com.br.

- Selection: from 19/12/2022 to 22/03/2023:

The evaluation and selection of the proposals will be made by a panel composed of the program management team and technicians from the MINING COMPANIES,

¹ For currency conversion purposes, the value of 1 USD = 5.2962 Real/BRL, as established on 10/31/2022 by the Central Bank of Brazil, shall be used as reference.

according to the rules established in this Public Notice. More information about the Selection stage can be found in Chapter V of this Public Notice.

- Proof of Concept (PoC): from 22/03/2023 to 27/09/2023:

Period in which the STARTUP will sign the contract with the SPONSOR MINING COMPANY and will also execute the PoC, according to the work proposal presented and validated in the Immersion stage, held during the Selection stage.

- Contract signing from 22/03/2023 to 20/04/2023;
- Implementation of the PoC from 17/04/2023 to 23/08/2023;
- Demoday on 27/09/2023;

At the end of the Proof of Concept stage, the STARTUP that has its PoC validated will participate in the Demoday, closing event of the program cycle, in which the STARTUPS present the results of the PoCs.

First Paragraph - The execution activities of the PoCs will only start after the conclusion of the contract signature process by all parties involved - STARTUP, MINING COMPANY and IBRAM.

Second Paragraph -The validation of the PoC for a given challenge, throughout the program, will occur between STARTUP and SPONSORING MINING COMPANY, and at the end of the execution cycle the generated case will be shared with all companies associated with the Mining Hub.

Third Paragraph - The schedule of activities for the main stages of the **M-START** program is available for consultation on the website www.mininghub.com.br/en/programas/m-start, as well as in ANNEX I of this Public Notice.

CHAPTER III - CHALLENGES AND SPONSOR MINING COMPANIES

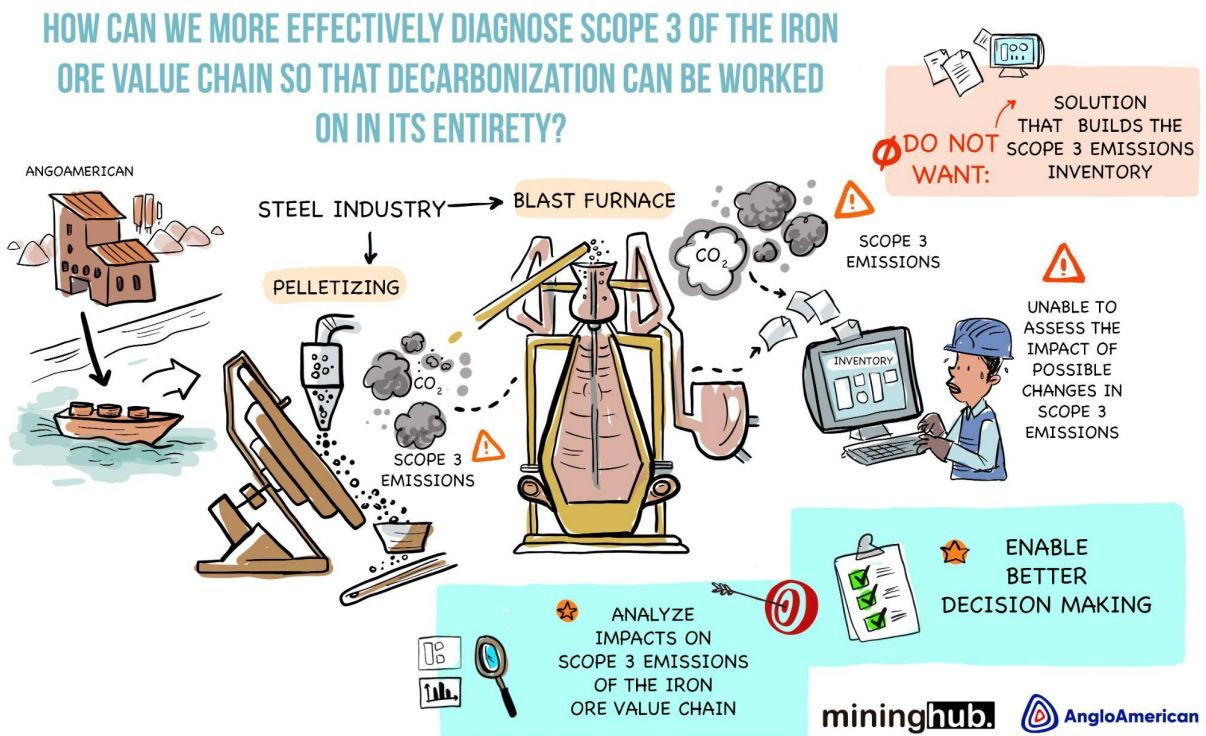
Article 6 - From articles 7 to 12 of this Notice, we describe the challenges proposed by the Mining Companies, divided into the 6 themes worked on in cycle 9. In addition, for each challenge, there is a picture that aims to promote a better understanding of the key information of each problem. The pictures can be seen in Annex II.

Article 7 - Regarding the theme "DECARBONIZATION" the challenges launched, and the respective SPONSOR MINING COMPANIES are shown in Table 1.

Table 1 – Decarbonization

CHALLENGE	MINING COMPANY
1.1 - How can we more effectively diagnose scope 3 of the iron ore value chain so that decarbonization can be worked on in its entirety?	Anglo American
1.2 - How can we reduce diesel consumption in mine equipment?	Anglo American, AngloGold Ashanti and Nexa Resources

1.1 - How can we more effectively diagnose scope 3 of the iron ore value chain so that decarbonization can be worked on in its entirety?



Sponsor Mining Company: Anglo American.

Challenge Description:

Scope 3 refers to all emissions for which the company is indirectly responsible, both upstream and downstream of its value chain.

Currently, calculating emissions beyond the company's borders is becoming

unavoidable. Knowing and understanding the profile of GHG emissions and collecting data from third parties are initiatives that need to be improved in the sector. Although it is not mandatory to report, for many companies scope 3 represents a high contribution.

Currently, at Anglo American, the scope 3 inventory is being developed, but this inventory only delivers the mapping of scope 3 emissions within the company. This does not demonstrate the possible impacts of applying the scope 3 decarbonization roadmap, based on our current inventory.

In this sense, the challenge is to obtain a solution that makes it possible to analyze the scope 3 emissions mapped in the iron ore value chain and support the development of the decarbonization strategy in its entirety.

Expected results:

Analysis of impacts on scope 3 emissions of the iron ore value chain, in different scenarios, based on the current scope 3 decarbonization roadmap.

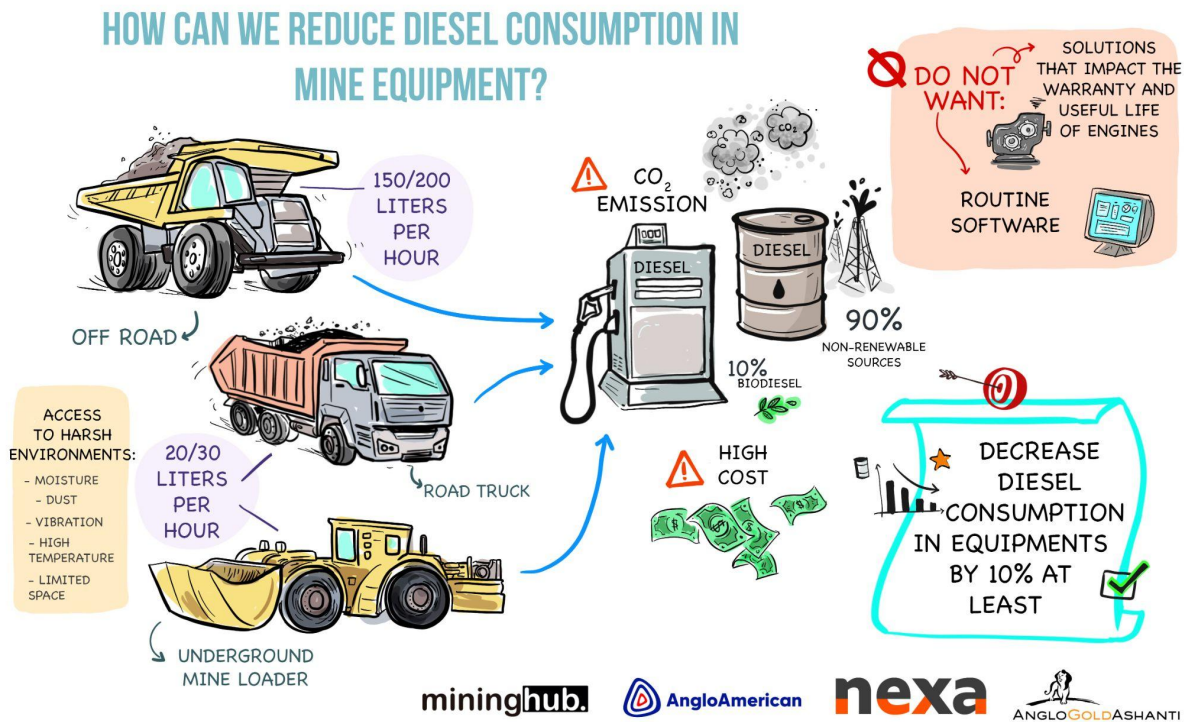
What we do not want or have already tested:

We do not want a solution that targets scope 3 inventory, as this activity is already carried out within the company.

