Australian Government

Department of Education, Employment and Workplace Relations

CPPWMT4060A Apply lean management techniques

Release: 1

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Modification History

Revised unit
Unit redeveloped incorporating PRMWM60A Apply cleaner production techniques
Unit title and outcomes changed to reflect the increased emphasis on lean production and management in waste management processes

Unit Descriptor

This unit of competency specifies the outcomes required to apply lean management techniques to avoid or reduce waste generation. It requires the ability to identify the opportunities for production practice that eliminates expenditure of resources for any goal other than the creation of value for the end customer, analyse those opportunities to establish criteria, and then develop an implementation program.

Application of the Unit

This unit of competency supports individuals with responsibilities for organising waste management operations, leading a team or supervising a site. It includes contributing to the implementation of developed strategies, systems and plans, as well as recognising the need for expert advice.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Determine effectiveness of current resource management practices.	1.1	Management support for the development and implementation of ***lean management techniques*** is confirmed.
		1.2	In-house lean management techniques are established.
		1.3	All components of current ***waste streams*** are ***measured***.
		1.4	Waste generation rates are linked to ***key waste indicators*** or benchmarks.
		1.5	Existing waste management ***site*** practices are assessed against ***legislation and codes***, industry standards, best practice and ***organisational requirements***.
		1.6	Practices and processes are discussed with operators and other stakeholders to gain in-depth information on why waste is generated.
		1.7	Cost analysis is conducted to identify the ***real cost of waste*** production process and waste stream.
		1.8	***Potential hazards and risks*** are factored into overall costs.
2	Determine strategies for lean management program.	2.1	Barriers to implementation are identified and effective strategies are developed to counter these.
		2.2	Goals and targets are established for lean management program.
		2.3	Potential ***resource improvement methods*** are identified to avoid or reduce waste generation.
		2.4	Cleaner production opportunities are identified and

			ranked in regard to implementation schedules.
		2.5	***Feasibility*** of options is analysed.
		2.6	Resource requirements are identified and costed.
		2.7	Findings are recorded promptly for full review by designated authority.
3	Implement lean management program.	3.1	Specific tasks are allocated and implementation timetable is developed.
		3.2	Specific implementation activities are conducted and equipment is installed.
		3.3	Change is communicated to relevant employees and other stakeholders, in conjunction with a specific education program.
		3.4	Implementation activities are monitored and reviewed to determine their effectiveness, and amendments are made as required.
		3.5	Reporting mechanisms are established to provide feedback to management on progress of cleaner production initiatives.
		3.6	Organisation lean management program is implemented in conjunction with a staff awareness program.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to undertake research and feasibility investigation
- critical thinking skills to identify resource needs
- interpersonal skills to:
  - lead teams
  - work in a team environment
  - solve problems in a team environment
- numeracy skills to calculate:
  - proportions and percentages
  - volume and weight
- oral communication skills to:
  - ask questions
  - listen actively
  - consult with colleagues and stakeholders
  - provide guidance
  - follow instructions
  - present information
  - negotiate production changes to facilitate lean production techniques
- problem-solving skills to:
  - identify hazards and risks
  - identify lean management opportunities
- reading skills to interpret:
  - technical plans
  - drawings
  - documents
  - material safety data sheets (MSDS)
- self-management skills to:
  - conduct work practices safely and efficiently
  - organise work methodically
  - prioritise production opportunities
  - use information technology to complete tasks
- written communication skills for:
  - report writing

- record keeping
- documentation

Required knowledge

- environmental issues relating to:
  - life cycle of products: re-new, re-use and recycle
  - environmental regulations
  - renewable energy
  - energy efficiency systems
- identification of:
  - waste types, streams and characteristics
  - waste non-conformances
  - unanticipated waste
  - hazardous waste
  - waste non-conformance procedures
  - waste containment
  - waste disposal and recovery routes
- lean management techniques, including:
  - analysing waste practices
  - analysing previous assessment plans and processes
  - outlining possible benefits and outcomes from applying lean management
  - eliminating or reducing wastes
  - fast and flexible process
  - lean manufacturing
  - lean production: more value with less work
- occupational health and safety (OHS) requirements relating to:
  - dangerous goods and hazardous substances
  - OHS hierarchy of control
- resource recovery options relating to:
  - valuable resources within materials
  - potential resources to be recovered
- waste management provision, including:
  - daily operations
  - duty of care
  - legislation, regulations and codes of practice applicable to specific waste management functions
  - organisational pricing schedules
  - organisational requirements and structure, including workplace communication channels and procedures
  - product safety and integrity requirements

