

HUMAN FACTORS

IMPACTING SAFETY IN THE SOUTH AFRICAN MINING INDUSTRY



DISCUSSIONS & PROPOSALS

MOSH LEARNING HUB | DAY OF LEARNING HELD ON 26 JULY 2024



MINING INDUSTRY
OCCUPATIONAL
SAFETY & HEALTH



MINERALS COUNCIL
SOUTH AFRICA

EXECUTIVE SUMMARY

MOSH hosted a Day of Learning workshop in July 2024 that focused on key themes crucial to the mining industry. Discussions throughout the workshop highlighted the need to integrate safety into production processes without compromising output, recognising that production incentives often prioritise output over safety.

Leadership-driven mentorship programmes and regular refresher courses were recommended, to encourage personal and professional growth in order to strike this balance.

Empowering employees to exercise their safety rights and fostering open communication between safety and production personnel were seen as essential steps toward creating a cohesive safety culture.

The challenge of absenteeism was addressed by identifying health, wellness and community-related issues as key contributors. The workshop proposed wellness programmes, mental health support, and the revision of employment policies to accommodate employees while maintaining productivity.

Fatigue, driven by long hours, equipment shortages, and secondary jobs, was another concern. Strategies such as workload redistribution and reduced mandatory hours were recommended.

Supervision was identified as a pivotal factor to improve safety and productivity. The need for competent leadership with strong emotional intelligence and clear role definitions was emphasised.

The introduction of risk-based supervisory allocation and the development of enhanced on-the-job coaching were recommended as vital steps to support supervisors in their demanding roles.

Training practices were scrutinised, with the need for modernisation and customisation of training methods taking centre stage.

The workshop stressed the importance of moving away from outdated, compliance-driven training models and adopting innovative approaches, such as blended learning and augmented reality, to cater to diverse learning styles and literacy levels.

The continuous evaluation of training programmes and practitioners was seen as crucial to drive behavioural change.

Fostering a safety culture that permeates all levels of the organisation was also considered vital.

Leadership must play a central role in promoting safety as a core value, ensuring that it is embedded equally in all operations. Specifically, it should address the disparities in safety between the day and night shifts.

Community engagement was highlighted as a means of reinforcing safety – both inside and outside the workplace. By nurturing shared values among stakeholders and fostering long-term collaboration with community leaders, the organisation would be able to create a sustainable and resilient safety culture.

This workshop underscored the importance of an integrated approach to safety, requiring alignment across the personal, organisational, and community dimensions to create a safer and more productive mining environment.

WORKSHOP FOCUS

FIVE KEY THEMES CRUCIAL TO THE MINING INDUSTRY

1

BALANCING SAFETY AND PRODUCTION

2

REDUCING ABSENTEEISM

3

EFFECTIVE SUPERVISION

4

EFFECTIVE TRAINING

5

FOSTERING A ROBUST SAFETY CULTURE

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INTRODUCTION

FOUNDATION

MOSH analyses of the human factors impacting health and safety in South African mining had a solid foundation for its investigations. Prior research by the MHSC revealed key factors contributing to poor health and safety performance. The following were highlighted in its 2022 Milestone Report:

PRODUCTION PRESSURES

Employees often feel pressured to prioritise production targets over safety, which can lead to shortcuts and unsafe practices. This pressure is exacerbated by incentives tied to production outcomes, which may encourage employees to compromise on safety (Mine Health and Safety Council, 2022, p. 80).

WORKPLACE STRESS AND JOB INSECURITY

High levels of stress and job insecurity are negatively correlated with safety compliance. Employees under stress may have lapses in concentration and judgment, leading to non-compliant behaviour and an increased risk of accidents (Mine Health and Safety Council, 2022, p. 80).

SUPERVISORY PRACTICES

Misalignment between top management and lower-level supervisors regarding safety responsibilities can lead to inconsistent execution of safety policies. Supervisors' beliefs about their safety responsibilities can influence how they implement organisational policies, potentially leading to the development of "safety subcultures" (Mine Health and Safety Council, 2022, p. 60).

There are also challenges when supervisors face competing demands or lack adequate training and support, which can impact their ability to fully commit to safety initiatives (Mine Health and Safety Council, 2022, p. 80).

HUMAN FACTORS AND NON-COMPLIANCE

Employees acknowledge that human factors, such as non-compliant behaviour, contribute to mine accidents. However, there is resistance to

The Mine Health and Safety Council (MHSC) 2022 Milestone Report titled 'What are Employees Experiences of Health and Safety Measures in the South African Mining Industry (SAMI)?' highlighted these contributing factors to poor health and safety performance.

embracing technology that could mitigate human error, indicating a gap in the adoption of technological solutions for safety improvement (Mine Health and Safety Council, 2022, p. 175).

ENVIRONMENTAL AND SYSTEMIC FACTORS

Harsh physical conditions, such as high temperatures and labour-intensive work, along with a behavioural environment that allows for the violation of standards, are significant contributors to poor safety performance. Leadership is also identified as a critical systemic factor influencing safety outcomes (Mine Health and Safety Council, 2022, p. 78).



FIVE BEHAVIOURAL FACTORS IMPACTING HEALTH AND SAFETY IN THE SAMI

 ABSENTEEISM	 PRODUCTION PRESSURE	 SAFETY CULTURE	 TRAINING	 SUPERVISION
Frequent occurrence leaves remaining crew short-handed.	Belief that production goals are sometimes prioritised over safety practices.	Safety emphasis varies between day and night shifts.	New employees often don't get needed training due to the immediate demand for their presence on the job.	Employees say supervisors are unable to spend enough time with their crews due to work demands.
Short-staffing pressure can lead to cutting corners or taking on unfamiliar tasks, increasing chance of mistakes and accidents.	Leads to reluctance to adhere to safety training and regulations like those outlined in sections 22 and 23 of the Mine Health and Safety Act ¹ .	Employees perceive a greater focus on safety during the day shift.	This lack of adequate training time can compromise their ability to perform safely and effectively.	Lack of transparency between supervisors and employees raised.
Absenteeism disrupts teamwork, crucial for safety in mines – where communication and trust are essential.				Apparent mistrust between supervisors and employees.

