

A shared commitment to world-leading OHS culture

NSW mining and extractives industry

Introduction

On 28 November 2008, 42 of the most senior leaders from the NSW mining and extractives industry gathered to set an agenda for culture change to improve occupational health and safety (OHS) performance.

Industry, unions and the public service representatives agreed on vision, guiding principles and common goals that will help ensure the industry has a dynamic future to address key health and safety issues.

The joint vision for the industry's OHS culture in 10 years enables industry, under the umbrella of the Mine Safety Advisory Council (MSAC), to focus on how it will make the transition from its current position to a truly world-leading OHS culture. The vision speaks to both individuals and organisations and expresses values to be shared by all who work in the industry.



Technical issues of health and safety are not the only issues that need to be resolved. Non-technical and culture issues were identified as the drivers for continued improvement in the industry's OHS performance.

As part of an integrated program of work within its World-leading OHS Culture Action Plan¹, MSAC will coordinate the following actions in partnership with stakeholders:

- conduct change management workshops for stakeholders;
- issue a discussion paper seeking industry stakeholder and individuals' views on the usefulness of Associated Non-Technical Skills (ANTS);
- approach the Coal and Metalliferous/ Extractives Industry Competence Boards on how competencies for Associated Non-Technical Skills could be addressed;
- develop a strategy that communicates the benefits and usefulness of developing Associated Non-Technical Skills within the industry; and
- integrate Associated Non-Technical Skills into Industry and Investment NSW education and assistance programs being implemented by its Mining Industry Assistance Unit.

This package provides an overview of the summit's vision and the changes required within the industry necessary to achieve world-leading OHS.

Norman Jennings

Chairman

NSW Mine Safety Advisory Council

¹ For a copy of the World-leading OHS Culture Action Plan see the Industry and Investment NSW webpage at: <http://www.dpi.nsw.gov.au/minerals/safety/consultation>

Drivers of industry OHS culture change

Initiatives in the NSW mining and extractives industry have demonstrated the importance of ownership of “world-leading OHS” by all levels of the industry.

Building capacity of all individuals who work in the industry and their organisations to implement and support OHS systems and management structures is fundamental to achieve this goal.

Mine Safety Advisory Council

MSAC is the peak multipartite OHS body for the NSW mining and extractives industry that provides advice to the Minister for Mineral Resources. It has become an authoritative and credible body on OHS and:

- has conducted research into issues identified by the WRAN Review;
- is addressing the issues through agreed standards and education and assistance to industry; and
- is driving the “world-leading OHS culture” strategy for the industry.

Wran Mine Safety Review (2005)

This review identified a range of issues that needed to be resolved in the industry (these are being addressed by the MSAC):

- a possible disconnect between policy, systems and practice at the mine face;
- meaningful consultation between management and workers;
- worker fatigue;
- review negative impacts of safety incentive schemes; and
- that the MSAC be an effective partnership.

Digging Deeper Project (2007) commissioned by MSAC

The Digging Deeper Project² investigated issues that were raised by the WRAN Mine Safety Review and identified an underlying theme across the industry – the need to get the basics of OHS management right. This includes effective participation and consultation to support suitable OHS management systems and acting at the local level.

CEO OHS Culture Change Summit (2008)

A summit of senior representatives from industry, unions and government agencies called by the Minister for Mineral Resources agreed on the mission, vision and actions that will assist in driving industry OHS culture change.

² The project was carried out by a consulting consortium led by Shaw Idea. The report is available on the Industry and Investment NSW webpage at:

<http://www.dpi.nsw.gov.au/minerals/safety/consultation/digging-deeper>



Vision for a world-leading OHS culture

NSW mining and extractives industry

Stakeholders from the NSW mining and extractives industry have identified 11 points that characterise its vision of a world-leading OHS culture:

1. Zero harm.

All who work in the industry expect that zero harm is the norm knowing that anything less is unacceptable and must change. Currently zero harm is interpreted as zero incidents that may result in fatalities, serious injuries or ill health.

