



Australian Government

Department of Education, Employment and Workplace Relations

MSACMS600A Develop a competitive manufacturing system

Revision Number: 1

MSACMS600A Develop a competitive manufacturing system

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required to develop a new competitive manufacturing system or make improvements to an existing system.
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Application of the Unit

Application of the unit	<p>In a typical scenario, the person (who may be a manager, technical specialist or similar) in a competitive manufacturing organisation, or an organisation wishing to embark on the competitive manufacturing path, needs to be able to analyse the needs of the organisation and lead them through a change process and down the competitive manufacturing path.</p> <p>This would typically be done in a team, or at least in close liaison with all relevant stakeholders.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Problem solving, initiative and enterprise, and planning and organising are required to determine effective competitive manufacturing strategies for the enterprise. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into competitive manufacturing strategies.</p>
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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. Determine appropriate analytical techniques	1.1. Liaise with key stakeholders to determine objectives of manufacturing <i>strategy</i> 1.2. Examine current manufacturing situation to determine major areas requiring improvement 1.3. Compare possible strategies, <i>techniques</i> and <i>tools</i> against organisation needs 1.4. Select possible strategies, techniques and tools 1.5. Consult with key stakeholders to confirm selected strategies, techniques and tools
2. Develop competitive manufacturing strategies	2.1. Estimate benefit/cost ratio for major stakeholders and the <i>value chain</i> overall 2.2. Select preferred manufacturing strategy 2.3. Examine and adapt strategy to organisation needs and priorities 2.4. Examine and adapt techniques and tools required to implement strategy 2.5. Negotiate with key stakeholders to develop an implementation plan 2.6. Identify key information and performance indicators required
3. Implement strategy	3.1. Identify data collection required 3.2. Identify methods of collecting and processing required data 3.3. Identify hardware and other resources required 3.4. Identify skill needs required 3.5. Ensure all resources/training are available and completed 3.6. Implement strategy
4. Monitor implementation of strategy	4.1. Compare information/performance indicators with desired levels 4.2. Liaise with key stakeholders regarding strategy issues 4.3. Identify areas requiring adjustment 4.4. Make required adjustments

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communication
- teamwork
- analysis
- problem solving
- mathematics
- planning
- computer use
- prioritising
- recording data

Required knowledge

- overview of competitive manufacturing principles and the decision rules for selecting the appropriate tools to use and place to start
- methods of estimating costs/benefits
- acceptable benefit/cost ratios
- continuous improvement principles
- principles of motivation and leadership
- systems thinking
- characteristics and strengths of different types of strategies, techniques and tools such as 5S, JIT, 6 sigma, lean manufacturing, agile manufacturing
- business goals sufficient to match the strategy to the business needs
- strategic thinking
- principles of process equipment and how to improve its reliability
- resources required and how to obtain them

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 will be able to conceptualise scenarios, determine which ones are of sufficient benefit to proceed with, and take their team with them.
What are the specific resource requirements for this unit?	Access to an organisation using competitive manufacturing.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of scenarios developed and implemented (and/or rejected for valid reasons) which have had a positive impact on the entire value chain should be available.
In what context should assessment occur?	Assessment needs to occur in an organisation following competitive manufacturing.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit could be assessed concurrently with other relevant units to do with change in the competitive manufacturing environment.</p> <p>This unit is related to:</p> <p><i>MSACMC210A Manage the impact of change on own work</i> which covers individual impact aspects in CM.</p>
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</p>

EVIDENCE GUIDE	
	with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Generally evidence will come from a range of scenarios and the improvements which flow.

Range Statement

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.

<p>Competitive manufacturing</p>	<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 • 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>
<p>Strategy</p>	<p>There are many approaches used to embarking on competitive manufacturing. Successful organisations select an appropriate array of techniques and tools and formulate a strategy for their implementation.</p>
<p>Techniques and tools</p>	<p>There are many techniques and tools used to implement a competitive manufacturing strategy such as 5S, six sigma, root cause analysis</p>
<p>Value chain</p>	<p>Competitive manufacturing organisations encompass the entire production system, beginning with the <i>customer</i>, and includes the product sales outlet, the final</p>

RANGE STATEMENT	
	assembler, product design, raw material mining and processing and all tiers of the value chain (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.
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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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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