



Australian Government

Department of Education, Employment and Workplace Relations

MSS408006A Develop and refine systems for continuous improvement in operations

Release: 1

MSS408006A Develop and refine systems for continuous improvement in operations

Modification History

New unit, superseding MSACMG806A Develop and refine systems for continuous improvement in manufacturing organisations - Equivalent

Unit Descriptor

This unit of competency covers the skills, knowledge and processes required to ensure that continuous improvement systems do not stultify and continue to improve along with other operational systems in an organisation.

This unit is about improving the process yield/unit of effort or cost, reducing process variation and increasing process reliability, upgrading, enhancing or refining process outputs, and includes developing a culture of reviewing and sustaining change ensuring improvements are maintained and built on.

Application of the Unit

This unit applies to managers and people with a similar sphere of influence and scope of authority and responsibility and who are familiar with competitive systems and practices, continuous improvement and locking in improvements. Where this is not the case the following units may be completed to supply the necessary skills:

MSS405001A Develop competitive systems and practices for an organisation

MSS405013A Facilitate holistic culture improvement in a operations organisation.

The equivalent team leader level unit is MSS407013A Review continuous improvement processes.

This unit may also be applied to service organisations applying competitive systems and practices principles.

Licensing/Regulatory Information

Not applicable.

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	Establish parameters of current internal improvement systems	1.1	Describe organisation systems that impact on continuous improvement
		1.2	Identify current relevant metrics and their values
		1.3	Check that metrics are collected for all improvements
		1.4	Determine yield of current improvement processes
		1.5	Review results of improvements
2	Distinguish breakthrough improvement processes	2.1	Identify all improvements which have occurred over an agreed period of time
		2.2	Distinguish between breakthrough improvements and continuous improvements
		2.3	Determine the timing of breakthrough improvement processes
		2.4	Analyse factors controlling the timing and selection of breakthrough improvements
		2.5	Analyse continuous improvements to identify cases where breakthrough improvements were required
		2.6	Validate findings with process/system owners and obtain required approvals

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| | | 2.7 | Improve timing/selection of breakthrough improvements |
| | | 2.8 | Improve other factors limiting the gains from breakthrough improvements |
| 3 | Develop continuous improvement practice | 3.1 | Check that levels of delegated authority and responsibility are appropriate for continuous improvement from the shop floor |
| | | 3.2 | Ensure all personnel have appropriate capabilities for continuous improvement processes |
| | | 3.3 | Ensure personnel and systems recognise potential breakthrough improvement projects |
| | | 3.4 | Ensure sufficient resources are available for the operation of continuous and breakthrough improvement processes |
| | | 3.5 | Check that relevant information flows from improvement changes to all required areas and stakeholders |
| | | 3.6 | Check data collection and metrics analysis capture changes which result from improvement actions |
| | | 3.7 | Check that improvement changes are standardised and sustained |
| | | 3.8 | Check review processes for routine continuous improvements |
| | | 3.9 | Remove or change factors limiting gains from improvements |
| | | 3.10 | Modify systems to ensure appropriate possible changes are referred to other improvement processes |
| | | 3.11 | Institutionalise breakthrough |
| 4 | Establish parameters of current external improvement | 4.1 | Review value stream systems that impact on improvement |
| | | 4.2 | Review procedures for deciding improvement methodologies |

	systems	4.3	Identify current relevant metrics and their values, as appropriate
		4.4	Determine yield of current improvement processes
		4.5	Review results of improvements
5	Explore opportunities for further development of value stream improvement processes	5.1	Review mechanisms for consultation with value stream members
		5.2	Develop mechanisms for further improving joint problem solving
		5.3	Develop mechanisms for increased sharing of organisational knowledge
		5.4	Obtain support and necessary authorisations from process/system owners
		5.5	Capture and standardise improvements
		5.6	Improve factors limiting gains from continuous improvements
6	Review systems for compatibility with improvement strategy	6.1	Review all systems which impact or are impacted on improvements and the improvement system
		6.2	Analyse relationships between improvement systems and other relevant systems
		6.3	Analyse practices caused by and results from the systems
		6.4	Negotiate changes to the systems to improve the outcomes from improvement systems
		6.5	Obtain necessary approvals to implement changes
		6.6	Monitor the implementation of the changes

Required Skills and Knowledge

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

Required skills

Required skills include:

- undertaking self-directed problem solving and decision-making on issues of a broad and/or highly specialised nature and in highly varied and/or highly specialised contexts
- communicating at all levels in the organisation and value stream and to audiences of different levels of literacy and numeracy
- analysing current state/situation of the organisation and value stream
- determining and implementing the most appropriate method for capturing value stream improvements
- collecting and interpreting data and qualitative information from a variety of sources
- analysing individually and collectively the implementation of competitive systems and practices tools in the organisation and determining strategies for improved implementation
- relating implementation and use of competitive systems and practices and continuous improvement to customer benefit
- solving highly varied and highly specialised problems related to competitive systems and practices implementation and continuous improvement to root cause
- negotiating with stakeholders, where required, to obtain information required for implementation and refinement of continuous improvements, including management, unions, value stream members, employees and members of the community
- reviewing relevant metrics, including all those measures which might be used to determine the performance of the improvement system, including:
 - key performance indicators (KPIs) for existing processes
 - quality statistics
 - delivery timing and quantity statistics
 - process/equipment reliability ('uptime')
 - incident and non-conformance reports
- implementing continuous improvement to support systems and areas, including maintenance, office, training and human resources

Required knowledge

Required knowledge includes:

- competitive systems and practices tools, including:
 - value stream mapping
 - 5S

- Just in Time (JIT)
- mistake proofing
- process mapping
- establishing customer pull
- kaizen and kaizen blitz
- setting of KPIs/metrics
- identification and elimination of waste (muda)
- continuous improvement processes including implementation, monitoring and evaluation strategies for a whole organisation and its value stream
- difference between breakthrough improvement and continuous improvement
- organisational goals, processes and structure
- approval processes within organisation
- cost/benefit analysis methods
- methods of determining the impact of a change
- advantages and disadvantages of communication media, methods and formats for different messages and audiences
- customer perception of value
- define, measure, analyse, improve, and control and sustain (DMAIC) process

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.

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 ability to: • critically review current continuous improvement processes • establish ongoing review of continuous improvement processes • implement improvements in the practice of continuous improvement • better align internal and external systems • gather data through interviews with stakeholders • review existing data • obtain additional data through a variety of techniques • communicate and negotiate at all levels within the organisation
Context of and specific resources	Assessment of performance must be undertaken in a workplace using or implementing one or more

for assessment	competitive systems and practices. Access may be required to: • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented, or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	A holistic approach should be taken to the assessment. Competence in this unit may be assessed by using a combination of the following to generate evidence: • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning for appropriate portions • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge. Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

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.

Competitive systems and practices	Competitive systems and practices may include, but are not limited to: • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • JIT, kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree Competitive systems and practices should be interpreted so as to take into account: • the stage of implementation of competitive systems and practices • the size of the enterprise • the work organisation, culture, regulatory environment and the industry sector
Codes of practice/standards	Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used
Health, safety and environment	All changes implemented are expected to be at least

(HSE)	neutral, or preferably beneficial, in their impact on HSE
Organisation systems	Organisation systems may include: • problem recognition and solving • operational/process improvement • improvement projects • product/process design and development • processes for making incremental improvements
Relevant metrics	Relevant metrics include all those measures which might be used to determine the performance of the improvement system and may include: • hurdle rates for new investments • KPIs for existing processes • quality statistics • delivery timing and quantity statistics • process/equipment reliability ('uptime') • incident and non-conformance reports • complaints, returns and rejects
Improvement process yield	Improvement process yield may be regarded as: • the benefit achieved for the effort invested
Breakthrough improvements	Breakthrough improvements include: • those which result from a kaizen blitz or other improvement project or event and are a subset of all improvements
Timing of breakthrough improvements	Timing of breakthrough improvements includes: • frequency (which should be maximised) and duration (which should be minimised) of events/projects
Continuous improvement	Continuous improvement is part of normal work and does not require a special event to occur (although may still require authorisations) and contrasts with breakthrough improvement/kaizen blitz which occurs by way of an event or project
Resources for improvement	Resources for improvements include: • improvement budget • guidelines for trialling of possible improvements • mechanism for approvals for possible improvements • business case guidelines for proposed improvements • indicators of success of proposed improvement • mechanisms for tracking and evaluation of changes

	• forum for the open discussion of the results of the implementation • mechanisms for the examination of the improvement for additional improvements • organisation systems to sustain beneficial changes
Capturing value stream improvements	Capturing value stream improvements includes: • revised contractual arrangements • revised specifications • signed agreements • other documented arrangements which formalise the raised base line
Systems impacting improvements	Systems which impact/are impacted on improvements and the improvement system include: • office • purchasing • rewards (individual or team at all levels) • sales • marketing • maintenance • process/product • transport and logistics
Organisational knowledge	Organisational knowledge should: • be able to be quantified or otherwise modified to make its outcomes measurable or observable • be able to be expressed in an accessible and distributable form appropriate to the organisation operations and stakeholders
Improvements	Improvements may: • be to process, plant, procedures or practice • include changes to ensure positive benefits to stakeholders are maintained
Manager	Manager may include: • any person who may have either a permanent or an ad hoc role in facilitating the function of multiple teams in a workplace, departments or entire organisations

Unit Sector(s)

Unit sector

Competitive systems and practices

Custom Content Section

Not applicable.