2. Demonstrated commitment at all levels that OHS is authentic and innate. Everyone has a leadership role.

All who work in the industry have joint OHS values and beliefs that demonstrate a personal commitment to world-leading OHS practice and culture. These values and beliefs are evident through each individual's actions. World-leading OHS

culture is viewed as an investment not a cost or imposition. All who work in the industry actively lead by example and constructively participate in achieving the highest standards in OHS practice and culture.

3. All people are competent and have the authority and resources to complete the job safely.

All who work in the industry are competent to undertake their work. Management systems ensure that everyone has the proper authority and resources to carry out their work safely and healthily. Those who work in the industry believe that investing in competent people and ensuring they have the authority to act leads to safe work practices and world-leading OHS culture.

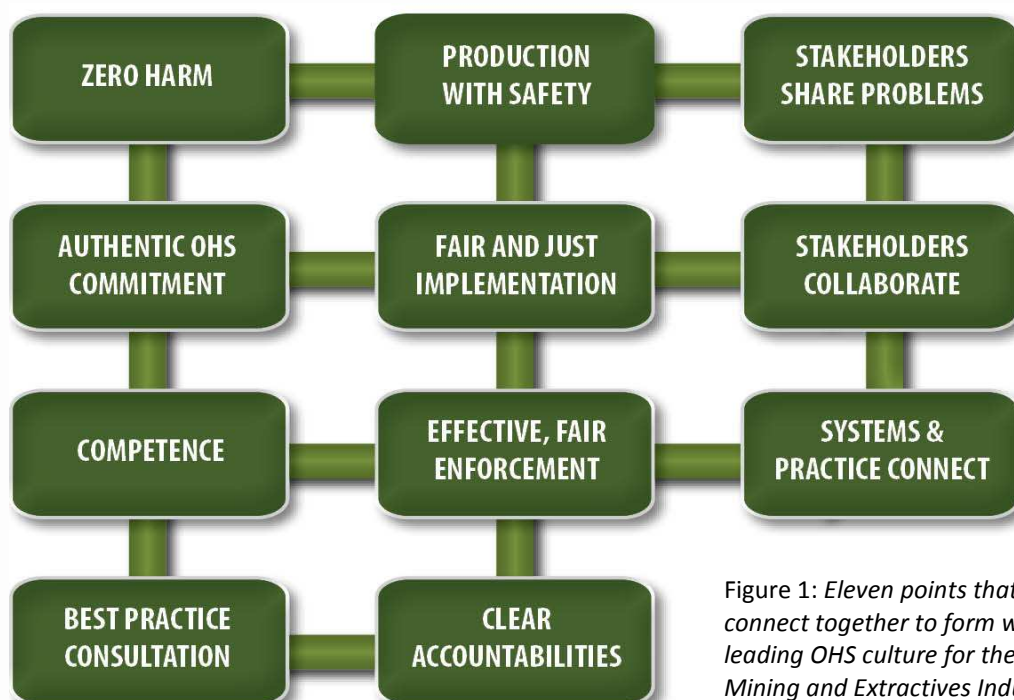


Figure 1: Eleven points that connect together to form world-leading OHS culture for the NSW Mining and Extractives Industry

4. Best practice consultation that is meaningful and effective.

Best practice consultation, at industry, sector, company, site and work team levels empowers individuals and organisations to actively and effectively participate in decision making at their level of authority and accountability. Different perspectives and expertise are openly and freely offered and considered when decisions are made on matters affecting OHS.

5. No tension between productivity and OHS.

World-leading OHS practice and culture is a highly valued driver to achieve high productivity. Those who work in the industry believe that high productivity is only achievable through the highest OHS standards being expected and achieved.

6. OHS implementation at regulatory, industry, site and individual levels is achievable, fair and just.

A balanced approach to OHS implementation at regulatory, industry, site and individual levels is developed in a consultative manner. The process is clear, fair and explicit while ensuring it meets the community expectation. Natural justice is afforded to all.

7. An effective enforcement policy that is applied in a consistent, fair and proportionate manner.

OHS enforcement is staged and balanced with multiple strategies available that support and drive improvement strategies to achieve and maintain world-leading OHS.