Table 1: Five themes extracted from the MOSH analysis: a summary

CORROBORATION

The qualitative data collected by the MOSH Learning Hub team over a period of more than five years supports the findings of the 2022 MHSC Milestone Report. The Learning Hub's data collection was conducted through various channels, including focus group discussions, bilateral engagements, ad hoc interviews, as well as surveys, to gain an understanding of what mine employees

perceive to be contributors to workplace accidents. MOSH ensured a broad representation of perspectives from across the organisational hierarchy – from management to frontline operations – in its information gathering.

¹ Mine Health and Safety Council (2018)

The five behavioural factors that emerged from the MOSH analysis highlight the complex interplay between organisational pressures, human behaviour, and environmental conditions when it comes to shaping health and safety performance in the mining industry.

Tackling these challenges requires a comprehensive approach that includes employee involvement, effective supervision and a mature safety culture.

Addressing the issues of absenteeism, inadequate supervision, production pressure, poor safety culture, and lack of training in the South African mining industry (SAMI) is crucial for at least four reasons.



1. HEALTH AND SAFETY

The mining industry is inherently dangerous, and without proper safety measures, training and a strong safety culture, the risk of accidents and occupational health diseases increases significantly. Resolving these challenges can prevent injuries, fatalities, and long-term health problems among workers.

2. PRODUCTIVITY AND EFFICIENCY

High levels of absenteeism and inadequate supervision can lead to decreased productivity and inefficiencies in operations. By addressing these issues, mining companies can ensure that operations run smoothly.

3. EMPLOYEE MORALE AND RETENTION

A safe and well-managed workplace with adequate training opportunities can improve employee morale and job satisfaction. This can reduce turnover rates and the associated costs of recruiting and training new employees.

4. ECONOMIC IMPACT

The mining industry is a significant contributor to South Africa's economy. Responding to the challenges productively can help ensure the industry's sustainability and continued economic contribution, including job creation and revenue generation.

The Minerals Council Learning Hub organised the Day of Learning to better understand the behavioural factors and explore organisations' existing safety measures. The workshop event brought together various industry stakeholders to share their experiences, challenges, and successful strategies in managing these critical safety issues.

DAY OF LEARNING

OBJECTIVES

Here's how the event aimed to achieve the MOSH objectives of continuous improvement:

EXCHANGE KNOWLEDGE AND LEADING PRACTICES

Participants had the opportunity to share their experiences and insights. This knowledge exchange allowed organisations to learn from each other, adopting practices that have been proven effective in various contexts.

PROVIDE FEEDBACK ON EXISTING PRACTICES AND TRAINING PROGRAMMES

The workshop served as a forum for participants to critically evaluate current health and safety practices and training programmes. By providing feedback, organisations could identify gaps and areas where current methods fell short, paving the way for improvements that aligned with the latest standards and technological advancements.

ASSESS WHAT'S WORKING AND WHAT NEEDS IMPROVEMENT

Through discussions and collaborative analysis, participants evaluated the success of their current policies and measures. This helped to distinguish between practices that yield positive results and those that require modification or replacement.

The Day of Learning was designed to be a collaborative platform, where various stakeholders in the mining industry could come together to address the critical factors impacting health and safety performance. The MOSH initiative is crucial for fostering a culture of continuous improvement, ensuring that safety standards in the industry are not only maintained but enhanced.

PINPOINT AREAS REQUIRING IMMEDIATE ATTENTION AND STRATEGIC INTERVENTION

The event identified critical areas that pose significant risks to health and safety. By pinpointing these areas, organisations could prioritise their efforts and aim resources toward interventions that would have the most substantial impact on improving health and safety outcomes.

GENERATE IDEAS FOR SOLUTIONS TO IDENTIFIED CHALLENGES:

A key outcome of the Day of Learning was the generation of innovative solutions to the challenges identified. By bringing together diverse perspectives and expertise, the workshop aimed to foster creative problem-solving and the development of actionable strategies that could be implemented to enhance safety performance.

IN SHORT

The Day of Learning was aimed at improving mine safety by facilitating knowledge exchange, critical evaluation and collaborative problem-solving. It empowered organisations to take proactive steps to address health and safety challenges, leading to a safer working environment for all employees.

WORKSHOP APPROACH

The Day of Learning programme was structured into four main sessions, with various speakers and facilitators covering different aspects of occupational health and safety in the mining industry. It aimed to provide a comprehensive understanding of these topics, share best practices, and develop actionable recommendations for improvement.

SESSION 1

SETTING THE SCENE: ACADEMIC PERSPECTIVE

The Minerals Council introduced the workshop's objectives. The session also included a keynote address by Prof S. Rupprecht (University of Johannesburg), who discussed the impact of work pressure on workers' attitudes towards health and safety. Dr S. Phakathi (Mjaji Research and Development) then presented the state of occupational safety performance in South African mines; outlining progress, successes, challenges and suggestions for progress.

SESSION 3

5 BREAKAWAY DISCUSSIONS

These discussions delved into the five key behavioural factors (themes) identified by MOSH, with facilitators and scribes present to guide discussions and document the outcomes. The themes discussed were: strategies for reducing absenteeism, balancing safety and production, effective and consistent training, cultivating a strong safety culture, and effective supervision. The sessions aimed to generate innovative solutions and practical strategies for each.

SESSION 2

LIVED EXPERIENCE: PRESENTATIONS FROM MINING COMPANIES

Industry players – including Gold Fields (South Deep), Glencore Alloys and Harmony – focused on improvements to organisational effectiveness in this session. Their presentations provided firsthand accounts and practical strategies for addressing safety challenges.

