

# Global Alliance for the **Project Professions**

# A Framework for **Performance Based Competency Standards for Project Controls**

Type of document: Normative

**Stage of document:** Exposure draft for Public Comment **Date of issue:** Version 0.01 30<sup>th</sup> June 2018

www.globalpmstandards.org

info@globalpmstandards.org

#### ISBN 0-0000000-0-0

GAPPS and the GAPPS logo are trademarks of the Global Alliance for the Project Professions

#### Copyright (c) 2018

Global Alliance for the Project Professions (GAPPS)

- The final version of this document will be released with the standard GAPPS "copyleft" license inserted here.
- However, this exposure draft is released under standard copyright terms: it cannot be copied or distributed except to solicit comments. Recipients are prohibited from using the document for any other purpose.
- This document should be referenced as:
   GAPPS (2018) Exposure Draft of a Framework for Performance Based Competency Standards for Project Controls: Global Alliance for the Project Professions

For further information about the Global Alliance for the Project Professions, or to enquire about membership, contact the Secretariat at <<u>Secretariat@globalpmstandards.org</u>> or visit our webpage at <<u>www.globalpmstandards.org</u>>.

## **Contents**

1. F	Process and Scope	1
1.1.	Role Context	2
1.2.	Role Definition for Project Controls	3
2. F	Project Controls: Units, Elements, and Performance Criteria	4
2.1.	Overview of Performance Based Competence Standards	4
2.2.	Design of the GAPPS Framework	4
2.3.	Detail of Units, Elements, and Performance Criteria	6
2.4.	Summary of Unit Titles and their Elements	7
2.5.	Detail of Units, Elements, and Performance Criteria	8
APPE	ENDIX A	17
Reco	rd of contributors to the performance based framework for Project Controls	17

### **Foreword**

As program and project management have become more widely recognised management approaches, governments, individuals, and both public and private sector organisations have become interested in frameworks and standards that describe levels of acceptable workplace performance for program and project personnel.

The Global Alliance for the Project Professions, formerly known as Global Alliance for Project Performance Standards (GAPPS) is a volunteer organisation working to create such frameworks and standards by providing a forum for stakeholders from differing countries, systems, backgrounds, and operating contexts to work together to address the needs of the global program and project management community.

These frameworks are intended to support the development and recognition of local standards and to provide a sound basis for mutual recognition and transferability of project, program and other management role related qualifications.

The GAPPS frameworks are intended to be used by businesses, academic institutions, training providers, professional associations, and government standards and qualifications bodies globally. Frameworks may be used "as is" to speed the development of local standards, or they may be adapted to local needs.

This document is the fourth framework produced by the GAPPS. In 2006 the GAPPS released the first version of *A Framework for Performance Based Competency Standards for Global Level 1 and 2 Project Managers*. In 2011 the GAPPS released the first version of *A Framework for Performance Based Competency Standards for Program Managers*. In 2015 the GAPPS released the first version of A Guiding Framework for Project Sponsors.

Future documents may address other roles involved with projects and programs.

Further information or copies of the frameworks can be found at <a href="https://www.globalpmstandards.org">https://www.globalpmstandards.org</a>

Version	Date	Summary of Changes
0.01	30 <sup>th</sup> June 2018	Exposure Draft

## A Framework for Performance Based Competency Standards for Project Controls

## 1. Process and Scope

Work on performance or competency based standards for a 'Project Controls' job family began in October 2011 at GAPPS Thought Leadership Forum No 23 hosted by the BG Group/QGC in Brisbane. The starting point was a review of existing standards for Project Controls in various forms, initially drawing on the following resources:

- ProVoc¹/ ACostE Project Control Qualifications
- National Occupational Standards for Project Control UK NVQ 2004
- Total Cost Management Framework First Edition, 2006, AACE International
- South African Qualification Authority standards for project controls
- APM Introduction to Project Control
- Competency Standards for Quantity Surveyors, Asia Pacific Region, 2001

It is noted that a number of these resources have since been updated.

Review and comparison of these documents provided a picture of coverage of roles in project controls and formed the basis for input and development over subsequent GAPPS Thought Leadership Forums. Globally representative and experienced project management and project controls professionals (see Appendix A) were asked to focus on what practitioners are required to do when providing project control services and oversight for projects. At each of the sessions where project controls were addressed the work of previous groups was reviewed and progressed in an ongoing validation process. In 2017 a review of the document was undertaken by several experienced practitioners and their comments addressed during 2018 GAPPS Thought Leadership Forums.

Accepted practice in development of performance based competency standards<sup>2</sup> is to seek input from practitioners on what is considered to be minimum acceptable performance in a particular role. Therefore, the process should start with a definition of the role. This proved to be extremely difficult in the area of project controls where it was agreed that roles are both broad and deep. The roles extend from entry level project support roles to very senior Project Controls Director roles which may be at Board level. Project Controls are also provided by specialist consulting firms and include a wide range of specialist areas including cost, scheduling, risk, quality, estimation, quantity and document control.