Possible difficulties for the implementation of the PoC:

Data acquisition in different scope 3 categories.

1.2 - How can we reduce diesel consumption in mine equipment?



Sponsor Mining Company: Anglo American, AngloGold Ashanti and Nexa Resources.

Challenge Description:

Currently, most operations and material movements in mines are carried out by diesel-powered mobile equipment. Approximately 90% of this diesel comes from non-renewable sources (petroleum), so the use of this fuel has a strong impact on CO₂ emissions from mining operations. In addition, Diesel has a significant financial impact for mining companies.

Despite being a villain of greenhouse gas emissions, Diesel has important characteristics such as ease of transport, storage, fleet supply, mastery of the diesel engine maintenance process, among others.

Several factors can raise consumption and GHG emissions to undesirable levels. In this way, we seek innovative solutions to reduce the impacts caused by this fuel, maintaining technical and economic viability. In addition to being aligned with the pillars of operational excellence, ESG, among others.

Expected results:

Reduce the diesel consumption of mine equipment by 10% or more.

What we do not want or have already tested:

- Solutions that incur risks of contamination of lubricating oil and internal parts of the engine, such as the fuel injection system, turbine, liners and other internal components associated with combustion;
- Solutions that overload or increase pressure drop in diesel filters;
- Solutions that impact engine warranty;
- Solutions with marginal gains in fuel economy;
- Fleet management software (not applicable to underground mining);
- Artificial intelligence software that requires real-time communication or updates in short periods of time;
- Maintenance management software.

Possible difficulties for the implementation of the PoC:

Aggressive environment, with dust, humidity, high temperatures, limited space in vehicles, high level of vibration and projection of materials, high utilization factor of vehicles.

Article 8 - Regarding the theme "SOCIAL DEVELOPMENT", the challenges launched and the respective SPONSOR MINING COMPANIES are shown in Table 2.

Table 2 – Social Development.

CHALLENGE	MINING COMPANY
2.1 - How to treat and make potable water available at low cost to the communities neighboring the operation?	Nexa Resources

2.1 How to treat and make potable water available at low cost to the communities neighboring the operation?

HOW TO TREAT AND MAKE POTABLE WATER AVAILABLE AT LOW COST TO THE COMMUNITIES NEIGHBORING THE OPERATION?



Sponsor Mining Company: Nexa Resources.

Challenge Description:

Currently, Nexa is developing projects to increase water supply and availability in communities close to mining operations. Given that the availability of water to be collected from groundwater and other sources varies greatly depending on the rainy season and other factors, alternatives are developed to compensate for such unavailability.

One of the alternatives to increase the availability of water is to capture and store rainwater in a cistern, for example, and store it for later consumption. However, the structure of the cistern, more specifically the roof used, can affect the potability of the water, not leaving it fit for human consumption. Therefore, it is necessary to carry out treatments in order to reach the standards established by the drinking water regulatory bodies.

Currently known solutions have a high cost, making their use by the community unfeasible. Thus, a low-cost solution is sought that allows the treatment of water

collected and stored in cisterns in rural areas neighboring the mining company's operation, so that it becomes potable and presents easy recognition that it is fit for consumption.

Expected results:

Simple and low-cost solution, with autonomy of use and maintenance by the user, which makes the water captured and stored in a cistern suitable for consumption. It is important to present a method that monitors the quality of this water.

What we do not want or have already tested:

- We do not want solutions that have a high cost or high demand for electricity;
- We do not want continuous water treatment methods, but batch methods;
- We do not want solutions that supply less than 3m³ of water (total capacity of the box);

Possible difficulties for the implementation of the PoC:

Lack of connectivity in the rural areas in question and seasonal drought.

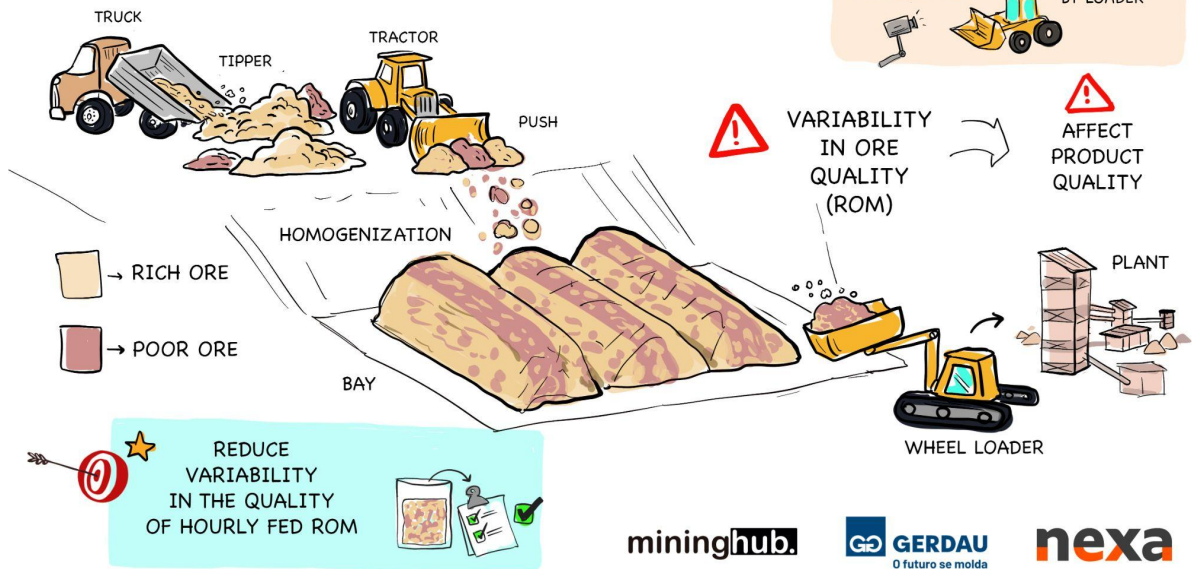
Article 9 - Regarding the theme “OPERATIONAL EFFICIENCY”, the challenges launched and the respective SPONSOR MINING COMPANIES are shown in Table 3.

Table 3 – Operational Efficiency.

CHALLENGE	MINING COMPANY
3.1 - How can we guarantee the homogeneity of the ROM in the plant feed, in order to guarantee the quality of the products and operational stability?	Gerdau and Nexa Resources

3.1- How can we guarantee the homogeneity of the ROM in the plant feed, in order to guarantee the quality of the products and operational stability?

HOW CAN WE GUARANTEE THE HOMOGENEITY OF THE ROM IN THE PLANT FEED, IN ORDER TO GUARANTEE THE QUALITY OF THE PRODUCTS AND OPERATIONAL STABILITY?



Sponsor Mining Company: Gerdau and Nexa Resources.

Challenge Description:

Currently, the supply of ore treatment plants is carried out through batteries or directly fed by trucks, causing a high variability in the supply, which directly affects the quality of the products and mass and metallurgical recovery. An alternative to this problem would be the use of forklifts or other conventional homogenization methods, but this alternative has a high cost and is not economically viable.

Low-cost technological alternatives are sought that can improve this homogenization and operational control, thus guaranteeing the quality of the desired product.

Expected results:

- To reduce the variability in the quality of the ROM fed on an hourly basis.
- Solution targeting a physical method.

What we do not want or have already tested:

What we do not want:

- Solutions that require a lot of space (e.g. forklift);
- High cost solutions;
- Homogenization by loader;
- Solutions related to monitoring with cameras;
- Solutions aimed only at operational research (electronic dispatch).

What we have already tested:

- Solutions that demand other movements (intermediate stacks);
- Mobile crushing solution;
- Solution with stack formation methodology in bays.

Possible difficulties for the implementation of the PoC:

- Difficulty making stops at the homogenization site for testing;
- Carry out tests in the rainy season;
- Perform chemical analysis using the company's infrastructure;
- Use of mining equipment utilized in the company's operations;
- Difficulty in adherence by workers and outsourced companies.

Article 10 - In relation to the “ALTERNATIVE ENERGY SOURCES” theme, the challenges launched and the respective SPONSOR MINING COMPANIES are shown in Table 4.

Table 4 – Alternative Energy Sources.

CHALLENGE	MINING COMPANY
4.1- How can we build self-sustainable support infrastructure in remote areas?	MRN
4.2 - How can we use the space/structure of the dam for electricity generation?	Gerdau and Samarco

4.1 - How can we build self-sustainable support infrastructure in remote areas?



Sponsor Mining Company: MRN.

Challenge Description:

Remote area infrastructure facilities are needed as new areas are explored. These represent a significant problem in the development of existing environmental/social programs, as these structures are increasingly removed from the company's definitive constructions.

We seek to develop the pillars of sustainability: economic, environmental and social, incorporating simple sustainable strategies with the objective of reducing costs, reducing risks, avoiding waste, generating revenue and promoting employee awareness on the subject in question.

Development of a renewable electrical matrix, reduction of water consumption, reduction of consumption of disposables and reuse of waste are topics to be addressed in the study.