SESSION 4

FEEDBACK SESSION

The feedback session involved a report-back from the breakaway discussions, summarising the findings and recommendations. The Minerals Council then concluded the workshop with closing remarks.

IN SHORT

Throughout the Day of Learning, participants engaged in discussions, shared knowledge, and collaborated to address the multifaceted challenges impacting health and safety performance in the mining industry. The workshop's structure ensured a robust exchange of ideas and the development of actionable plans for improving safety standards and practices.



HOW TO READ THIS DOCUMENT

The discussions and inputs from the various breakaway discussions are grouped into three key areas: personal factors, organisational factors and environmental factors, in line with common socio-technical system models used to address issues holistically.

In the context of this document, these factors are defined as follows:

PERSONAL FACTORS

The individual characteristics and behaviours of the employee that can influence performance. They are:

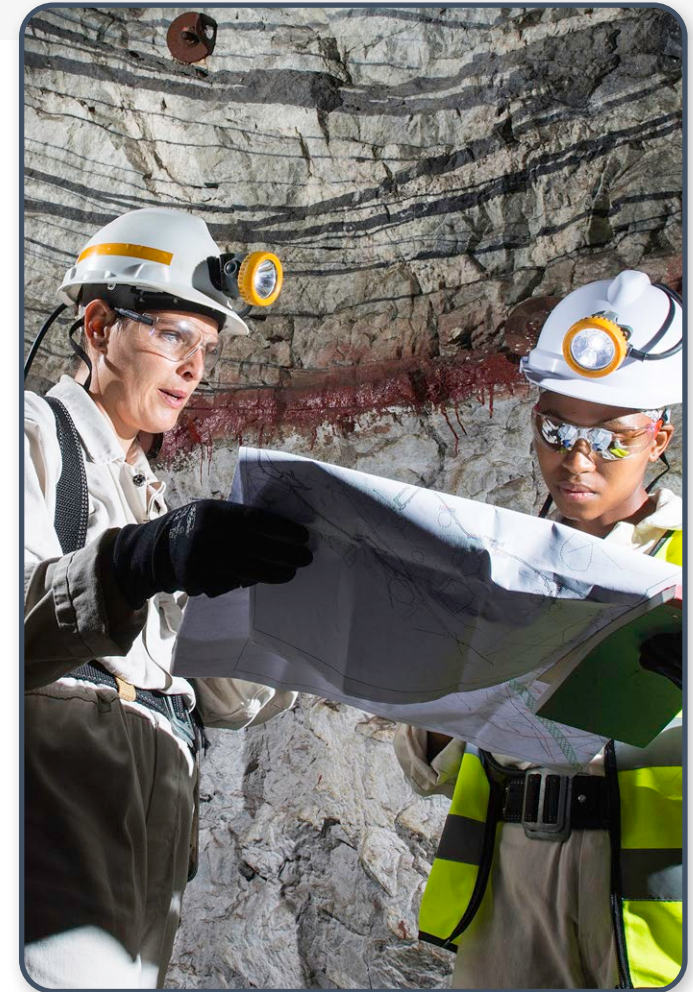
- Mindsets and attitudes toward safety
- Skills and competencies that affect the employees' ability to recognise hazards and respond appropriately
- Physical and mental health, which can affect alertness and decision making

ORGANISATIONAL FACTORS

The policies, practices and culture within the organisation, as well as the physical and operational conditions of the mining environment that affect health and safety outcomes.

ENVIRONMENTAL FACTORS

The broader community and societal context within which mines operate, as well as the broader economic and market dynamics that influence mining operations.



BALANCING SAFETY AND PRODUCTION

BREAKAWAY 1

This discussion explored challenges and proposed strategies for maintaining health and safety standards while meeting production goals.

FACTOR	CHALLENGES	PROPOSED STRATEGIES
PERSONAL	If safety practices are not equally recognised and rewarded, employees may perceive them as less important. The need for training and skills development to equip employees to recognise hazards. The cost-of-living crisis (job insecurity). Employees often seek recognition for their hard work and contributions. Recognition can be praise from supervisors or bonuses.	Encourage personal development and mentorship. Well-trained workers are more proficient in their tasks, which can lead to increased productivity. They will perform their duties more efficiently while complying with safety practices, thereby supporting both safety and production goals.
ORGANISATIONAL	Employees are not empowered to exercise their rights as outlined in the Mine Health and Safety Act Sections 22 and 23. Lack of integration between safety systems and production systems: Safety practices and production goals are treated as separate or conflicting priorities, rather than being aligned and mutually supportive. Difference in operational focus between safety practitioners and production personnel: Safety practitioners are primarily focused on ensuring that all operations adhere to safety practices and regulations. Production personnel are typically driven by the need to meet production targets and maintain operational efficiency. Incentive structures in the organisations are focused more on production.	Empower employees to exercise their rights. Encourage leaders to actively participate in safety initiatives and model safe behaviour. Foster open communication between safety and production personnel: Encourage collaboration between safety and production teams through cross-functional meetings and joint training sessions to foster understanding and cooperation. Provide regular refreshers: Ongoing training keeps safety practices fresh in workers' minds, preventing complacency. This continuous reinforcement of safety practices ensures that safety remains a priority, even under production pressure. Review incentive structures to balance safety and production: Develop incentive programmes that include both safety and production metrics. For example, bonuses could be tied to achieving production targets while also maintaining good health and safety performance.
ENVIRONMENTAL	Economic climate and its impact on the organisation.	Nurture shared value among stakeholders: Embed safety as a core organisational value, ensuring that it is seen as integral to achieving production goals. This can be reinforced through regular communication from leadership and visible commitment to safety practices.

