A Construction Safety Competency Framework:
Improving OH&S performance by creating and maintaining a safety culture

CRC Construction Innovation
B U I L D I N G   O U R   F U T U R E

Executive summary

On-site employees in the construction industry, arguably those at the greatest risk of injury, have not been receiving a consistent and clear message from all levels of management that safety is critical and that safe behaviour is a requirement.

A Construction Safety Competency Framework: Improving OH&S performance by creating and maintaining a safety culture has been developed through a Cooperative Research Centre (CRC) for *Construction Innovation* project. It presents a practical application for overcoming significant barriers that hinder Occupational Health and Safety (OH&S) performance improvement for the industry.

One such barrier is the movement of the sub-contractors and workforce between construction companies, projects and sites. Labour mobility makes it difficult for any one company to consistently influence this workforce's safety attitudes and behaviours. In addition, the sector traditionally does not view behaviours such as communication and leadership as a necessary part of safety competency.

By having an accepted standardised competency framework (founded on safety culture principles), it is possible for the industry to become more proactive in improving the behaviours and attitudes of those most at risk. It would also reduce the difficulties that companies face when managing the OH&S performance of a mobile labour pool and sub-contracting workforce.

The competency framework

A Construction Safety Competency Framework is designed for use by safety managers, senior managers and executives and demonstrates how to create and maintain a positive safety culture through the development of principal contractor staff competency.

The framework identifies a number of safety critical positions and the safety tasks they need to be able to perform competently. By linking this framework to strategic business and OH&S performance plans, it can raise the quality of an organisation's safety culture and safety performance.

The emphasis of the framework is on its effective implementation and making content available so that it can readily be adapted to suit an organisation's individual requirements.

Positive safety culture and behaviour change

Safety culture is a highly useful and relevant concept for understanding how an organisation influences the safety behaviour of their employees and sub-contractors. It is used to characterise the safety beliefs, values and attitudes that are held by those within the organisation, project or site.

These beliefs, values and attitudes are communicated largely by management (principal contractor staff) through their words and actions with regard to safety. From this, employees learn what behaviour will be rewarded, tolerated or punished. This in turn influences what behaviours employees initiate and maintain and share with sub-contractors – which directly relates to both safety and organisational performance.

The competency framework identifies nine broad staff actions considered essential to the development of a positive and effective safety culture. They include communicating company values, demonstrating leadership, clarifying required and expected behaviour and personalising safety performance.

The framework expands and explains these actions and indicates how they work to influence the safety behaviour of employees (referred to as the behaviour change mechanism) and thereby improve overall safety performance. Most of the nine can be introduced at no direct cost, except for the time and effort taken by executive managers to visit sites.

The Task and Position Competency Matrix

Underpinning the framework is the Task and Position Competency Matrix which links the principal contractor's safety critical position holders (e.g. Project Manager, Site OH&S Advisor, Engineer) to the competency requirements (full competency or working knowledge) for the major tasks needed to manage OH&S performance.

The 39 tasks are grouped within the following categories:

- proactively identify, assess and determine appropriate controls for OH&S risks
- effectively communicate and consult with stakeholders regarding OH&S risks
- monitor, report, review and evaluate safety program effectiveness
- engage with sub-contractors in OH&S performance management
- identify and implement relevant components of the OH&S and workers' compensation management system
- understand and apply workers' compensation and case management principles
- provide leadership and manage staff and sub-contractor OH&S performance.

Competency specifications and outcomes

For each of the 39 identified tasks, the framework lists in detail the steps that should be followed when completing the task, the knowledge and skill required to effectively complete the task, and the behaviour that should be undertaken while completing the task. Examples of outcomes that should be achieved by the effective completion of the task are also provided. See extract below.

Competency specifications		
Process steps	Knowledge, skill and behaviour	Culture outcomes
Safety Management Task 1. Carry out project risk assessments		
• Gather project information required to undertake the risk assessment (scope of work, contract requirements, legislative requirements). • Select and form risk assessment team. • Conduct project risk assessment. • Identify risk controls (resources, people and procedural actions required), and ensure actions are completed. • Communicate and review project risk assessment. • Review control implementation progress.	**Knowledge** • The provisions of OH&S Acts, Regulations and Codes of Practice relevant to the workplace including legal responsibilities of principal contractors, sub-contractors, manufacturers, suppliers, employees and other parties with legal responsibility • Management arrangements for keeping the organisation abreast of developments in OH&S (e.g. law, control measures for hazards), mandatory licensing and certificates • Legally required risk assessment / management procedures or based on industry standard / equivalent tools such as: • AS/NZS 4360: 2004 Risk Management	• Consistent and visible leadership in OH&S behaviours and actions • Consistent proactive communication of organisation's values, policy and procedures throughout the project/ site including management/ workforce/ contractors and sub-contractors • An increase in broader OH&S risk awareness and action before start up throughout the project/ site including management/ workforce/ contractors and sub-contractors • Development and communication of standard procedures and instructions across the organisation at all levels and throughout the project/ site including contractors and sub-contractors

By ensuring that the position holders are competent to complete the relevant tasks, construction organisations can maximise the likelihood that staff will undertake the actions that lead to a positive safety culture. Individual construction companies need to customise the matrix and table of specifications to reflect their organisational and regional requirements.

Implementation — integrate and customise

Once safety critical positions and the safety competencies required to be skillful in the positions are established, it is vital that they are integrated into the organisation's HRM and OH&S management procedures. This practice can occur through existing and new employee selection and recruitment methods as well as training and performance management processes.

Clearly, individual construction organisations are at varying levels of safety system implementation, so it is strongly recommended that the material is customised to meet unique organisational needs, situations and the stage of safety culture and safety management development.

It is essential that the customised material is monitored, periodically reviewed, evaluated and improved to ensure that competency improvements are always being guided to higher levels in alignment with continuous improvement principles.

The full version of *A Construction Safety Competency Framework*
is available from www.construction-innovation.info (from 22 September, 2006.)

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This research was an initiative of the
Cooperative Research Centre (CRC) for *Construction Innovation*.

Project participants:

The CRC for *Construction Innovation* is a national research, development and implementation centre focussed on the needs of the property, design, construction and facility management sectors.

Established in 2001 under the Australian Government's Cooperative Research Centres Programme with headquarters at Queensland University of Technology in Brisbane, *Construction Innovation* is developing key technologies, tools and management systems to improve the effectiveness of the property and construction industry.

Through its active industry diffusion program of targeted industry seminars and publications, *Construction Innovation* is bringing the outcomes of our applied research into industry practice.

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