PMLORG602B: Manage complex projects

Description

This unit of competency covers the ability to interpret a complex technical brief, determine project methodology and resource requirements, establish a project plan, manage the project to a successful conclusion and evaluate the outcomes. This unit of competency has no prerequisites. This unit of competency is applicable to laboratory personnel working in all industries. Industry representatives have provided case studies to illustrate the practical application of this unit of competency and to show its relevance in a workplace setting.

Unit Sector

No sector assigned

Performance criteria

Element	Performance criteria
1. Interpret brief and design feasible project plan	1.1 Interpret and confirm project objectives, deliverables, constraints and principal work activities
	1.2 Determine resource requirements, including personnel, equipment and materials
	1.3 Develop a detailed implementation plan for the project outlining methodology, milestones and budget
	1.4 Identify roles and responsibilities of project team members
	1.5 Analyse quality requirements to ensure compliance with quality standards
	1.6 Develop risk management strategies and risk management plans to ensure successful and timely outcomes
2. Establish and implement project plan	2.1 Brief team members about the project and allocate roles and responsibilities, balancing job roles and skills development opportunities
	2.2 Establish communication and reporting mechanisms
	2.3 Implement agreed time management

		strategies to ensure milestones are met
	2.4	Apply agreed quality requirements to measure performance and outcomes
3. Manage project	3.1	Monitor and report progress of activities in relation to the project plan
	3.2	Ensure income and expenditure is in line with the agreed project plan and budget
	3.3	Work with the team to analyse and diagnose problems and to determine corrective actions
	3.4	Implement agreed variations to the plan to accommodate changing situations
	3.5	Maintain accurate records and communication with stakeholders and project team members
4. Finalise project	4.1	Ensure project objectives are met and deliverables are provided on time and within budget
	4.2	Complete all reporting requirements
5. Evaluate project methodology	5.1	Assess the effectiveness of resource management in delivering project outcomes
	5.2	Evaluate the effectiveness of communication processes used throughout the project
	5.3	Recommend improvements for future projects.

Key competencies

The seven key competencies represent generic skills considered for effective work participation. The bracketed numbering against each of the key competencies indicates the performance level required in this unit. These are stand-alone levels and do not correspond to levels in the Australian Qualifications Framework (AQF). Level (1) represents the competence to undertake tasks effectively Level (2) represents the competence to manage tasks Level (3) represents the competence to use concepts for evaluating and reshaping tasks.

Key Competency	Example of Application	Performance Level
Communicating ideas and information		3
Collecting		3

analysing and organising information	
Planning and organising activities	3
Working with others and in teams	3
Using mathematical ideas and techniques	3
Solving problems	3
Using technology	3

Range statement

The range of variables relates to the unit of competency as a whole. It allows for different work environments and situations that will affect performance. Where reference is made to industry Codes of Practice, and/or Australian/international standards, it is expected the latest version will be used.

The focus of projects could involve	• development or modification of products and services • acquisition and commissioning of new equipment • commissioning of laboratory facilities • appraisal of supplies • development of applications for customers • validation of analytical methods and/or equipment • quality improvement or corrective action teams • restructuring of laboratory services • reclassification of staff and staffing levels.
Records may take the form of	• lists of potential costs, invoice and payments records • project and/or enterprise files and records • reports to clients, personnel and higher management • risk management plans and log books

	• diaries, scheduling charts and other charts.
Communication may be computer generated, and may involve	• customers, stakeholders, external authorities and project team • reports, briefs, minutes, letters, oral briefings, advice and conversations, telephone calls.
Resources may include	• personnel • budget • equipment, materials, facilities • computer project planning programs.
Health, safety and environment	All operations to which this unit applies are subject to stringent health, safety and environmental (HSE) requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence. All operations assume the potentially hazardous nature of samples and require standard precautions to be applied. Users should access and apply current industry understanding of infection control issued by the National Health and Medical Research Council and State and Territory Departments of Health. All operations are performed in accordance with standard operating procedures.

