



Implats – Impala Rustenburg operations

MOSH LEADING PRACTICE ADOPTION AND ADDRESSING ADOPTION CHALLENGES

Stanford Malatji, Head MOSH Learning Hub, Minerals Council South Africa
19 March 2026, 7th Mine Health Dialogue
Birchwood Hotel & OR Tambo Conference Centre

PRESENTATION OUTLINE

1.	STRATEGIC CONTEXT FOR MOSH WORK
2.	MOSH STRATEGIC FOCUS
3.	MOSH STRUCTURES
4.	OVERVIEW OF THE MOSH LEADING PRACTICE ADOPTION SYSTEM
5.	MOSH ADOPTION PROCESS AND PRINCIPLES
6.	ADOPTION SUCCESSES AND ADDRESSING CHALLENGES

STRATEGIC CONTEXT



Minerals Council's Strategic Goals and Objectives

- Lead initiatives to fast-track mining's progress to zero harm.



Promote a holistic approach to the elimination of fatalities and understanding occupational risks in and beyond employment



OHS Tripartite Milestones.



Adopt globally leading practices to learn better and faster from others.

Khumbul'ekhaya Health and Safety Strategy

ASPIRATION

Zero Harm

APPROACH

Holistic

The step-change priority for the CEO Zero Harm Forum should be on the elimination of fatalities from safety and health

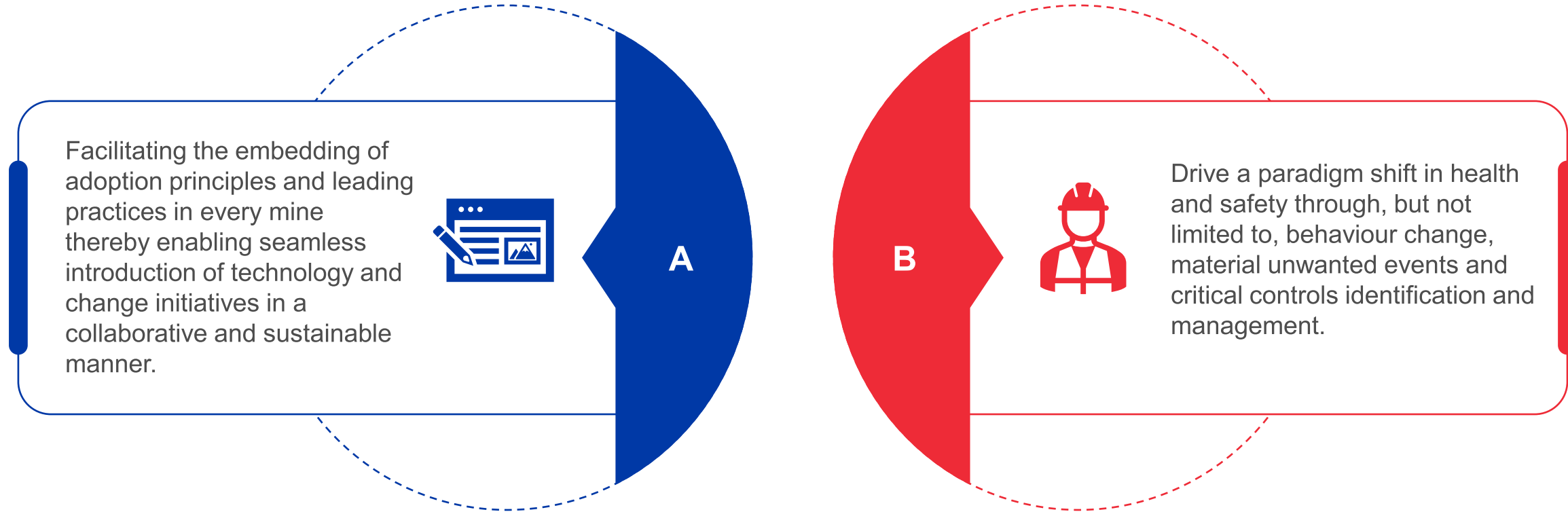
Broadening the focus to include fatalities from health during and beyond employment

We sustain our aspiration of zero harm as defined in the tripartite agreement of 2014

Every employee and contractor returns from work unharmed everyday

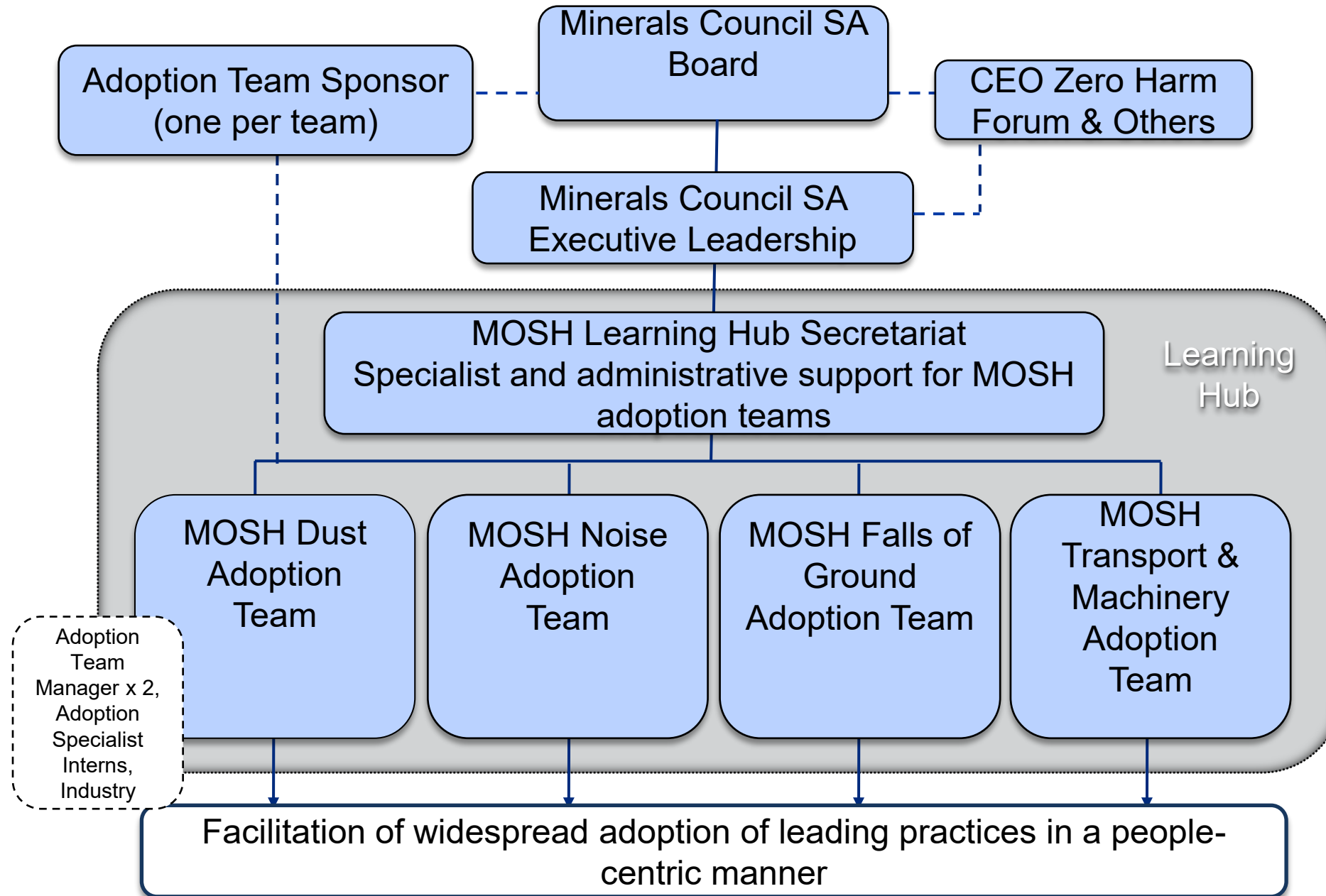
There is a need for a renewed re-alignment to it as an aspiration and not a goal

