

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 WHS 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?

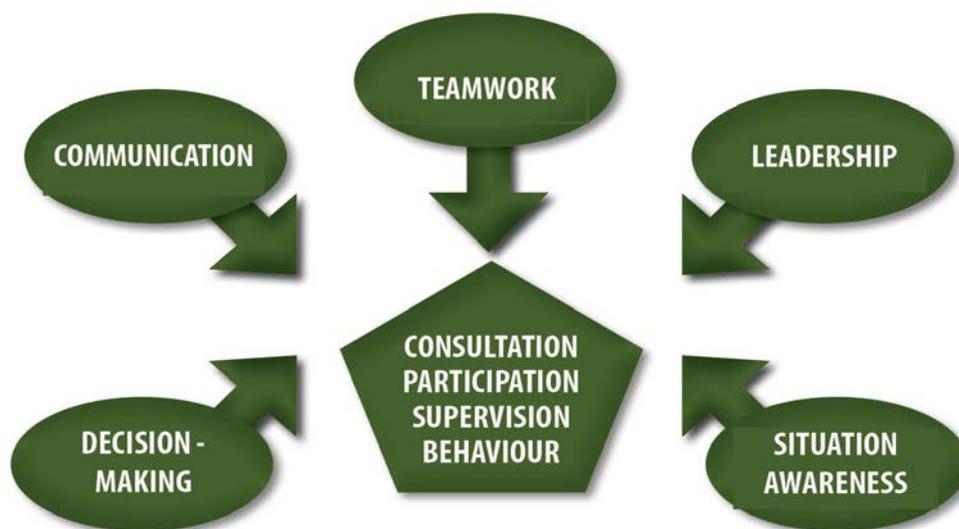
Associated Non-Technical Skills are cognitive, social and personal resource skills that complement technical and management skills and contribute to safe and efficient task performance¹.

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 WHS risks are effective.

Individuals who need Associated Non-Technical Skills include:

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

Associated Non-Technical Skills contribute to the key elements of an WHS 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 “team work”.

Participation may be promoted through team work 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, team work 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.



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Description of Associated Non-Technical Skills

These Associated Non-Technical Skills have been identified as critical for making improvements in the industry's WHS 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 (e.g. 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 co-ordination of actions.



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Description of Associated Non-Technical Skills (continued)

4. Team work

Team work 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
- competent people and good leadership

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

Team work failures can contribute to incidents when roles and responsibilities are not clearly defined because of 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, WHS committee meetings).

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



Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of NSW Trade & Investment or the user's independent adviser.