



Australian Government

MEM22017 Coordinate continuous improvement and technical development

Release: 1

MEM22017 Coordinate continuous improvement and technical development

Modification History

Release 1. Supersedes and is equivalent to MEM22017A Coordinate continuous improvement and technical development.

Application

This unit of competency defines the skills and knowledge required to coordinate and facilitate the implementation of engineering-related continuous improvement, change and technical development within organisations.

It does not cover design or implementation of major change, including re-engineering or design and commissioning of new major plant. It is suitable for people working in engineering or related environments in design, maintenance or operational functions.

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

Pre-requisite Unit

MEM16006 Organise and communicate information

Competency Field

Management and organisation

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate project or operation for improvement and technical development opportunities	1.1 Follow standard operating procedures (SOPs) 1.2 Select project or operation for review in conjunction with stakeholders 1.3 Determine current performance against objectives and key performance indicators (KPIs) 1.4 Establish and monitor processes to identify shortfalls in performance, root causes and opportunities for performance and technical improvements 1.5 Evaluate hardware and software technology requirements for

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	performance improvement opportunities 1.6 Evaluate personnel skill requirements and training needs for performance improvement opportunities 1.7 Confirm current or future work health and safety (WHS) requirements, codes of practice, regulations, standards and regulatory requirements related to possible opportunities for performance improvement
2. Develop recommendations for performance improvement and technical development	2.1 Coordinate the specification of options for performance improvement including required technology changes, skills development needs, timelines, budget and extent of disruption to current operations 2.2 Coordinate feasibility analyses on options and develop proposals based on outcomes 2.3 Prepare report and recommendations including objectives, implementation schedule, budget and any required regulatory compliance measures 2.4 Communicate and negotiate with stakeholders to confirm recommendations for change and technological developments
3. Coordinate implementation of approved changes	3.1 Develop implementation objectives, plan, schedule and budgets for approved changes 3.2 Monitor implementation of objectives by priority, strategy and schedule 3.3 Coordinate change management, process redesign and introduction of technology in accordance with plan 3.4 Manage physical and financial resources and budget within delegation 3.5 Monitor change and technological development for compliance with organisational policies and procedures 3.6 Provide input to risk management procedures that is based on completed evaluation and planning
4. Report outcomes	4.1 Record progress and results in accordance with procedures 4.2 Provide documentation, data entry and analysis according to project or operation requirements

Foundation Skills

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.	
Stakeholders include one or more of the following:	• enterprise or project owners and managers • team members • support function groups • expert technical and professional assistance • customers and suppliers • colleagues identified in reporting arrangements for the engineering project or operation.
Constraints and contingencies include:	• financial, organisational, procedural or cultural constraints • physical constraints including limits to resources, site access or logistical limitations.
Organisational policies and procedures include:	• enterprise agreements and awards • work health and safety (WHS) requirements • codes of practice and other legislative requirements • environmental and social obligations • ethical practice.
WHS, regulatory requirements and enterprise procedures include:	• WHS acts, regulations and relevant standards • codes of practice from Australian and overseas engineering and technical associations and societies • risk assessments • registration requirements • safe work practices • state and territory regulatory requirements.
Continuous improvement implementation includes one or more of the following techniques:	• balanced scorecard • current and future state mapping • measuring performance against benchmarks • process improvement, problem-solving and decision-making • data management, generation, recording, analysing, storing and use of software • training for improvement systems participation • technical training.
Sustainability includes:	• meeting all regulatory requirements • conforming to all industry covenants, protocols and best practice guides • minimising ecological and environmental footprint of process, plant and product

	• maximising economic benefit of process plant and product to the organisation and the community • minimising the negative WHS impact on employees, community and customer.
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Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM22017A Coordinate continuous improvement and technical development.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM22017 Coordinate continuous improvement and technical development

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Performance Evidence

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

- following work instructions, standard operating procedures (SOPs) and safe work practices
- evaluating technologies, assets, workforce and contractor skills and knowledge, personnel development strategies, hardware and software technology requirements, for technology and capability gaps and opportunities for improvement
- reviewing organisation structure, current operations and context, development opportunities, budgets and constraints and software options for opportunities for improvement on at least two occasions
- completing feasibility analyses on options and developing proposals on at least two occasions
- maintaining appropriate documentation and records
- demonstrating systems thinking, constraints and contingency management, short-term planning adjustments and rescheduling
- managing physical and financial resources and budget within delegation
- communicating and negotiating with stakeholders
- reporting and documenting progress and results, data and analysis in accordance with standard operating procedures (SOPs).

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

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

- safe work practices and procedures
- work health and safety (WHS) and regulatory requirements, codes of practice, and risk minimisation and registration requirements
- project management techniques
- modern production management techniques
- stakeholders
- constraints

- context of operations including competitive pressures or markets, customer-supplier relationships, regulatory and industrial environment, environmental and sustainability, and resourcing and labour issues
- operations or project management structure, functional team relationships, responsibilities and delegations across the organisation, available technical and professional support services, communications and reporting lines
- procedures for audit of technologies, skills, knowledge, techniques, plant and other assets including hardware and software used by current operations and projects
- feasibility analysis or ‘trade-off’ methods to assist selection from among options
- accountability and record keeping requirements
- tendering and contract requirements and processes and their effect on continuous improvement including agreement on design and specification, negotiations and optimisations, provisions for variations, delays and penalties
- change and technological development implications for WHS requirements, codes of practice, regulations, standards and regulatory requirements
- sustainability issues related to continuous improvement of engineering-related projects and operations
- typical software for program management and budget control, use and validation options
- implementation plan, strategic and prioritised objectives and budgets
- lean manufacturing principles
- procedures for reporting and recording of progress and records of legislative compliance in accordance with procedures for accountability against objectives, schedule and budget
- requirements for and functions of technical documentation, graphics and specifications and records of meetings, communications and agreements with stakeholders.

Assessment Conditions

- Assessors must:
 - have vocational competency in co-ordinating continuous improvement and technical development at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.

- 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.

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