Expected results:

- Development of a renewable electrical matrix for structures with demands between 30kVA and 1500kVA and built area ranging from 100m² to 800m², reusing water, reducing the final water consumption of the infrastructure;
- Reduction of particles in the movement of vehicles and equipment. Effluent treatment in a sustainable way;
- Solution involving facilitated logistics.

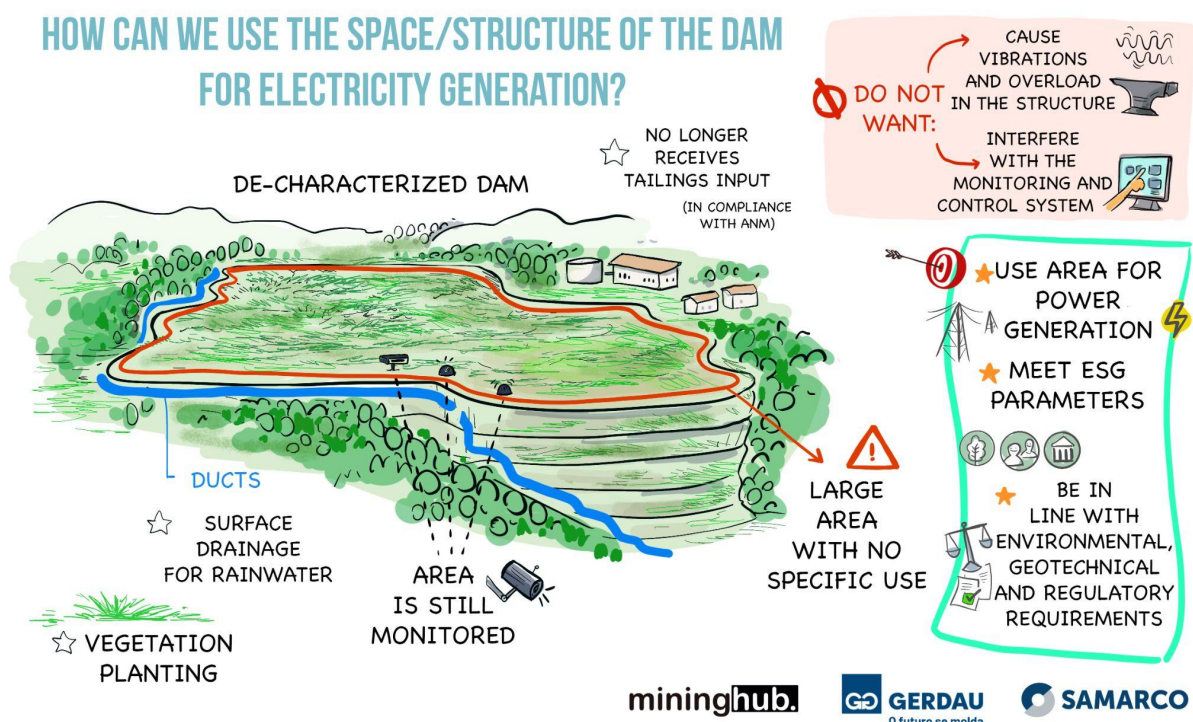
What we do not want or have already tested:

Use of diesel generator sets to supply electricity.

Possible difficulties for the implementation of the PoC:

- Remote area;
- Minimal environmental impact;
- Unpaved areas;
- High dusting;
- Need for prior involvement of the operation.

4.2 - How can we use the space/structure of the dam for electricity generation?



Sponsor Mining Company: Gerdau and Samarco.

Challenge Description:

Currently, one of the ways of disposing of the tailings is the use of dams. The space/structure occupied by the dam currently has no use, being an area that tends to go through a process of de-characterization. With the increasing cost of electricity, alternatives are sought that take advantage of the area occupied by de-characterized dams for the generation of electricity and consequent reduction of the cost of electricity in the plant.

Expected results:

- Reduce the volume of energy purchased on the market and consequently the costs;
- Solution that meets ESG parameters and is economically viable;
- Strategic use of the area;
- Solution that is aligned with legal, environmental and licensing requirements involving geotechnical structures;

What we do not want or have already tested:

Solutions that pose risks to the dam structure.

Possible difficulties for the implementation of the PoC:

- Difficulty in accessing the dam area (mobilization, training and access to the structure);
- Connection difficulty in the dam area;

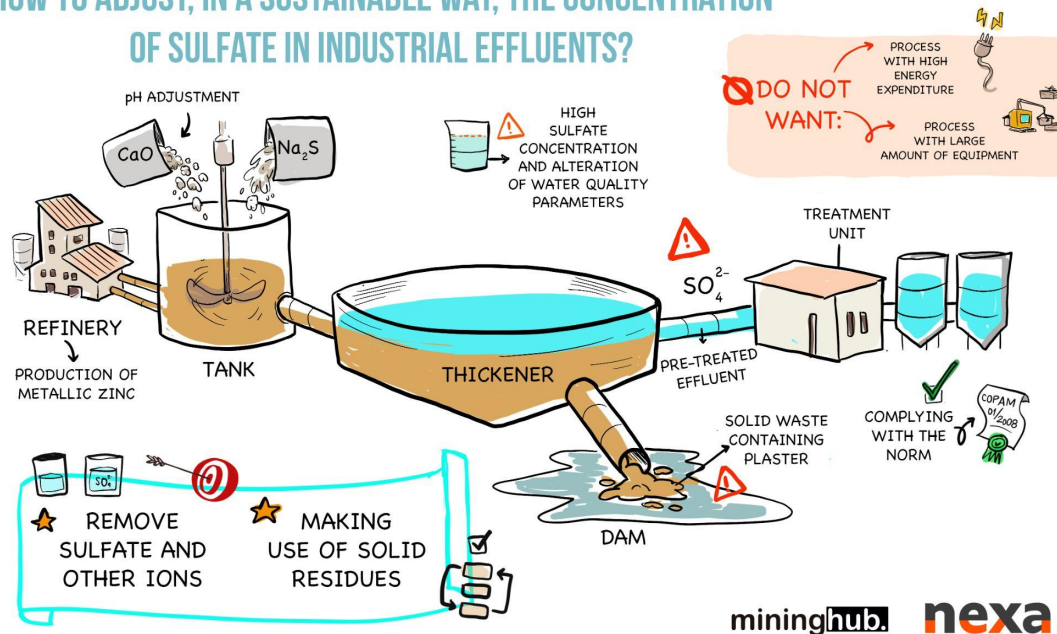
Article 11 - In relation to the theme “WATER MANAGEMENT”, the challenges launched and the respective SPONSOR MINING COMPANIES are shown in Table 5.

Table 5 - Water Management.

CHALLENGE	MINING COMPANY
5.1 - How to adjust, in a sustainable way, the concentration of sulfate in industrial effluents?	Nexa Resources

5.1- How to adjust, in a sustainable way, the concentration of sulfate in industrial effluents?

HOW TO ADJUST, IN A SUSTAINABLE WAY, THE CONCENTRATION OF SULFATE IN INDUSTRIAL EFFLUENTS?



Sponsor Mining Company: Nexa Resources.

Challenge Description:

In mining and metallurgical companies, when sulfuric acid is used in the process, it is common for equipment such as tanks, vats and others to be contaminated with this reagent. One of the steps of the mining-metallurgical processes is the washing of this equipment in pre-determined times for maintenance, cleaning and others. It is also necessary to wash patios and structures, which generates a concentrated effluent in relation to these contaminants.

The high concentration of sulfate can result in the alteration of other parameters of water quality, making this effluent unsuitable for disposal in a receiving body or for its reuse. In this sense, the present challenge seeks solutions that are economically viable, sustainable and without excessive use of reagents and energy, aiming at the adequacy of the sulfate concentration of this effluent as well as the destination of the solid residues generated as inputs for other markets.

Expected results:

- Removal of sulfate and other ions sufficient to adapt the industrial effluent for its disposal in a receiving body or recirculation (COPAM 01/2008);
- Use of sulfate and residue that will be precipitated in the treatment of the effluent;
- Route of removal and use of sulfate with technical and economic feasibility;
- The project must demonstrate on a bench or pilot plant the technical-economic feasibility of the route with the optimization of conditions (it does not include installation of the plant in the unit at this stage).

What we do not want or have already tested:

We do not want:

- Routes with high energy expenditure;
- Processes with a large amount of equipment that require a large area for installation;
- Routes that do not promote a circular economy with the solid waste generated.

We have already tested:

Not applicable

Possible difficulties for the implementation of the PoC:

- Effluent with high sulfate concentration and low pH (< 3);
- Sending samples outside the country (the requirements for sending liquids outside Brazil must be included in the work proposal);
- Amount of sample required for the PoC must be included in the work proposal;
- The destination of the solid generated in the treatment process must meet the market requirements (physicochemical characteristics);
- Physical-chemical characterizations of the phases after separation must be previously listed for speed in contracting.