8. Accountabilities and responsibilities of all persons in the workplace are clear and within their control.

Accountabilities are clearly communicated and they are understood. All who work in the industry meet their responsibilities that are within their control and believe they are contributing to the development and implementation of the highest OHS standards.

9. Stakeholders understand that a perceived problem for one stakeholder is a problem for the whole industry and needs resolution.

Stakeholders with varying and different perspectives can freely and openly discuss them through meaningful, respectful consultation. Stakeholders attempt to understand the different perspectives and constructively participate in addressing issues of concern.

10. Industry stakeholders collaborate to achieve common goals. Collaboration provides a mechanism to appreciate the perceptions of other stakeholders.

Stakeholders identify common goals and develop integrated and independent strategies and actions to achieve them.

11. The industry has 'effective' consultation. There is no disconnect between systems and practice.

OHS management systems are integrated with management structures and applied in a participative process that closes the disconnect between systems and practice.

Change to achieve a world-leading OHS culture

NSW mining and extractives industry



The mining industry recognises that significant change is required to achieve an agreed goal of a world-leading OHS culture. As illustrated in Figure 1, organisations can function at different levels of maturity, but until health and safety is the “way we do business” in all enterprises, the industry will fall short of its goal.

Research (Figure 2) has identified that while around 30% of enterprises in the industry currently operate proactively, significant improvement is required across the board if the industry as a whole is to become truly world-leading.

What needs to change?

The industry has markedly improved hard barriers and technical means to eliminate significant OHS risks. Management systems including human resources, training, procurement, financial, due diligence and OHS management support these hard barriers.

Human interactions necessary to develop, implement, maintain and improve systems and hard barriers depend on each individual’s interpersonal and communications skills.

These skills, commonly known as Associated Non-Technical Skills, are becoming increasingly important at all levels of the industry.

Figure 1: Levels of maturity




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The central issues that need to be addressed include structure; culture; systems; leadership; and the ability of all people involved to participate constructively through effective consultation using the full range of non-technical skills.

Organisational change requires that people from managers to operators are able to interact meaningfully and respectfully. All people involved need to feel they have participated in the decision-making process to ensure ownership. The relationship between the supervisor and worker is perhaps the most challenging issue.

Change needs to be managed. To manage change everyone needs to be prepared to confront new ideas, attitudes, behaviours and ways of doing things.

To achieve a world-leading OHS culture the people within the industry must:

- see the need for change;
- foster leadership at all levels;
- create a shared vision that can be simply expressed and communicated;
- enable people at all levels to influence the process and act on the vision; and
- celebrate and consolidate improvement that leads to further improvement.

What are OHS culture and organisational behaviour?

The way an organisation behaves depends on its culture, which in turn is determined by the people who work in the organisation and the way they interact.

Organisational behaviour can be said to be how business processes are developed, organised and reviewed by its people. The organisation's behaviour is reflected in its management systems and can be influenced by its culture and the individuals that make up that organisation. OHS culture is reflected in how the organisation behaves day-to-day in managing its OHS hazards.

OHS culture is the shared individual values, beliefs and attitudes regarding OHS and the organisation of the business to eliminate or manage OHS risk.

Safety culture was defined by James Reason (1997) as:

'An assembly of characteristics and attitudes in organisations and individuals which establishes safety issues as an over-riding priority.'