MOSH STRATEGIC FOCUS



MOSH STRUCTURES & INDUSTRY OWNERSHIP

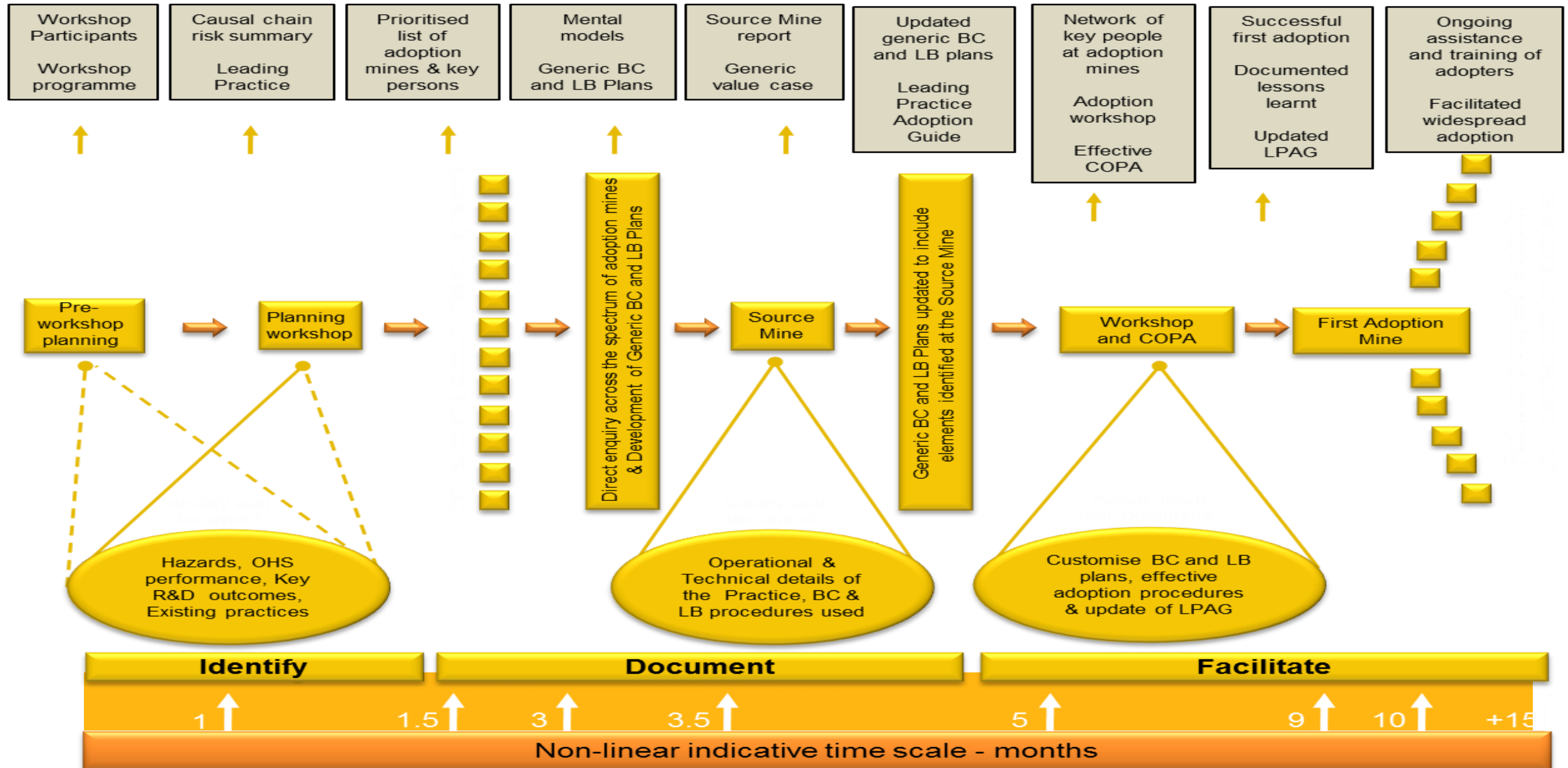
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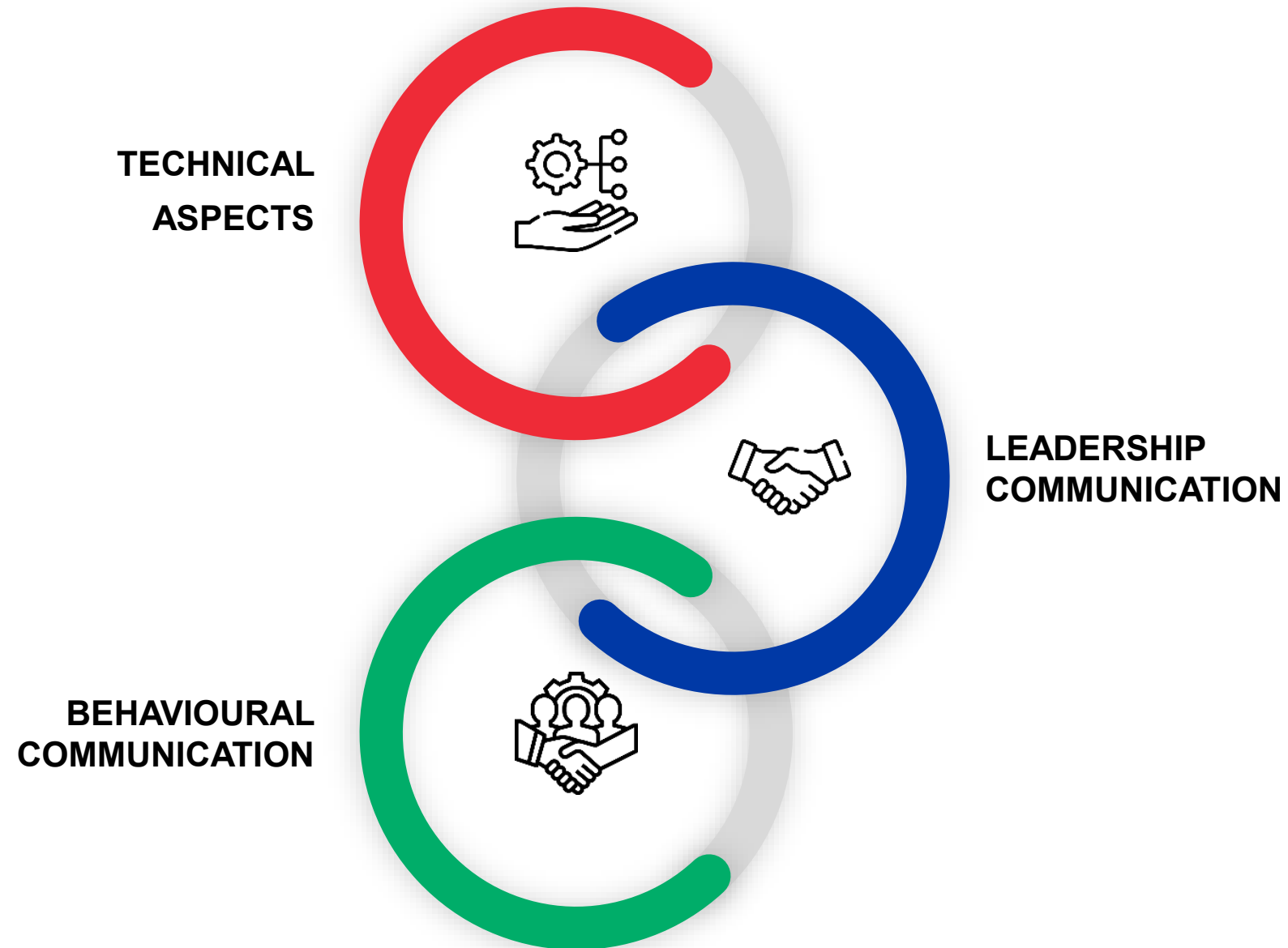
SIMPLE LOGIC OF THE MOSH PROCESS