\_

<sup>&</sup>lt;sup>1</sup> ProVoc is the UK National steering Committee raising the profile of Professional level National Vocational Qualifications (NVQs) for Project Management and Project Control staff in industry and commerce.

<sup>&</sup>lt;sup>2</sup> Heywood, L., Gonczi, A., & Hager, P. (1992). A Guide to Development of Competency Standards for Professions. Canberra: Australian Government Publishing Service.

Work to date has focused on developing an understanding of a core set of performance based competencies expected of a Project Controller or Project Controls Manager. This was intended to provide a shared understanding of the 'job family' and a basis for further attempts at actually defining the roles.

At GAPPS Thought Leadership Forum No 38 in London the core set of performance based competencies were agreed in the form provided in this document.

A Project Controls Role Definition is provided in Section 1.2 and it is intended that this will be provided in a Wiki via the GAPPS website to enable ongoing development between GAPPS sessions.

#### 1.1. Role Context

The role of the *project controls manager* in this context may be for single or multiple projects. The role *of project controls manager* is generally to support the project manager(s) to achieve project objectives by establishing the baseline plan, confirming the control basis, metrics and assumptions, identifying deviations and recommending corrective actions.

In some organizations the *project controls manager* is a position with that title, while in others, it may be termed differently. This may be a position or an assignment. Whenever a single individual is clearly responsible for providing project controls support to the project manager, that individual can be considered to be a *project controls manager* for the purposes of this framework.

#### Incidental notes:

- Activities referred to in the standard may be undertaken by the Project Controls Manager or by a member of their team or other specialist.
- Every decision must support business value.
- The project controls manager is the navigator. The Project Manager is the pilot.
- Project Controls have a key role of providing reliable information in a timely manner to enable decision makers to make informed decisions.

# 1.2. Role Definition for Project Controls

Level	At this level you would typically be responsible for:	Desirable attributes would include:
Strategic	In line with the organisational risk appetite:  - setting the overall governance and policy framework for controls including roles and responsibilities, reporting and operating structures, assurance processes, tools, compliance and continuous improvement;  - monitoring performance of the overall project, program or portfolio to identify systemic and cumulative risk, intervening to maintain strategic alignment;  - developing and sustaining organisational controls capability;  - embodying desired values, behaviours and ethics.	<ul> <li>an interdisciplinary understanding of the business context,</li> <li>credibility that enables engagement with and influence of stakeholders,</li> <li>intuitive insight into control functions</li> <li>maintain confidentiality</li> <li>Typical role titles:</li> <li>Head of Project Controls</li> <li>Controls Director</li> </ul>
Tactical / Integrative	Within strategy, governance and policy framework  - implementing policy, developing project specific procedures and making tactical level decisions  - evaluating risks and dependencies within the project and applying appropriate control approaches  - gathering and making sense of data, monitoring and reporting on performance  - recommending decisions, approaches and response options  - managing and developing control teams  - resolving conflicts as required	<ul> <li>an interdisciplinary understanding of the controls function</li> <li>interpersonal, influencing, delegating and negotiation skills that enable coordination and timely elicitation of performance data</li> <li>ability to understand the full extent of the project / program</li> <li>an appreciation of systems architecture and tools</li> <li>analytical ability</li> <li>maintain confidentiality</li> <li>Typical role titles:</li> <li>Controls Manager</li> <li>Project Controls Manager</li> <li>Controls Executive Officer</li> <li>Baseline Manager</li> <li>Project Controller</li> </ul>
Discipline specific	In one or more of the control disciplines:  - providing expertise including production, collection, collation, dissemination, synthesis, analysis and meaningful interpretation and administration of data and information  - providing timely insights, advice and contributions in areas of discipline expertise  - interfacing effectively with other project disciplines and functions	<ul> <li>technical / sub discipline expertise</li> <li>accuracy and proactive ability to obtain information and apply judgement</li> <li>understanding of their role within the overall controls function</li> <li>ability to identify and communicate pertinent information</li> <li>maintain confidentiality</li> <li>Typical role titles: Planning / Cost Engineer</li> <li>Scheduler</li> <li>Quality Controller/ Quality Controls</li> <li>Manager</li> <li>Estimator</li> <li>Risk Controller / Risk Manager</li> <li>Cost Controller</li> <li>Cost Schedule Analyst</li> <li>Cost Account Manager</li> </ul>

Figure 1. Descriptions of Role Differentiators

## 2. Project Controls: Units, Elements, and Performance Criteria

## 2.1. Overview of Performance Based Competence Standards

This section provides a brief overview of the subject of performance based competency standards (PBCS) for potential users of this document who are not familiar with the topic.

Competent comes from the Latin root competere which means "to be suitable." In today's workplace, the term "competent" is generally used to describe someone who is sufficiently skilled to perform a specified task or to fill a defined position — a competent physician, a competent salesperson, a competent plumber. Increasingly, organisations are interested in assessing the competency of individuals in order to guide employment and development decisions.

Broadly speaking, there are two major approaches to defining and assessing competency:

- Attribute based wherein personal attributes such as knowledge, skills, values, attitudes, and
  other characteristics are identified and assessed. Competency is inferred based on the
  presence of the necessary attributes.
- Performance based wherein work outcomes and performance levels are identified and assessed. Competency is inferred based on the demonstrated ability to satisfy the performance criteria.

