



Australian Government

TLIK0004 Apply knowledge of automated workplace fundamentals

Release: 1

TLIK0004 Apply knowledge of automated workplace fundamentals

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 apply knowledge of automated workplace fundamentals for work in an automated work environment.

It includes identifying the sources, use and importance of data by sourcing and retrieving information relevant to autonomous workplaces; explaining the contribution of automation within the value chain and working safely in an automated workplace.

Work is performed under general supervision within a team environment.

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

Pre-requisite Unit

Not applicable.

Competency Field

K – Technology.

Unit Sector

Rail sector.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Identify the sources, use and importance of data

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

1.1 Types and sources of data in the automated workplace are identified

1.2 How data is used in an autonomous workplace is

	described
	1.3 Why collecting, receiving and interpreting data is vital to working in an automated environment is explained
	1.4 Reasons behind the priority of data, its use and application are explained
	1.5 How data is used to aid the continuous improvement of organisational processes and performance is analysed
	1.6 Current emerging developments of data use in an automated workplace are identify and described
2 Source and retrieve information relevant to autonomous workplaces	2.1 Changes, benefits and future trends of automation in the workplace are identified
	2.2 Key or major systems and equipment of automation and automated workplaces are described
	2.3 Work instructions, policies and workplace procedures for tasks performed alongside automated plant, machinery, equipment and devices are determined and applied
	2.4 Work health and safety (WHS)/occupational health and safety (OHS) legislation and related safety management systems relevant to an automated workplace are accessed and applied
	2.5 Common terminology in automated workplaces is identified and employed
3 Explain the contribution of automation within the value chain	3.1 Concept of integrated systems within the value chain, their interdependencies and contributions are identified and explained
	3.2 Roles and function of people and equipment in the value chain, their interdependencies and contributions are identified and the integration explained
	3.3 Importance of the human-machine-interface (HMI) is evaluated and how human decisions impact on the autonomous systems effectiveness, efficiency and safety is explained
4 Work safely in an automated workplace	4.1 Personal safety workplace procedures in an automated workplace are identified and applied

- 4.2 Isolation and functional requirements associated with automated systems, devices and equipment are identified and confirmed
- 4.3 Safe and responsible behaviours in an automated workplace is demonstrated
- 4.4 Communication protocols and processes for working safely in an autonomous workplace are explained and demonstrated
- 4.5 Procedures for responding to or reporting incidents or emergencies are identified and explained in accordance with safety management system

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>

Assessment Requirements for TLIK0004 Apply knowledge of automated workplace fundamentals

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- applying relevant information, legislation, regulation, documentation, policies and workplace procedures
- demonstrating, on at least three separate occasions, the following:
 - application of the terminology used
 - accessing and interpreting data including:
 - analysing
 - collecting
 - displaying
 - prioritising
 - security
 - storing
 - clear and timely communication of data
- demonstrating communicating data within the relevant organisational network
- demonstrating language, literacy numeracy (LLN) skills consistent with the ability to receive and present information in a complex automated workplace
- demonstrating skills employed in analysing, collecting and applying data including:
 - critical thinking
 - data analysis
 - decision making
 - digital literacy
 - predictive analytics
 - problem solving and diagnostics
- working effectively in an automated environment by:
 - applying the terminology used within the automated system
 - applying work health and safety (WHS)/occupational health and safety (OHS) and workplace requirements
 - complying with policies, workplace procedures, legislation and regulations
 - demonstrating clear, precise and prompt communication

- demonstrating safe interaction with autonomous equipment
- describing the features of the automated system including:
 - historical perspective
 - benefits and future opportunities
 - systems and their integration and interdependency
 - policies, workplace procedures, legislation and regulations.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- current automated workplaces including:
 - challenges of technology evolution
 - common terminology
 - computer systems including hardware and software requirements
 - historical perspective
 - safety improvements provided by automation
 - trends and future of automation
- data handling including:
 - algorithms and equations
 - graphical representations – display and interpretation
 - identifying and understanding anomalies and breaks in trends
 - simulation techniques
 - volumes, variety and velocity (rate of change or growth in data)
- data in a complex automated workplace including:
 - common terminology
 - data types
 - emerging developments including:
 - artificial intelligence
 - big data
 - data analytics
 - hybrid systems
 - identifying data types and sources, including:
 - existing, readily available, and difficult to collect and verify
 - integrated systems
 - numeric and text
 - organisational, industry-wide, national and universal
 - sensor-generated

- function of sensors, devices and systems in providing data
- organisational requirements in relation to data and its impact on:
 - business reputation
 - maintenance and storage of data
- safety management system.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation including legislation, regulations, codes of practice, workplace procedures and operation manuals.

Links

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