CLIENTS DRIVING INNOVATION: BENEFITTING FROM INNOVATION

Full Paper

<u>INDUSTRY APPLICATION OF THE CONSTRUCTION SAFETY COMPETENCY FRAMEWORK</u>

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Despite improvements in OHS performance over the past 20 years, the injury and fatality rate in the Australian Construction Industry remains a matter of concern. Recent investigations into construction site safety culture (Biggs et al., 2006, Dingsdag et al., 2006) have provided a means through which the industry could address this issue. This paper reports on a project to continue development of the *Construction Safety Competency Framework* by formulating comprehensive implementation guides and support kits covering all 39 Safety Management Tasks and all safety critical positions identified in the Framework. Developmental issues, industry liaison processes, and stakeholder ownership issues are discussed as well as future implications for skill acquisition of safety critical tasks and recruitment and professional development concerns. The anticipated outcomes have the potential to enhance current safety skill and behaviour acquisitions in both 1st tier and 2nd tier construction companies.

Keywords: Implementation, safety, culture, behaviour, construction

1.0 INTRODUCTION

Although there have been improvements in OHS performance over the past 20 years, the injury and fatality rate in the Australian Construction Industry remains a matter of concern (ASCC, 2006). The notion of safety culture has been identified as a useful concept to help understand what safety behaviour is expected in industry (Cox, Tomas, Cheyne & Oliver, 1998; Glendon & Stanton, 2000). Improving safety culture is an important step toward imbedding safety awareness and compliance in everyday practices in industry (Guldenmund, 2000; Farrington-Darby, Pickup & Wilson, 2005). Recent investigations into construction site safety culture (Biggs et al., 2006, Dingsdag et al., 2006) have provided a means through which the industry could address this issue. This research specifically developed the Construction Safety Competency Framework (Dingsdag, Biggs, Sheahan & Cipolla, 2006) which identified 39 Safety Management Tasks and 11 Safety Critical Positions which are crucial to understanding which safety position is responsible for what safety task. After focus group and interview data were gathered, specific positions were ranked with either a 1 or a 2 indicating the level of proficiency and understanding the position needed to demonstrate on each of the Safety Tasks. These safety critical positions within the industry that have a significant impact on safety culture were mapped, and the behaviours and competencies required to successfully drive a positive site safety culture were identified. Essentially, the Framework identified, in detail, what process should be followed when completing particular tasks; the knowledge, skill and behaviour required to complete the task effectively; and what cultural outcomes should be achieved if the task is completed effectively (Biggs, Dingsdag & Sheahan, 2006). The Framework also provided some initial recommendations to industry on training, mentoring and employee motivation.

This paper reports on a project to continue development of the *Construction Safety Competency Framework* by formulating comprehensive implementation guides and support kits covering an initial 13 Safety Management Tasks and all safety critical positions identified in the Framework. Developmental issues, industry liaison processes, and stakeholder ownership issues are discussed as well as future implications for skill acquisition of safety critical tasks and recruitment and professional development concerns. The anticipated outcomes have the potential to enhance current safety skill and behaviour acquisitions in 1st tier construction companies and greatly assist the strategic development, planning, and implementation of these skills and behaviours in 2nd tier construction companies and associated contractors.

1.1 RESEARCH METHOD:
In order to develop a useful implementation kit for the Framework, it was important to firstly identify the sections of information that would help industry to begin to implement the Framework in a systematic and efficient way. It was also important to highlight the fact that the Framework should be customised to meet the needs and level of safety competency already within the organisation. To this end, preliminary development of the kits commenced, a brief 'how-to-implement' document was conceived, and industry participation was sought.

1.2 Developmental issues:
Initially decisions were made about the audiences, the presentation of the implementation kits and the type of information the kits were going to contain, prior to seeking industry comment. Beginning with the audiences, of the 11 Safety critical positions that were identified in the Framework, four super ordinate categories or Framework Implementation audiences were created. These categories aimed to

collapse the 11 positions into more workable categories for the presentation of the information. It was thought that not all companies would employ staff to fill each of the 11 individual positions. For parsimony, the 4 categories were: Senior Managers (inclusive of CEO's and Senior Managers), Safety Professionals (inclusive of National Safety Managers, Regional Safety Managers and State Safety Managers), Engineers and Project Managers (inclusive of Engineers, Project Managers and Construction and Operations Supervisors), and Construction Site Managers (inclusive of Site Managers, Foreman and Site OH&S Advisors).

