



Fostering Partnerships in T&E and Acquisition

Improving the Current and Future T&E Workforce

Test and Evaluation Competencies
– An International Perspective

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Thursday, 15th September, 2011



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Defence and
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Outline

- Education versus training
- Australian Qualifications Framework
- University of South Australia
- Government Skills Australia competencies
- Units of competency
- Engineers Australia
- Comparison of perceptions versus reality
- Path ahead



Education versus Training

- **Education** implies the acquisition of knowledge, skills and attitudes to manage complex problems, particularly where the outcome is unpredictable or unknown.
- **Training** implies the acquisition of skills to perform tasks where the outcome is predictable or known.

Prof Ian Gough, RACS Censor in Chief, *Surgical Education and Training*, Oct 2006

Australian Qualifications Framework

- Doctor of Philosophy (PhD)
- Master's degree
- Graduate diploma
- Graduate certificate
- Bachelor's degree
- Associate degree
- Advanced diploma
- Diploma
- Certificates I-IV

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University of South Australia

■ Award courses:

- Doctor of Philosophy
- Master of Engineering (Test and Evaluation)
- Master of Engineering (Military Systems Integration)
- Associate Degree in Engineering (Defence Systems)

■ Non-award courses:

- Principles of Test and Evaluation
- Operational Test and Evaluation
- Software Test and Evaluation
- Engineering Needs and Acceptance



Government Skills Australia Qualifications

- Diploma in Public Safety (Test and Evaluation)
- Certificate IV in Public Safety (Test and Evaluation)
- Currently only able to be delivered by Nova Aerospace Pty Ltd



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Units of Competency

- Analyse test data
- Apply knowledge of test data
- Conduct testing processes
- Evaluate testing
- Plan testing and evaluation processes
- Prepare testing and evaluation processes
- Produce testing and evaluation reports



Engineers Australia

- Hierarchy:

- Professional engineers
- Engineering technologists
- Engineering officers

- Assessment via:

- Engineering practice report
- Details of continuing professional development
- Professional interview



Perception versus Reality

- Excellent T&E education and training framework in place, however:
 - Still have recurrent problems with T&E in major projects,
 - Appear to have a strategic shortfall in T&E guidance, and
 - Need to be smarter with limited resources.



Path Ahead

- Must have guidance from Defence regarding importance of T&E competencies
- Need to establish a competency framework, not just for practitioners, but for managers
- Base framework on Engineers Australia model
- Exam or no exam?



Summary

- Important to understand the difference between education and training
 - We have qualification framework in place
 - Need to align perception with reality
 - Base framework on Engineers Australia model
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- Questions?