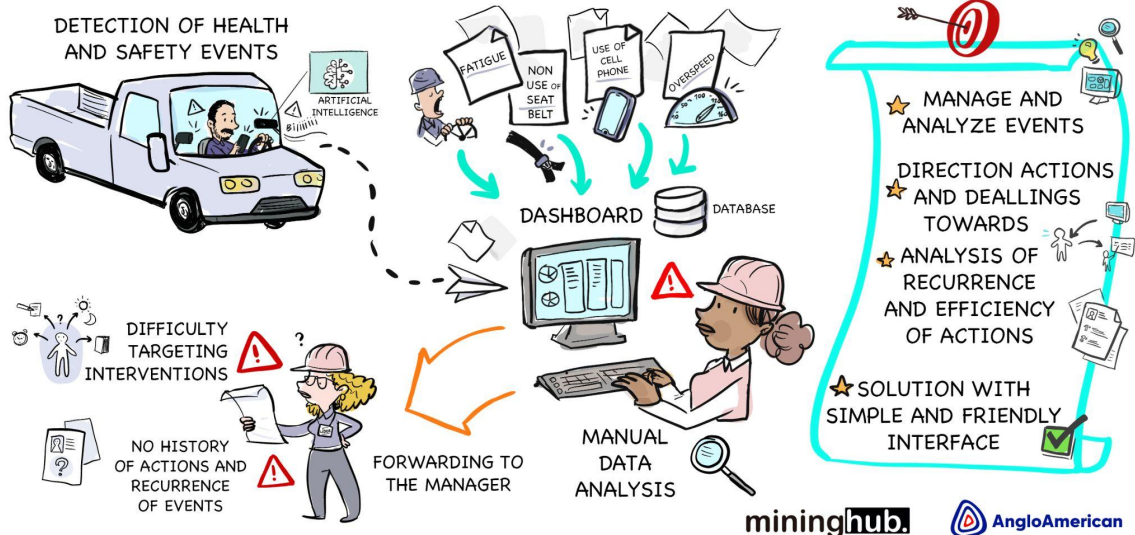
Article 12 - Regarding the theme “OCCUPATIONAL SAFETY AND HEALTH”, the challenges launched and the respective SPONSOR MINING COMPANIES are shown in Table 6.

Table 6 – Occupational Safety and Health.

CHALLENGE	MINING COMPANY
6.1 - How can we manage, analyze and treat behavioral deviations when driving vehicles and mobile equipment and thus improve safety performance?	Anglo American
6.2 - How can we implement a system model so that companies can promote a widely trained and monitored environment in favor of worker safety?	J. Mendes and Vale

6.1- How can we manage, analyze and treat behavioral deviations when driving vehicles and mobile equipment and thus improve safety performance?

HOW CAN WE MANAGE, ANALYZE AND TREAT BEHAVIORAL DEVIATIONS WHEN DRIVING VEHICLES AND MOBILE EQUIPMENT AND THUS IMPROVE SAFETY PERFORMANCE?



Sponsor Mining Company: Anglo American.

Challenge Description:

Currently, within the mining companies there is a high rate of accidents related to the driving of vehicles and equipment. Some mining companies have several technologies embedded in the vehicles, whose objective is to monitor driving, issue alerts and thus avoid the occurrence of incidents. Even with this monitoring while driving, there is a lack of event management, negotiations, driver score management, consequence management and coaching for these behavioral events.

Thus, we are looking for a solution to manage and analyze safe and unsafe behaviors while driving, and that can mitigate unsafe behaviors.

Expected results:

- Manage and analyze behavioral deviations;
- Categorization and direction of handling behavioral events (recognition, coaching and consequence management);
- Analysis of recurrence and efficiency of handling behavioral events over time;
- Simple solution with easy and user-friendly interface.

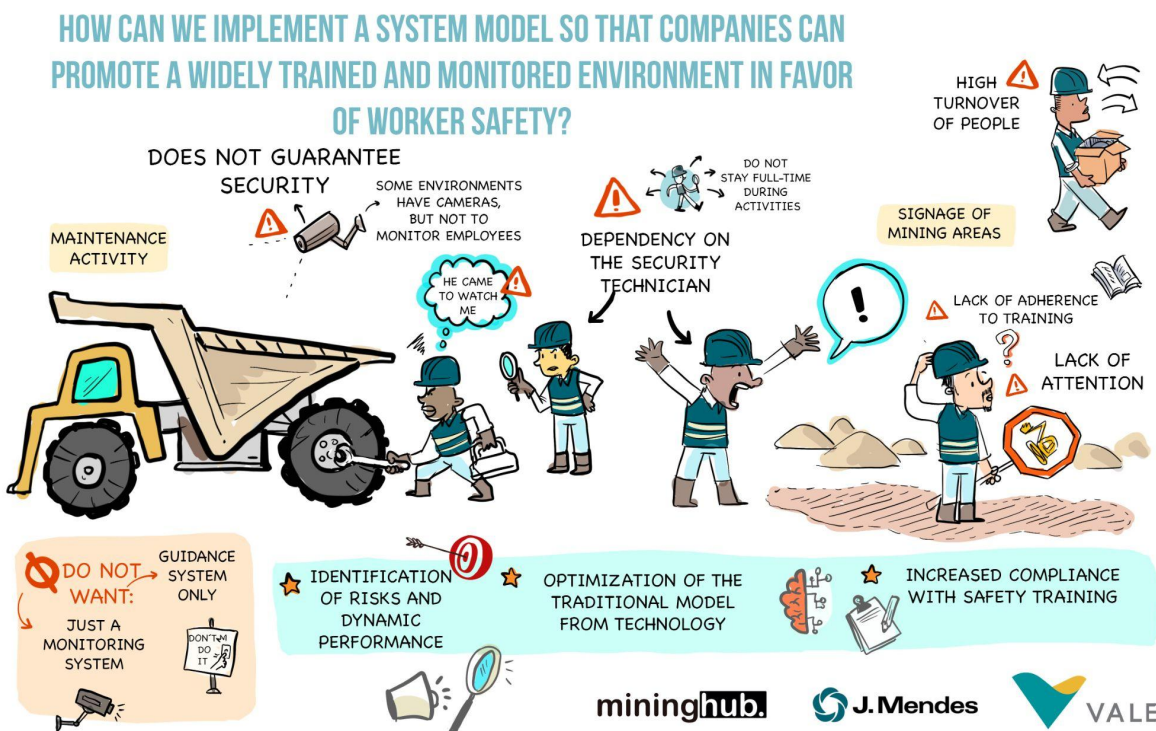
What we do not want or have already tested:

We do not want a solution that only aims at visualizing behavioral deviations because we already have this type of technology.

Possible difficulties for the implementation of the PoC:

Difficulty in integrating and consulting the supplier's database of the technology currently used.

6.2 - How can we implement a system model so that companies can promote a widely trained and monitored environment in favor of worker safety?



Sponsor Mining Company: J. Mendes and Vale.

Challenge Description:

The mining environment and its numerous sub-areas are highly dynamic, regardless of the type of segment in which there is activity. From the complexity of the modalities of the various activities developed, sometimes concomitantly, to the high turnover of employees, various hazards and risks are mapped throughout the execution. Often, the possibility of raising awareness about worker safety in a sequence is hampered due to the short contract time and low quality of introductory training offered, thus requiring greater input and intensification of field inspections. On the other hand, reinforcing inspections in the field exposes more people to danger, characterizing a continuous cycle of risk. Personal accidents during the working day are risks, life changing and/or fatalities. In this way, a solution is sought based on the development of methodology and systematics for greater efficiency in monitoring the process and training of employees, especially in mobilization.

Expected results:

- Optimization of the traditional inspection model based on technology;
- Comprehensive inspection of all areas in immediate time;
- Increase in employees' OHS awareness, regardless of formal education;
- Identification of hazards/risks and dynamic action;
- Reduction of employees exposed to existing risks;
- Improved security indices in general (KPI).

What we do not want or have already tested:

- We do not want a monitoring system only through cameras, acting as a surveillance system;
- We do not want a guidance system with only visual indications;
- We have already tested automated access control to the areas.

Possible difficulties for the implementation of the PoC:

- Difficulty connecting in some areas;
- Lack of infrastructure (energy for example);
- High risk areas;

- Dirt in the environment (high concentration of dust);
- Employee resistance to technology;
- Legal impediments (contracts not providing for monitoring);
- Dynamics of spot inspection (visualization/focus of one area at a time).

Article 13 - The resources available by the SPONSOR MINING COMPANIES for the validation of the STARTUPS PoCs will be agreed by means of a contract to be signed between the parties at the beginning of the Proof of Concept stage.

First paragraph - Expenses related to participation in the M-START program, including transportation, accommodation and food, may be reimbursed within the total amount made available and previously agreed by the respective SPONSOR MINING COMPANY for the execution of the PoC.

Second paragraph - The disbursement plan for the resources for the PoC and reimbursement of expenses will be developed by STARTUPS and validated with the SPONSOR MINING COMPANIES during the Immersion phase, in the Selection stage.

Third paragraph - If any SPONSOR MINING COMPANY does not have the resources available to carry out the PoC and, even so, STARTUP chooses to work with this company, it will not be possible to claim any kind of reimbursement or payment by STARTUP in the future to SPONSOR MINING COMPANY in question.

Article 14 - The place of development of the PoC will be defined by SPONSOR MINING COMPANY, and may undergo changes at its discretion.