TABLE 2: Challenges and proposed strategies for balancing safety and production

REDUCING ABSENTEEISM BREAKAWAY 2

This discussion focused on understanding the factors that lead to employee absenteeism and identifying methods to minimise it.

FACTOR	CHALLENGES	PROPOSED STRATEGIES
PERSONAL	Health and mental wellness programmes are reactive rather than proactive.	Education on policies: Ensuring employees are well-informed about company policies, particularly regarding sick leave and wellness programmes
	Substance abuse and gender-based violence	Address employee health and mental wellness through awareness programmes, such as mental health support and substance abuse training.
	Fatigue due to moonlighting: Employees taking on multiple jobs and the impact of fatigue on attendance.	Integration of wellness into daily operations: Propose the involvement of wellness representatives in daily, weekly and monthly planning to maintain a proactive approach. Review employment contracts and policies to provide additional income opportunities and accommodate employee wellness.
ORGANISATIONAL	Shortage of resources; eg. tools, equipment and compressed air	
	Supervisors are not empowered to halt work when adequate staffing is not available.	Empower supervisors: Give supervisors Stop Work Authority (SWA) – the authority to halt work when adequate staffing is not available, as part of Trigger Action Response Plan (TARP).
	Spare gang model halted by companies	Reintroduce spare gang model: Implement a model where employees are multiskilled to cover for absent colleagues.
	The impact of long hours, physically demanding work, and long commutes on employee fatigue and absenteeism.	Review mandatory working hours: Reduce working hours to alleviate employee fatigue and improve working conditions.
ENVIRONMENTAL	Labour shortage: Additional strain on working employees, including pregnant employees, due to labour shortages	Studies on reducing work overload: Conduct work studies to find ways to reduce workload without compromising health, safety and production.
	Culture of substance abuse and gender-based violence in mining communities	Collaborate with community leaders to implement wellness programmes.
	Social activities: Influence of social and disruptive after-hours activities on absenteeism.	Explore ways to provide alternative recreational facilities in the community. Continuous presence in the community: Commit to long-term collaborations with the community to address absenteeism holistically.

TABLE 3: Challenges and proposed strategies for reducing absenteeism

IN SHORT

The session emphasised the need for a multifaceted approach to tackle absenteeism that considers personal, organisational and environmental factors. Proactive measures, such as wellness programmes and policy reviews, were recommended to prevent absenteeism rather than reacting

to it. Community engagement was seen as a vital component to address the social issues that contribute to absenteeism. Continuous monitoring and evaluation of these strategies would be essential to measure their effectiveness and make the necessary adjustments.

EFFECTIVE SUPERVISION

BREAKAWAY 3

This discussion aimed to identify methods to ensure that supervisors in the mining industry would be effective in their roles. Effective supervision is critical for maintaining health and safety, productivity and compliance with legal requirements.

FACTOR	CHALLENGES	PROPOSED STRATEGIES
PERSONAL	Leadership qualities and emotional intelligence: Supervisors should possess strong leadership and interpersonal skills, as well as emotional awareness to manage their teams effectively.	Enhance training and support: Provide comprehensive training and on-the-job support to build supervisor competencies.
	Education level: Ensuring supervisors have the necessary educational background relevant to their supervisory roles.	Evaluate and monitor performance: Regularly assess supervisor performance and implement corrective action as needed.
	Risk appetite: Assessing the risk tolerance of supervisors to match them with appropriate responsibilities.	Resource adequately: Ensure supervisors have the necessary resources and support staff to focus on their supervisory roles.
	Personal motivation: Recognising the importance of supervisors' personal drive and motivation to perform effectively in their duties.	Induction programmes: Implement programmes to effectively instil the organisation's safety culture in new supervisors.
ORGANISATIONAL	Supervisor workload vs legal appointments: Balancing the workload of supervisors with their legal obligations.	Develop criteria and a framework: Create a structured approach to assess and address supervision needs.
	Unclear definition of roles and responsibilities: Clarifying the roles and expectations of supervisors to avoid confusion and improve performance	Clarify roles and responsibilities: Define clear expectations for supervisors to enhance accountability and performance.
	Appointment policies (favouritism): Ensuring fair and transparent processes for appointing supervisors to avoid favouritism	Implement risk-based supervision: Allocate supervisors based on risk assessments to optimise their effectiveness.
	Criteria for appointing supervisors: Developing clear criteria for selecting supervisors, based on competency and fit for purpose.	Establish fair appointment policies: Ensure transparent and merit-based appointment processes.
	Training: Providing more on-the-job coaching, practical experience and support for supervisors.	
	Evaluation and monitoring – Interventions to address poor performance: Establishing mechanisms to evaluate supervisor performance and implement interventions when necessary.	
	Supervisors not resourced with adequate people: Addressing the issue of supervisors taking on too many direct tasks, which can detract from their supervisory duties.	
	Erosion of team leader role: Recognising and preventing the erosion of the team leader role.	
	Risk profile/appetite: There are no structured programmes to help employees adjust to the organisational culture and risk management principles.	
	Safety culture of external vs internal appointments: Considering the impact of appointing supervisors from within the organisation versus from external sources on the overall safety culture.	

TABLE 4: Challenges and proposed strategies for effective supervision

ENSURING EFFECTIVE TRAINING

BREAKAWAY 4

This discussion aimed to identify challenges and propose effective methods to ensure effective training within the SAMI.

