



Australian Government

Department of Education, Employment and Workplace Relations

ICAPMG606A Manage IT project quality

Release: 1

ICAPMG606A Manage IT project quality

Modification History

Release	Comments
Release 1	This Unit first released with <i>ICAI1 Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to ensure quality within information technology (IT) projects. It covers planning for quality based on stakeholder needs, implementing quality assurance processes, and using quality control data to ensure continuous improvement for the benefit of current and future projects.

Application of the Unit

IT project managers in small, medium or large organisations apply the skills and knowledge in this unit to ensure that appropriate quality processes and controls are established in projects under their control.

Their job roles combine high-level management, business and technical skills necessary to manage complex technology projects within the information and communications technology (ICT) industry.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Establish a quality management plan	<p>1.1 Determine project quality requirements with reference to project scope and stakeholder needs and expectations</p> <p>1.2 Adopt or agree on organisational quality policy and quality standards with stakeholders</p> <p>1.3 Determine project quality management approach, including proposed quality assurance processes and quality control measurement methods and benchmarks</p> <p>1.4 Negotiate project quality, cost, time trade-offs and changes to stakeholder expectations if necessary</p> <p>1.5 Develop a quality management plan for the project and obtain sign-off</p>
2. Perform IT quality assurance processes	<p>2.1 Execute quality assurance activities as the project progresses according to the quality management plan</p> <p>2.2 Identify project processes not meeting quality standards agreed in the quality management plan</p> <p>2.3 Raise project change request to action process changes or corrective actions, update project-management plan and quality baselines as necessary</p>
3. Perform quality control	<p>3.1 Validate project processes and deliverables against quality requirements as the project progresses</p> <p>3.2 Review quality control metrics and take action as necessary to investigate and understand the reasons for failure</p> <p>3.3 Use quality-management tools to determine failures and root causes and implement continuous improvement processes</p>

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to interpret quality metrics, identify issues, root causes and identify the need for improvement processes
- communication skills to:
 - negotiate and establish stakeholder expectations and gather quality requirements
 - facilitate problem-solving workshops
- literacy skills to:
 - develop quality plans
 - review recommendations and reports
- numeracy skills to develop cost-benefit analyses
- project-management skills to develop a life cycle process.

Required knowledge

- problem-solving tools and techniques
- project-management roles and responsibilities
- quality improvement processes and methodology
- quality management theory, techniques, tools and methodologies
- relevant quality standards.

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	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • identify and implement appropriate quality management processes within a complex IT project.
Context of and specific resources for assessment	<p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> • appropriate learning and assessment support when required • modified equipment for people with special needs • appropriate simulated or real organisation and suitable IT project • facilities suitable for holding quality assurance problem-solving workshops.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of the candidate carrying out project work • verbal or written questioning to assess required knowledge and skills • review of reports, plans and documents • review of a portfolio of the project work undertaken.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p>

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. Bold 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.

Quality requirements may include:	<ul style="list-style-type: none"> • negotiated trade-offs between cost, schedule and performance as these relate to implementation of quality processes • quality aspects that may impact on customer satisfaction • requirements from the client and other stakeholders.
Quality standards may refer to:	<ul style="list-style-type: none"> • ISO 10006:2003, which provides guidance on the application of quality management in projects and other recognised standards and guidelines • national and international standards, such as ISO 9004:2008 and 9004:2009 for guidance on implementing continual improvement processes and quality of product and service delivery • recognised industry best practices.
Quality assurance processes refer to:	<ul style="list-style-type: none"> • procedures and processes implemented to ensure agreed quality outcomes based on the specific needs of the project.
Quality control may relate to:	<ul style="list-style-type: none"> • monitoring compliance with best practice, standards, requirements and solution specifications • monitoring the results of regular quality assurance processes, including audits or inspections by internal or external agents • recommending continual improvement activities • recommending ways to eliminate root causes of unsatisfactory performance of processes or products.
Quality baselines may include:	<ul style="list-style-type: none"> • standard by which quantitative values captured via quality metrics are compared to, such as stakeholder satisfaction index, which must remain above 90%.
Quality-control metrics relate to:	<ul style="list-style-type: none"> • measures that have been developed to allow quantitative evaluation of the relative performance of specific processes, activities and outcomes over time • defect density • schedule variance • stakeholder satisfaction index • training effectiveness.
Quality-management tools may include:	<ul style="list-style-type: none"> • benchmarking • brainstorming • charting processes

	<ul style="list-style-type: none">• control charts• cost-benefit analysis• flowcharts• group work activities• histograms• Pareto charts• processes that limit or indicate variation• ranking candidates• run charts• scattergrams• statistical methods.
--	---

Unit Sector(s)

IT project management