



Australian Government

MSS404053 Use DMAIC techniques

Release: 1

MSS404053 Use DMAIC techniques

Modification History

Release 1. Supersedes and is equivalent to MSS404053A Use six sigma techniques

Application

This unit of competency covers the skills and knowledge required to apply the Define, Measure, Analyse, Improve, and Control and standardise (DMAIC) to improve quality, cost and delivery in operations and other supporting processes in the workplace. This will be undertaken with other members of the process team.

This unit requires the application of skills associated with using information, problem solving, initiative, enterprise, planning and organising in order to identify an area requiring improvement and develop a measured process to make improvements.

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 an area requiring improvement	1.1	Identify customer needs from process.
		1.2	Identify customer benefits delivered by process.
		1.3	Identify areas requiring improvement.
2	Apply DMAIC process	2.1	Define improvement project.
		2.2	Acquire required measurements/data.

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| | | 2.3 | Analyse data and determine possible process improvements. |
| | | 2.4 | Develop and test improvement solutions. |
| | | 2.5 | Control and standardise the improvement. |
| 3 | Review and confirm improvement | 3.1 | Determine and document benefits. |
| | | 3.2 | Ensure procedures and other relevant documentation is updated for improved procedure. |
| | | 3.3 | Review process data after an appropriate period and confirm the improvement. |

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.
- DMAIC includes all of:**
- define
 - measure
 - analyse
 - improve
 - control and standardise.
- Define improvement project includes all of:**
- ‘as is’ process map
 - defining benefits from the project
 - problem statement
 - goal statement
 - project scope.
- Measurement includes one or more of:**
- identification of key measures/attributes
 - sampling schedule for project
 - variations and limits.
- Analyse includes one or more of:**
- statistical analysis of data
 - root cause analysis
 - use of various problem solving/analysis tools.
- Improvement includes one or more of:**
- generation and testing of improvements
 - selection of appropriate improvements.
- Control and standardise includes one or more of:**
- documenting
 - transferring ownership of improved process.

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>