



### National Competence Assurance for Train Drivers: Literature Review

One of the goals of the Education and Training division of the CRC for Rail Innovation is to examine the feasibility of a national competence assurance framework for Australian train drivers. It was anticipated that this framework would provide

- practical tools to guide smarter program design and resource allocation
- improved models for ongoing competence refresher and assurance courses
- significant savings as a result of increased training throughput
- more efficient and standardised training, which will in turn provide clearer and more attractive pathways for entrants to the rail industry

Following the completion of an initial scoping project in 2008 (Kavanagh et al., 2008), a project was funded to answer the following questions:

- What are the strengths and weaknesses of current Australian rail industry competence assurance practices across a range of settings? For example, what are the implications of the use of in-cab assessors who typically only observe routine drives?
- What features are necessary in a national competence assurance framework?
- How might such a framework be operationalised within the existing range of contexts?
  - What groundwork needs to be undertaken within rail companies?
  - What allowances need to be made for size, nature of business, different assets, etc?
- What benchmarks are appropriate when setting triggers for assessment and retraining?

This literature review is the first deliverable for the project, and is intended to help structure ensuing case studies by identifying key issues and points of focus. As a result of this review some fundamental questions have been raised about the nature of competences and how they are understood and acted on by everyone involved in the training and management of train drivers. We have gone beyond instrumental considerations (such as the timing of assessments) to raise the possibility that levels of competence or professionalisation may be recognisable, and have suggested some elements of management systems that may be needed to support such a shift if it is deemed appropriate. We can articulate these questions with respect to each of the stages of a driver's career at which their employer needs to be assured of their competence: at first recruitment, on completion of initial training, and as a regular part of quality control.

#### Recruitment

1. Building competence assurance begins with confidence that the most suitable trainees have been recruited.

Key questions in this area include:

- What competencies should be sought in new recruits?
- What methods of assessment should be used?

- How are competencies and competences expressed and acted upon?

In addition:

- The research will need to consider recruitment processes and standards within an activity theory approach, paying particular attention to questions of how well personal competencies are, can be or should be distinguished from job competences. For instance, will it be helpful to the establishment of a national framework to have a common set of competencies required of incoming trainees, or does the nature and scope of the employer's business have an impact on the desired competencies?
- Consideration will need to be given to the changes that might be necessary to internal company processes in either event and how those changes may be instituted.

### Training and assessment

2. Authenticity in instruction and assessment are likely to produce best competence and greatest assurance of competence.

### Key issues in this area include

- congruence between learning outcomes and training formats
- the degree to which competence rather than compliance drives instruction
- the desirability of recognising levels of competence beyond the basic
- how authentic assessment functions beside standard tests
- the interaction between descriptors of competence such as criteria and the practice-based judgement of assessors

In addition:

- The safety-conscious nature of the rail industry leads to a concern with rules and compliance which may sometimes militate against the most authentic training and assessment processes. The research needs to keep in mind the real nature of this constraint in weighing up the factors identified in the key questions above.
- The project needs to consider the description and understanding of competences in practice and how well they deliver assurance for stakeholders that desired competences are present.

### Ongoing competence assessment

3. The management processes used in the ongoing review of competence can have an impact on levels of competence as well as levels of confidence in competence.

The key issues in this area include:

- optimum assessment intervals
- "just in time" training delivery
- risk-based training needs analysis
- the impact of management systems

In addition:

- Some management processes—such as those which seek to foster core business competence as well as individual competence—imply greater professionalisation of train drivers and different benchmarks for review and intervention.
- The research needs to document the extent to which greater professionalisation of the train driver beyond the basic standards required of regulated competences is necessary and desirable.
- The need for increased professionalisation may vary with the working context and consideration will need to be given to how that may impact on a national framework
- The question of increased professionalisation will affect all of the factors identified as issues above; these issues should be investigated with this influence in mind.