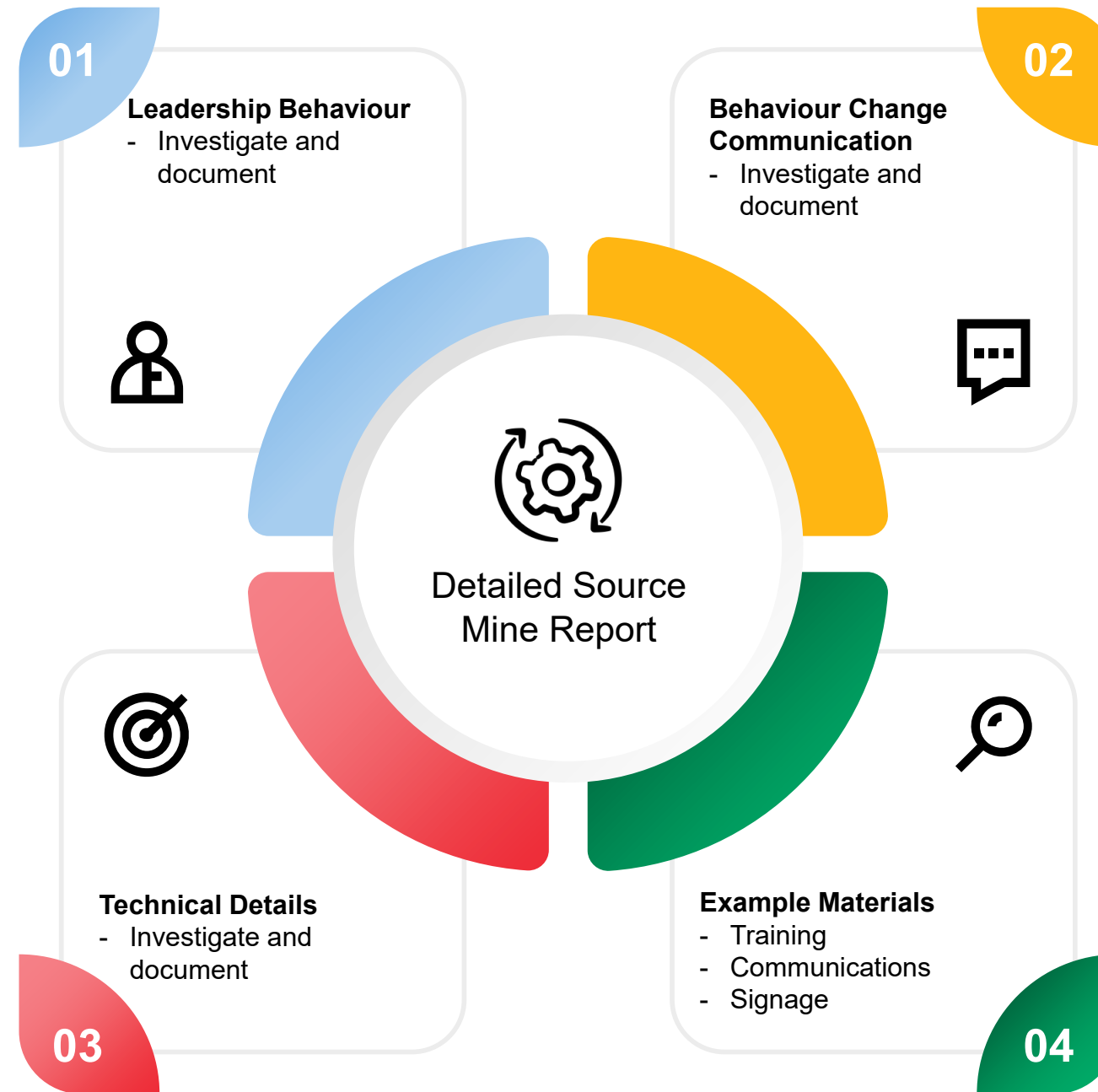
SYSTEMATIC PROCESS STEPS OF THE MOSH ADOPTION SYSTEM



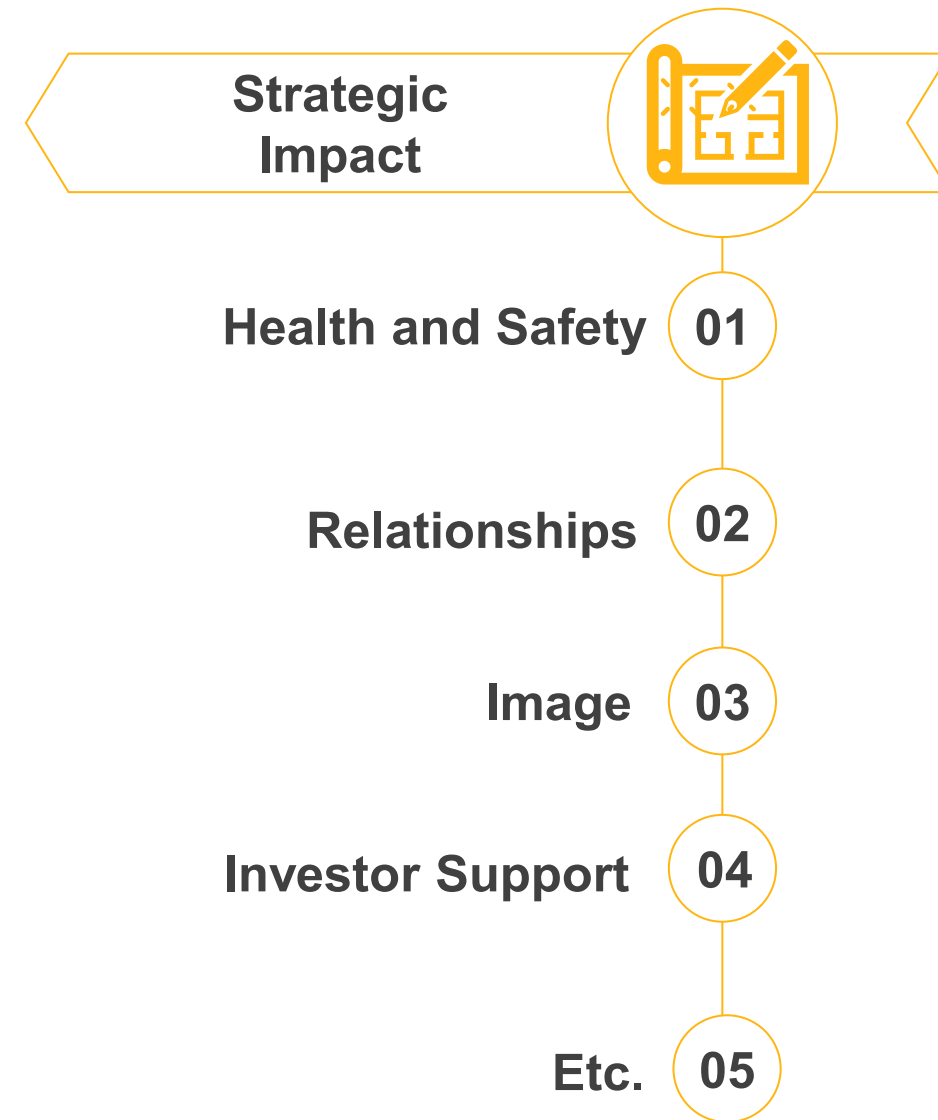
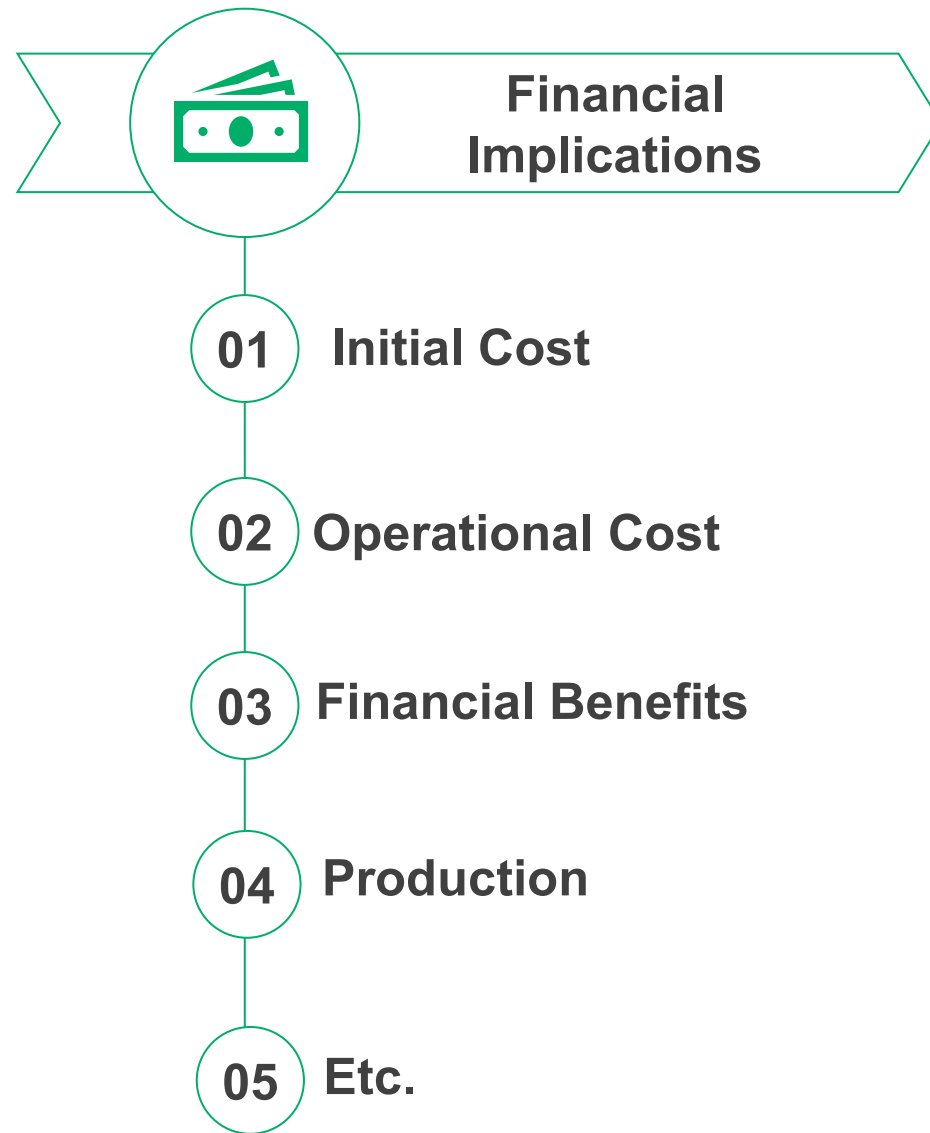
THREE LEGS OF THE ADOPTION SYSTEM