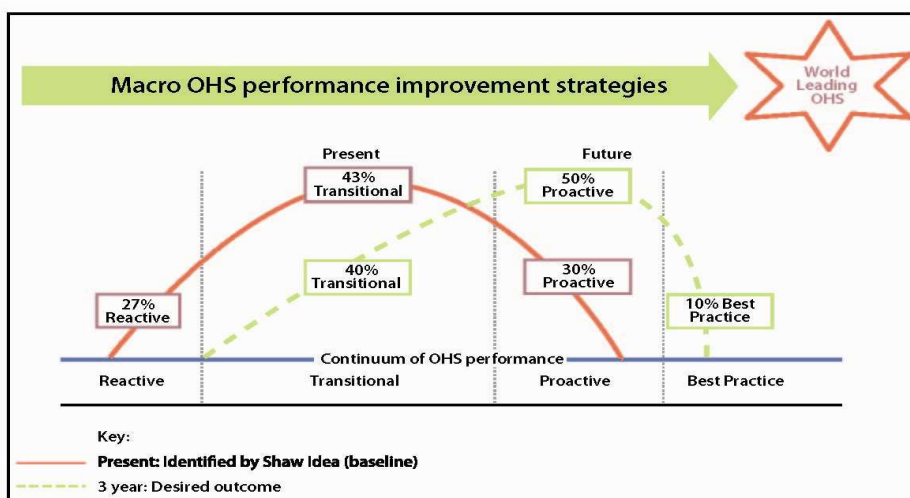


Figure 2:
Current and projected industry OHS performance

What is required for successful change?

Change management requires good leadership and fostering Associated Non-Technical Skills that allow all involved to be aware of the perspectives of others, communicate in a meaningful and respectful manner, and constructively participate and work as a team.

People go through predictable stages in responding to change. An effective change process will take people through a successful transition and help them respond positively to change and boost their confidence in their capacity to share in the positive outcomes of change towards a world-leading OHS culture and performance.

For change to be successful:

- Managers must be perceived as credible, be able to motivate and enable others to progress towards the vision of world-leading OHS culture, and provide the structure to direct the effective use of resources to achieve the goal.
- Workers must be able to constructively and actively participate in a meaningful consultation process.

The effective use of Associated Non-Technical Skills at all levels must be seen as a driver for the industry to manage the change process to achieve world-leading OHS culture.

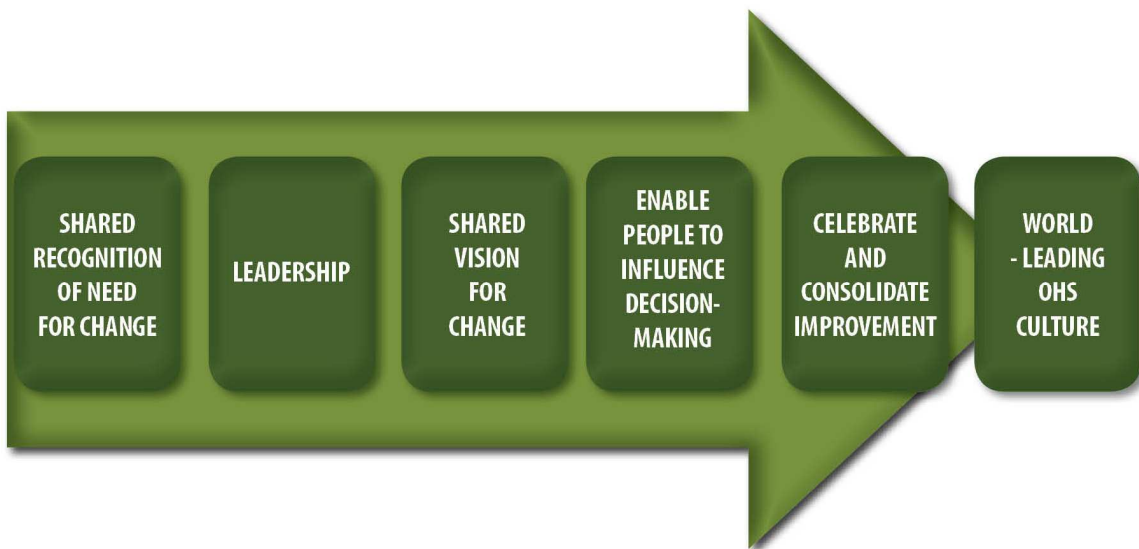


Figure 3: Moving towards a world-leading OHS culture

The features of a world-leading OHS culture

The NSW Mining and Extractives Industry has articulated a world-leading OHS culture vision embodied in 11 points and a set of principles agreed by industry, unions and government agencies (see opposite Eleven characteristics of a world-leading OHS culture).