PBCS, also called occupational competency standards, are widely used throughout the world and have been developed within the context of government endorsed standards and qualifications frameworks in Australia (Department of Employment, Education and Workplace Relations: DEEWR), New Zealand (New Zealand Qualifications Authority: NZQA), South Africa (South African Qualifications Authority: SAQA), and the United Kingdom (Qualifications and Curriculum Development Agency: QCDA). Although all of these approaches are focused primarily on performance based competency assessment, some approaches do include aspects of attribute based competency assessment.

## 2.2. Design of the GAPPS Framework

PBCS typically address at least the following two questions:

- What is *usually* done in this occupation, profession, or role by competent performers?
- What standard of performance is *usually* considered acceptable to infer competency?

In the GAPPS frameworks, these questions are answered by defining:

#### Units of Competency

A Unit of Competency defines a broad area of professional or occupational performance that is meaningful to practitioners and which is demonstrated by individuals in the workplace. This GAPPS framework includes 6 Units of Competency.

#### Elements of Competency

Elements of Competency describe the key components of work performance within a Unit. They describe *what* is done by individuals in the workplace but do not prescribe *how* the work is done. For example, project sponsors must "cultivate stakeholder commitment," but they can do this using approaches and tools of their own choice. This GAPPS framework includes a total of 24 Elements of Competency.

#### Performance Criteria

Performance Criteria set out the type and/or level of performance required to demonstrate competency in each element. They describe observable results and/or actions in the workplace from which competent performance can be inferred. In the GAPPS framework, Performance Criteria can be satisfied in many different ways; there are no mandatory approaches, tools, or methodologies. This GAPPS framework includes a total of 79 Performance Criteria.

#### Explanatory Statements

Explanatory Statements help to ensure consistent interpretation of the Elements and the Performance Criteria by expanding on critical or significant aspects of them to enable consistent application in different contexts. They also may include a description of a range that may apply to the context of the experience. Where the Explanatory Statements contain lists, the lists are generally illustrative and not exhaustive.

Although some of the terms and definitions of the GAPPS framework described above differ in some respects from other PBCS, the overall approach is consistent and compatible with generally accepted practice within the field of competency development and assessment.

The Performance Criteria in this document focus on *threshold* performance — demonstration of the ability to do something at a standard considered acceptable in the workplace. They do not measure *superior* performance — what the best project controllers do. Superior performers should be able to satisfy the threshold criteria without difficulty.

The GAPPS frameworks include the minimum number of Performance Criteria needed to infer competency. As a result, a candidate must satisfy all of the Performance Criteria in the applicable Units in order to be viewed as competent. In addition, the Performance Criteria represent different levels of effort. The number of Performance Criteria in a Unit or Element is not proportional to the amount of time or effort that an individual must spend in that area to be viewed as competent.

The material in this document can also be used to support learning and development when applied by qualified educators and trainers. In order to provide such support, the GAPPS framework would need to be expanded to address questions such as:

- What skills and knowledge are needed to demonstrate this standard of performance?
- What are the parameters for collecting evidence and assessing performance?

## 2.3. Detail of Units, Elements, and Performance Criteria

The following pages detail the Units, Elements, and Performance Criteria of this framework. They are presented using the format illustrated below in Figure 2.

PC0X	Unit Title		
performance that is individuals in the wo		me orkp	defines a broad area of professional or occupational aningful to practitioners and which is demonstrated by place.  It includes 6 Units of Competency.
PC0X List o	of Elements		
<ul> <li>X.1 Elements of Competency describe the key components of work performance within a Unit.</li> <li>X.2 They describe what is done by individuals in the workplace but do not prescribe how the work is done.</li> <li>X.3 This GAPPS framework includes a total of 24 Elements of Competency.</li> </ul>			
PC0X Eleme	ent Y		
X.Y Element desc	cription is repeated he	ere.	
Performance Criteri	ia	Ex	planatory Statements
required to der	vel of performance monstrate a each element.	a. b.	Explanatory statements are provided for key words and phrases in the element descriptions or the performance criteria.  Explanatory statements may provide clarification and a general guide for the scope and context in which an
observable results and/or actions in the workplace from which competent performance can be inferred.		C.	individual is expected to perform by describing a range of situations or conditions that may apply  The <b>explanatory statements</b> provide guidance for both Assessors and for the individuals being assessed.
evaluation of e assessment.	criteria are written sive voice to facilitate evidence during ramework includes 79	C.	<b>Explanatory statements</b> are provided the first time each term is used in a unit. Although additional explanations may be included if required to clarify the context of a criteria

Figure 2. Illustration of presentation format for Units, Elements, and Performance Criteria

Performance Criteria.