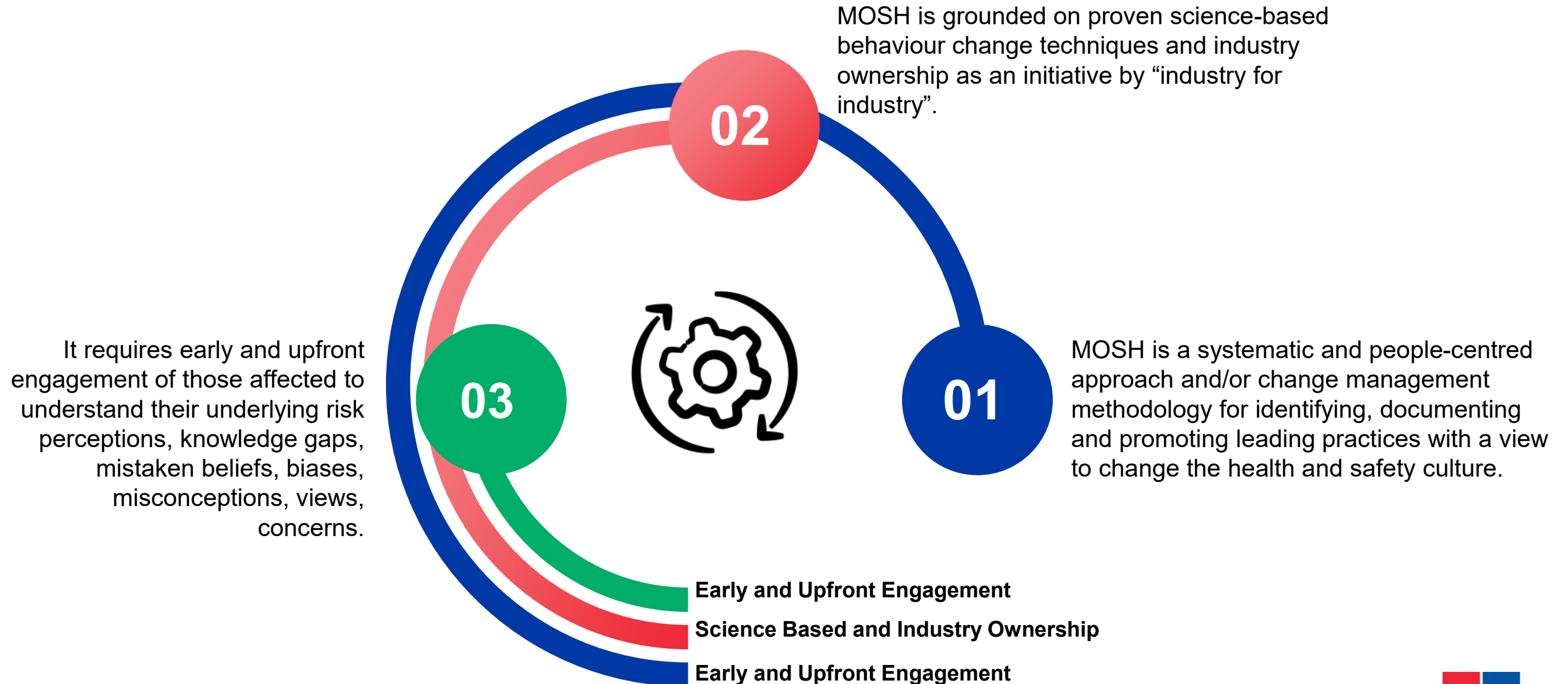
DOCUMENTING A LEADING PRACTICE AT THE SOURCE MINE



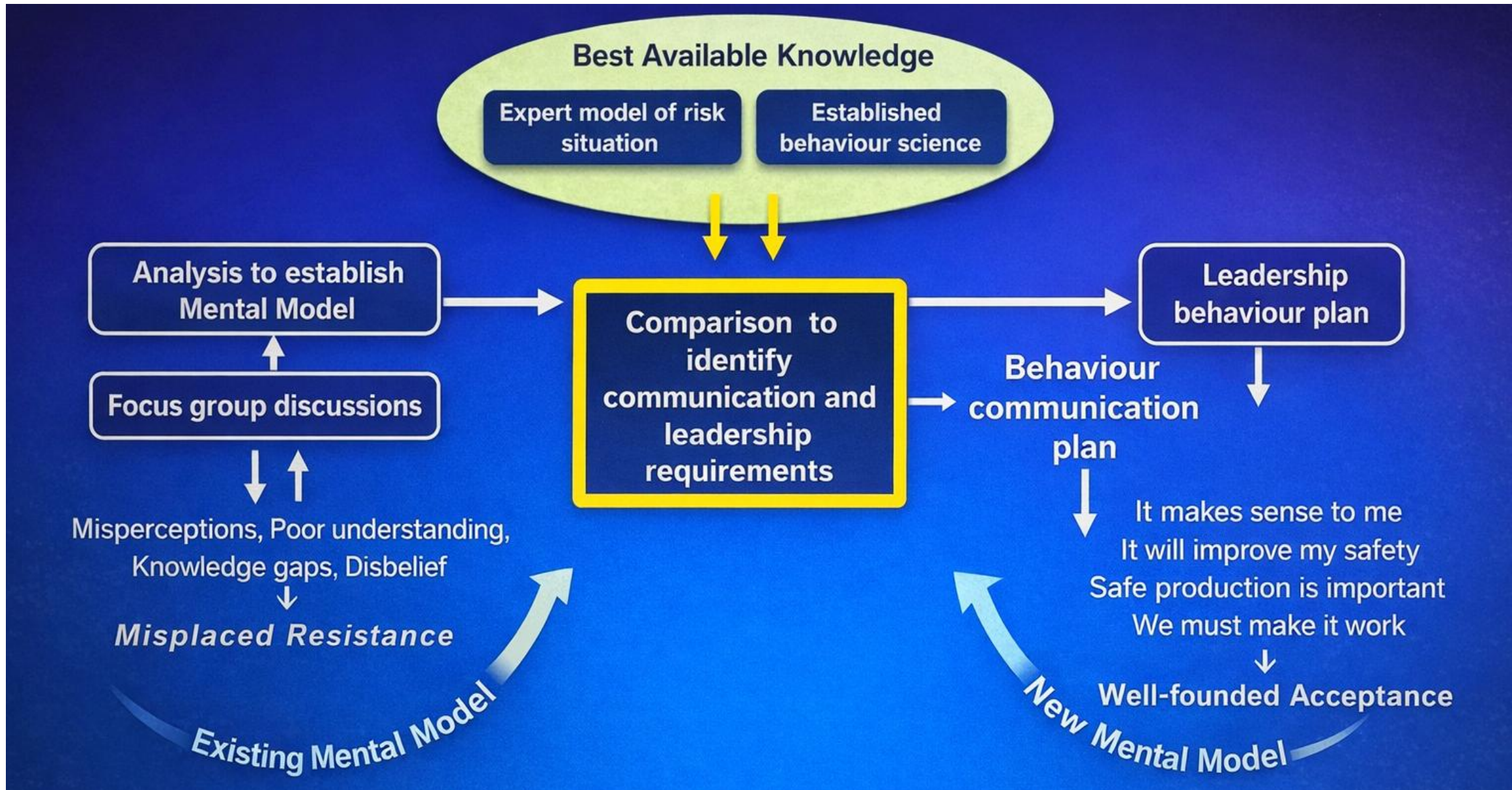
IDENTIFYING AND DOCUMENTING THE FULL VALUE CASE



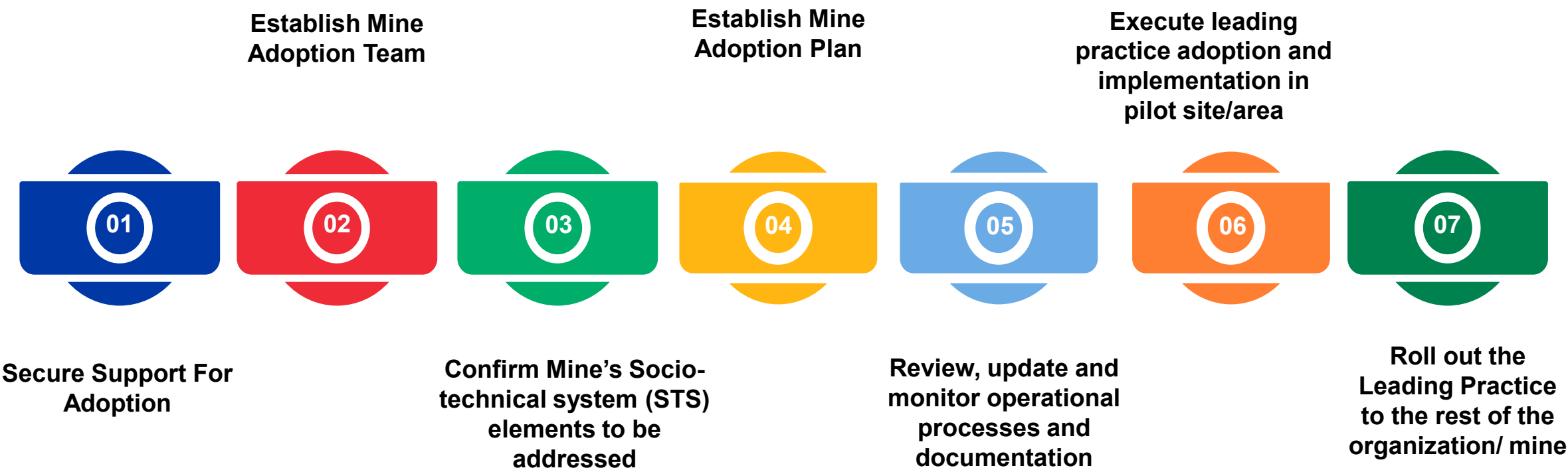
MOSH ADOPTION PRINCIPLES



BEHAVIOUR CHANGE PROCESS

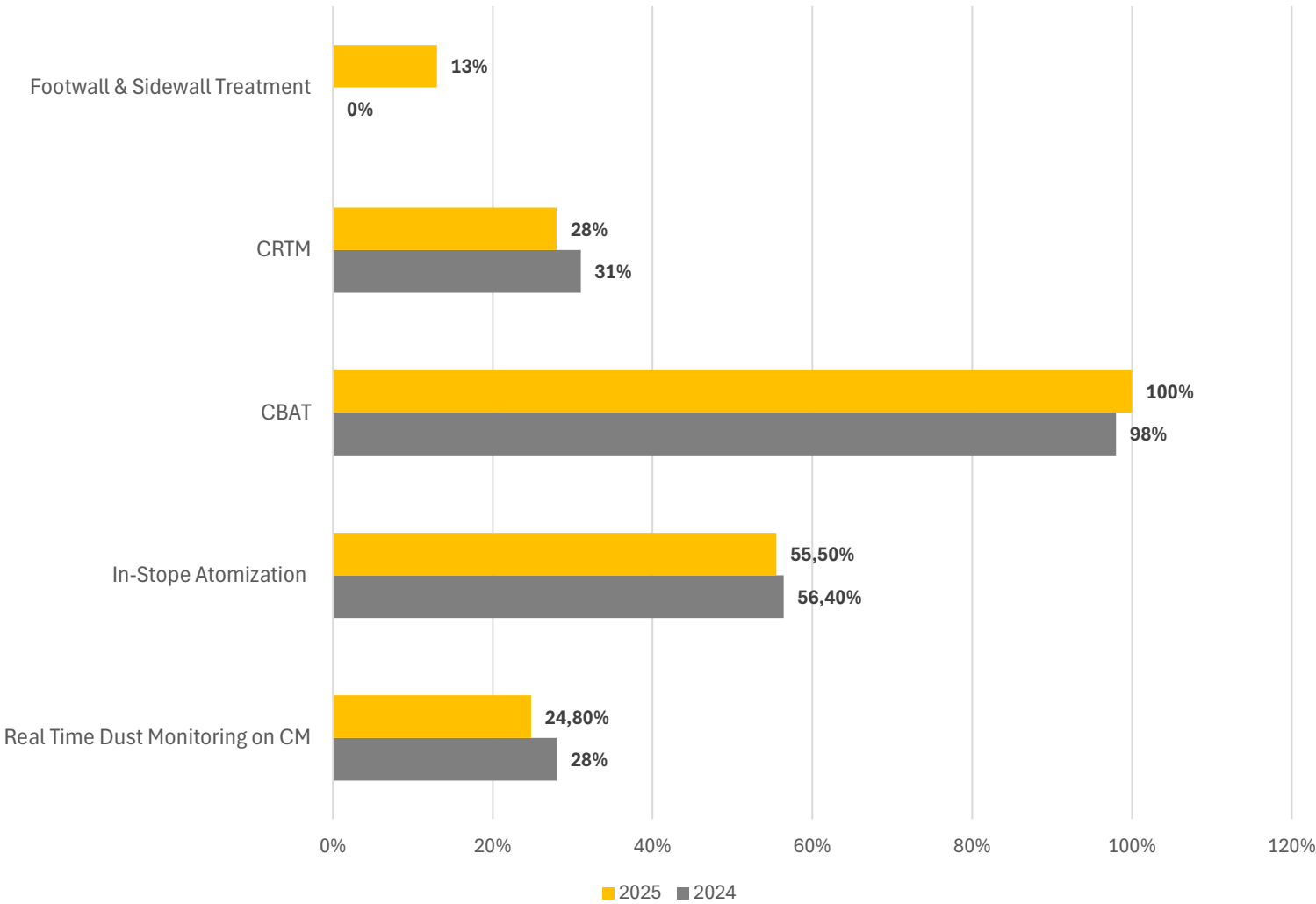


LEADING PRACTICE ADOPTION PROCESS



MOSH DUST LEADING PRACTICES: ADOPTION PROGRESS

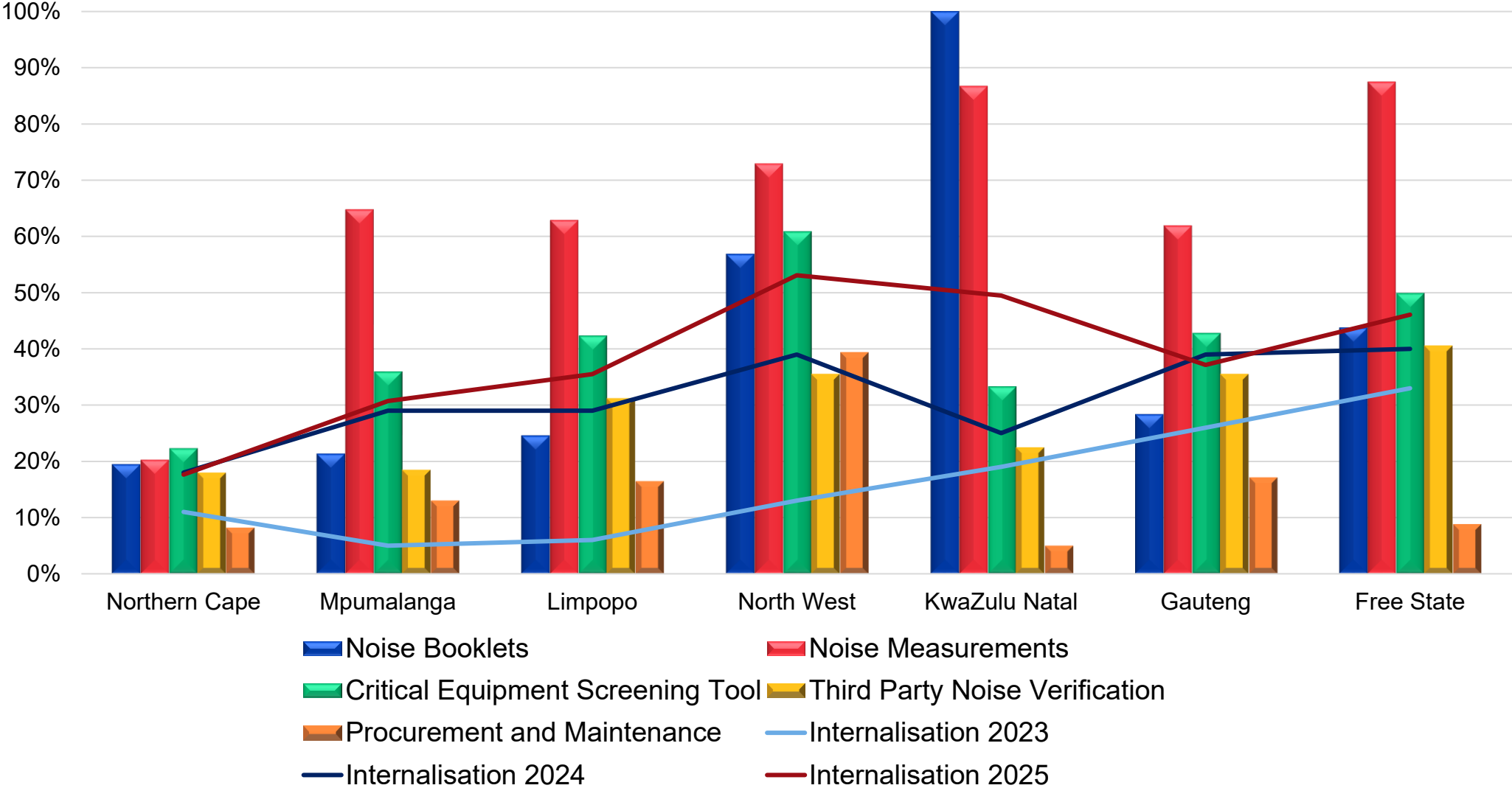
MOSH Dust Leading Practice Adoption Progress 2024/2025



Key Milestones:

- ✓ **CBAT** – all current adopters concluded adoption. Verified by the MOSH Dust Team.
- ✓ **Real Time Dust Monitoring on CM** – 6x new adopters
- ✓ **CRTM** – 4x new adopters, two operations concluded adoption
- ✓ **In-Stope Atomization** – 1x new adopter

IBMQI INTERNALISATION STATUS



MOSH DUST PUBLICATIONS (COAL)



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SERITI KHUTHALA COLLIERY
CONTINUOUS REAL TIME
MONITORING (CRTM) OF DUST
ENGINEERING CONTROLS

CASE STUDY



