



Implats – Impala Rustenburg operations

BEYOND COMPLIANCE

UNLOCKING THE UNTAPPED POTENTIAL OF EEMS AND TARP
THROUGH SAFETY CULTURE, HUMAN FACTORS AND SYSTEMS THINKING

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Looking Beyond Compliance

Unlocking the Untapped Potential of EEMS & TARP



Safety Culture

Unlocking the human commitment behind EEMS & TARP

Speaking up | Ownership | Quality over compliance | Making safe



Human Factors

Enabling People to Recognise, Decide and Act

Hazard recognition | Situational awareness | Decision-making | Communication | Escalation



Systems Thinking

Transforming Operational Observations into Organisational Learning

Risk intelligence | Integrate observations | Organisational learnings | Shared understanding of risk



Published in 2009

Eliminating falls of ground in South African mines

Leading Practice Adoption Guide for the "TARP" system for use in underground mining faces

Andre van Zyl / Duncan Adams
Reviewed by Christopher Legodi



Copyright of the Chamber of Mines of South Africa

Published in 2012



The Journey of Safety Management Thinking in the SAMI

The evolution of safety management towards risk intelligence



The Next Stage: Unlocking the Full Value of EEMS & TARP

Phase 1 - Developed

Established technically sound leading practices



Phase 2 - Adopted

Facilitated adoption of LPs across SAMI



Phase 3 - Standardised & Sustained

Embedded the practices into routine & operational work



Phase 4 - Unlock Their Full Value

Integrate frontline observations into modern critical risk management, organisational learning & operational decision-making.



What Phase 4 means for EEMS & TARP

1. STRENGTHENING MEANING & QUALITY

- Shift the focus from routine completion to meaningful risk management
- Emphasise quality hazard identification, making safe and sound decision-making (Quality over compliance)

2. ALIGNING WITH MODERN CRITICAL RISK MANAGEMENT

- Align EEMS and TARP with Major Unwanted Events (MUEs), Critical Controls and Critical Control Verification.
- Update the language and intent to reflect today's Fatal / Critical Risk Management approach.

3. INTEGRATING FRONTLINE INPUT WITH TECHNICAL INFORMATION

- Combine crew observations with rock engineering, mining, and safety information.
- Build a shared operational understanding of Fall of Ground risk.
- Help crews understand how their observations contribute to preventing fatalities.

4. TURNING INFORMATION INTO LEARNING & BETTER DECISIONS

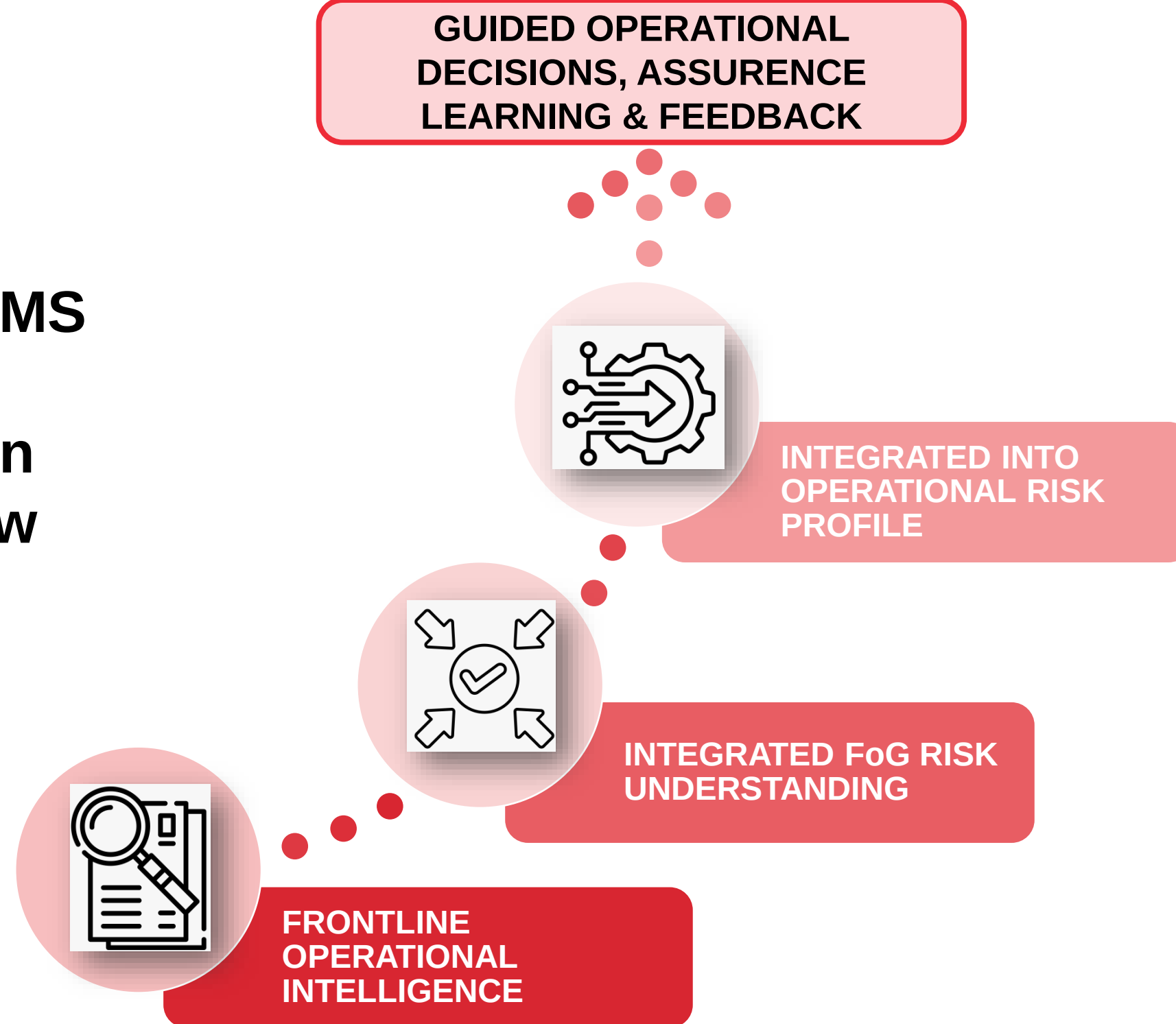
- Treat EEMS and TARP observations as operational risk intelligence, not just completed paperwork.
- Analyse trends, strengthen feedback loops and support better operational decisions.