# 2.4. Summary of Unit Titles and their Elements

Units	Elements
PC01. Appreciate the context for project control	1.1 Understand project control requirements
	1.2 Work within governance framework
PC02. Develop control processes	2.1 Establish monitoring processes
	2.2 Develop coding structures
	2.3 Utilize information management systems
	2.4 Apply measurement approaches
PC03. Support development of integrated	3.1 Facilitate refinement of project deliverables and requirements
baseline	3.2 Define executable packages of work
	3.3 Establish the baseline
	3.4 Communicate with other functions
	3.5 Support validation of the baseline
PC04. Implement control framework	4.1 Apply project control processes
	4.2 Ensure information quality
	4.3 Analyse comparative data
	4.4 Implement agreed reporting structures
	4.5 Recommend corrective action
	4.6 Support implementation of corrective actions
PC05. Exercise professional and social	5.1Observe and apply professional ethics and values
responsibility	5.2 Maintain effective working relationships
	5.3 Ensure continued personal and professional performance
PC06. Manage the control team	6.1 Allocate work to the team
(optional for Project Controller)	6.2 Agree objectives with team and individuals
	6.3 Develop the skills of team members
	6.4 Build an environment of confidence and trust within the control team

Figure 3. Summary of Unit Titles and Elements

## 2.5. Detail of Units, Elements, and Performance Criteria

The following pages detail the Units, Elements, and Performance Criteria of this framework.

PC0	1 Appreciate the	context for project control
Unit	un	is Unit defines the Elements required to demonstrate an derstanding and appreciation of the requirements for project ntrols.
	COL	includes the Performance Criteria required to demonstrate mpetency in how the project controls work, within an ganisation/project and within a governance framework.
PC0	1 List of Elements	
1.1 1.2	Understand project control requ Work within governance framew	
PC0	1 Element 1	
1.1	Understand project control requ	irements
Perfo	rmance Criteria	Explanatory Statements
1.1.1	Project and project control objectives a understood.	re <b>Appreciate</b> should be interpreted and applied relative to the context within which the person is operating.
1.1.3 1.1.4 1.1.5	Established budget for project control is confirmed Understanding of project control orga structure is demonstrated. Limits of personal expertise are acknown Roles and responsibilities are confirmed operating processes and procedure identified. Control requirements of relevant states are understood.	this is the budget for the control function for the project. The budget may be provided or may be negotiated by the Project Controls Manager.  Project control organization structures will vary according to project type, size and complexity. Controls include a wide range of specializations.  Acknowledgement of personal expertise is an important element in determining additional controls assistance and expertise that may be required.  Roles and responsibilities will include reporting relationships and
	are understood.	authority levels.  Confirmed may include negotiation to deal with variations in expertise.  Operating processes and procedures are those relevant to the project and the controls function. They may be those of the parent organization, joint venture or alliance partners, contractors and any other relevant parties.
		Control requirements may include interpretation and treatment of baselines and change requests. They include approval, monitoring and reporting processes and may include or be affected by such things as the level of project complexity, form of contract, commercial and regulatory requirements. They may include defining measures, tolerances, frequencies or other parameters.  Stakeholders include individuals and organisations whose interests may be affected by the project, or whose actions may have an effect on some aspect of the project. Stakeholders may include project proponents, sponsors, clients, customers, contractors, collaborators,
		contributors, champions, constituent project managers, project team members, project support staff, subcontractors, suppliers, media representatives, and the general public. Stakeholders may be internal to or external from the sponsoring organisation.  The <b>relevance</b> of a stakeholder may be affected by the impact on the stakeholder, or by the stakeholder's impact on the project, and by cultural or ethical considerations. Different stakeholders are relevant in different situations. Relevant stakeholders will include contractors and the control requirement including process and submissions required from them.

PC0	PC01 Element 2				
1.2	Work within governance framework				
Performance Criteria Explanatory Statements					
1.2.1	Alignment of reporting structures with organisational and project strategy is maintained.	Governance framework refers to the corporate and project governance frameworks within which the project will be conducted.  Breadth and depth of information gathered should be limited to the			
1.2.2	<b>Information</b> required to control the project is defined, agreed and <b>reviewed</b>	minimum required to satisfy stakeholder control requirements.  Information requirements should be <b>reviewed</b> at key stages of the project life cycle to ensure they remain fit for purpose			
1.2.3	Prescribed signing and approval authorities are fully understood and applied. Approval processes and authorities are confirmed and applied.	project ine cycle to chears they remain in for purpose			

PC0	2	Develop control process	ses
Unit Descriptor		This Unit defines the Elements required to develop project control processes.  It includes the Performance Criteria required to demonstrate competency in how to establish monitoring processes, develop coding structures, utilize information management systems and apply measurement approaches.	
PC0	2 List of	Elements	
2.1 2.2 2.3 2.4 <b>PC0</b> 2.1	<ul> <li>2.2 Develop coding structures</li> <li>2.3 Utilize information management systems</li> <li>2.4 Apply measurement approaches</li> <li>PC02 Element 1</li> </ul>		
Performance Criteria Explanatory Statements		Explanatory Statements	
2.1.2	established and Report content, determined. Sources of data Responsibilities	formats and frequencies are	Criteria for acceptable performance may include tolerances e.g. 5% above or below budget or schedule; triggers for unacceptable performance, escalation, key performance indicators (KPI) and the like.  Sources of data should be transparent and traceable. They may include any of the parties involved in the project such as project team / functions principal sub-contractors and supply chain, customer, and any data systems used by these parties.  Regular and other meetings required for information provision, monitoring and control such as board meetings should be scheduled and included in the communication plan in order to coordinate and facilitate the flow of information. The Project Manager should include this in the communication plan.