FULL DESCRIPTION OF THE RISK ADDRESSED:

Khuthala Colliery is one of Seriti Resources underground mining operations which is located about 7km south of Ogies town in the Mpumalanga province. The mine produces 4 Seam using bord and pillar mining method which it supplies to Eskom's Kendal Power Station.

The risk of occupational lung diseases (OLD) within the South African Coal Mining Sector remains a challenge. The sector has reported a high number of employees who are exposed to respirable coal dust levels that are above the regulated occupational exposure limit (OEL) of 2.0mg/m³.

According to the Mine Health and Safety report [MHSA 2022_2023], a total of 7% of employees in the coal mining industry are exposed to airborne pollutant levels that are above the standard occupational exposure limit. Data sourced from the current Minerals Council South Africa Occupational Health Milestone reporting portal [HealthSource] indicates that the respirable coal dust target of 1.5mg/m³, which was agreed upon by Tripartite Stakeholders in 2014 was not achieved.

As the coal mining industry continues to intensify efforts focused at reducing employee coal dust exposure by targeting dust generating at source, continuous real time monitoring of dust levels to measure the performance of dust engineering controls has been identified as one of the leading practices to mitigate the risk of exposure.

Continuous real-time monitoring (CRTM) of airborne pollutants engineering controls is not a primary engineering control but rather a system that monitors and communicates the performance of engineering controls in real time. The system enables operations to proactively manage dust by taking immediate actions upon failure of dust engineering controls. Khuthala Colliery adopted the CRTM Leading Practice to help them monitor the effectiveness of the following dust controls i.e., travelling road dust suppression, belt transfer points water sprays, ventilation, and CH dust suppression systems (scrubber fans and water sprays).