FACTOR	CHALLENGES	PROPOSED STRATEGIES
PERSONAL	Learning style: Recognising the importance of customising learning to cater to individual learning styles. Literacy levels: Varying literacy levels in the workforce, particularly the older workforce. Personal development and motivation: Understanding the role of personal development and motivation in the training process.	Customised learning: Develop training programmes that cater to individual learning styles and needs.
ORGANISATIONAL	Ensuring the quality and integrity of training and avoiding mere box-ticking exercises. Quality of training practitioners: Ensuring that training practitioners have the necessary education, skills and experience. Modernised blended learning: Consider modern, blended learning approaches using various media to deliver training. Continuous monitoring and evaluation: Regularly assessing training material and trainee progress – including employee feedback. Compliance-driven training: Recognising that training is often driven by compliance requirements. One-size-fits-all training: Avoiding a one-size-fits-all approach and considering individual learning methods, styles, and theories. Stagnant training: Addressing the issue of outdated, rigid and laborious training methods. Moving away from outdated training methods that are still prevalent in the SAMI.	Quality assurance: Ensure the accreditation and quality of training providers and materials. Continuous improvement: Regularly update training materials and methods to reflect industry changes and best practices. Monitoring and evaluation: Implement systems to monitor training effectiveness and employee performance after the training. Targeted training: Design training programmes that are specific to job roles and responsibilities. Modernisation: Invest in modern training technologies to enhance learning experiences.

TABLE 5: Challenges and proposed strategies for ensuring effective training

FOSTERING A SAFETY CULTURE

BREAKAWAY 5

The objective of fostering a safety culture within an organisation is to create an environment where safety is a core value and is prioritised in all aspects of operations.

FACTOR	CHALLENGES	PROPOSED STRATEGIES
PERSONAL	Personal accountability: Emphasising the importance of individual responsibility for safety Personal beliefs: Recognising the influence of personal beliefs on safety behaviours	Integrate safety systems into all organisational processes. Institute regular celebrations of safety milestones to reinforce positive safety behaviours. Invest in processes that correct safety issues without punitive measures.
ORGANISATIONAL	Self-driven teams: Encouraging teams to take ownership of safety in their operations Team rotation: Rotating teams, supervisors and management across all shifts to mitigate perceived discrepancies. Lack of accountability due to lack of supervision Visible felt leadership (VFL): Ensuring senior management presence across all shifts to demonstrate commitment Lack of open communication and collaboration between employees and supervisors Shift discrepancies between day and night shifts, especially in supervision and perceived importance Night shift challenges: Recognising the unique challenges faced by the night shift, such as exposure to freshly blasted ground Resource allocation: Inadequate resource allocation for the night shift in terms of supervision, materials, health and safety representatives, and training.	Empower teams to drive safety initiatives and take responsibility for their safety performance. Implement policies that rotate teams and management across shifts to ensure equity and empowerment of all shifts. Align leadership values with a safety culture to lead by example. Establish channels for open communication and collaboration. Address the discrepancies between shifts to ensure equal importance and empowerment. Ensure that all shifts are adequately resourced with supervision, materials and training.
ENVIRONMENTAL	Safety mindset outside the workplace	Influence the community culture through long-term collaboration with community leaders on safety issues. Engage with the community to foster a culture of safety beyond the workplace.

TABLE 6: Challenges and proposed strategies for fostering a safety culture in the mining industry

'WHAT WENT RIGHT' MODEL

The 'What Went Right' model is a mining industry safety framework that was developed by Prof Kobus de Jager. It is based on his work examining what mining companies did to achieve a noticeable and dramatic reduction in fatalities – from 270 in 2003 to 51 in 2019 (Macnamara, 2022).

COMPONENTS OF THE MODEL

ADVOCACY

Advocating for safety involves promoting a culture where safety is prioritised. This includes ensuring that all stakeholders understand the importance of safety and are committed to it.

LEADERSHIP TO TAKE HEED OF SOCIETAL EXPECTATIONS/ REQUIREMENTS

Leadership plays a crucial role in aligning company practices with societal expectations. This means being responsive to safety standards and integrating them into the organisation's values.

INSTITUTIONALISE STRATEGIC INTENT

This involves embedding safety into the core strategy of the organisation.

SYSTEMISE

Developing and implementing systems that support safety objectives. This includes processes, technologies and tools that ensure safe operations and compliance with safety practices.

HUMANISE

Focusing on the human element by empowering employees to take ownership of safety. This involves training, encouraging proactive behaviour, and creating an environment where people feel responsible for their own safety and that of others.

OPERATIONALISE

Creating an environment that supports and enables safe practices. This involves ensuring that all necessary resources, policies and infrastructure are in place to facilitate safety.

SAFETY RESULTS THAT YOU DESERVE

Achieving safety outcomes through continuous improvement; learning from past mistakes and successes.

IN SHORT

The model focuses on health and safety by emphasising a proactive and holistic approach. It emphasises a cycle of continuous improvement and alignment with societal expectations, ensuring that safety is an integral part of the organisational culture and operations.

WHAT WENT RIGHT MODEL



FIGURE 1: What Went Right model by Professor Kobus de Jager²

² Macnamara (2022)

USING THE MODEL

BALANCING SAFETY & PRODUCTION



SEE
BREAKAWAY 1

In the realms of **advocacy and leadership**, institutionalising safety within an organisation involves nurturing shared value among stakeholders by embedding safety as a core organisational value.

This approach promotes advocacy for safety as integral to production goals and aligns with societal requirements for fair and comprehensive recognition of employee contributions.

It also involves reviewing incentive structures so that they balance safety and production targets, ensuring they align with societal expectations for responsible leadership.

Empowering employees by encouraging leaders to model safe behaviour is another key aspect, as it sets a precedent for responsible leadership.

Systemising safety requires providing regular refreshers, through ongoing training, to reinforce the strategic intent of prioritising safety in the organisation.

Fostering open communication by encouraging collaboration between safety and production teams is essential for integrating systems that support mutual goals.

Additionally, reviewing incentive structures to tie them to both safety and production metrics ensures that safety results are achieved alongside production goals.

Humanising safety efforts involves encouraging personal development and mentorship. Well-trained workers are more proficient in their tasks, leading to increased productivity while complying with safety practices – thereby supporting both safety and production goals.