#### PC02 Element 2

#### 2.2 Develop coding structures

Performance Criteria		Explanatory Statements	
2.2.1	Coding structures are selected to facilitate measurement and reporting requirements.  Compatibility with organizational accounting and data reporting requirements is maintained.	Coding structures are a means of integrating elements of project control, reporting and accounting particularly for use with information management systems. They may be provided or required by the client, based on organizational processes, industry or ISO standards, determined by the information management system to be used, or developed specifically for the project. They may be a combination of the above	

#### PC02 Element3

#### 2.3 Utilize information management systems

Perf	ormance Criteria	Explanatory Statements
2.3.1	<b>Information management systems</b> are selected or adapted to suit the specific requirements of the project.	<b>Information management systems</b> should be used effectively for sharing of information and integrated reporting.
2.3.2	A data repository is established.	
2.3.3	Agreed data integrity and security principles are applied.	

#### PC02 Element 4

#### 2.4 Apply measurement approaches

Performance Criteria		Explanatory Statements
2.4.1	Performance measures to be used are determined and agreed by relevant stakeholders.	Performance measures will be appropriate to the size and complexity of the project and may include staff turnover, rates of production, number of rejects, number of change requests, rate of work performance or output compared to expectations, safety
2.4.2	Compliance with <b>applicable industry standards</b> is ensured.	performance, labour productivity. Earned Value measures of SPI and CPI are examples of performance measures.
2.4.3	Measurement criteria are established.	<b>Stakeholders</b> include individuals and organisations whose interests may be affected by the project, or whose actions may have an effect on some aspect of the project. Stakeholders may include project proponents, sponsors, clients, customers, contractors, collaborators,

contributors, champions, constituent project managers, project team members, project support staff, subcontractors, suppliers, media representatives, and the general public. Stakeholders may be internal to or external from the sponsoring organisation.

The **relevance** of a stakeholder may be affected by the impact on the stakeholder, or by the stakeholder's impact on the project, and by cultural or ethical considerations. Different stakeholders are relevant in different situations.

**Applicable industry standards** include local and national regulations. The same information may need to be provided in different ways to satisfy different requirements.

**Measurement criteria** would be developed as a basis for monitoring. They would be specific to each project. They may include quality, efficiency, stakeholder expectations and acceptance criteria. This may be an iterative process to ensure satisfaction of all relevant parties

PC03	Support development of integrated baseline
Unit Descriptor	This Unit defines the Elements required to support the development of an integrated baseline for a project.
	It includes the Performance Criteria required to demonstrate competency in defining packages of work, establishing, validating and integrating baselines and communicating with other functions.
	In the context of project controls, a baseline is an approved start point used as a basis for performance measurement

#### PC03 List of Elements

- 3.1 Facilitate refinement of project deliverables and requirements
- 3.2 Define executable packages of work
- 3.3 Establish the baseline
- 3.4 Communicate with other functions
- 3.5 Support validation of the baseline

#### PC03 Element 1

#### 3.1 Facilitate refinement of project deliverables and requirements

Performance Criteria	Explanatory Statements
3.1.1 Detail of deliverables and requirements for the overall project or phase are verified.  3.1.2 Assumptions and constraints are documented.	Integrated baseline may also be referred to as the project plan. Items in Integrated baseline should include audit requirements.  High level deliverables and requirements would be provided by the Project Manager. Input for refinement of deliverables and requirements may be obtained from participating specialists.  Assumptions and constraints made in developing baselines must be documented.

## PC03 Element 2

#### 3.2 Define executable packages of work

Performance Criteria	Explanatory Statements
3.2.1 Detailed <b>breakdown structures</b> are developed.	<b>Breakdown structures</b> may include breakdown of project, product, resource, organisation and work breakdown structures, milestone deliverables, work packages and the like.
3.2.2 Responsibilities for work packages are identified.	packages and the like.

#### PC03 Element 3

#### 3.3 Establish the baseline

Perfo	rmance Criteria	Explanatory Statements
3.3.2 3.3.3	Resource requirements are determined Sources of data are identified. Input is sought from other functions. Scope, cost, schedule, risk and quality baselines are integrated.	Baseline in the context of project controls is an approved start point used as a basis for performance measurement.  Resource requirements may include staffing, material, funding, machinery, time, equipment, supplies  Input may include confirmation of resource availability, scope, cost, timing, regulatory, environmental, political, economic, contractual and other implications and do-ability review  Other functions may include design, engineering, procurement, construction, human resources, finance, commercial, operations and the like.  Development of scope, cost, schedule, risk and quality baselines may be the responsibility of separate specialists. Procurement, operational, environmental, communication, resource and other baselines may be included.