OVERVIEW

A

Mining Company: Seriti Resources

B

Commodity: Coal

C

Health and Safety Case Study: Application of the MOGH Continuous Real-Time Monitoring (CRTM) of Airborne Pollutants Engineering Controls

D

Operation/Mine: Khuthala Colliery

E

Number of employees affected: 1 843 (to be confirmed)

F

Stakeholders Consulted: Mining, Engineering, VQHE, Training and SHE Committee

G

Occupations affected/benefited: Belt Attendants, all lobby employees i.e., Miner, Operators and Engineering personnel

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CM CUTTING
SEQUENCE
GUIDELINE

KEY CONSIDERATIONS
FOR DEVELOPING AN
OPTIMAL CUTTING
SEQUENCE



An optimal cutting sequence should support the following aspects:

A

Promotes safe production

B

CH Operator and Cable Handler safe position concerning Proximity Detection System (PDS) zones.

C

Establish thorough ventilation as soon as possible.

D

Splits to be mined, as practically reasonable, in the direction of ventilation airflow.

E

Maintain a buffer between the CH and the Roof Bolter - RB to be out of the way of the CH.

F

Adhering to Mine-specific Standard on support installation. (No more than 3 faces to be left unsupported whilst cutting)

G

Tramming routes of all three shuttle cars to be optimised.

H

Optimise (Continuous Miner) CH cable handling and tramming.

BACKGROUND

The DMRE Guideline for the compilation of a mandatory CDP for "The Prevention of Flammable Gas and Coal Dust Explosions in Collieries" requires the ventilation layout of production sections [8.3.1.5] to include a mining sequence that complements the ventilation flow. The requirement is in place to prevent the accumulation of an explosive concentration of flammable gas and it also benefits employees in that dust is cleared from the immediate working environment. However, the guideline is not prescriptive on the CH cutting sequence to be adhered to.

On the 7th of August 2024, a cutting sequence workshop was conducted by the Collieries Dust Working Group in the quest to achieve a cutting sequence with minimum exposure to coal dust. The workshop proved to be a valuable exercise, as inputs on practicality, possibilities and limitations of various coal cutting sequences were solicited from various subject matter experts (Mine Overseer, VQHE Superintendent, CH Operators etc.) who were in attendance. It was also noted that various mines use different cutting sequences due to ground conditions and associated mining methods.

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SECTION 11 (5)
DUST
OVEREXPOSURE
INVESTIGATION
GUIDELINE



PROBLEM STATEMENT

The prevention of incidents/accidents and overall improvement of health and safety forms the core obligations mandated by the Mine Health and Safety Act [MHSA No. 29 of 1996]. Significant resources are made available to ensure that systems are in place to eliminate or manage risk at mines. The occurrence of an incident/accident is indicative of a failure within these systems i.e., if a safe and effective expectation was derived in planning the activity and an incident/accident occurs, then there was either a problem with adherence to the expectation or a gap with the quality of the expectation itself.

Investigation of unwanted events following an incident/accident is one of the methods of identifying such gaps in the risk management process. The Mine Health and Safety Act is specific on the requirement to investigate all incidents/accidents and even provides guidance on what the investigation should aim to achieve. However, the Act does not necessarily give guidance on the specific items which must be covered in the investigation report. In order to close this gap, Collieries Dust Working Group hosted a workshop with VQHE Specialists industry members to develop a guideline on dust overexposure investigation.

BACKGROUND

The Collieries Dust Working Group was established as a MOSH Dust initiative. The committee comprises of the MOGH Dust team members and VQHE Specialists from the various coal mining groups such as Exaro Media, Glencore, Overlooked, Sasol Mining, Seriti, and Thungela Resources to address airborne pollutants and dust challenges within the coal sector through collaborative interventions and facilitation of new research. One of the objectives of this forum is "to promote inter-company learnings on effective dust and airborne pollutants risk mitigating strategies, systems, controls, learning from incidents or initiatives. Extensive work in dust management, such as the compilation of an Underground and Opencast Dust Risk Bowties, has been conducted by this committee in previous years. In the Collieries Dust Working Group Strategy session for 2024, the team identified Learning from incidents as one of the areas which needs to be prioritised for 2024.

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MINERALS COUNCIL, SOUTH AFRICA | SECTION 11 (5) DUST OVEREXPOSURE INVESTIGATION GUIDELINE

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MOSH FACILITATION WORKSHOP

GUIDANCE NOTE

FOR NOISE MEASUREMENT OF EQUIPMENT TO ENSURE CONFORMANCE WITH MHSC MILESTONE

BACK

The noise exposure assessment must not occur in a quiet environment.

This relative of noise measurement must not occur in a quiet environment.

- ⊗ Risk level - High
- ⊗ Risk level - Medium
- ⊗ Risk level - Low

PURPOSE

To manage the noise hazard effectively, industry focus on control noise of source by implementing an effective noise management system.

About The Workshop

The workshop will provide guidance on the **noise measurement methodology** to ensure the employment of uniform measurement procedures under realistic operating conditions. Following this workshop VOHE employees will be aligned with the instrument Settings, measurement Criteria to be selected, the actual Measurement Procedure and Reporting Requirements. It is essential to understand these requirements to develop a functional noise risk register.

WHO SHOULD ATTEND:

- Occupational Hygienists
- Occupational Technologists
- Occupational Assistants
- Environmental /Ventilation Officers
- Environmental /Ventilation Observers

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DURATION

1 DAY

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NOSH FACILITATION WORKSHOP

Synopsis: This purpose of this page is to provide the South African Mining Industry with guidance on the appropriate results of the Critical Noise Equipment Screening Tool, representative and comparable between Mining operations.

Introduction

The industry wide buy and maintain guidelines are supported by mining companies, to promote industry wide buy and maintain good practices for the identification, measurement and management of noise exposure against specific noise emission requirements.

The Mine Health and Safety Act requires critical machines for noise management.

The IBMQI Measurement and Standardisation requirement of equipment to ensure compliance.

The IBMQI Committee further recognized that noise risk of equipment.

In order for the successful facilitation of the noise management criteria set, the Critical Noise Exposure risk of employees to noisy equipment, which includes the following:

- Noise Measurement Result in dBA
- Number of Persons Exposed
- Number of Machines within the Work Environment
- The Duration of Exposure
- The Acoustical Environment / Confined Work Space
- Machine Characteristics

About The Workshop

The **Screening Tool** incorporates the key factors identified within the IBMQI, which influences the noise exposure risk of employees to noisy equipment. The Tool assists mines in the identification and selection of the most appropriate machines for repair, planned maintenance and replacement considerations.

Following this workshop VOHE employees will be registered to work on the system, aligned with the application of the Critical Noise Equipment Screening Tool, in order for the results obtained to be representative and comparable between Mining operations within the same Commodity and had the opportunity to log a piece of equipment.

WHO SHOULD ATTEND:

- Occupational Hygienists/Technologists/Assistants
- Environmental/Ventilation Officers and/or Sectionals
- Environmental/Ventilation Observers
- Environmental/Ventilation Managers

DURATION

½
DAY

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MOSH FACILITATION WORKSHOP

For the
Implementation of
the Industry-wide
Buy and Maintain
Quiet Initiative
(IBMQI) in the South
African mining
industry

MANUFACTURER'S AND AS STIPULATED IN SECTION 1:

- (a) any person who -
- (i) designs, manufactures, imports, sells or leases any equipment, or
- (ii) that the article is intended to be used properly
- (iii) that it complies with any applicable standard

PURPOSE

Equipment noise emissions have been identified as a significant occupational health and safety risk within the South African mining industry.

WHO SHOULD ATTEND:

- Occupational Hygienists
- Environmental/Ventilation Engineers
- Procurement Managers
- Engineering Managers

About The Workshop

Equipment noise emissions have been identified as a significant occupational health and safety risk within the South African mining industry. To effectively manage the noise hazard, the need was identified to develop a practical and effective Industry-wide **Buy and Maintain Quiet Initiative (IBMQI)** to assist the industry in their respective efforts to eliminate and/or control noise at the source.