When the NSW Mining and Extractives Industry achieves a world-leading OHS culture, its shared values and beliefs and the way it behaves in managing OHS will be seen as the “gold standard” when benchmarked against the mining industry of other countries (e.g. USA, Canada), States (e.g. WA, QLD) or industries (e.g. nuclear, marine transport, construction).

Eleven characteristics of a world-leading OHS culture

1. Zero harm.
2. Demonstrated commitment at all levels that OHS is authentic and innate. Everyone has a leadership role.
3. All people are competent and have the authority and resources to complete the job safely.
4. Best practice consultation that is meaningful and effective.
5. No tension between productivity and OHS.
6. OHS implementation at regulatory, industry, site and individual levels is achievable, fair and just.
7. An effective enforcement policy that is applied in a consistent, fair and proportionate manner.
8. Accountabilities and responsibilities of all persons in the workplace are clear and within their control.
9. Stakeholders understand that a perceived problem for one stakeholder is a problem for the whole industry and needs resolution.
10. Industry stakeholders collaborate to achieve common goals. Collaboration provides a mechanism to appreciate the perceptions of other stakeholders.
11. The industry has “effective” consultation. There is no disconnect between systems and practice.



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Capacity building in Associated Non-Technical Skills

NSW mining and extractives industry

Why are Associated Non-Technical Skills useful?

Associated Non-Technical Skills (ANTS) support the development, implementation, maintenance and improvement of OHS management systems and the technical skills required to introduce engineering solutions or hard barriers to eliminate or control risk.

Competence in Associated Non-Technical Skills enables the people within the organisation to interact effectively and fosters:

- participative approaches to consultation that enables ownership;
- efficient implementation of organisational policy and programs ensuring role clarity and commitment at all levels;
- development and use of realistic safe work practices;
- competent people to carry out the work; and
- evaluation and improvement strategies.

What are Associated Non-Technical Skills?

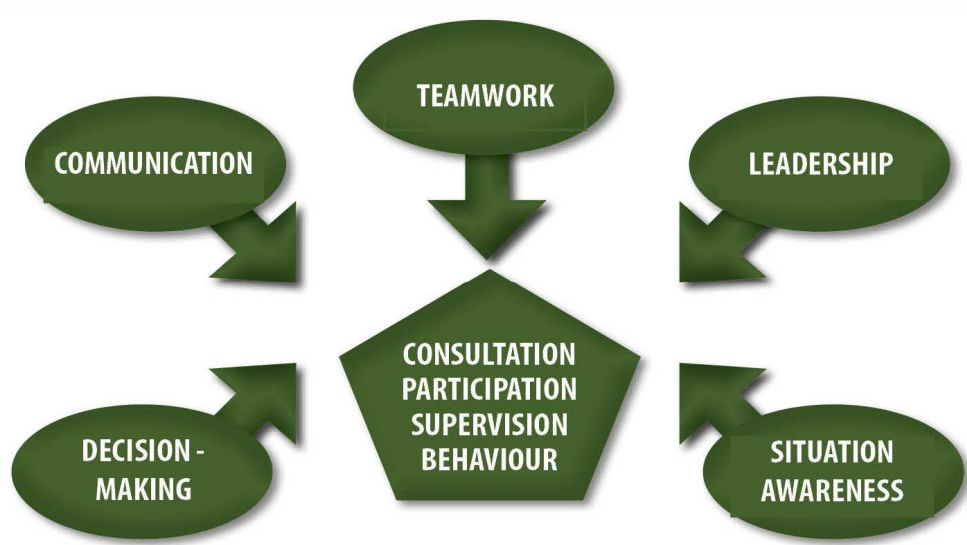
Associated Non-Technical Skills are cognitive, social and personal resource skills that complement technical and management skills and contribute to safe and efficient task performance¹.

These skills may include:

1. Situation awareness.
2. Decision making.
3. Communication.
4. Teamwork.
5. Leadership.

The core Associated Non-Technical Skills work together to facilitate:

- a) Consultation.
- b) Participation (demonstrated commitment).
- c) Supervision.
- d) Behaviour.



¹ Rhona Flin, Paul O'Connor, Margaret Chrichton, 2008. *Safety at the sharp end*.