Evidence guide

The Evidence Guide describes the underpinning knowledge and skills that must be demonstrated to prove competence.

Critical aspects of competency	Competency must be demonstrated in the ability to perform consistently at the required standard. Candidates must be able to establish a project team and implement a project in response to a given brief. The project will contribute to the business needs of the enterprise. In particular, the assessor should look to see that the candidate can: • analyse a complex technical brief and prepare

a feasible project implementation plan
- reach milestones within budget
- consult and communicate effectively to ensure the project outcomes are achieved
- maintain accurate records and documentation in accordance with the enterprise procedures
- select and establish operational systems for the project
- plan work activities, resources and finances to ensure the project outcomes are achieved within the timeframe and budget constraints
- monitor and evaluate the progress of the project.

Underpinning knowledge

Competency includes the ability to apply and explain:

- purpose and methods of planning
- techniques for monitoring timelines, expenditure, team performance
- techniques for achieving effective communication and cooperation
- techniques for troubleshooting, problem solving and conflict resolution
- reporting requirements
- techniques for evaluation and continuous improvements
- relevant health, safety and environment requirements.

An awareness of the laboratory's business goals and key performance indicators is also required as a basis for managing complex projects in the laboratory.

Assessment context and methods

This unit of competency is to be assessed in the workplace or simulated workplace environment.

The following assessment methods are suggested:

- review of reports, operational budgets and project plans generated by the candidate
- review of project outcomes and customer satisfaction
- questioning/interview to assess underpinning knowledge
- feedback from project team and management
- review of documented examples of quality performance improvements achieved and examples of significant problems solved

- observation of the candidate's interaction with project team.

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. Questioning techniques should suit the language and literacy levels of the candidate.

Interdependent assessment of unit

This unit of competency may be assessed with:

- PMLTEAM600B Manage and develop teams
- PMLQUAL600B Implement and monitor quality systems and continuous improvement processes.

Resource implications

Resources may include:

- procedures and documentation typically used by the enterprise
- scheduling charts/strategic plans
- GANTT charts
- operational reports
- financial plans
- sample budgets.

This competency in practice

Manufacturing

A cosmetics manufacturing company decided to upgrade the image of a product range which included lipsticks, nail lacquers, hair shampoos and conditioners. A technical specialist coordinated the project and organised input from marketing, development, quality assurance and production personnel. The production boundaries were defined through consultation with marketing and it was decided to update shades of shaded products and introduce natural ingredients wherever possible. The project had to be completed within a reasonably short timeframe and within a tight budget which placed overall constraints on the way the project could be handled. After developing and getting approval for an implementation plan, team members were briefed and development samples produced for approval. Product characteristics were checked and recommendations made for adjustments until each product met requirements. When pilot batch manufacture had been successfully completed,

project development processes were fully documented and then passed to production to allow for efficient development of production batches.

Environmental

The quality team in a laboratory has set a goal of getting reports out more quickly and assigned the coordination of the project to one of the senior technical officers. The officer prepared an outline of the project, a timeframe, a resource list and budget. Specific tasks were allocated to members of the quality team according to their abilities and existing work commitments. The officer monitored the project's progress by tracking and adjusting elements as necessary. After the development of a final draft for the revised procedures, a draft project report was prepared for consideration by the quality team.

Food processing

A dairy company currently uses an imported cocoa-based product for the chocolate flavouring of their milk. Following a feasibility study of a range of ingredients, it was decided to investigate further an alternative source on the basis of cost. A technical specialist prepared a project plan that included required personnel, materials, equipment and a detailed GANTT chart. Key personnel from quality assurance, production, engineering, product development and marketing were chosen for the project team. The project was monitored to confirm progress, control expenditure and review the suitability of the alternative product source. At the end of the project, the technical specialist assessed the outcomes and prepared a detailed report that recommended the use of a local ingredient.