#### PC03 **Element 4** 3.4 Communicate with other functions **Performance Criteria Explanatory Statements** Resources may include but are not limited to staffing, material, funding, 3.4.1 Report content, formats and frequencies machinery, time, equipment, supplies are determined. 3.4.2 Responsibilities for information provision are defined and accepted. 3.4.3 Baseline information is provided as an input to other functions. 3.4.4 Information on quality and availability of potential resources is provided. **PC03** Element 5 3.5 Support validation of the baseline **Performance Criteria Explanatory Statements Declared strategy** is that which has been adopted by the project. It may be Compliance with applicable standards specific for the project, an organisation strategy and / or the project control and regulations is verified. strategy. 3.5.2 Alignment with declared strategy is maintained. Independent Expert review may include peer review or be provided by specialists independent from the project, internal or external. 3.5.3 Independent expert review is sought.

**Artefacts** may include but is not limited to written, printed or electronic documents, digitised matter, drawings, models, or photographs that provide

information or evidence or that serve as an official record.

3.5.4 Supporting artefacts are provided

PC04	Implement control framework	
Unit Descriptor	This Unit defines the Elements required to implement the control framework.	
	It includes the Performance Criteria required to demonstrate competency in how to support the project applying control processes, gathering and analysing data and information, providing reports, recommending corrective actions and supporting the implementation of corrective action.	

#### PC04 List of Elements

- 4.1 Apply project control processes
- 4.2 Ensure information quality
- 4.3 Analyse comparative data
- 4.4 Implement agreed reporting structures
- 4.5 Recommend corrective action
- 4.6 Support implementation of corrective actions

#### PC04 Element 1

4.1 Apply project control processes

Performance Criteria	Explanatory Statements
<ul> <li>4.1.1 Actual performance data is captured</li> <li>4.1.2 Impacts of change are analysed.</li> <li>4.1.3 Approved changes are incorporated into the baseline and relevant documents</li> </ul>	Impact is the effect of a change on the baseline or project objectives.  Change is a positive or negative deviation from baseline and can be as the result of for example; a scope change, inefficiencies, external influences, safety issues.  Approved changes should only result in a change to the baseline if this is in accordance with the governance framework.

#### PC04 Element 2

4.2 Ensure information quality

Perfo	rmance Criteria	Explanatory Statements
4.2.1	Ability to obtain information from stakeholders is demonstrated.	Reliability includes backward (accurate) and forward looking (forecast) perspectives. It also includes confidence that information will continue to be
4.2.2	Information is questioned for meaning, validity and <b>reliability</b> .	provided predictably.
4.2.3	Information is stored, maintained, updated and utilized	

#### PC04 Element 3

4.3 Analyse comparative data

Performance Criteria	Explanatory Statements
4.3.1 Performance variances are analysed	Variances may be positive or negative differences from the baseline
4.3.2 Performance forecasts are conducted.	

#### PC04 Element 4

## 4.4 Implement agreed reporting structures

4.4	.4 Implement agreed reporting structures	
Performance Criteria		Explanatory Statements
4.4.1	Project reports are issued in accordance with the governance and control frameworks.  Applicable regulatory and commercial	Regulatory requirements will usually be imposed as a result of legislation. They may be generic or industry specific and will normally vary with jurisdiction.  Commercial control requirements will be defined by the contract or other applicable form of engagement.
4.4.3	control requirements are supported. Information is collated to validate submissions.	Submissions may be from contractors, suppliers, vendors, service providers, consultants or to customers, clients or other stakeholders and may include claims, bids / tenders, product reviews, invoices, reports, updated schedules etc.

#### PC04 Element 5

#### 4.5 Recommend corrective action

Performance Criteria	Explanatory Statements
<ul><li>4.5.1 Response options are generated.</li><li>4.5.2 Viable options are identified.</li></ul>	<b>Corrective actions</b> address reported variances in project performance. They may relate to variations from baseline or to requirements or opportunities for continuous improvement.
4.5.3 Selected <b>response options</b> are documented and proposed	Viability is established by way of expert judgement or a qualitative assessment, or by quantitative analysis.  Response options may include but is not limited to requests for further information / detail, engagement of other experts, coaching and mentoring, updating of systems, re-planning, or stopping depending on the particular challenge. Impact analysis may be undertaken in developing options.

#### PC04 Element 6

#### 4.6 Support implementation of corrective actions

4.0	4.6 Support implementation of corrective actions	
Perfo	rmance Criteria	Explanatory Statements
4.6.1	Approved <b>response options</b> are communicated for implementation. Relevant documents are updated to reflect the impacts of action approved for implementation.	Adjustments may be highlighted by insights from, for example; reviews, system failures and gaps, benchmarking.  Resolution may include updated or changed systems, processes, policies and procedures but may be finalised by non-acceptance. Where possible official sign-off should be obtained.  Impacts may be positive or negative.
4.6.3	<b>Adjustments</b> to systems, policies, and procedures are documented, proposed, approved by relevant stakeholders and tracked to <b>resolution</b> .	impacts may be positive of negative.
4.6.4	<b>Impacts</b> of implemented corrective actions are monitored, captured and reported.	