With reference to the presentation of the kits to the four audiences in brochure and folder format, and in order to gain a more useable and readable document, it was decided to highlight different sections of the Skills Matrix in each brochure for easy reference. In addition, it was decided to seek industry feedback on the information medium for specific elements in the preliminary kits. For example, it was thought that the Construction Line Managers represented staff 'on the ground' and they may utilise a plasticized flip chart type brochure which could be carried in the pocket.

The intention was that the kits would contain information gleaned from the original Framework document, added information about how to use the kits, and emphasis on the customisability of the Framework. Additionally, CD-ROMs were planned to be included in each brochure, which would contain web links and other useful information for industry professionals.

1.3 Industry liaison process

In order to determine if the ideas on audience, presentation and information were accurately able to aid industry to adopt the Framework into part of their day to day accountabilities, industry feedback was sought. Several first tier and some second tier companies were contacted and invited to take part in evaluating the draft Implementation kits. Draft kits were sent to industry professionals and face-to-face focus groups followed.

1.4 Focus Groups

Ten focus groups were held across Australia with people in a range of different positions from both 1st tier and 2nd tier organisations. The focus group discussions lasted approximately one and a half hours and were structured around the appropriateness of the implementation kits including, the audiences, useability, usefulness, and the media used. The information gained from these focus groups was instrumental in helping to identify strengths and weaknesses in the initial kit concepts.

For example, in terms of audience, most first tier companies did have staff in most or all of the original 11 roles. However, feedback from second tier companies indicated that they only have staff in the 4 super ordinate roles. This and other positive feedback about the audience groupings helped to strengthen the rationale for the categories of safety critical roles.

Other main points of discussion indicated that most industry representatives did not think that Construction Site Managers would carry the plasticized flip chart in their pockets, highlighting the need to create a brochure style pack for this audience. The CD-Rom also caused a significant amount of comment from the industry professionals. Interestingly, some companies did not have CD/DVD readers in their computers for security reasons. In addition, a perusal of industry intranet sites indicated that the industry already has a great deal of quality information and web links developed for their intranet already. Therefore, it was deemed unnecessary to

provide a detailed list of sources of information since, firstly employees might not be able to access it; secondly, it would be reiterating information that employees already had access to, and; thirdly, the information provided would be outdated very quickly and would need continual updating and there were no identified resources to assist this process.

The focus groups were also very useful in detailing the types of information organisations would like to see in the 'how-to-implement" tip-sheets and Flow Charts. Discussions mainly centred on an initial mapping procedure to help give the organisation an idea of where they presently were in regard to achieving a safety culture whereby each Safety Management Task had an employee responsible for ensuring that that Task could be completed and monitored effectively. It was determined that the kits would provide a brief instruction and a Workbook for enabling the organisations to gain a snapshot as to where they were currently in the safety culture environment. Interestingly, many 1st tier organisations, with sufficient resources, has already begun to map and implement the Tasks and Positions included in the Framework, while several 2nd tier organisations were struggling with the complexity and detail in implementing the framework with significantly less resources. As a result of these observations, several 1st tier organisations were approached and agreed to provide examples or case studies as to how they initially tackled the task of beginning to map and implement the Framework within their organisations. In keeping with the notion of customising the Framework to suit pre-existing safety matrices and internal structure within organisations, each company began the implementation in different ways. It is believed that the 'tip sheet' and 'industry case studies' will vastly improve the understanding and accessibility of the Framework, particularly for 2nd tier organisations where such information fulfils both an informatics and mentoring function.

The importance of the focus groups with industry professionals cannot be underestimated, not only do they provide valuable and knowledgeable feedback about the usefulness of the information to industry but the participants also become stakeholders with ownership of the finished product. Their input helps shape the finished product and therefore the authors can be more confident that their product will be accepted and valid for industry use.

1.5 Final Framework Implementation Kit:
The final kit will include a series of four content brochures which detail the safety management tasks specifically for the four separate audiences. Additionally there will be a series of case studies provided by organisations that have already adopted elements of the Safety Framework. These case studies will cover adoption areas across recruitment and selection, continuing education, and effective communication and will act as a catalyst for organisations wishing to customise their own solutions across their critical safety positions using a number of the 39 identified Safety Management Tasks. There will also be a "safety snapshot" and "tip sheet" which will enable an organisation to take a snapshot of how their current occupational health and safety concerns are being met, and a set of ideas on how they can positively progress meeting these concerns. Additionally there is likely to be either a CD provided or an accessible web link detailing some critical written material in accessible electronic format and a hard and electronic copy of the original "Construction Site Safety Competency Framework" document as a resource.