Article 15: SPONSORING MINING COMPANIES can work with more than one STARTUP within the same challenge, if they understand that the solutions are complementary and the due justification is presented.

Article 16: A challenge may have more than one SPONSOR MINING COMPANY. In these cases, after the Selection process, each SPONSOR MINING COMPANY will execute a PoC with its respective selected STARTUP.

Article 17: STARTUPS are authorized to perform only one PoC per cycle, even if they are selected for more than one of the challenges launched. If this is the case, the STARTUP must choose which challenge/ mining company it will follow in the cycle in question.

CHAPTER IV - APPLICATION

Article 18 - The application process for a STARTUP is free and must be done by filling and sending the electronic form available, exclusively, through the **MINING HUB** website www.mininghub.com.br, during the period from **07/11/2022** to **16/12/2022**, at 11:59 pm (eleven, fifty-nine minutes), Brasília time.

Article 19 - Responses to the registration form can be written in Portuguese or English.

Article 20 -The applicant, when filling in the submission form, must always indicate, in a specific field, the respective theme and challenge in which wishes to execute the PoC.

Article 21: After the end of the registration deadline, the STARTUP will not be able to make changes to the submitted answers.

First paragraph – The STARTUP will be able to apply for more than one challenge in the cycle, as long as different registrations are made.

Second paragraph - If the STARTUP chooses to work in partnership with another company, this must be indicated on the registration form and must participate in all stages of the selection process, and, at the discretion of the Mining Hub, the partnership may be admitted or not.

Article 22 - The STARTUP representative indicated on the registration form as “project leader” must have sufficient autonomy to represent THE STARTUP in decision making throughout the selection process and will be responsible for all communication with the program.

Article 23 - Requests for clarification and doubts must be sent up to 05 (five) business days prior to the closing date for receipt of applications, in Portuguese or English, to the e-mail mstart9@mininghub.com.br

CHAPTER V - SELECTION

Article 24 - STARTUPS that propose to develop solutions to the challenges presented by the MINING COMPANIES during the Proof of Concept stage will be selected.

Single paragraph - The selection of the STARTUPS participating in the program will be carried out by a panel, composed of the program management team and MINING COMPANY technicians, according to the criteria described in Chapter VI. It is also up to the panel the right not to select a STARTUP for one or more challenges, if they believe that there are no suitable proposals.

Article 25 - The STARTUPS application analysis process consists of the following phases:

(i) Framework of the STARTUPS, considering the “Elimination Criteria, as described in article 27 - Chapter VI, below;

(ii) Technical screening of the STARTUPS 'proposals with the SPONSOR MINING COMPANIES for each challenge. In this stage, the first technical evaluation of the proposals will be made, based on the registration form filled out by the STARTUPS and in accordance with the “Classification Criteria”, as described in article 28 - Chapter VI, below;

(iii) Face-to-face and/ or online interviews, in PITCH format up to 5 minutes in duration, in which the STARTUP must present its proposal to SPONSOR MINING COMPANY for the challenge. Up to three (3) the STARTUPS may be selected for the Immersion phase, according to the “Classification Criteria”, as described in article 28 - Chapter VI, below;

(a) The non-attendance, without any justification, of any member of the candidate STARTUP on the date, time and place designated, even if it is the case of remote presentation, disclosed under the terms of this Notice, will be considered as withdrawal of its participation in this selection process. Justified cases will be analyzed and handled individually.

(iv) Immersion in person and/ or online, in which the objective is to provide the STARTUPS with access to SPONSOR MINING COMPANIES and the Mining Hub team to understand the details of the challenges and refine the PoC proposal, together. In the period of 1 (one) week, the SPONSOR MINING COMPANIES will accompany the pre-selected the STARTUPS in the interview phase, providing data and clarifying doubts so that each one of them can refine the scope of the proposed solution for the challenge (s) which one (s) applied. In the end, the SPONSOR MINING COMPANIES will be able to select between 0 and 2 STARTUPS to proceed

to the Proof of Concept stage. The “Classification Criteria” are described in article 28 - Chapter VI, below.

- (a) During the Immersion phase, the participating STARTUPS will be asked to prepare additional documentation related to the implementation of the proposed PoC (physical and financial project schedules, presentation and other documentation). The selection of the STARTUP for the Proof of Concept stage will be made based on the documentation presented.
- (b) During the Immersion phase the participating STARTUPS must attend all the schedules requested, with the participation of at least one member.

Article 26 - The result of the selection of the STARTUPS will be announced through the communication channels of the Mining Hub, such as the website www.mininghub.com.br, Instagram [@hubdamineraçao](https://www.instagram.com/hubdamineraçao) and by e-mail until **March 22, 2023**. The date may be changed by decision and necessity of the **MINING HUB**.

Single paragraph - The STARTUPS not selected in the Technical Screening, Interviews and Immersion phases will receive feedback, exclusively in writing, through the e-mail mstart9@mininghub.com.br, in up to 10 working days after the end of the Selection phase.

CHAPTER VI - SELECTION CRITERIA

Article 27 - STARTUPS will be evaluated according to the following Elimination Criteria:

- (i) Company Profile - The applicant company must fit as a STARTUP or SPIN-OFF, according to the definitions and criteria established in Article 3 - Chapter I.
- (ii) Themes and Proposed Challenges - The solution that does not meet the challenges proposed by the SPONSOR MINING COMPANIES will be eliminated, as mentioned in Chapter III;
- (iii) Innovation - The solution presented by the STARTUP must have an innovative character for the MINING COMPANIES, that is, it must be tested in Proof of Concept.

STARTUPS that present solutions routinely marketed or already tested previously in some mining company in Brazil or abroad, will be automatically excluded from the program.

(iv) Participation - The M-Start Cycle 9 program will prefer to select startups which have participated in 0 to 4 previous Cycles of M-Start Program.

Article 28 - STARTUPS will be evaluated by the MINING COMPANIES, during the stages of Technical Screening, Interviews and Immersion, according to the “Classification Criteria” presented in Table 7 below.

Table 7 - Classification criteria.

Criterion	Objective
Team	Assess the team's ability to develop the solution and leverage the business.
Technological potential	Evaluate the effectiveness of the technologies used in the solution and their degrees of maturity.
Proposed solution	Assess whether the solution meets the MINING COMPANY demand (s).
Scalability	Assess whether the solution allows scalability for companies associated with the Mining Hub
Potential impact	Assess the potential impact of the solution on MINING COMPANIES (financial, social, environmental, etc.)
Resources for the PoC	Check the necessary resources, regardless of nature (financial, human or otherwise) for the development of the proof of concept of the solution.

Sole paragraph - In the Technical Screening stage, the solutions will be assessed by the SPONSOR MINING COMPANIES with scores from 0.5 to 5 in each of the criteria described in Table 7. In this process, up to 6 STARTUPS with the highest scores, given by the sum of the averages of the scores in each criterion, they will be classified for the Interview stage. In the Interview stage, based on the criteria described in Table 7, the SPONSOR MINING COMPANIES will be able to select up to 3 STARTUPS for the Immersion stage. Finally, in the Immersion stage, the STARTUPS will be selected for the development of the PoC, this choice being again

guided by the criteria described in Table 7 and by the free decision of the respective SPONSORING MINING COMPANIES.

CHAPTER VII - DURATION OF THE M-START PROGRAM

Article 29 - The schedule with the main milestones of the **M-START** program is available on the MINING HUB website (www.mininghub.com.br) as well as in Annex I.

Article 30 - Dates may change due to the **MINING HUB's** decision and need.

CHAPTER VIII - OBLIGATIONS AND RESPONSIBILITIES

Article 31 - The obligations of the STARTUPS are:

- (i). Comply with all the provisions present in this Public Notice;
- (ii) Deliver the documents requested to register new “suppliers”, demanded by SPONSOR MINING COMPANY for the challenge and within the established deadlines;
- (iii) Present, when requested, the Legal Register and Bank Account – the STARTUP or the SPIN-OFF must have the National Register of Legal Entities (CNPJ), in case of Brazilian nationality or legal regulations related to their respective nationality, such as Tax Identification Number (NIF), case of Portugal, as well as current account in the name of the company for the signature of the contracts;
- (iv) Participate in the actions provided for in each phase of **M-START**, as well as provide all the necessary information and documents required by the SPONSOR MINING COMPANY and or by the Mining Hub team;
- (v) Compulsory attendance at events and activities of the M-START CYCLE 9 presented in this notice and/or communicated via mstart9@mininghub.com.br, with at least 01 (one) representative of the STARTUP;
- (vi) the STARTUP, when enrolling in this program, declares that it does not use and does not have, in its entire production chain, directly or indirectly, slave labor, in degrading conditions, workers subjected or forced to illegal conditions under the employer's domain, work by minors under 16 (sixteen), except as an apprentice from

the age of 14 (fourteen), as established in article 7, item XXXIII of the Federal Constitution, as well as not allowing any type of discrimination and respecting freedom of association, under penalty of being immediately eliminated by the MINING HUB, without the need to send prior notification, being the STARTUP, in case of violation of this clause, subject to compensation of losses and damages caused and the penalties provided for by law;

(vii) The STARTUP, when enrolling in this program, declares, to fully observe Law nº. 12,846/ 2013 (“Brazilian Anti-Corruption Law”) and declares that it is aware of all the terms and definitions provided in the Brazilian Anti-Corruption Law, which defines as a harmful act to promise, offer or give, directly or indirectly, an undue advantage to a public agent or the third person related to it, among others. In case of breach of said Law, it will be responsible for any losses, damages or liabilities caused, in addition to the penalties provided for by law.

