



Australian Government

Department of Education, Employment and Workplace Relations

MSS015016A Implement and monitor reengineering for sustainability

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit of competency covers identifying, implementing and monitoring a reengineering process to achieve a sustainability improvement.

Application of the Unit

This unit applies to production operations that have identified reengineering as a potential strategy for improving sustainability. Where a strategic review of sustainability improvement options is required, MSS015008A Develop strategic sustainability plans, should be selected. This unit includes the identification of the process for reengineering, the development of the sustainability objectives of the reengineering project, establishment of project objectives, implementation and evaluation.

The reengineering project may involve consultations and participation by customers and suppliers in the value chain.

It would typically be undertaken by a manager or technical specialist who had a major responsibility for sustainability as part of a broader work role, or sustainability may be their primary work responsibility. The manager or technical specialist may undertake this alone or as part of a team.

The technical measurement of operational performance or measurement of emissions or other environmental impact is not covered by this unit.

This unit does not supply the technical skills for undertaking the engineering alterations, such as installation, commissioning and operation of equipment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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| 1 Determine the need for reengineering | <ul style="list-style-type: none">1.1 Choose a process for improvement1.2 Analyse process performance1.3 Compare reengineering approach with other process improvement methodologies1.4 Confirm the need for reengineering |
| 2 Determine process objectives | <ul style="list-style-type: none">2.1 Identify stakeholders in the process2.2 Research and define perceived stakeholder benefit from process2.3 Translate perceived benefits into product and process specifications2.4 Collect current available metrics on process performance2.5 Determine metrics for monitoring future sustainability related and other process performance |
| 3 Facilitate reengineering study | <ul style="list-style-type: none">3.1 Organise appointment of reengineering team3.2 Determine impact on suppliers and customers during and after reengineering3.3 Acquire required resources and authorities to proceed3.4 Develop descriptions of alternative processes which will deliver required specifications3.5 Short-list most likely alternatives3.6 Evaluate short-listed alternatives3.7 Rank evaluated short-listed alternatives by desirability |
| 4 Implement preferred option | <ul style="list-style-type: none">4.1 Select preferred option4.2 Develop implementation plan for preferred option4.3 Negotiate required resources with relevant stakeholders |

- 4.4 Negotiate timelines and measures/indicators of success with change stakeholders
- 4.5 Acquire and deploy resources required to achieve agreed responses
- 4.6 Monitor implementation and take action as required to achieve required responses
- 4.7 Renegotiate with relevant stakeholders as necessary
- 5 Recommend further improvements
 - 5.1 Measure improvements actually obtained
 - 5.2 Identify non-compliances with planned improvements
 - 5.3 Determine additional improvements desirable

Required Skills and Knowledge

Required knowledge includes:

- benchmarking
- process analysis techniques
- process improvement methodologies:
 - kaizen
 - kaizen blitz
 - technical optimisation approaches
 - reengineering
- calculation of cost/benefit
- brainstorming techniques
- cost-benefit analysis techniques
- project improvement planning/scheduling
- process monitoring and critical measures
- root cause analysis and other problem-solving techniques

Required skills include:

- communicating and negotiating with internal and external stakeholders
- analysing equipment operation and processes for sustainability impacts
- brainstorming
- planning implementation of a project
- undertaking formal problem-solving processes

Evidence Guide

Overview of assessment	A person who demonstrates competency in this unit must be able to compare reengineering to other options for sustainability improvement, facilitate and implement a reengineering study and suggest further improvements.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently apply the skills covered in this unit of competency in new and different situations and contexts. Critical aspects of assessment and evidence include: • comparing reengineering to other possible solutions to sustainability issues • understanding and collecting metrics on current and future process performance • implementing a reengineering process to achieve desired sustainability objectives • using of benefit/cost and brainstorming techniques appropriately.
Context of and specific resources for assessment	• This unit of competency is to be assessed in the workplace or a simulated workplace environment. • Assessment should emphasise a workplace context and procedures found in the candidate's workplace. • This unit of competency may be assessed with other relevant units addressing sustainability at the enterprise level or other units requiring the exercise of the skills and knowledge covered by this unit. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.
Method of assessment	• In all cases, practical assessment should be supported by questions to assess underpinning knowledge and those aspects of competency which are difficult to assess directly. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • The language, literacy and numeracy demands of assessment should not be greater than those required to undertake the unit of competency in a work-like environment.
Guidance information for assessment	

Range Statement

Process	Process may include: any manufacturing, administrative, information technology or business process in a manufacturing value chain
Process performance	Process performance must include: - sustainability related performance and should also include other relevant performance measures Analysis may include: - benchmarking comparisons - comparison with theoretical performance - comparisons with regulatory requirements - examination of operational and maintenance records - consultation with operational and maintenance staff to identify informal history (e.g. excessive effort in 'work arounds', and making it work in spite of the system) - conflicts in the organisation - an extremely high frequency of meetings - excessive use of non-structured communication (memos and emails)
Process improvement methodologies	Process improvement methodologies may include: - kaizen - kaizen blitz - technical optimisation approaches - reengineering, including new plant and equipment, modification of existing plant and equipment and changes to specification of product or process
Customer	Customer includes: the user of what the process produces
Product	Product includes: - goods - services
Desirability ranking	Desirability ranking includes: - direct dollar benefit/cost - customer benefits - stakeholder perception: - shareholders - employees - community - regulators

	• financial community • other • life cycle improvements • flexibility to adapt to future needs
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Unit Sector(s)

Sustainability

Custom Content Section

Not applicable.