Australian Government

TLIX0033X Undertake RAM analysis in a defence integrated logistics environment

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to undertake reliability, availability and maintainability (RAM) analysis used in logistics support analysis (LSA). It applies to logistics support systems in a Defence environment and broader constituent capabilities.

It includes identifying RAM source data, undertaking RAM analysis, and maintaining RAM data.

RAM engineering concerns the study, characterisation, measurement, prediction and analysis of the failure and repair of systems in order to improve capability and reduce cost of ownership by eliminating or reducing the chance and severity of failures, and reducing the downtime associated with system failure.

This unit is appropriate for technical specialists supporting integrated logistics functions. Typically, these individuals will have existing vocational or higher education qualifications related to engineering, and significant engineering support experience. They must demonstrate the ability to work independently or as part of a team under direct and/or indirect supervision, use discretion and judgement, and take responsibility for the quality of their outputs. All activities are carried out in accordance with relevant policy and procedures.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

X – Logistics

Unit Sector

Integrated logistics

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1 Identify RAM source data	**1.1** Integrated logistics support (ILS) strategy for the program is reviewed to ensure relevance and alignment of RAM
	1.2 Organisational procurement and supply chain policies for each identified item are interpreted to determine data requirements
	1.3 Contractual and regulatory requirements are determined and reviewed
	1.4 Sensitivity analysis is conducted in accordance with organisational procedures
	1.5 Levels of confidence to data is risk assessed
2 Undertake RAM analysis	**2.1** Significant points of failure and candidates for asset redesign are identified
	2.2 Maintenance requirements and inputs to the safety case are identified
	2.3 RAM data is interpreted to calculate system level reliability and availability metrics
	2.4 RAM data is interpreted to determine maintenance and supply support requirements
	2.5 RAM baseline data and actions to deal with deviations or failure from established baselines are reviewed
	2.6 RAM data is interpreted to confirm coverage of the operating support intent
	2.7 Verification and validation of data is completed to confirm performance outcomes
3 Maintain RAM data	**3.1** RAM analysis is documented
	3.2 RAM data is loaded to document management system
	3.3 Data collection systems are applied to produce required system reporting

3.4	RAM data is collected throughout in-service and disposal phases to inform support system requirements

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851