Article 32 - The STARTUP declares that it is fully qualified to use the technology used by the proposed solution for the respective challenge during the development of the PoC, owning its characteristics or being duly licensed to use them.

Article 33 - The STARTUP declares that it does not have, in the composition of its capital stock or in its membership/management/employees/service providers, people with a potential conflict of interest in relation to the mining companies associated with the Mining Hub.

CHAPTER IX - TERMINATION OF THE RELATIONSHIP BETWEEN THE STARTUPS AND THE MINING COMPANIES OF THE M-START CYCLE 8

Article 34 - The relationship between the M-START program and the STARTUPS will be considered terminated upon prior notification, in the following cases:

- (i) Elimination in the selection phases;
- (ii) End of program duration term;
- (iii) If there is a violation of any clause of this Public Notice;
- (iv) If the MINING HUB significantly changes the main features of M-START and the STARTUP does not agree with these changes;

- (v) If the insolvency, bankruptcy or judicial recovery of STARTUP and its members is verified;
- (vi) If there is a temporary transfer of activity from STARTUP;
- (vii) At the initiative of STARTUP, duly justified;
- (viii) At the initiative of the MINING HUB, duly justified;
- (ix) On the initiative of the SPONSORING MINING COMPANY, duly justified through a joint meeting with the startup;

First paragraph: The STARTUP that does not have available time or does not respect attendance during the program, which will be carried out in person, at the headquarters of the Mining Hub and/ or associated Mining Companies, or online, will be eliminated. The eliminated will be the sole and exclusive responsible for any costs spent in this period.

Second paragraph - After the disclosure of the selection result, each STARTUP will have up to 7 calendar days to communicate without prejudice, via e-mail mstart9@mininghub.com.br, the withdrawal regarding participation in M-Start Cycle 9. After this period, the STARTUP that, for any reason, gives up participating in the program will be unable to apply for another MINING HUB initiative for 6 (six) months, counting from the date of withdrawal.

Third paragraph: If the SPONSOR MINING COMPANY chooses to leave the program, it must present its justification in writing to the Mining Hub Board of Directors.

Fourth paragraph: Any financial expenses incurred to the STARTUP or the Mining Hub, within the period referring to that cycle in which the SPONSOR MINING COMPANY gave up, shall be reimbursed in full by the quitting mining company to the first two cited in this paragraph.

CHAPTER X - POSSIBLE BENEFITS FOR THE SELECTED STARTUPS

Article 35 - The following benefits can be made available to the STARTUPS selected for the Proof of Concept stage:

- Possibility of investment to develop the projects together with SPONSOR MINING COMPANIES for validation of the POCs;

- Possibility of access to the infrastructure and teams of the associated Mining Companies, under favorable and safe conditions for the parties involved;
- Working together with professionals in the mining sector;
- Working together with the program management team;
- Methodology for carrying out Proofs of Concept: technical visits and development monitoring routines.
- Presentation of the partial results of the Proofs of Concept for Mining Companies associated with the Mining Hub.
- At the end of the program, and at their sole discretion, the MINING COMPANIES, if they consider it feasible for their business, will be able to invest in the operational scale of the solutions, as well as establish partnerships to seek funding, purchase or distribute the STARTUPS' products and services.
- The STARTUP participating in the M-START is eligible to participate in the M-GROWTH program.

CHAPTER XI - GENERAL PROVISIONS

Article 36 - It is hereby clearly and established that all rights related to the intellectual property arising from the work performed as a result of this Notice shall be owned by the STARTUP, which shall be entitled to the free disposal of such rights.

Article 37 - It is clear and established from now on that the participation and / or selection in the **M-START CYCLE 9** does not constitute any kind of bond, operating agreement, joint venture or association between the participant STARTUP (selected or not), the **Mining Hub** and others involved in the program. The participating STARTUP (selected or not) and others involved in the program are independent entities among themselves, that no provision of this Public Notice or the program shall be construed to create any corporate, labor or tax relationship between the parties and that there is not or will not be any solidarity or subsidiarity of any nature between the parties.

Article 38 - It is hereby made clear and established that the participation in the program and the eventual signing of a contract with the SPONSOR MINING COMPANIES does not generate any kind of employment relationship. The STARTUP undertakes to exclude the Mining Hub and others involved from any liability in labor /

social security lawsuits eventually brought by any of its employees, as well as to bear all costs incurred in such lawsuits, including, but not limited to, attorney's fees.

Article 39 - It is hereby clearly established that the management team may alter this Public Notice at any time if necessary for the good and regular course of the Program established herein.

Article 40- It is clear and established from now on, that all STARTUPS enrolled in M-Start Cycle 9 authorize the Mining Hub to eventually make contact about future opportunities in other fronts of activity of the Mining Hub itself.

Article 41 - It is hereby made clear that if there are any questions about this Public Notice, the MINING HUB is available to answer them by e-mail at mstart9@mininghub.com.br.

Article 42 - The participants give Mining Hub the right to use their image, text and/or voice in any type of material, free of charge and without exclusivity. In return, the Mining Hub undertakes to use the image of the participants without making any changes to the physiognomy and, further, not to use the image in a derogatory manner, or that may represent, in any form, some kind of violation of moral damage.

Article 43 - The Mining Hub clarifies that, in the programs conducted by its initiative, the rules provided in the Law for the Defense of Competition (Law No. 12.529/11) are applied, in particular with regard to art. 36 and following, which determines as violations of the economic order, among others, all and any act related to (i) discussion, negotiation, agreement, collusion, manipulation or adjustment on prices, production and division of market segments; (ii) promotion, obtaining and/or influence to adopt uniform commercial conduct (iii) limiting the access of new companies to the market; (iv) preventing the access of competitors to the sources of inputs, raw materials, distribution channels or technology; (v) discriminating purchasers or suppliers of goods or services by means of the differentiated fixing of prices or operational conditions; and (vi) abusive exploitation of industrial property rights, intellectual property, technology or trademark. In this regard, Mining Hub constantly applies measures to mitigate any competition risks arising from the interactions related to the programs, including, among them, but not limited to, the establishment of Antitrust Protocol with the Mining Companies and the Startups eventually selected for its programs.

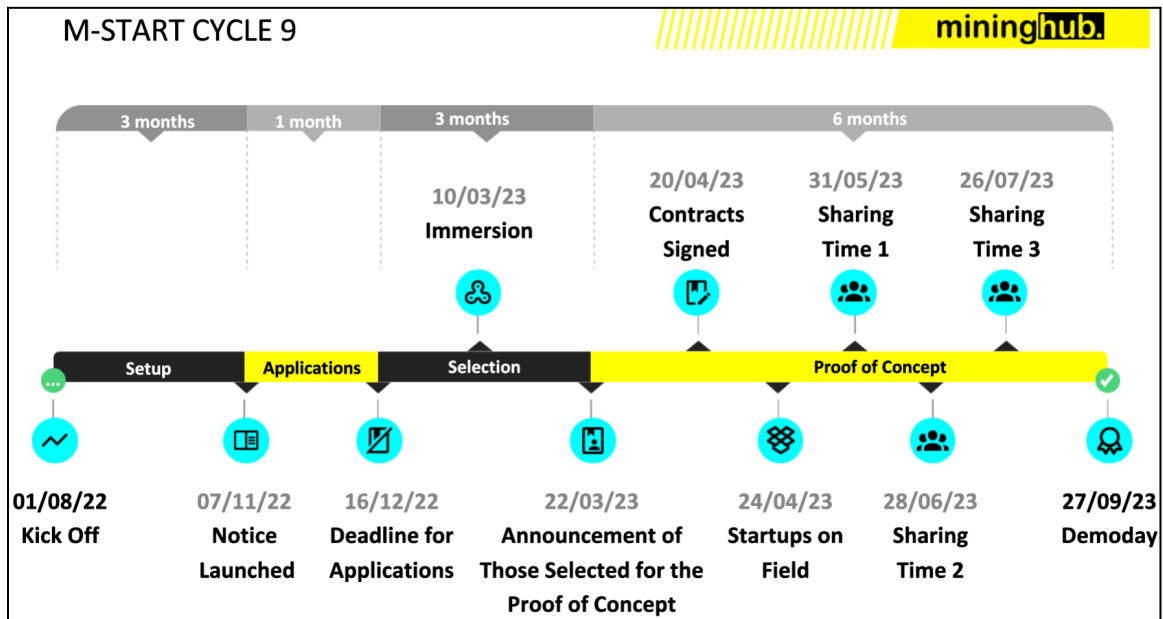
Single paragraph: Upon completion of registration, the holder of the personal data entered in this document expressly and unequivocally authorizes the MINING HUB to process such personal data, under the terms of Law No. 13.709/18 (LGPD - General Law of Personal Data Protection) and the Privacy Policy of the MINING HUB, for the purposes of (i) identifying and contacting the holder of personal data for the development of a business relationship with the MINING HUB; (ii) sending publicity, advertising, mailings, virtual or physical cards motivated by commemorative dates, including the holder's birthday, digital and printed magazines, or any other advertising materials, customized or not to the holder's profile, related to the products, services and /or events offered by the MINING HUB and/or its business partners; (iii) using in research, studies, projects and programs developed by the MINING HUB;

Article 44 - The parties involved undertake to treat as secret all confidential information related to the sponsor mining companies that have been revealed to them, and undertake not to reveal it to third parties without their knowledge and consent, under penalty of civil and criminal liability.