The 'What Went Right' model was used to organise proposed strategies from the Day of Learning workshop by categorising them into the model's components for ease of implementation. The belief that production goals outweigh safety practices can be combated by balancing incentive structures between safety and production targets.

Empowering employees to exercise their rights also improves engagement, contributing to a positive work environment.

Operationalising safety through encouraging personal development and mentorship creates an enabling environment for personal and professional growth.

Providing mentorship and training not only supports systemised growth and operational efficiency, but also ensures that employees are well-equipped to perform their duties efficiently and safely.



USING THE MODEL

REDUCING ABSENTEEISM



SEE
BREAKAWAY 2

From an **advocacy and leadership** perspective, addressing absenteeism requires a multifaceted approach.

Continuous presence in the community through long-term collaborations promotes sustained engagement and support. Collaborating with community leaders to implement wellness programmes extends this advocacy beyond the organisation.

Ensuring that employees are knowledgeable about company policies aligns with societal expectations for transparency and fairness.

Empowering supervisors with the authority to halt work when staffing is inadequate ensures responsive and accountable leadership.

Systemising efforts includes integrating wellness into daily operations, reflecting a strategic intent to prioritise health.

The reintroduction of the spare gang model aligns with strategic goals for operational efficiency.

Reviewing employment contracts and policies to support wellness integrates systematic changes to enhance employee wellbeing.

Conducting work studies to optimise workload involves creating systematic solutions to reduce overload.

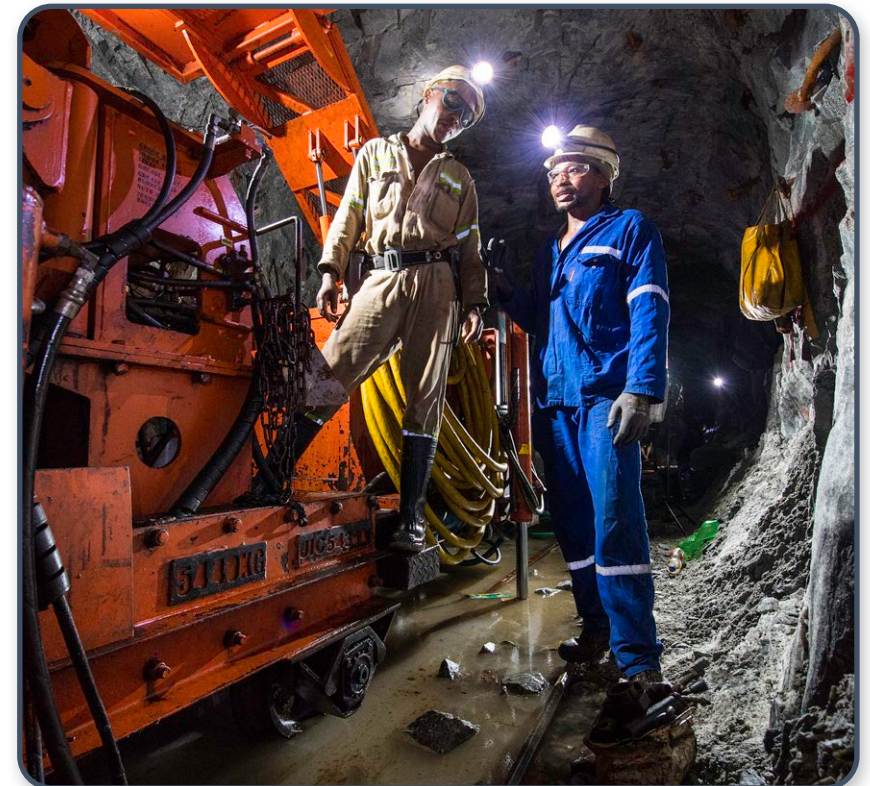
Humanising the approach involves addressing employee health and mental wellness through supportive programmes, and empowering employees by prioritising their wellbeing.

Reviewing mandatory working hours to alleviate fatigue focuses on humane working conditions.

The 'What Went Right' model was used to organise proposed strategies from the Day of Learning workshop by categorising them into the model's components for ease of implementation. Community engagement is a vital component of addressing absenteeism.

Exploring alternative recreational facilities provides options that support healthier lifestyles, creating an enabling environment.

In terms of **operationalising**, reintroducing the spare gang model ensures flexibility in staffing, fostering an adaptable and supportive work environment.



USING THE MODEL

EFFECTIVE SUPERVISION



SEE
BREAKAWAY 3

In terms of **advocacy and leadership**, addressing supervision requires a comprehensive approach.

Establishing fair appointment policies ensures transparent and merit-based processes, advocating for fairness and integrity within the organisation.

Clarifying roles and responsibilities for supervisors aligns with societal expectations of accountability and performance. Developing criteria and frameworks for structured approaches to supervision ensures alignment with organisational and societal standards.

Institutionalising the approach means implementing risk-based supervision and induction programmes for new supervisors. This will integrate the organisation's strategic intent into supervising practices. The induction programmes support onboarding strategically by integrating new supervisors into the safety culture.

Regularly assessing supervisor performance through systematic evaluation is crucial for maintaining high standards.

Systemising involves providing comprehensive training and on-the-job support, creating systems that enhance supervisor competencies.

Enhancing training and support further builds these competencies, empowering supervisors to perform effectively.

Humanising here is about recognising and fostering the personal drive and motivation of supervisors. This boosts empowerment, making the supervisors more engaged and effective.

The 'What Went Right' model was used to organise proposed strategies from the Day of Learning workshop by categorising them into the model's components for ease of implementation. Fair appointment policies, adequate resourcing and comprehensive training are clear goals.

Finally, **operationalising** supervision to ensure its effectiveness involves ensuring that supervisors have the necessary resources. This supports an enabling environment, which allows them to perform their duties efficiently.