1.6 AREAS OF USE
The full usefulness of the Framework and the Implementation Kits will be seen as companies embrace the need for a consistent and thorough means to identify the strengths and weaknesses they presently have in their organisations with regard to

safety. Once companies move forward to identify the Safety Critical Positions in their organisations and map the responsibilities inherent in those positions to specific Safety Management Tasks, they can begin the job of evaluating and monitoring the critical safety tasks and behaviours of employees in those safety roles. There are many ways to evaluate, monitor and manage those roles to ensure employees are committed to achieving a positive safety culture. For example, steps can be made in performance management, recruitment and selection and professional development. Some brief examples follow (see Biggs, Dingsdag & Sheahan, 2006).

1.7 Performance Management

After ensuring that the employees hold the required competencies, it is then important to promote the desired behaviours. This could be done by linking behaviours to existing performance management and appropriate reward systems. For instance, an employee may be motivated to increase his/her safety communication by a management requirement that they show evidence of this behaviour in order to receive public recognition or even a satisfactory performance review. Incorporating safety competency and demonstrated safety performance improvement in performance appraisals reinforces organisational values while also giving incentive to individuals to focus on safety as part of their everyday actions.

1.8 Recruitment and Selection

Selecting new employees who have the competencies required to successfully maintain and develop an appropriate safety culture is one method an organisation can use to improve safety. For example, a construction company seeking an engineer may assess candidates for communication, leadership styles and attitudes and beliefs about safety. By structuring the assessment process around key competencies it is possible for organisations to exclude people who are most likely to have a negative impact on safety culture. The skill and safety competency level of existing employees is also an issue. Hence, a robust training system based on adult learning principles also needs to be in place.

1.9 Professional Development

A set of safety competencies should make clear to the organisation the difference between an employee's current behavioural competencies and the behaviour that is required. After conducting a traditional training needs analysis, the organisation should develop a training plan to develop the skills, abilities and behaviours required by employees to positively affect safety culture.

Additionally, by standardising and integrating core safety culture competencies into the organisational safety management and HRM system, it is possible to mitigate the behavioural skills loss when employees shift to new projects either with the organisation or with another construction company. The greater the uptake of standardised safety culture competencies by individual organisations, the more uniform safety practice will be across the industry.

2.0   1st Tier and 2ND Tier Implications

The project investigations have made it very clear there is a substantial gulf between 1st and 2nd tier construction companies in the development and expansion of critical staff positions match to safety management tasks. Almost universally 1st tier companies have developed systems to recruit for, train for, and perform for, improving safety outcomes. There is no doubt that substantial savings to the industry

overall could be made by some rationalisation and sharing of these systems and procedures across the sector as a whole. The authors have seen some examples of that occurring and expect that such common use will be a feature of future efforts to gain equivalency, and easier systems to facilitate competency assessment in a human resource environment of significantly shifting workforces across organisations and projects.

The 2nd tier companies are somewhat more challenged. With fewer resources and less specialised critical safety positions, they are not generally able to adopt immediate and ongoing strategies to implement the entire 39 safety management Tasks of the Framework in a short time frame. It is thought that the Framework Implementation Kits would be of greater practicality to 2nd tier organisations in that they could commence (or advance) the customised development of their own address of the 39 tasks, by selecting those of greater priority and adopting them initially, and then proceed to address more SMT's as priorities and resources allow - a process undertaken at all times within the Framework broadly accepted by 1st Tier companies and the Office of the Federal Safety Commissioner.

2.1 FUTURE PROGRESS

Following an industry launch of the Framework Implementation, a series of industry workshops is planned for key cities across Australia which will facilitate the use of the Framework Kits in organisations. The workshops will be structured using workbooks developed by the current authors and industry experts, and participants will have the opportunity during the sessions to develop and retain their own implementation plans.

The combination of a discussion of the Framework intentions, a review of how other organisations are currently implementing it, and a practical exercise to develop a customised Implementation Plan for each workshop participant organisation, should provide an ideal and practical learning opportunity for framework adoption.

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