



Australian Government

MSS405055 Manage application of Six Sigma for process control and improvement

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements changed. Performance Criteria changed. Foundation Skills populated. Range of Conditions removed. Assessment Requirements changed. Workplace outcome changed. Supersedes and is not equivalent to MSS405053 Manage application of Six Sigma for process control and improvement.

Application

This unit describes the skills and knowledge required to manage Six Sigma (or similar statistics based approach) for process control and process improvement.

This unit applies to managers, technical specialists or similar roles who are required to identify potential six sigma projects, apply and assist others to participate in the DMAIC approach, and establish and confirm control strategies.

This unit applies to any process or organisation.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

MSS404056 Apply statistics to operational processes

Competency Field

Competitive systems and practices

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify Six Sigma projects	1.1 Confirm area of responsibility or study with leadership team and other stakeholders 1.2 Review statistical process control (SPC), process capability and other data relevant to area of responsibility or study

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.3 Identify shifts in process performance and processes requiring improvement 1.4 Quantify shifts in performance which have occurred or which are desired 1.5 Determine cost of shift in performance and cost of intervention 1.6 Identify improvement priorities and degree of intervention
2. Apply define, measure, analyse, improve, and control and standardise (DMAIC) process to priority areas	2.1 Define improvement project 2.2 Provide information and/or guidance to assist employees to participate in DMAIC 2.3 Determine metrics and acquire initial data 2.4 Analyse data and determine possible causes of performance shifts and process improvements 2.5 Develop and trial improvement solutions 2.6 Control and standardise improvement
3. Establish or review control strategies	3.1 Determine sampling schedule 3.2 Analyse data to determine process capability 3.3 Develop process control strategy 3.4 Confirm strategy with all stakeholders 3.5 Recognise skill needs of employees to implement and monitor process control strategy 3.6 Arrange for training or development to address identified needs
4. Review and confirm improvement	4.1 Calculate and document benefits 4.2 Make, or initiate action for, updates to procedures and other relevant documentation for improved procedure 4.3 Review process data and confirm improvement

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Writing skills to document outcomes and ensure procedures are updated
- Oral communication skills to liaise with a range of stakeholders and provide information and/or guidance
- Numeracy skills to determine metrics, apply statistical control methods.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. No equivalent unit.

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 MSS405055 Manage application of Six Sigma for process control and improvement

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- manage application of Six Sigma to control and improve at least one process.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- processes for the identification and definition of Six Sigma (or similar) projects
- sampling, data collection, and analysis methods
- how to determine quantifiable benefits
- DMAIC methodology and application
- statistical principles and analysis, including confidence limits, analysis of variance, frequency distribution tables, histograms, arithmetic mean, median, mode, standard deviation, range, interquartile range, correlation and dependence
- acceptance criteria and confidence levels
- failure mode and effects analysis (FMEA)
- process mapping
- suppliers, inputs, process, outputs, customers (SIPOC) mapping
- types of data (including discrete, continuous and attributes) and their use in Six Sigma
- communication styles, methods and media to suit a range of audiences
- types of skills and information needed to apply DMAIC and process controls
- options to address skills and information needs.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - access to process data
- modelling of industry operating conditions.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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