Who needs to use Associated Non-Technical Skills effectively?

Associated Non-Technical Skills are the essential supporting skills required at all levels to ensure interactions between individuals and work groups when addressing technical matters and managerial processes concerning the control of OHS risks are effective.

Individuals who need Associated Non-Technical Skills include:

- Supervisors
- Line managers
- Mine managers
- Engineers
- Leading hands
- OHS staff
- OHS Committees
- Workers
- Inspectors

Associated Non-Technical Skills contribute to the key elements of an OHS management system

Consultation

Consultation is the mechanism, within the health and safety management system, through which health and safety issues are raised, communicated and resolved participatively.

Consultation is integral to the risk management process. Effective consultation is facilitated by application of Associated Non-Technical Skills, especially communication.

Participation

Individuals become engaged in and committed to the process of sharing in the activities of a group through participation. Participation is reflected in the Associated Non-Technical Skill of “teamwork”.

Participation may be promoted through teamwork and encouraging individuals to work towards a shared common goal. This may be reflected in the health and safety system element of commitment and role clarity.

Supervision

Through supervision, information and instructions are conveyed to individuals and teams to effectively carry out their roles, perform work tasks, and adhere to instructions.

Supervision is reflected in the Associated Non-Technical Skill of leadership and situation awareness. It also requires communication, teamwork and decision-making skills.

Behaviour

Behaviour is an individual’s conformity to agreed safe work practices and reflects the person’s commitment and participation.

Safety behaviour is a combination of Associated Non-Technical Skills including situation awareness, decision-making, leadership, team work and communication.

Description of Associated Non-Technical Skills

These Associated Non-Technical Skills have been identified as critical for making improvements in the industry's OHS practice and performance.

1. Situation awareness

Situation awareness is the process of gathering information, deciding what it means and anticipating what might happen in the future. This requires concentration and attention.

Individuals need a mental model of interactions between the work process, plant and equipment, environment and others to interpret what is happening now. This is also informed by past experience and knowledge.

An individual's ability to assess risk uses this skill as it requires the person to think ahead. Fatigue and stress will affect memory and memory recall. Organisational factors, including perceived organisational priorities (eg production targets) may lead to managers and workers applying a poor mental model.

2. Decision-making

Decision-making is a judgement or choosing an option. Closely linked to situation awareness, it involves assessing the situation, thinking of options, selecting and carrying out the best option and evaluating the outcome. Like situation awareness, decision making requires individuals to search their memory to recognise cues then identify and apply the right set of rules. Technical expertise, experience and familiarity with the situation influence decision-making, as do fatigue, stress, noise and other distractions. Perceived organisational priorities will also influence the decision.

3. Communication

Communication is sharing information between individuals. It is important for information gathering, issuing instructions or making decisions. Feedback in two-way communication helps prevent misunderstanding. Communication needs to be clear, timely, relevant and use standard language. The giver and receiver need to be prepared to question or challenge. Individuals also need to check to make sure the message has been heard accurately. Inadequate communication and lack of "role clarity" can cause team underperformance. Good team performance requires effective communication and coordination of actions.

Description of Associated Non-Technical Skills (continued)

4. Teamwork

Teamwork relies on communication. It contributes to a shared situation awareness and understanding of the mental model being used for assessment and decision-making.

Team members need to be clear about their specific assigned role and responsibility. Team members need to be respectful and supportive of each other.

A “good team” will have:

- a shared goal and understanding of the situation;
- a collective orientation;
- clear communication; and
- competent people and good leadership.

In an effective team, individuals will monitor their own performance.

Teamwork failures can contribute to incidents when roles and responsibilities are not clearly defined due to a lack of co-ordination and communication.

5. Leadership

Effective leadership is crucial for maintaining safe performance.

Supervisors, managers and team members demonstrating health and safety leadership will:

- reinforce team safe work practices.
- participate in workforce health and safety activities (e.g. inspections, incident investigations, job safety analysis, OHS committee meetings).

Leadership includes being supportive of health and safety initiatives and establishing OHS as an over-riding priority.

