



A MODEL TO DESCRIBE THE FUNCTIONS AND ROLES OF TEST AND EVALUATION (T&E) IN THE LIFE CYCLE PROCESS

© May 1991, 1993, 1996 Australian Flight Test Services Pty Ltd ⁽¹⁾

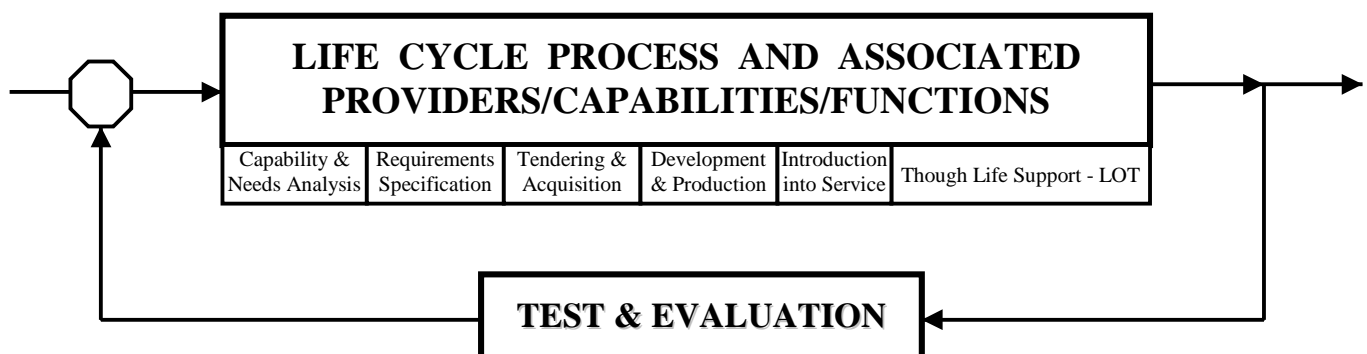
What is T&E ? - a Simple Definition of this Engineering Discipline

Test and Evaluation (T&E) is the “*feedback loop*” of the Systems Engineering *Life Cycle Process*, which is applicable to all stages of the process, and embodies the following functions and roles :

- T&E oversees and provides the proof that a *product* or a *system* complies with and conforms to the specification and, moreover, meets the *needs* of the end user.
- T&E is a “*Womb to Tomb*” philosophy and an important *technology enabler*.
- T&E is a means of “*maximising return on expenditure*” (according to a former President of ITEA ⁽²⁾, ADM Pete Adolph (USN), “*T&E is about getting the best bang for your bucks!*”).
- T&E is an integral part of the process for achieving “*cost effectiveness*” and “*value for money*”.
- T&E rigour and processes provide the *objective data* needed to achieve *compliance, conformity, probity, accountability, transparency and fair dealings* in contracting activities.
- T&E assists the customer to be a “*smart buyer*” and obtain “*value in technology*”.
- T&E is a broad set of activities and functions, including the following :
 - Systems Testing eg. Flight Test (Developmental, Certification, Acceptance, Production)
 - Certification, Classification and other Regulatory Activities/Functions
 - Developmental Test and Evaluation (DT&E)
 - Acceptance Test and Evaluation (AT&E)
 - Operational Test and Evaluation (OT&E)
 - Independent Verification and Validation (IV&V)
 - Risk Analysis & Risk Assessment & Risk Planning (eg. System Safety Analysis)

“To be effective, T&E should be independent of ... but integrated with the Life Cycle Process and the associated providers and their capabilities.”

A Simple Model to Describe T&E“the feedback loop for all stages of the Life Cycle Process”



(1) Permission is granted for the complete copying or reproduction of this document in its entirety only, provided full rights of authorship and copyright are attributed to Australian Flight Test Services Pty Ltd (AFTS).

(2) ITEA - International Test and Evaluation Association