PC05	Exercise professional and social responsibility	
Unit Descriptor	This Unit defines the Elements required to maintain effective and professional working relationships.	
	It includes the Performance Criteria required to demonstrate competency in applying values and ethics in a professional manner, achieving effective working relationships and continuing development of performance.	

#### PC05 List of Elements

- 5.1 Observe and apply professional ethics and values
- 5.2 Maintain effective working relationships
- 5.3 Ensure continued personal and professional performance

#### PC05 Element 1

5.1 Observe and apply professional ethics and values

Perf	ormance Criteria	Explanatory Statements
5.1.1	Accepted values and ethics are defined and communicated	<b>Values</b> and <b>ethics</b> referred to here will include industry ethics and those stated at organisational, team, professional and cultural level.
5.1.2	Behaviours reflect accepted ethics and	Behaviours may be agreed at organisational, project or team level.
	values	Sensitivity includes accommodation of differing values, ethics and practices of
5.1.3	<b>Sensitivity</b> to local cultural values, ethics and practices is demonstrated.	communities, suppliers, workforce, political context and the like.

#### PC05 Element 2

5.2 Maintain effective working relationships

Performance Criteria		Explanatory Statements	
5.2.1 Desired results an influence and pos	•	Constructive manner may include Conflict resolution techniques such as: Crucial conversations, Negotiation, escalation up the line, dealing with the issue not the person.	
5.2.2 The priorities, exp of colleagues are considered when taking actions.		Communications may include content required, method used (e.g., electronic, phone, meeting), geographical dispersion, protocols, cultural differences, and confidentiality requirements. They may be documented formally or informally and may be included in other project documentation.	
5.2.3 Issues are resolve manner.	ed in a <b>constructive</b>	<b>Respect</b> may include consideration of cultural differences, sensitivity of information shared etc.	
5.2.4 Communication accordance with a communication p	the approved		
5.2.5 People are treate	d with <b>respect.</b>		

## PC05 Element 3

5.3 Ensure continued personal and professional performance

Performance Criteria		Explanatory Statements
	Personal development plan is documented, updated and implemented. Personal performance is <b>evaluated</b> and reviewed against an agreed.	Evaluated may include 360 degree and other approaches and will usually be in accordance with organizational performance evaluation processes. It should be supported by individual review and reflection on personal performance.  A performance contract is the formal or informal agreement between an
	reviewed against an agreed performance contract	individual and their employer concerning expectations of their performance in their role.

	rol team (optional for Project Controller)
It is an optional unit a team. It includes the I	Elements required to manage the project control team. as a specialist project controls person may not be managing a Performance Criteria required to demonstrate competency in how port and develop the team.
PC06 List of Elements	
<ul> <li>6.1 Allocate work to the team</li> <li>6.2 Agree objectives with team and indivi</li> <li>6.3 Develop the skills of team members</li> <li>6.4 Build an environment of confidence a</li> </ul>	
PC06 Element 1	
6.1 Allocate work to the team	
Performance Criteria	Explanatory Statements
<ul><li>6.1.1 Roles and responsibilities are clarified, agreed, documented and communicated</li><li>6.1.2 Work is assigned and agreed.</li></ul>	Agreed includes documentation of said agreement.
PC06 Element 2	
6.2 Agree objectives with team and indivi	duals
Performance Criteria	Explanatory Statements
6.2.1 Performance criteria for each team member are clarified, negotiated and agreed.	Team Objectives are aligned to the project objectives
<ul><li>6.2.2 <b>Team objectives</b> are mutually developed, understood and agreed.</li><li>6.2.3 Individual and team performance is</li></ul>	
monitored and feedback provided.	
PC06 Element 3	
6.3 Develop the skills of team members	
Performance Criteria	Explanatory Statements
6.3.1 <b>Professional development</b> is encouraged and acknowledged.	Professional development may include internal accreditation / internal licence to operate.
PC06 Element 4	
6.4 Build an environment of confidence a	nd trust within the control team
Performance Criteria	Explanatory Statements
6.4.1 Team members are treated fairly and equitably.	
6.4.2 Open discussion is encouraged and facilitated	
<ul><li>6.4.3 Differences are managed constructively.</li><li>6.4.4 Issues and concerns are attended to in a timely manner.</li></ul>	
<ul> <li>6.4.5 Interpersonal and leadership styles are chosen and applied based on the circumstances.</li> <li>6.4.6 Personal commitments are realistic and</li> </ul>	
honoured.	

