



Australian Government

MSS405075 Facilitate the development of a new product

Release: 2

MSS405075 Facilitate the development of a new product

Modification History

Release 2. Updated pre-requisite code

Release 1. Supersedes and is equivalent to MSS405075A Facilitate the development of a new product

Application

This unit of competency covers the skills and knowledge required to facilitate the development of a new or evolutionary product within an existing range of products and encompasses design for manufacture, determining the process capability and the facilitation of its initial production.

This unit applies to an individual responsible for the development of a new product. The unit assumes an initial product design has been prepared by a designer and also assumes a working knowledge of all main processes and materials so that an informed choice can be made between them. The person will normally be a manager or technical expert and be required to work closely with a range of other management and operations personnel.

The unit requires balancing the business and technical sides of the new product and would typically be done as part of a cross-functional team. This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Teamwork, problem solving, initiative and enterprise, and planning and organising are required to facilitate the development of a new product. This unit also requires aspects of self-management and learning to ensure feedback and new learning is integrated into competitive systems and practices.

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

Pre-requisite Unit

MSS404054 Apply statistics to operational processes

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	Confirm design brief of new product in consultation with relevant people	1.1	Review product design with customer and other key stakeholders and agree on technical specification, aesthetic requirements, timelines, cost and other market requirements.
		1.2	Determine any regulatory, industry code/intellectual property (IP) requirements for product.
		1.3	Identify any required tooling, process or equipment needs.
		1.4	Confirm design brief, including relevant drawings, to meet needs.
		1.5	Determine design brief conforms to organisation objectives and capability.
		1.6	Obtain approval on total design brief from all relevant personnel.
2	Determine material requirements for product	2.1	Select appropriate materials or combination of materials/components in liaison with key stakeholders.
		2.2	Determine material/component testing and evaluation regime required to meet product end use requirements, including regulatory/industry code requirements.
		2.3	Arrange for testing and evaluation of trial materials/components.
		2.4	Guide material trial process and interpret material trial results.
		2.5	Determine final materials/components specifications and details of value chain.
3	Determine process requirements for product	3.1	Select appropriate process to make product in liaison with key stakeholders and based on relevant factors.
		3.2	Determine any special process/equipment requirements for this product.

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| | | 3.3 | Communicate with production personnel to determine any concerns and/or training or other needs. |
| | | 3.4 | Adjust the design, as required, to satisfy customer and production needs. |
| 4 | Ensure process needs for new product have been met | 4.1 | Liaise with equipment design/procurement personnel. |
| | | 4.2 | Interpret hardware specifications and ensure they are appropriate for the job required. |
| | | 4.3 | Liaise with process personnel to ensure appropriate draft procedures for new product have been developed. |
| | | 4.4 | Validate product cost and design meets organisation requirements and capability. |
| 5 | Trial new product through the process | 5.1 | Design trialling procedure to deliver required information. |
| | | 5.2 | Liaise with relevant stakeholders. |
| | | 5.3 | Ensure health, safety and environment (HSE) requirements are observed. |
| | | 5.4 | Coordinate the trialling of the new product. |
| | | 5.5 | Interpret product trial results and guide product trial process. |
| | | 5.6 | Tune process to optimise production of new product. |
| 6 | Determine process capability | 6.1 | Plot appropriate statistical process control charts. |
| | | 6.2 | Determine confidence limits. |
| | | 6.3 | Compare confidence limits with product specification. |
| 7 | Coordinate product trials | 7.1 | Determine product testing and evaluation regime required to meet end use requirements, including regulatory/industry code requirements. |

		7.2	Arrange for testing and evaluation of trial product/prototype.
		7.3	Interpret product trial results and guide product trial process.
		7.4	Determine final product specification in liaison with key stakeholders.
		7.5	Make required changes to materials, process and equipment.
8	Implement standard procedures for new product	8.1	Monitor initial production and, in liaison with appropriate team members, adjust process, conditions and materials to ensure the product and process outcomes conform to customer, regulatory and organisation requirements.
		8.2	Ensure process specifications are updated and reflect the optimised operation developed.
		8.3	Ensure standard operating procedures (SOPs) are correct for the new product.
		8.4	Ensure equipment and other hardware records are updated to reflect additions/changes.
		8.5	Ensure project records are complete and all required reports have been completed and submitted.
		8.6	Archive records according to company procedure.

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.
Organisation objectives and requirements include one or more of:	• cost/profit requirements for new products (e.g. minimum return and capital expenditure limits) • encouragement/discouragement of different types of products (e.g. on sustainability, ethical or other non-individual customer-related criteria) • potential or actual capacity conflicts with other customers or product/process activities • activities that require/may require community consultation (e.g. on noise or other environmental grounds).
Typical regulatory requirements include one or more of:	• work health and safety (WHS) • environmental regulations • structural codes • product/industry-specific requirements.
Typical problems include one or more of:	• defining product end-use requirements in terms meaningful to the product design and manufacture • matching suitable materials and processes to the product needs and company expertise and facilities • matching (and improving) process capability to product

tolerances.

- Relevant factors include one or more of**
- type of material
 - dimensional precision of product
 - length of run/number of products
 - required aesthetics
 - size and complexity of product
 - available capital funding
 - process equipment available
 - HSE factors.

Unit Mapping Information

Release 2. Equivalent to Release 1

Release 1. Supersedes and is equivalent to MSS405075A Facilitate the development of a new product

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 MSS405075 Facilitate the development of a new product

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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 facilitate the development of one (1) or more new/modified products and to:

- confirm the design brief
- determine material and process requirements
- ensure process needs have been met
- trial the new product and determine process capability
- conduct product trials
- standardise the new product.

Knowledge Evidence

Must provide evidence that demonstrates sufficient knowledge to interact with relevant personnel and be able to facilitate the development of a new product, including knowledge of:

- appropriate types of materials/components and criteria for choosing between them
- alternative processes/plant/equipment for making the new product and criteria for choosing between them
- determination of process capability
- appropriate sampling and testing for materials/components and products
- determination of processing time, product cost, benefit cost of the new product
- interpretation of trial/field test results.

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 a real new/modified product development project 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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