"Confidential Information" shall not be deemed as that which is in the public domain before being disclosed or made available by the parties prior to the signing of the contract between STARTUP and SPONSOR MINING COMPANY, or that which is made public by the National Institute of Industrial Property - INPI or by the competent body at international level.

Article 45 - The e-mail mstart9@mininghub.com.br is established as the program's official communication channel.

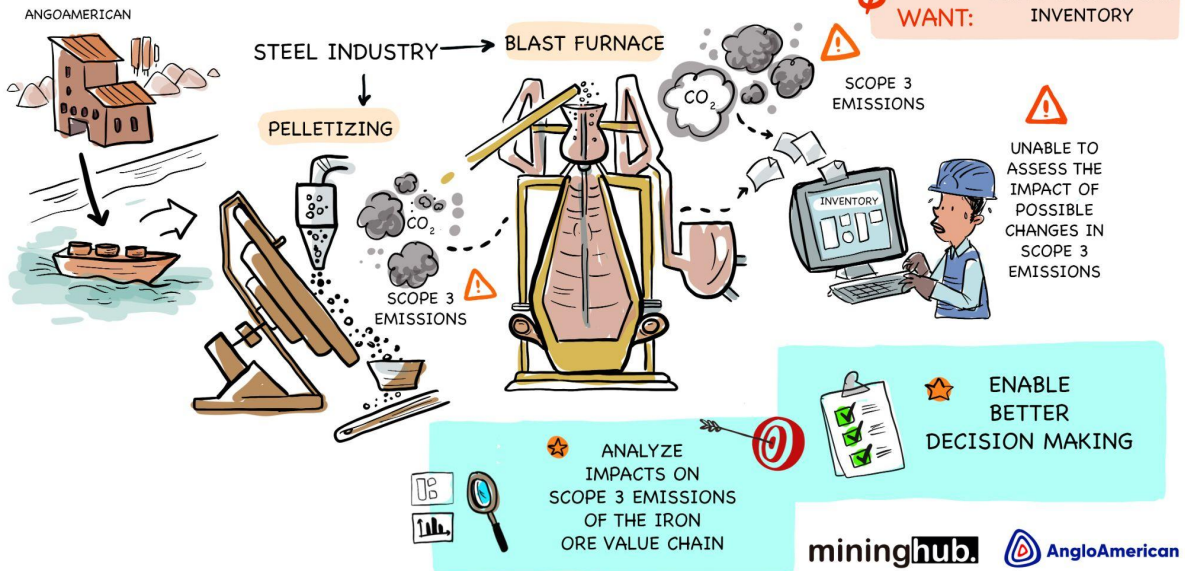
ANNEX I - SCHEDULE



ANNEX II – CHALLENGES

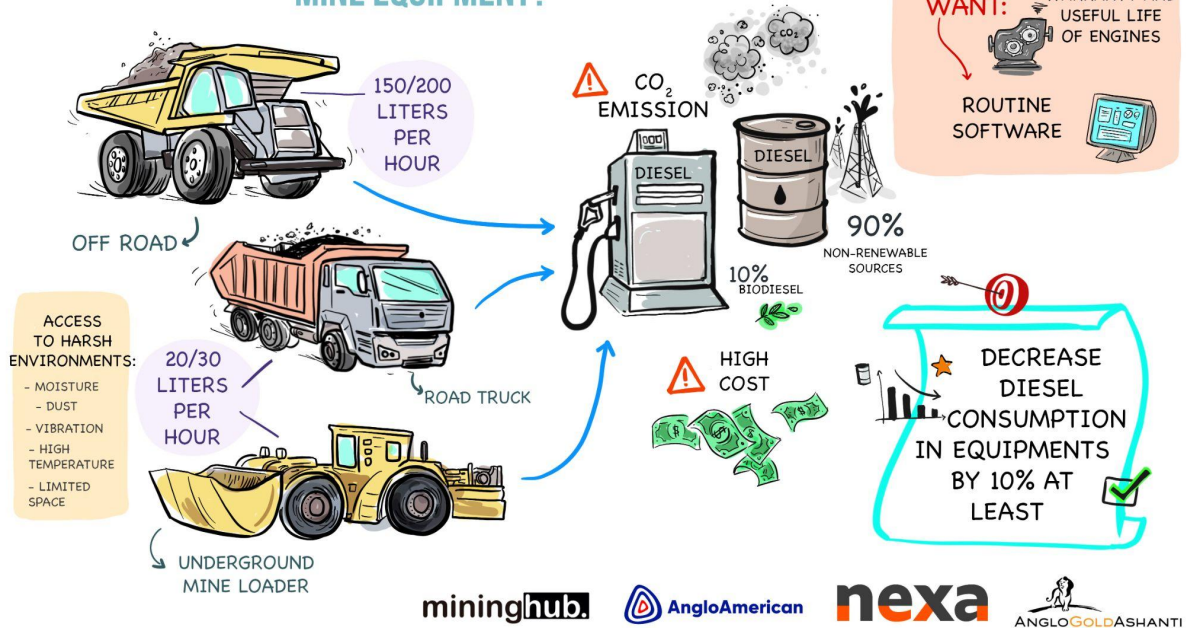
1.1 - How can we more effectively diagnose scope 3 of the iron ore value chain so that decarbonization can be worked on in its entirety?

HOW CAN WE MORE EFFECTIVELY DIAGNOSE SCOPE 3 OF THE IRON ORE VALUE CHAIN SO THAT DECARBONIZATION CAN BE WORKED ON IN ITS ENTIRETY?



1.2 - How can we reduce diesel consumption in mine equipment?

HOW CAN WE REDUCE DIESEL CONSUMPTION IN MINE EQUIPMENT?



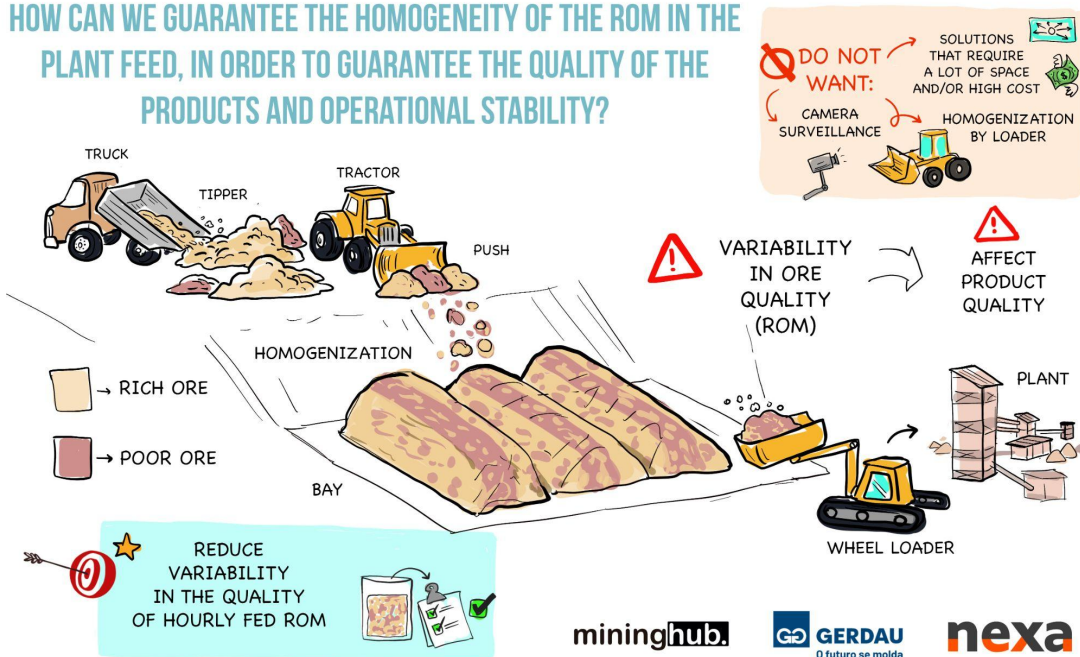
2.1 How to treat and make potable water available at low cost to the communities neighboring the operation?

HOW TO TREAT AND MAKE POTABLE WATER AVAILABLE AT LOW COST TO THE COMMUNITIES NEIGHBORING THE OPERATION?



3.1- How can we guarantee the homogeneity of the ROM in the plant feed, in order to guarantee the quality of the products and operational stability?

