The Road to Zero Harm for South African Mining

Presented by
Sietse van der Woude
Chamber of Mines of South Africa

As leaders we must see and promote future possibilities…

“We just haven’t been flapping them hard enough.”

…as Einstein observed, “Intellect is not enough for innovation…eventually it takes a leap of consciousness”.
Industry performance against tripartite milestones

Chamber of Mines
Roadmap to Zero Harm

1. Strengthen our culture
   • Develop culture transformation framework

2. Promote learning from others
   • Establish Chamber’s Learning Hub to promote leading practices

3. Build capacity
   • Review training material for ‘most vulnerable’ OHS reps

4. Improve R&D
   • Establish Centre of Excellence
Changing Minds, Changing Mines:
A culture transformation framework
for SA mining

Blueprint for Health and Safety Transformation

Organizational Culture

Leadership

Enabling Elements
- Hazard recognition & Mitigation
- Skills, Knowledge, & Training
- Policies & Standards
- Exposure reduction mechanisms

Source: BST

Organizational Sustaining Systems
- Selection & Development
- Structure
- Performance management
- Rewards & Recognition

Working Interface

Worker

Procedures
Myths #1:

- Mining is dangerous, deaths are inevitable

Myth #2:

- Different versions of the myth…
  - The problem is not with the system, if only workers would follow the rules
  - 95% of accidents are caused by unsafe acts (only)

- Analysis of 25 Serious Incidents by Jim Joy  
  (Source: Anglo American Risk Management course)
  - 100% of accidents are partly caused by a management system issue
  - 90% of accidents are ALSO partly caused by (active) human error
Management System Issues in 25 Incidents

- Leadership: 3%
- Communication: 5%
- Competency: 8%
- Design/Acquisition: 3%
- Method Documentation: 14%
- Maintenance: 5%
- Mine Planning: 5%
- Work Scheduling: 8%
- Contractor Management: 19%
- Inspections/Auditing: 8%
- Emergency Planning: 22%

Human Error in 25 Serious Incidents

- No active human error: 15%
- Slip/Lapse: 31%
- Mistake: 3%
- Violation: 8%
- 46%
Myth #2: Further considerations…

- Are our systems that good?
  - Are they easy to implement?
  - Do they recognise fallibility of all human beings?

- Do I ever speed?

CAPACITY AND R&D
Structural challenge in the mining industry

R&D and capacity-building needed in dealing with the challenge

- **Short-term**
  - Engineer risks out as much as possible
  - Creative training methods to help people with low education levels understand complex risks

- **Long-term**
  - How can we switch to mining methods used by benchmark countries without causing a social disaster?
Conclusions

• Significant improvements have been made in safety performance

• The Roadmap to Zero Harm gives us the opportunity to:
  – Dispel myths around safety
  – Deal with structural challenges in the industry
  – Accelerate improvements in safety and health

The Author

Sietse van der Woude, Safety and Sustainable Development Adviser, Chamber of Mines

Sietse van der Woude has a Masters Degree specialising in radiation safety. At the National Nuclear Regulator he led the implementation of a regulatory framework for radiation safety in the mining industry. During this time he completed his Masters Degree in Business leadership focusing on the management of non-financial indicators, like safety, in financial organisations. He subsequently worked for Xstrata as a Safety, Health, Environment and Quality Manager. In 2005, he was appointed as the Safety and Sustainable Development Adviser at the Chamber of Mines. He is currently the business convenor on the tripartite Mine Health and Safety Council.