- waste management hierarchy
- waste management options

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	This unit of competency could be assessed by observation of practical demonstration in the workplace or in a simulated environment of applying lean management techniques.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit. In particular the person should demonstrate the ability to: • determine strategies for lean management techniques • apply lean management principles and techniques • incorporate OHS and impacts and drivers of waste.
Context of and specific resources for assessment	Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or Australian standards' requirements. Resource implications for assessment include: • work plans and approved specifications • forms and procedures manuals.
Method of assessment	Lean management techniques must comply with industry expectations in the particular client environment. If the environment is narrowly defined or is not representative of industry needs, it may be necessary to refer to portfolio case studies to assess competency in lean management techniques. Assessment methods must: • satisfy the endorsed Assessment Guidelines of the Property Services Training Package • include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application • reinforce the integration of employability skills with workplace tasks and job roles • confirm that competency is verified and able to be transferred to other circumstances and environments.
Guidance information for assessment	Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

	Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed. This unit could be assessed on its own or in combination with other units of competency relevant to the job function, for example: • CPPCMN4002B Implement and monitor environmentally sustainable work practices • CPPWMT3059A Plan and conduct waste assessments CPPWMT4030A Determine waste management services • CPPWMT4052A Organise waste management operations • CPPWMT5004A Develop waste management strategies • CPPWMT5058A Develop emergency response plans.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Lean management techniques may include:	• eliminating or reducing wastes, such as:
	  • breakdown
	  • conveyance
	  • inventory
	  • motion
	  • over-processing
	  • over-production
	  • poor information
	  • rework
	  • unnecessary cost
	  • unused material
	• fast and flexible process
	• lean manufacturing
	• lean production: more value with less work.

Waste streams may include:	• chemical waste • construction and demolition • dangerous goods • green waste • hazardous substances • municipal waste • prescribed waste • putrescibles • quarantine • recyclable liquids • regulated waste • solid inert.
Measurement may include:	• materials • number • proportion • percentage • sustainability of supply source • types • volume • weight.

Key waste indicators may include:	• employee hours • financial issues • output units • percentage of waste per unit of product • productive hours • recovery options • recycling options • square metres occupied.
Site may include:	• business premises • landfill site • local government area • workplace plant • factory • waste processing plant.

Legislation and codes may include:	• codes, including:
	  • Australian Code for the Transport of Dangerous Goods by Road and Rail
	  • industry
	• commonwealth, state and territory legislation, including:
	  • anti-discrimination
	  • environmental protection
	  • equal employment opportunity
	  • freedom of information
	  • industrial
	  • OHS
	  • trade practices
	• road laws.

Organisational requirements may include information found in:	• briefing papers • job sheets • letters • memos • operations manuals • policy and procedures documents • quality assurance documents • site development plans • tender and contract documents • training materials • verbal or written instructions • work procedures.
Real cost of waste may	• cost of transport and disposal • cost of product and items disposed

include:	• recovery costs • recycling costs.
Potential hazards and risks are those identified by the organisation that may lead to:	• damage to plant, vehicle or property • harm to the environment • illness or injury to employees, contractors or the public • injuries resulting from manual handling and repetitive work.
Hazards and risks may include:	• broken glass • broken metal • compaction equipment • contamination • dust • fire • gases and fumes • hazardous waste (e.g. sharps) • narrow driveways • other vehicles and equipment • overhanging signs • projectiles • spark-producing equipment • unguarded conveyor belts • weather.

Resource improvement methods may include:	• changes in product or process
	• correct application of work procedures
	• customer standards
	• energy efficiency systems
	• handling and storage practices
	• housekeeping
	• material specifications:
	  • portion control
	  • quality
	• product packaging
	• purchasing practices
	• quality of materials supplied
	• quality standards
	• technology improvements.

Analysis of *feasibility* may include:	• cost-benefit analysis
	• employee factors:
	  • redundancy
	  • training
	  • upskilling
	  • workflow

	• environmental impacts • energy efficiency policies • logistical impacts • OHS issues • technical capability • time constraints.

Unit Sector(s)

Waste management

Custom Content Section

Not applicable.