MEM23119 Evaluate continuous improvement processes

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM23119A Evaluate continuous improvement processes.

Application

This unit of competency defines the skills and knowledge required to evaluate continuous improvement processes for production, engineering and associated services. It requires the evaluation of improvement processes, and the efficiency and effectiveness of their response, to continuous feedback from customers and other sources along with consideration of the effect of improvements or change on entire systems.

It applies to production and engineering activities where continuous improvements including those to product, process or service, efficiency or competitiveness, is required. It is suitable for people working as service providers, supervisors or technicians and those pursuing manufacturing, engineering or related technical qualifications and careers.

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

Pre-requisite Unit

MEM23118 Apply production and service control techniques

MEM30012 Apply mathematical techniques in a manufacturing engineering or related environment

Competency Field

Engineering science

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. Establish scope of continuous improvement evaluation	1.1 Identify industrial and market context for continuous improvement
	1.2 Identify features, functions and measurable parameters of products, processes, systems or services, assets and operations subject to continuous improvement
	1.3 Assess software techniques required for continuous improvement

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
	1.4 Review sustainability implications of evaluation task
	1.5 Identify stakeholders in continuous improvement processes and appropriate licensed technical and professional assistance to be consulted on the tasks
	1.6 Determine compliance requirements of relevant work health and safety (WHS) and regulatory requirements, codes of practice, standards and risk assessment procedures
2. Prepare for evaluation	2.1 Identify appropriate measurement, data gathering, software and other analysis methods to be used for evaluation
	2.2 Identify performance criteria or indices
	2.3 Identify existing process capability, evaluation, control and run charts and sampling procedures
	2.4 Identify existing qualitative continuous improvement processes
3. Evaluate organisation continuous improvement processes	3.1 Evaluate manual and automatic methods for measurement of parameters of products or services
	3.2 Evaluate data gathering, analysis and performance indices
	3.3 Evaluate software techniques for performance analysis and visual display generation
	3.4 Evaluate quantitative and qualitative continuous improvement processes
	3.5 Apply systems thinking, constraint and contingency management, problem-solving and decision-making to evaluation tasks
	3.6 Evaluate sustainability implications of improvements
4. Report results	4.1 Record results of continuous improvement evaluation, and the identified principles and techniques
	4.2 Provide documentation including reports, data, graphics, flow charts and performance indices

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

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.	
Features, functions and measurable parameters of products, processes, systems or services, assets and operations subject to continuous improvement include:	• sustainability • software • product manufacturability • process design • process control • equipment and tooling • material and product flow • plant layout and transfer operations • standard operating procedures (SOPs) • maintenance • lean systems • labour and skills distribution • information flow • value chain • sales, marketing and planning • management.
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 work health and safety (WHS) impact on employees, community and customer.
WHS, regulatory requirements and organisational 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 processes relate to:	• plant • products

	• production processes
	• systems and services including:
	  • design
	  • development
	  • implementation or manufacture
	  • commissioning
	  • operation or delivery
	  • maintenance.

Continuous improvement processes include:	• 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
	• qualitative improvement processes including:
	  • toolbox meetings
	  • suggestion schemes
	  • mentoring
	  • changes in work organisation, responsibilities and recruitment.

Constraints and contingencies include:	• financial • organisational • procedural • cultural • physical (resource, access and logistical limitations).

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2