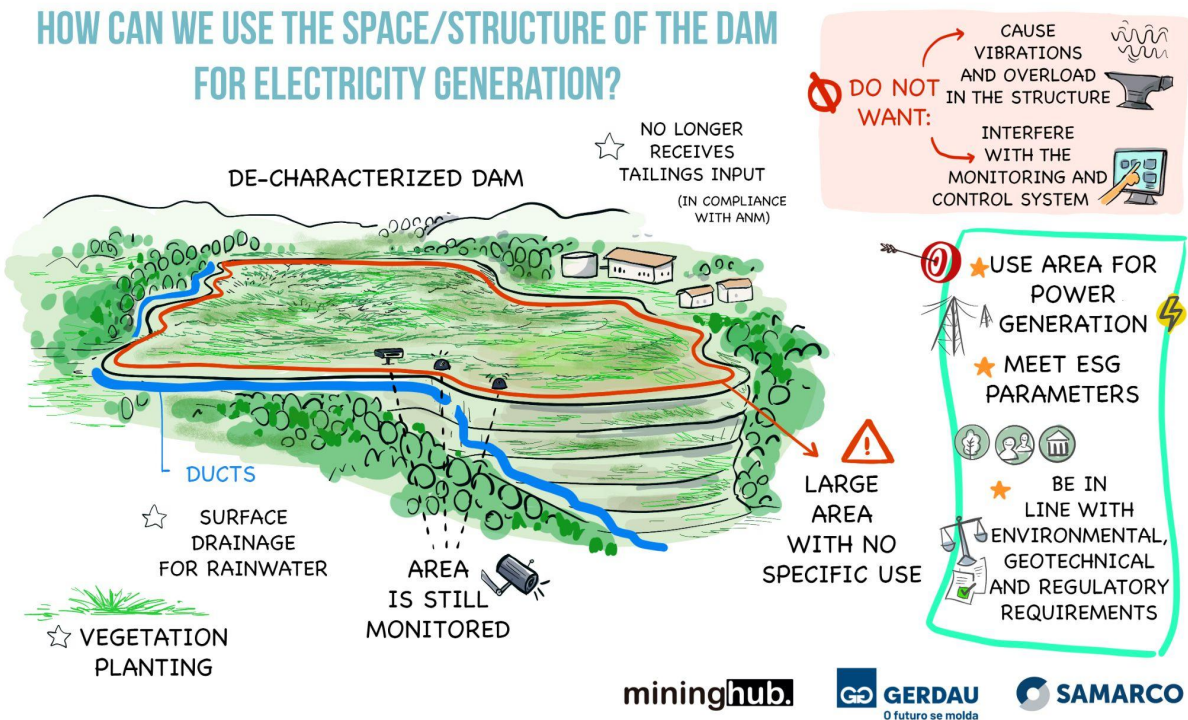
HOW CAN WE GUARANTEE THE HOMOGENEITY OF THE ROM IN THE PLANT FEED, IN ORDER TO GUARANTEE THE QUALITY OF THE PRODUCTS AND OPERATIONAL STABILITY?



4.1 - How can we build self-sustainable support infrastructure in remote areas?

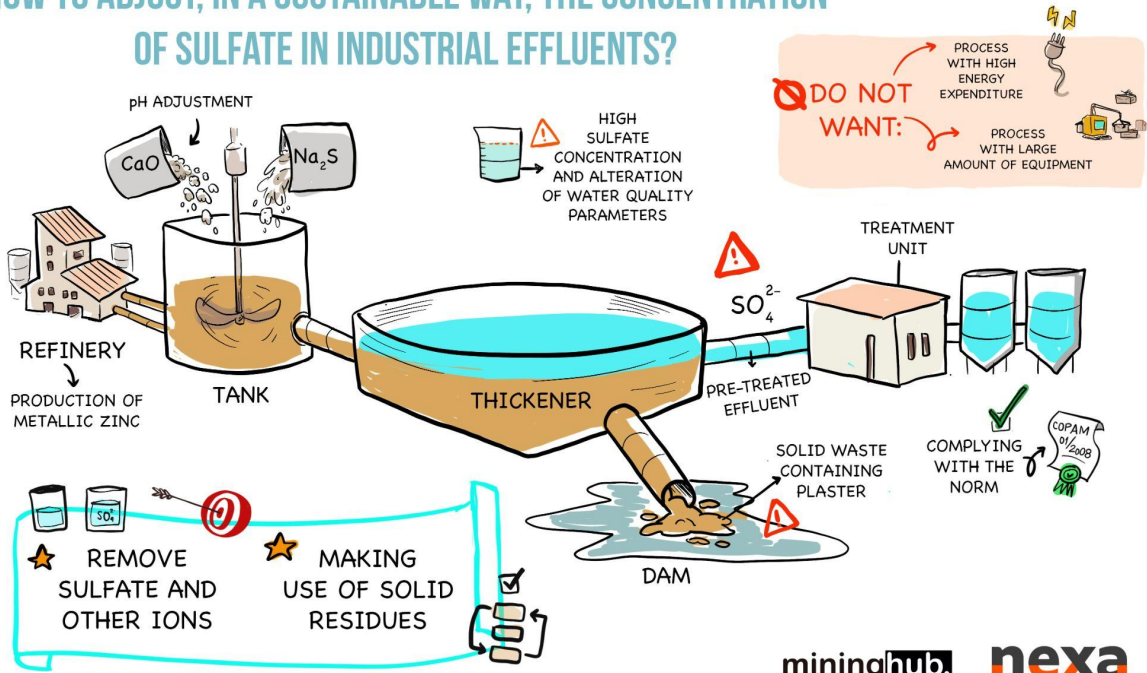


4.2 - How can we use the space/structure of the dam for electricity generation?



5.1- How to adjust, in a sustainable way, the concentration of sulfate in industrial effluents?

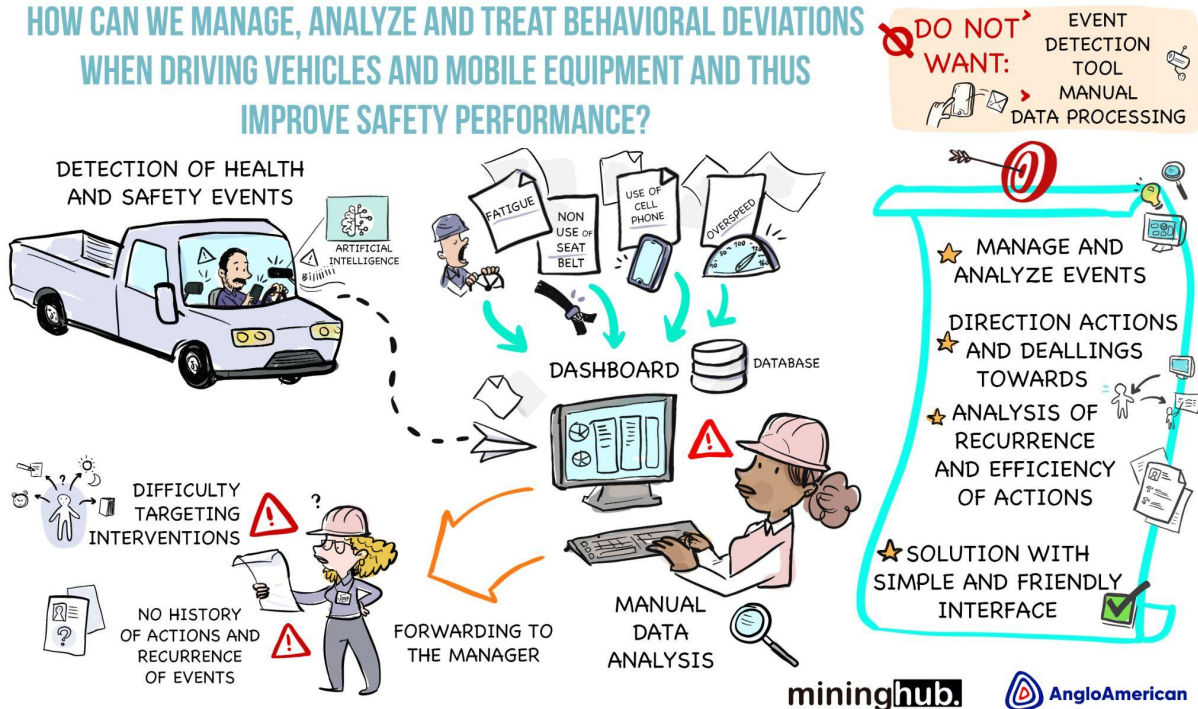
HOW TO ADJUST, IN A SUSTAINABLE WAY, THE CONCENTRATION OF SULFATE IN INDUSTRIAL EFFLUENTS?



mininghub. nexa

6.1- How can we manage, analyze and treat behavioral deviations when driving vehicles and mobile equipment and thus improve safety performance?

HOW CAN WE MANAGE, ANALYZE AND TREAT BEHAVIORAL DEVIATIONS WHEN DRIVING VEHICLES AND MOBILE EQUIPMENT AND THUS IMPROVE SAFETY PERFORMANCE?



mininghub. AngloAmerican

6.2 - How can we implement a system model so that companies can promote a widely trained and monitored environment in favor of worker safety?

HOW CAN WE IMPLEMENT A SYSTEM MODEL SO THAT COMPANIES CAN PROMOTE A WIDELY TRAINED AND MONITORED ENVIRONMENT IN FAVOR OF WORKER SAFETY?

