



Australian Government

MSS403024 Work within a constrained process

Release: 1

MSS403024 Work within a constrained process

Modification History

Release 1. Supersedes and is equivalent to MSS403024A Work within a constrained process

Application

This unit of competency covers the skills and knowledge required to apply the theory of constraints to a process which has a constraint.

This unit applies to individuals who, as part of their work, are able to apply the theory of constraints to improve the operability of a constrained process (a process with at least one constraint) where it occurs in their team or work area or as part of their responsibilities. This unit identifies and works within the imposed constraint. This process may be colloquially known as ‘drum-buffer-rope’ approach. The unit will normally be applied as part of an organisation’s improvement strategy and in conjunction with other competitive systems and practices units.

The person will typically be a technician, team leader or other person who works with others in the bringing of change to an organisation as part of a formal team or otherwise. The unit includes liaison and communication with others, as required.

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

Pre-requisite Unit

Nil

Competency Field

Competitive systems and practices

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Identify the system constraint (bottleneck)	1.1	Identify desired output from process/system.
		1.2	Determine throughput of process/system steps.
		1.3	Identify capacity constrained resource (bottleneck).

		1.4	Confirm maximum/optimum throughput for this capacity constrained resource.
2	Manage capacity constrained resource (drum)	2.1	Determine required time buffers for capacity constrained resource.
		2.2	Translate time buffer into physical buffers, as appropriate.
		2.3	Establish required buffers.
		2.4	Examine capacity constrained resource to ensure optimum use of capacity.
3	Determine schedule based on capacity constrained resource	3.1	Implement supply schedule appropriate for capacity constrained resource.
		3.2	Determine delivery schedule based on capacity of capacity constrained resource.
		3.3	Compare delivery schedule with externally required delivery rate and take action.
4	Examine operation of system/process	4.1	Determine throughput of process/system steps.
		4.2	Identify any additional/new capacity constrained resource.
		4.3	Take action.

Foundation Skills

This section describes those required skills (language, literacy and numeracy) 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.

- Competitive systems and practices include one or more of:**
- lean operations
 - agile operations
 - preventative and predictive maintenance approaches
 - statistical process control systems, including six sigma and three sigma
 - Just in Time (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.

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS403024 Work within a constrained process

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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 the ability, for at least one (1) constrained process, to:

- identify capacity constrained resource (bottleneck) in own work area
- manage capacity constrained resource (drum)
- determine schedule based on capacity constrained resource.

Knowledge Evidence

Must provide evidence that demonstrates knowledge relevant to their job role sufficient to fulfil their job role independently, including:

- theory of constraints
- concepts of weakest link (often colloquially known as the drum)
- duration (in production applications this is often known as material release buffer or inventory to protect the weakest link/constraint)
- release timing of buffer (colloquially called 'rope')
- processes, products, internal and external customers for own work area.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence shall be based on a holistic assessment of the evidence.
- The collection of performance evidence:
 - should occur over a range of situations which include typical disruptions to normal, smooth operation of the workplace
 - will typically include a supervisor/third-party report focussing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
 - must include working within a constrained process in own workplace
 - will typically include the use of appropriate tools, equipment and safety gear requiring demonstration of preparation, operation, completion and responding to problems.
- Assessment should occur in operational workplace situations.

- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process such as workbooks, written assessments or interviews (provided a record is kept).
- 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.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competency and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with an organisation providing relevant environmental monitoring, management or technology services about performing the competency being assessed within the last twelve months.

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