5. BUILDING AN INTEGRATED & DYNAMIC OPERATIONAL RISK PROFILE

- Integrate operational, technical and safety information into a continuously evolving operational risk profile.
- Support proactive decision-making, targeted interventions and continuous organisational learning.

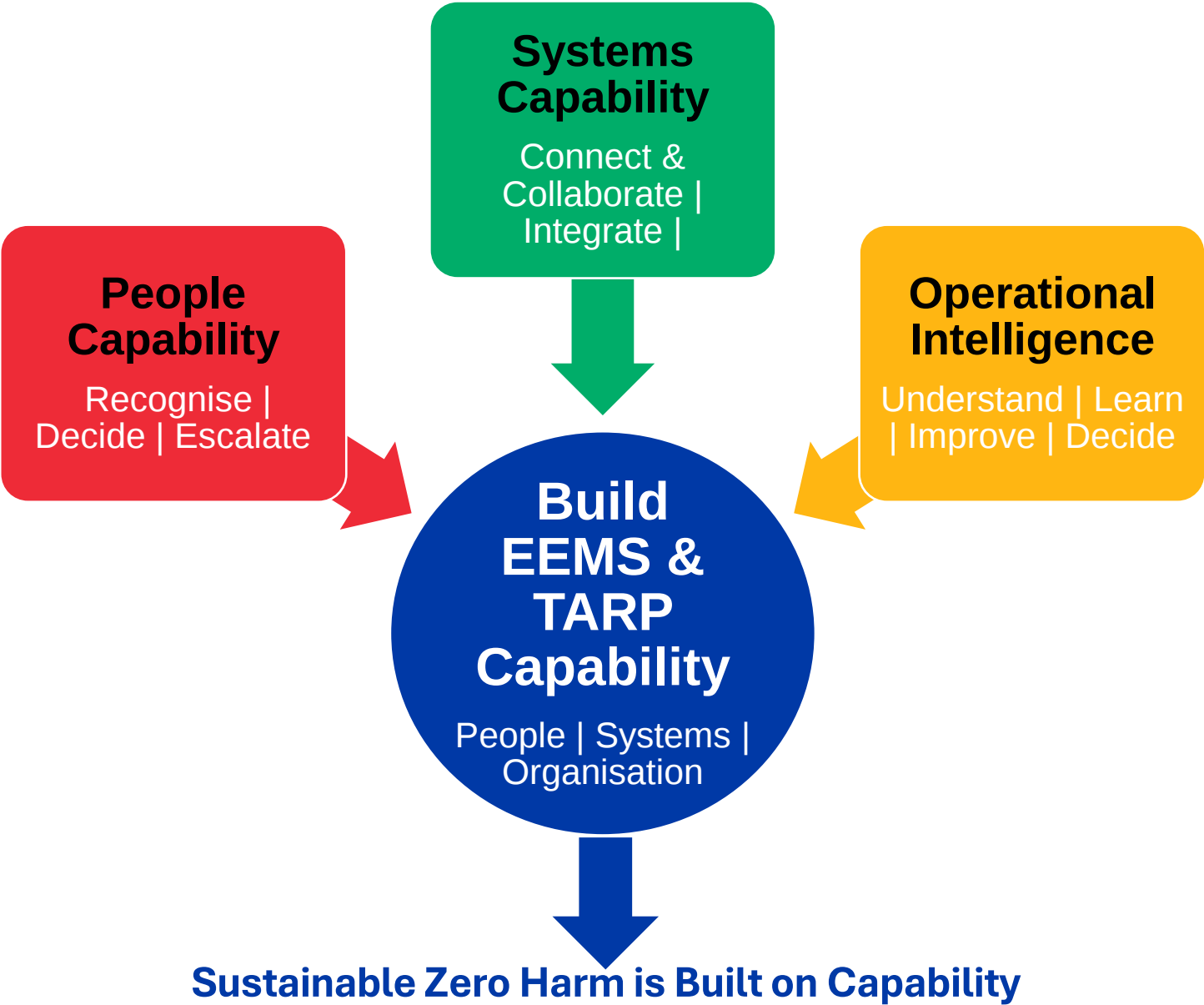
Operational safety information is to an operational risk model what geological and geotechnical information are to a geotechnical model.

How The EEMS & TARP Information Would Flow



Climbing to Sustainable Zero Harm

As the summit gets closer, capability matters more than effort.





Anglo American Platinum – Dishaba Mine

Thank you

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