

A DEFINITION AND MODEL TO DESCRIBE THE FUNCTIONS AND ROLES OF TEST AND EVALUATION (T&E) - AN INTEGRAL PART OF THE LIFE CYCLE PROCESS

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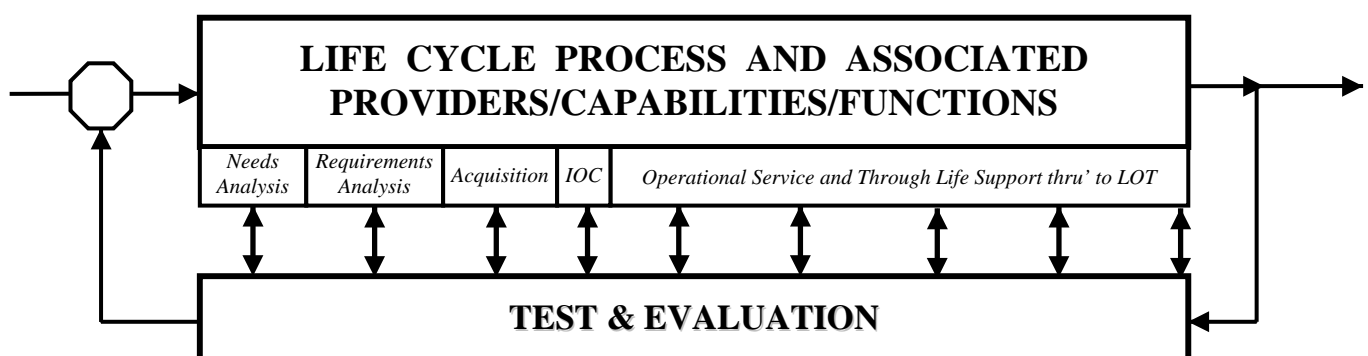
What is T&E ? – T&E is an Engineering Discipline. A simple definition follows:

Test and Evaluation (T&E) is the “*feedback loop*” to the *Life Cycle Process*. It is applicable to all stages of the process, and embodies a range of roles and functions, including:

- T&E is a “*Womb to Tomb*” philosophy and an important *technology enabler* that not only *sharpens* but *hones* the technology, the resulting capability, and the processes used to *produce, support* and *operate* them.
- T&E provides oversight and 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 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 are employed by *domain experts* to provide the *objective data* needed to achieve *compliance, conformity, probity, accountability, transparency and fair dealings* in life cycle activities.
- T&E assists the customer to be a “*smart buyer*” and obtain “*value in process*” through the application of *applied learning* techniques eg. *lessons learned*.
- 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 Functions/Activities
 - 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 needs to be integrated with but independent of 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”



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⁽²⁾ ITEA - International Test and Evaluation Association