



Australian Government

Department of Education, Employment and Workplace Relations

MSACMS400A Implement a competitive manufacturing system

Revision Number: 1

MSACMS400A Implement a competitive manufacturing system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to implement competitive manufacturing practices. Generally, five areas drive competitive manufacturing: cost, quality, delivery, safety/environment, and morale. In a competitive manufacturing company systems will need to be implemented which drive continuous improvement in all these areas, without one area competing unduly with another.
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Application of the Unit

Application of the unit	In a typical scenario, team performance is continually reviewed against the five key areas and in liaison with other relevant people, and with the support of technical support staff, improvements in these five key areas are developed and implemented. Whereas other units may emphasise the competence to use one or more <i>tools</i> , this unit emphasises the ability to advance on all five key areas over a moderate time period. This unit requires the application of skills associated with problem solving and initiative and enterprise in order to identify opportunities to make improvements and maximise performance. Communication, teamwork and planning and organising skills will be required to implement improvements and address any conflicts that arise. This unit also requires an ability to identify appropriate technology, and to consider and integrate feedback on how personal performance can be improved. This requires self management and learning.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Optimise the manufacturing system	<ul style="list-style-type: none"> 1.1. Apply competitive manufacturing practices to maximise health, safety and environment performance 1.2. Apply competitive manufacturing practices to maximise quality consistency 1.3. Apply competitive manufacturing practices to maximise performance by team members 1.4. Apply competitive manufacturing practices to maximise customer benefit/cost ratio 1.5. Apply competitive manufacturing practices to reduce lead time to delivery within the scope of the team's authority and responsibility 1.6. Negotiate with relevant stakeholders to resolve conflicts which arise 1.7. Select improvements which will deliver the greatest overall benefit for the resources required/available without reducing current performance on individual factors
2. Implement improvements	<ul style="list-style-type: none"> 2.1. Implement the chosen improvement/s 2.2. Check the selected improvements improve the system as a whole and do not result in unintended consequences 2.3. Monitor implementation and make adjustments as required.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills:

- communication
- communication
- interpersonal relationships
- prioritising
- mathematics
- statistics
- analysing
- conducting root cause analysis
- problem solving.
- solving.

Required knowledge:

- the customers and the benefits they derive from the products
- cost components and their relationship to customer benefits/features
- the suppliers and their capabilities
- product waste
- factors causing variability in a product and how to control them
- relevant tools for their job and how to apply them
- factors impacting on the product, process and waste, particularly those wholly or partially under their control (and how to control them)
- good health safety and environment (HSE) practice and factors impacting on HSE performance
- morale and how to improve it
- optimisation techniques appropriate to the organisation and the job
- application of quality standards and processes.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person should be able to continuously make improvements to all key aspects of their team/process and any change made should be of benefit to the system as a whole.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of the implementation of the competitive manufacturing system and the improvements made to product, process and team.
In what context should assessment occur?	Assessment needs to occur in an organisation implementing competitive manufacturing or using a suitable project.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit may be assessed concurrently with a unit on continuous improvement and or units on the use of competitive manufacturing tools.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMS200A Apply competitive manufacturing practices</i> which covers the lower skill level aspects of this competency.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, performance criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement</p>

EVIDENCE GUIDE	
	of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence will generally come from the routine implementation of competitive manufacturing and the routine continuous improvements which flow from this. As such evidence from a range of improvements is necessary.
What are the specific resource requirements for this unit?	Access to an organisation implementing competitive manufacturing.

Range Statement

RANGE STATEMENT	
<p>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.</p>	
Competitive manufacturing	<p>Competitive manufacturing is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:</p> <ul style="list-style-type: none"> • lean manufacturing • agile manufacturing • preventative and predictive maintenance approaches • monitoring and data gathering systems such as Systems Control and Data Acquisition (SCADA)software, Enterprise Resource Planning (ERP)systems, Manufacturing Resource Planning (MRP), and proprietary systems such as SAP etc. • statistical process control systems including six sigma and three sigma • Just in Time (JIT), kanban and other pull related manufacturing control systems • supply, value, and demand chain monitoring and analysis • other continuous improvement systems. <p>Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the enterprise's size and work organisation, culture, regulatory environment and manufacturing sector.</p>
Tools	Tools is used in this unit to mean the tools of competitive manufacturing such as 5S, 6 sigma, continuous improvement, cause effect diagrams, etc.
Customer	Competitive manufacturing organisations encompass the entire production system, beginning with the <i>customer</i> , and includes the product sales outlet, the final assembler, product design, raw material mining and processing and all tiers of the <i>value chain</i> (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and

RANGE STATEMENT	
	<p>the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.</p> <p>Customer may be interpreted to be an internal customer, but typically the benefits to the final customer should be used as the basis for the identification of waste. The operator does not need to interface directly with the external customer, but should be provided with sufficient information to enable them to identify customer benefits and features.</p> <p>Supplier may be interpreted to be an internal supplier, but typically the external supplier and their abilities should be known. The operator does not need to interface directly with the external supplier, but should be provided with sufficient information to enable them to identify supplier abilities.</p>
System	A competitive manufacturing system is that holistic combination of the process, plant and equipment, procedures and practices including the skills and work organisation of the workforce which make up the productive organisation.

Unit Sector(s)

Unit Sector	CM Systems
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corequisite units

Corequisite units	
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Functional area

Functional Area	