



Australian Government

MSS407003 Analyse process changes

Release: 1

MSS407003 Analyse process changes

Modification History

Release 1. Supersedes and is equivalent to MSS407003A Analyse process changes

Application

This unit of competency covers the skills and knowledge required to quantitatively analyse past changes made in an organisation's operations, systems, process or environment to ensure the quantum of expected change has been achieved and that gains are maintained and are used as a basis for further gains.

The unit includes statistical and other mathematical analysis of data, methods for capturing data on implemented changes (quantitative and qualitative) and producing useful information from this data. It includes consultation with stakeholders both for data validation and consensus decision making for future improvements.

This unit applies to team leaders, technical experts and people with a similar sphere of influence/scope of authority and responsibility who already have a knowledge of statistics used in managing operations and of process capability improvement and some knowledge of factorial design, the selection and analysis of appropriate metrics, and the discrimination between valid and invalid interpretations of data

The unit applies to reviews of both intended and unintended consequences of change and the effectiveness of the implementation of the change. This unit is not intended to be applied to a technical or engineering review of a major capital expenditure or similar.

This unit takes a largely quantitative approach to the review.

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

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.

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| 1 | Analyse a change | 1.1 | Identify changes which have occurred. |
| | | 1.2 | Select a change or group of related changes to analyse. |
| | | 1.3 | Determine the initiation of the selected change. |
| | | 1.4 | Identify relevant metrics and predicted values for these metrics. |
| | | 1.5 | Gather data for these metrics prior to the change. |
| | | 1.6 | Gather data and information on the implementation of the change. |
| | | 1.7 | Gather data for these metrics after the change. |
| | | 1.8 | Survey all key metrics and identify anywhere variations may correlate with the change being analysed. |
| | | 1.9 | Discuss results of change with key stakeholders and identify other possible (qualitative or quantitative) results of the change. |
| | | 1.10 | Analyse this data to determine the results of the change. |
| 2 | Review results of change with stakeholders | 2.1 | Identify trends over time in all relevant metrics. |
| | | 2.2 | Analyse correlated metrics to determine causal relationship. |
| | | 2.3 | Audit health, safety and environment (HSE) impacts as a result of the change. |
| | | 2.4 | Present information in a form understandable by stakeholders. |
| | | 2.5 | Discuss analysed information with relevant stakeholders. |
| | | 2.6 | Modify information based on stakeholder input, as required. |
| | | 2.7 | Develop a consensus view of the result of the change which is supported by the information available. |

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| | | 2.8 | Validate the consensus view with stakeholders. |
| 3 | Identify future improvements | 3.1 | Discuss lessons learned from the change with stakeholders. |
| | | 3.2 | Capture key knowledge in accordance with systems and procedures. |
| | | 3.3 | Identify future improvements in collaboration with team members. |
| | | 3.4 | Validate identified changes with stakeholders. |
| | | 3.5 | Obtain sign-off from process/system owner. |
| | | 3.6 | Start the process for implementing future improvements. |
| | | 3.7 | Check that the planned improvements are occurring. |
| | | 3.8 | Take action to sustain improvement by standardising. |

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.
Change includes one or more of:	• plant, operations, products, procedures or practice • continuous improvement (or an improvement event/project) or implementing new products, technology or systems • intended to make an improvement or to implement new products, technology or systems.
Presentation of information may occur in one or more formats:	• in appropriate visual forms (e.g. graphs, charts and noticeboards • verbally or other forms able to be understood and used by stakeholders.
Stakeholders include one or more of:	• work team members • value stream members • managers.
Results of change include one or more of:	• an initial improvement followed by a return to previous performance • continued improvement • continued detriment or other variations over time.
Improvements include one or more of:	• changes to operations, process, plant, procedures or practice • changes to ensure positive benefits are maintained.
Sustaining improvement include one or more of:	• standard procedures and work instructions • standard practice • other relevant documents and practices.

- Team leader includes one or more of:**
- a person with a formal, permanent role
 - a person with an ad hoc role in facilitating the function of a team in a workplace.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS407003A Analyse process changes

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 MSS407003 Analyse process changes

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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 to quantitatively analyse one (1) or more changes and to:

- analyse the change
- review the results of the change
- identify improvements to be made.

Knowledge Evidence

Must provide evidence that demonstrates sufficient knowledge to interact with relevant personnel and be able to analyse a change, including knowledge of:

- methods of determining the impact of a change using quantitative analysis of process data, including advanced statistical/mathematical analysis and basic qualitative techniques
- organisation metrics, particularly those related to the change
- sources of data (actual and possible) within the organisation and the value stream
- range of typical metrics, their applications and limitations
- trends, correlation and causation.

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 is best done from a report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should use an analysis of a real change in an operational workplace.
- Knowledge evidence may be collected concurrently with performance evidence 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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