



Australian Government

Department of Education, Employment and Workplace Relations

FPITMM5201B Assess product feasibility of designs

Release: 1

FPITMM5201B Assess product feasibility of designs

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to systematically analyse, assess and determine the feasibility of designs for translation into commercially viable production

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5201A Assess product feasibility of designs

Application of the Unit

Application of the unit

This unit involves assessing product feasibility of designs in a forest products factory setting

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse design objectives	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental, legislative</i> and <i>organisational requirements</i> relevant to assessing product feasibility of designs are identified and followed</p> <p>1.2. <i>Design purpose</i> is assessed and the potential market for the product investigated</p> <p>1.3. Intended production <i>materials</i> and production processes are <i>analysed</i> as the basis for development</p> <p>1.4. <i>Communication</i> with others is established and maintained in line with OHS requirements</p>
2. Set the design assessment criteria	<p>2.1. <i>Criteria</i> for the assessment of production material options are established</p> <p>2.2. Criteria for the assessment of product <i>functionality</i> are established</p> <p>2.3. Criteria for the assessment of production process options are established and impact of these on overall business operations assessed</p> <p>2.4. Criteria for the assessment of safety and potential <i>liability</i> issues are established</p> <p>2.5. Criteria for assessment of costs and <i>marketability</i></p>

ELEMENT	PERFORMANCE CRITERIA
3. Apply the assessment criteria	<p>are established</p> <p>3.1. Resources including human, material, equipment and systems are allocated to particular design grading criteria processes</p> <p>3.2. Products which are competitors or potential competitors in the market place are selected for comparative purposes</p> <p>3.3. Design is scored and graded against agreed criteria and results recorded</p> <p>3.4. Competition products are scored and graded against agreed criteria and results recorded</p> <p>3.5. Assessment results are completed in line with the agreed process</p>
4. Establish feasibility and options	<p>4.1. Assessment results of the design and competition products are analysed</p> <p>4.2. Designs which fail to satisfy assessment and provide no optional potential are rejected</p> <p>4.3. Designs which fail to satisfy assessment and have optional or alternative potential are referred to <i>appropriate personnel</i></p> <p>4.4. Designs which satisfy potential are conditionally endorsed and conditions recorded and passed to the appropriate personnel</p> <p>4.5. Formal <i>records and reports</i> are completed and processed in line with organisational procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment safely assess product feasibility of designs
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to

REQUIRED SKILLS AND KNOWLEDGE

complete a task

- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for assessing product feasibility of designs
- Environmental protection requirements, including the safe disposal of waste material and minimising carbon emissions
- Organisational and site standards, requirements, policies and procedures relevant to the assessment of product feasibility of designs
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Problem identification and resolution
- Product design methods and trends
- Characteristics of materials and equipment
- Products and their use
- Criteria for assessing designs
- Established communication channels and protocols
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely and efficiently assess product feasibility of designs within organisational requirements

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to assessing product feasibility of designs
- following organisational policies and procedures relevant to assessing product feasibility of designs
- effective communication and safe working practices
- assessing product feasibility of designs in line with organisational requirements and performance targets

Context of and specific resources for assessment

- Competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to follow relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE

application of required knowledge

- Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
- Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
- Assessment may be applied under project-related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency
- The assessment environment should not disadvantage the candidate
- Assessment practices should take into account any relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English
- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

RANGE STATEMENT

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements
may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements
may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage

RANGE STATEMENT

- Organisational requirements** may include:
- requirements
 - environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)
 - legal, organisational and site guidelines
 - policies and procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals, quality and continuous improvement processes and standards
 - OHS, emergency and evacuation
 - ethical standards
 - recording and reporting
 - access and equity principles and practices
 - equipment use
 - maintenance and storage
 - environmental management (waste disposal, recycling and re-use guidelines)
- Design purpose** is to include: the process of applying:
- problem solving skills
 - thought processes
 - cultural and demographic awareness
 - materials technology
 - conceptual development techniques
 - working with production limitations to determine and produce products or 3-D functional solutions
- Materials** may include:
- native timber species
 - imported timber species
 - dressed timber
 - in-the-rough timber
 - stress and non-stress graded timber
 - preservative treated timber
 - medium density fibreboard
 - laminated veneer
 - chipboard
 - fibreboard and other manufactured board products
 - coated and/or treated timber products
 - beams or laminated beams

RANGE STATEMENT

Analysis of production processes is to include:

- consideration of the impact on the environment
- use of renewable energy
- effective and efficient use of energy
- effective and efficient use of material

Communication may include:

- verbal and non-verbal language
- constructive feedback
- active listening
- questioning to clarify and confirm understanding
- use of positive, confident and cooperative language
- use of language and concepts appropriate to individual social and cultural differences
- control of tone of voice and body language

Criteria

are a proforma for establishing the viability of any aspect of the design process and scoring that on a points system against set questions

Functionality

is the process of assessing a design for its ease of use and application together with its relevance for the desired purpose

Liability is to include:

assessing a design to ensure:

- it will not cause danger to someone or something resulting in litigation against the enterprise
- its impact on the environment is minimised or off-set (where feasible)

Marketability

is the process of assessing the potential for sale of the product

Appropriate personnel may include:

- supervisors
- suppliers
- clients
- colleagues
- managers

Records and reports may include:

- product type
- size
- inspection
- grading and labelling outcomes
- storage locations

RANGE STATEMENT

- quality outcomes
- hazards
- incidents or equipment malfunctions

and may be:

- manual
- using a computer-based system or other appropriate organisational communication system

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising