



Australian Government

MSFFDT4003 Assess and record the lifecycle of a product

Release: 1

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Modification History

Release 1 - New unit of competency

Application

This unit of competency covers assessing and recording the design and production of a product from its raw source to its completion and life as a product in accordance with design elements and principles in an industry workplace or design studio environment.

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

Pre-requisite Unit

Competency Field

Unit Sector

Furniture design and technology

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Assess raw sources of material	1.1	Applicable work health and safety (WHS), legislative and organisational requirements relevant to recording the lifecycle of a product are verified and complied with
		1.2	Design brief is reviewed, confirmed and clarified with appropriate personnel
		1.3	Communication with others is established and maintained in accordance with WHS requirements
		1.4	Most suitable materials to fulfil the brief are assessed to meet the requirements
		1.5	Materials are assessed from their source taking account of where they derived from and their processing techniques
		1.6	Materials are assessed for their ecological and

			environmental impact
		1.7	Materials are assessed for their availability and supply
		1.8	Information on raw materials is recorded for future use
2	Assess the design process	2.1	Problem or underlying factors being addressed by the design brief are verified and documented
		2.2	User needs and desires are assessed and documented
		2.3	Elements of design are assessed for the intended outcome and documented
		2.4	Principles of design are assessed for the intended outcome and documented
		2.5	Requirements of the brief are prioritised and assessed for conflicts
		2.6	Activities to be undertaken to complete concepts, sketches, drawings and models are documented and prioritised
		2.7	Final documentation outlining the full analysis of the design brief is compiled and produced as a report
3	Assess the production process	3.1	Production timeline is assessed
		3.2	Supply of raw materials for production is analysed
		3.3	Available personnel with suitable skills are assessed for proficiency to complete production
		3.4	Manufacturing process is assessed for equipment and assembly methods
		3.5	Component production is mapped
		3.6	Finishing requirements are assessed
		3.7	Final completion of product is assessed and quality checking arrangements put in place
		3.8	Action plan for production is completed
4	Assess the product life	4.1	Packaging and despatch procedures are assessed and verified
		4.2	Destination of the final product is verified and

documented

- 4.3 Use of the product is assessed and potential life of the product estimated
- 4.4 Product lifecycle process is reviewed using all of the assessed data

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies 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. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit context includes:

- WHS requirements, including legislation, building codes, material safety management systems, hazardous and dangerous goods codes, and local safe operating procedures or equivalent
- work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving
- customers or suppliers may be internal or external

Design brief includes:

- the aims, objectives and milestones for the design project
- organisational or personal profiles
- target audience
- budget
- timeline
- consultation requirements
- colour requirements

Appropriate personnel include:	• image requirements • function • trainers • supervisors • suppliers • clients • colleagues • managers
Materials include:	• timber (native and imported) • man-made timber products • plastic • metal • alloys • stones • glass • textiles • fibreglass • foam • cardboard • paper products • any other manipulable substance
Sources include:	• origin of the raw material, including type and location wood was derived from, how and where it was processed, impact growth and available seasoning lead time • mining source of metal or alloys and how these were processed • formulas for the composition of plastics • origin of textiles and how these were milled
Ecological and environmental impact include:	• how the use of raw materials effect the ecology and environment and how its continued use will affect the area it has been sourced from • what impact will be felt by reducing or stopping material from the source
Documentation includes:	• working notes • hand written records • typed and computer generated information • reports
Elements of design include:	• line • shape • form (geometric or organic) • texture • colour

Principles of design include:

- function
- balance
- proportion (symmetry and asymmetry)
- harmony
- contrast
- pattern
- movement
- rhythm
- unity
- style
- focus
- scale
- dominant
- sub-dominant
- subordinate relationship
- emphasis
- proximity
- alignment
- space
- anthropometry
- ergonomics
- arrangement
- workload materials handling capacity
- skills available
- equipment capabilities
- aesthetic relations
- tension
- development methods

Concepts include:

- ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation

Sketches include:

- hand drawn images
- ideation drawings completed freehand

Working drawings include:

- drafted technical drawings or drawings produced on computer using computer-aided design (CAD) software packages that contain project specifications

Models include:

- any three-dimensional (3-D) product which is made to full size or replicated through maquette, produced without normal manufacturing techniques, mainly to provide for the analysis of proportion, balance and aesthetic value

Manufacturing processes include:

- methods by which the product will be produced with steps that entail working from drawings and specifications, producing components utilising machine operations,

Personal protective equipment includes:

- assembly of the components and finishing techniques
- that prescribed under legislation, regulations and enterprise policies and practices

Information and procedures include:

- work procedures/instructions
- manufacturer specifications and instructions
- standard forms of workplace process and procedures
- organisation work specifications and requirements
- legislation, regulations and codes of practice
- quality and Australian Standards and procedures

Unit Mapping Information

Supersedes and is equivalent to LMFFDT4003A Assess and record the lifecycle of a product

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>