Clearly defining roles and responsibilities contributes to an organised and effective operational environment, ensuring that supervision is both strategic and humanising.



USING THE MODEL

EFFECTIVE TRAINING



SEE
BREAKAWAY 4

Advocacy and leadership are demonstrated here by investing in modern training technologies to enhance learning experiences, promoting the adoption of new methods to improve training.

Confirming the accreditation and quality of training providers and materials aligns with societal expectations for high standards.

Institutionalising training involves regularly updating training materials and methods to reflect industry changes and best practices, supporting a strategic approach to training. Designing programmes specific to job roles aligns with the strategic intent of meeting organisational needs.

Systemising training requires using various media and approaches to deliver training, creating systems that support diverse learning needs. Implementing systems to assess training effectiveness and employee performance after training ensures that the relevant systems are in place.

Humanising training involves developing programmes that cater to individual learning styles and needs, empowering employees by addressing personal preferences. Understanding and integrating personal development into training boosts empowerment.

Operationalising training includes the regular assessment of training materials and trainee progress, creating an enabling environment for learning. Ensuring that training practitioners have the necessary skills and experience to instruct supports an effective training environment.

The 'What Went Right' model was used to organise proposed strategies from the Day of Learning workshop by categorising them into the model's components. New methods, regular assessment and updated materials are all required to ensure effective training.



FOSTERING A **STRONG SAFETY CULTURE**



SEE
BREAKAWAY 5

In the context of creating and maintaining a culture of safety, **advocacy and leadership play a central role**. Leaders create the culture when they lead by example, which aligns leadership values with safety. It is essential for senior management to demonstrate a visible and active commitment to safety.

Their commitment can be further enhanced by engaging with the community to foster a culture of safety beyond the workplace. This involves influencing the community culture through long-term collaboration with community leaders on safety issues.

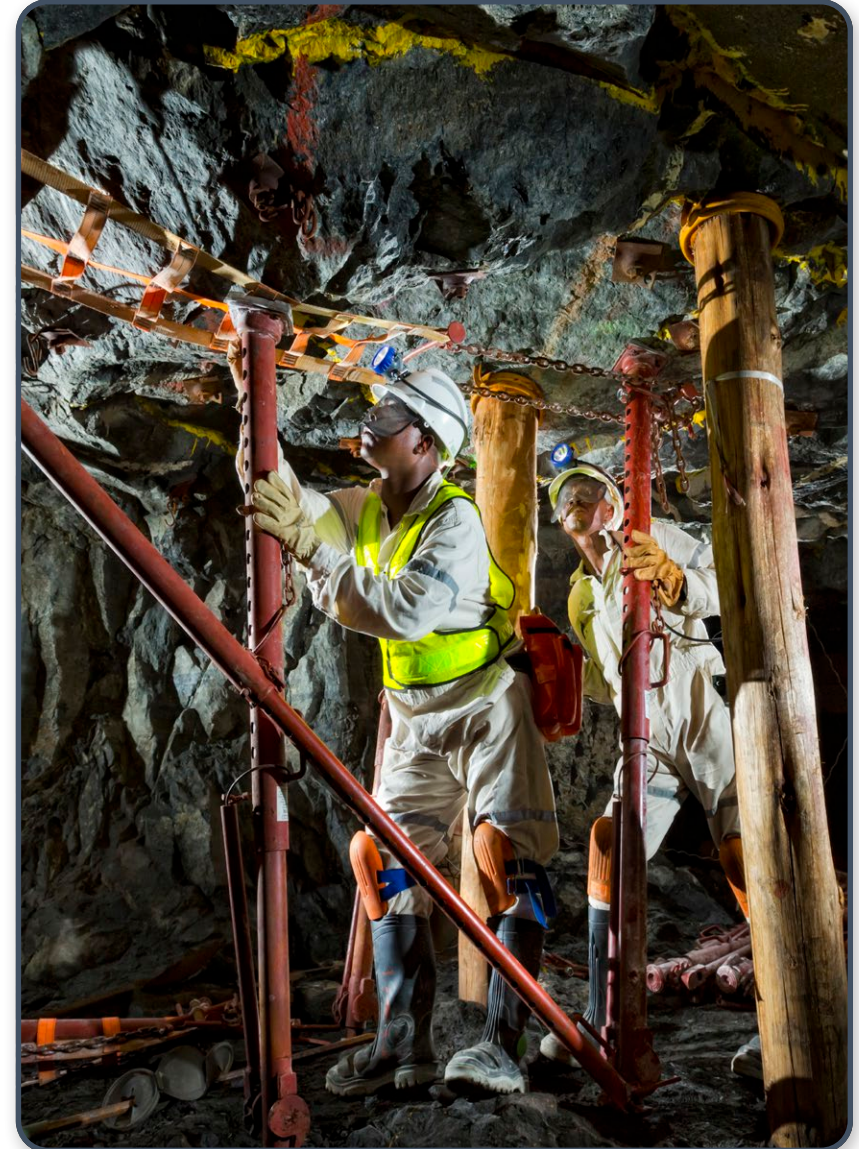
Institutionalising safety culture includes implementing policies that rotate teams and management across shifts to ensure equity and empowerment.

Systemising safety practices requires ensuring that all shifts are adequately resourced with supervision, materials and training. Policies to rotate personnel across shifts, to share knowledge and guarantee equal treatment, should be formalised to mitigate shift discrepancies.

Humanising safety culture involves empowering teams across shifts to drive safety initiatives and take responsibility for their safety performance. Regular celebrations of safety milestones can reinforce positive safety behaviours.

Operationalising safety culture includes establishing channels for open communication and collaboration, as well as investing in processes that correct safety issues without punitive measures.

The 'What Went Right' model was used to organise proposed strategies from the Day of Learning workshop by categorising them into the model's components for ease of implementation. Safety needs to be a core aspect of each of the organisation's operations.