The workshop will provide an overview of the **IBMQI Principals**. This is an industry guide for the implementation of a Maintenance and Procurement plan and will address the items to incorporate into OEM discussions.

DURATION

1
DAY

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IBMQI INTERNALIZATION



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MOSH FACILITATION WORKSHOP

GUIDANCE NOTE

FOR 3rd PARTY EQUIPMENT
NOISE VERIFICATION
MEASUREMENT



The diagram shows a central circle labeled 'Intelligent measurement' surrounded by six numbered steps: 1. Procurement strategy, 2. Supply chain strategy, 3. Material management, 4. Procurement integration, 5. Tender & Supply, and 6. Contract administration. A blue arrow points from step 1 to step 2, and another from step 2 to step 3.





About The Workshop

"By December 2024, the total operational or process noise emitted by any equipment must not exceed a milestone sound pressure level of 107 dB(A)". To effectively manage the noise hazard, it's imperative to have a strategy aimed at the elimination and control of noise at source.

The workshop will provide **guidance to suppliers on the application of uniform measurement procedures under realistic operating conditions** and allow for the equipment noise emissions reported to be representative and comparable.

Following this workshop operations and their manufacturers, suppliers and repairers will be aligned with regards to the procurement strategies, and/or tender and contractor's packs requirements,

WHO SHOULD ATTEND:

- Occupational Hygienists
- Environmental/Ventilation Engineers
- Procurement Managers
- Engineering Managers
- Suppliers
- Manufacturers
- Repairers
- Safety Officers

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DURATION

½

DAY



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MOSH FACILITATION WORKSHOP

GUIDANCE

by the occupational
section 12.1 of the
(29 of 1996) to
by virtue of their
experience.

This document serves as an industry guidance for the implementation of a quality assurance plan as is stipulated in Annexure G of the guideline for a mandatory code of practice for a health programme for noise; 2021.

PURPOSE

This guidance note was developed to assist employers in the selection of sound measuring equipment used in the assessment of noise levels in the workplace in accordance with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) and the Occupational Health and Safety Regulations (Act 181 of 1996).

About The Workshop

The workshop will provide an overview of the Guidance note for **Quality Assurance**. This is an industry guide for the implementation of a quality assurance plan as is stipulated in Annexure G of the guideline for a mandatory code of practice for a Health Programme for noise; 2021. The workshop will address the Legal Requirements, Standards, what an Accredited Laboratory is, and various requirements for noise instrumentation to ensure quality assurance; e.g. Calibration, Storage, Handling, Uncertainty and various items to be on the look out for the SANAS Calibration Certificate.

South African Bureau of Standards

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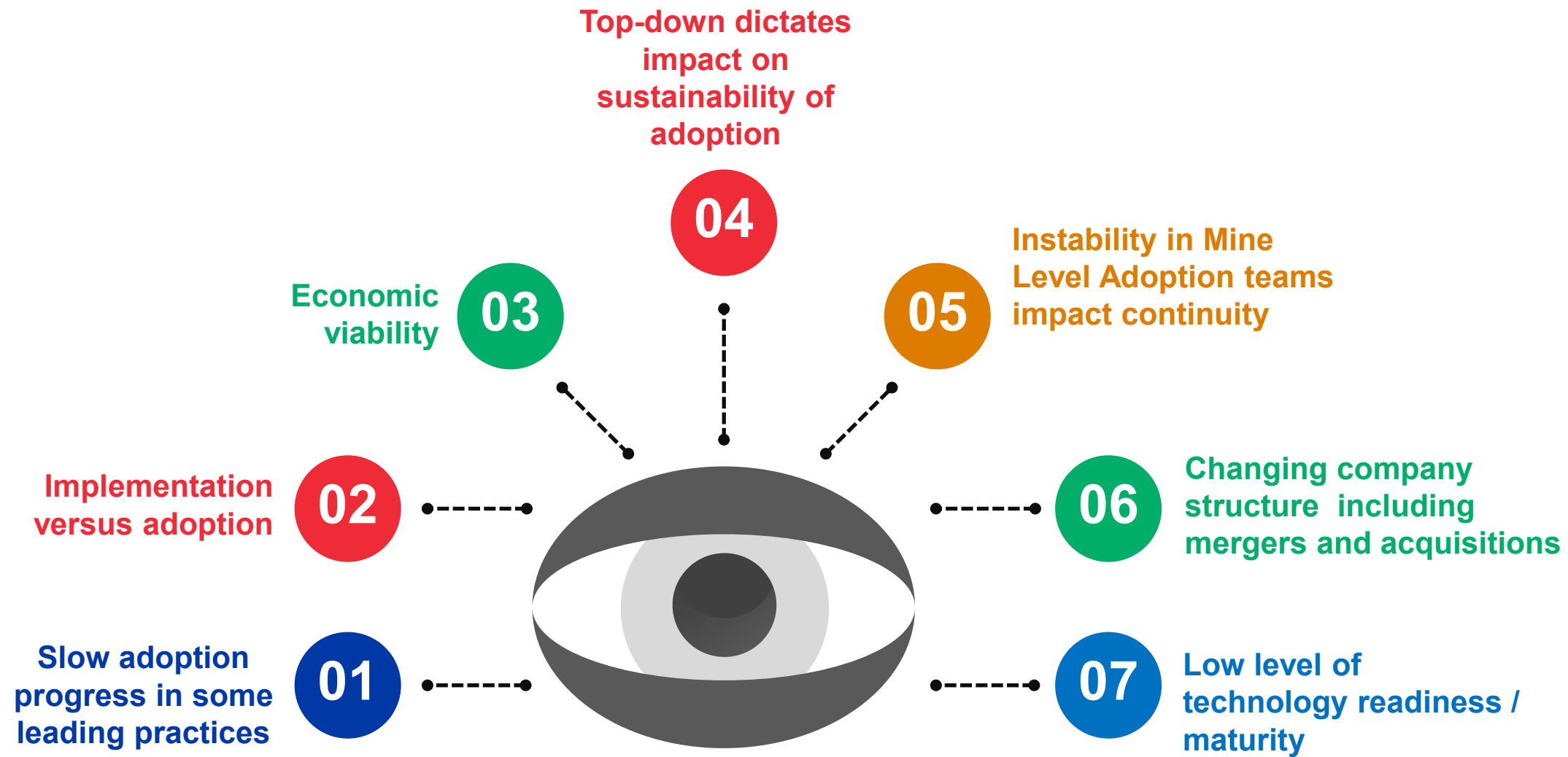
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DURATION

1
DAY

QUALITY ASSURANCE

ADOPTION CHALLENGES



ADDRESSING ADOPTION CHALLENGES





Anglo American Platinum – Dishaba Mine

Thank you

#MiningMatters

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GET TO KNOW THE PRESENTER

Mr. Stanford Malatji



In his current role as the Head of the MOSH Learning Hub at the Minerals Council, Stanford encourages mines and mining companies to use a people-centric and change management approach to learn better and faster from each other from the pockets of excellence that already exist to improve occupational health and safety performance in focus risk areas of falls of ground, transport and machinery, noise, and dust.

He holds a B. Admin Honours in Industrial Psychology from UNISA, an undergraduate B. Admin degree from the University of the North (currently known as University of Limpopo), completed a Business Management Development Programme (BMDP) from Wits Technikon, and a Leadership Development Programme from Wits Business School. His 35 years working career spans various economic sectors including telecommunications and postal services, national government, business consulting, petrochemicals, energy distribution, and mining. Twenty-four (24) years of his career were spent in senior leadership and general management.

Come rain or sunshine he remains a Kaizer Chiefs supporter: “Amakhosi Amahle – Love & Peace !!!”

Every mine worker returning from work unharmed every day. Striving for zero harm in our lifetime.



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