CONCLUSIONS

The Day of Learning workshop provided a valuable opportunity to explore key areas related to mine safety and productivity.

The discussion from the workshop confirmed that the identified behavioural factors are contributors to health and safety performance in the SAMI.

The workshop emphasised the critical need for a holistic approach that integrates safety efforts at personal, organisational and community levels, thereby creating a sustainable and resilient safety culture.



Proposals from workshop participants align with key recommendations from the 2022 MHSC Milestone Report³ aimed at improving occupational health and safety in the SAMI.

THROUGH DISCUSSIONS & BRAINSTORMING, PARTICIPANTS IDENTIFIED STRATEGIES TO:

IMPLEMENT SYSTEMS THAT PRIORITISE SAFETY WHILE MAINTAINING PRODUCTIVITY GOALS.

ADDRESS THE ROOT CAUSES OF ABSENTEEISM, SUCH AS HEALTH ISSUES, WORKPLACE CONDITIONS AND ORGANISATIONAL FACTORS.

DEVELOP CRITERIA FOR SELECTING AND TRAINING SUPERVISORS AND PROVIDE THEM WITH THE NECESSARY RESOURCES AND SUPPORT.

IMPLEMENT CUSTOMISED TRAINING PROGRAMMES THAT CATER TO INDIVIDUAL LEARNING STYLES AND ENSURE THAT TRAINING IS RELEVANT AND UP-TO-DATE.

CREATE A CULTURE WHERE SAFETY IS A TOP PRIORITY, AND EMPLOYEES ARE EMPOWERED TO TAKE OWNERSHIP OF THEIR OWN SAFETY.

³ Mine Health and Safety Council (2022)

RECOMMENDATIONS

1. TRAINING & EDUCATION

Implement training programmes focused on behaviour-based safety, to address issues such as complacency and shortcuts that lead to accidents. This training should aim to influence employees' decision making when dealing with hazards.

Provide targeted training for employees with lower levels of education, to empower them to voice their concerns about health and safety matters. This includes educating them on their rights and the communication channels available for reporting safety issues.

2. TECHNOLOGICAL INTEGRATION

Implement training programmes focused on behaviour-based safety to address issues such as complacency and shortcuts that lead to accidents. This training should aim to influence employees' decision making when dealing with hazards.

Provide targeted training for employees with lower levels of education to empower them to voice their concerns about health and safety matters. This includes educating them on their rights and the communication channels available for reporting safety issues.

3. ORGANISATIONAL & SYSTEMIC CHANGES

Train employees to integrate safety with production planning, to ensure that safety is not compromised for the sake of production targets. This involves educating them on how safe production can be achieved.

Measures such as zoning mines into districts based on travel time to manage working hours and reduce fatigue, which is a significant safety risk.

4. EMPLOYEE INVOLVEMENT & FEEDBACK

Establish continuous assessment and feedback mechanisms to evaluate the effectiveness of safety measures and make necessary adjustments based on employee feedback.

5. CONTINUOUS IMPROVEMENT & EVALUATION

Involve employees in the development and implementation of safety measures to ensure that their practical experiences and insights are considered. This can lead to more effective and relevant safety interventions.

SNAPSHOT OF OTHER INDUSTRIES' SAFETY APPROACHES

HEALTHCARE, PRODUCTION & THE CONSTRUCTION SECTOR

Balancing safety culture and production in various industries – particularly in healthcare and manufacturing – is a critical challenge that organisations must navigate to ensure employee wellbeing and operational efficiency. A strong safety culture is essential for minimising accidents and enhancing overall safety performance– and it can coexist with the demands of productivity. Research indicates that a robust safety culture can lead to improved safety performance, which in turn can support production goals (Naji et al., 2021; Xiongzhong, 2023; Marquardt et al., 2020).

One of the primary factors influencing the balance between safety culture and production is management's commitment to safety practices. Studies have shown that when management prioritises safety, it fosters an environment where employees feel empowered to engage in safe practices without compromising productivity (Ricci et al., 2016; Ford & Tetrick, 2011). Effective occupational health and safety training has, for instance, been linked to improved safety culture, because it equips employees with the necessary skills to identify hazards and implement safety measures while maintaining production efficiency (Ricci et al., 2016). Furthermore, high-quality communication between management and employees enhances safety performance, as it encourages a culture of transparency and shared responsibility for safety (Ford & Tetrick, 2011; Zadow et al., 2017).

Integrating safety culture into the organisational framework can lead to better safety outcomes without hindering production. For example, the concept of design-for-safety in product development emphasises the importance of embedding safety features into the design process, which leads to safer products and processes while still meeting production targets (Zhu et al., 2016). This approach not only enhances product safety but also aligns safety culture with production goals, demonstrating that safety and productivity are mutually reinforcing, rather than conflicting, objectives.

In construction, where safety risks are particularly high, research has shown that a positive safety culture directly correlates with improved safety performance (Xiongzhong, 2023; Neupane & Hamzeh, 2023). Construction firms that actively promote safety culture through continuous training and investment in safety materials tend to experience fewer accidents and higher productivity levels. This suggests that organisations can achieve a balance, by viewing safety culture as an integral part of their operational strategy rather than a secondary concern.

Finally, it is crucial for organisations to assess and adapt their safety culture continuously, to meet the evolving demands of production. Regular evaluations using tools such as safety-climate surveys can help identify areas for improvement and ensure that safety practices align with production goals (Xiongzhong, 2023; Zadow et al., 2017). By fostering a proactive safety culture that emphasises learning and adaptation, organisations can create a work environment where safety and productivity harmoniously coexist.

Balancing safety culture and production requires a multifaceted approach that includes a strong commitment from management, effective training, integration of safety into design processes, and continuous assessment of safety practices. By prioritising safety culture as a core organisational value, companies can enhance both safety performance and productivity.

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