Figure 4. Detail of Units, Elements, and Performance Criteria

6.4.7 An independent and objective perspective is maintained.

## **APPENDIX A**

# Record of contributors to the performance based framework for Project Controls

NAME	REPRESENTING	COUNTRY
Adamopoulos, Pierre	Heriot Watt University	UK
Aitken, Alicia	PPG / Telstra	Australia
Al-Qahtani, Ali S	Ma'aden Aluminium Company	Saudi Arabia
Al-Shammary, Sami	Ma'aden Aluminium Company	Saudi Arabia
Andrew Gale	University of Manchester	UK
Andrew Tims	Major Projects Authority, UK	UK
Angelilo, Stephen	NASA	USA
Baker, Chris	NAB	Australia
Baker, Rod	APMG	UK
Bibby, Jon	Costain	UK
Ben Aiben, Saad	Ma'aden Aluminium Company	Saudi Arabia
Bentley, Lesley	Living Planit	Australia
Best, Robert	Services SETA	South Africa
Billat, Pensilla	Sasol Ltd	South Africa
Botes, Melani	SOLAL	South Africa
Buhagiar, Michael	Sydney University	Australia
Callaway, Amy	TBH Group	Australia
Castillo, Omar	Sydney University	Australia
Chen, Helen	Centre for Public Project Management	Singapore
Chung, Ken	Sydney University	Australia
Coleman, Sarah	APM	UK
Crawford, Lynn	Bond University	Australia
Darley, Martin	AACEI	USA
David Preece	APM	UK
Duncan, Bill	asapm	USA
Edwards, Andrew	State Emergency Services/NSW Fire & Rescue	Australia
Egbu, Charles	Doctoral student, London Southbank University, LSBU	UK
Eltinayn, Nuha	Doctoral student, London Southbank University, LSBU	UK
Ferrabone, Galileo	Sasol	South Africa
Fitzgerald, Donna	asapm	USA
Floris, Maurizio	JGCPL, Sydney University	Australia
Forth, Shane	Costain	UK
Framp, Melody	Human Systems Asia Pacific	Australia
Gardiner, Paul	BUID	UAE
Gaspar, Josephine	Snowdon Group	Australia
George, Stella	Athabasca University	Canada
Giammalvo, Paul	PTMC	Indonesia
Graham, Robert	Heriot Watt University	UK
Gray Garraway, Isabelle	Department of Premier and Cabinet	Australia

NAME	REPRESENTING	COUNTRY
Haddad, Rania	Caparol Paints	Dubai
Haggerty, Patrick	AACEI	USA
Hancock, Gill	APM	UK
Haniff, Amos	Heriot Watt University	UK
Heymans, Christa	Sasol Ltd	South Africa
Ho, Bernard	SPM	Singapore
Hoffman, Ed	NASA	USA
Kaesler, Shane	BAE Systems Australia	Australia
Kananu, Rose	Sasol	South Africa
Keeys, Lynn	Independent consultant	South Africa
Kirkham Richard	University of Manchester	UK
Knoepfel, Hans	IPMA	Switzerland
Khorsand Moadab Mohsen	University of Manchester	UK
Kruger, J C	Greybeards	South Africa
Lai, Ruby	SPM	Singapore
Langston, Craig	Bond University	Australia
Liu, Lucia	Lend Lease	Australia
Magee, Kevin	NASA	USA
Manton-Hall, Patricia	Independent Consultant (formerly Bechtel)	Australia
Maria Doufa	University of Manchester	UK
Mavuso, Johannes	Sasol Ltd	South Africa
Milsom, Peter	APMG	Canada
Morar, Sunil	Sasol Ltd	South Africa
Morgan, David	BG Group	UK
Myezo, Mpho	Petro SA	South Africa
Nalewaik, Alexia	AACEI	USA
Noble, Will	Human Systems Asia Pacific	Australia
Omokhomion , Itua	London Southbank University	UK
Peh, Luke	SPM	Singapore
Petit, Ivan	UQAM	Canada
Petro, Yacoub	MHW, Stantec	Dubai
Piesker, Julia	Heriot Watt University	UK
Preece, David	APM	UK
Pretorius, Carl	Sasol Ltd	South Africa
Radyati, Maria	Independent consultant	South Africa
Reay Atkinson, Simon	Sydney University	Australia
Reinhard Wagner	IPMA	Germany
Rider, Lesley	Services SETA / PMSA	South Africa
Rodrigues, Chantal	Services SETA	South Africa
Ruiz, Natalie	Heriot Watt University	UK
Rutherford Jones, John	Sasol Ltd	South Africa
Sakhaee, Ehssan	Sydney University	Australia
Sargent, Roy	Building and Asset Services	Australia
Schaden, Brigitte	IPMA	Austria
Schmemr, Werner	IPMA	Germany
Sedlmayer, Martin	IPMA	Switzerland
Seng King, Ting	SPM	Singapore
Simmonds, Tony	Interlink Technologies	Australia
Droprietary and confidential	<u> </u>	Soura Draft Juna 2018

NAME	REPRESENTING	COUNTRY
Sompie, Meiske	TBH Group	Australia
Tharakan Mulackal, Philips	AACEI	Dubai
Thomas, Janice	Athabasca University	Canada
Tillin, Adrian	QGC / BG Group	Australia
Van Waveren, Beno	Sasol Ltd	South Africa
Veloz, Carolina	UTS	Australia
Voolhofer, Alexander	Projekt Management Austria	Austria
Wallace, Yvonne	Living Planit	Australia
Wilson, Liz	APM	UK
Witte, Rob	Worley Parsons	South Africa
Ying Chang	University of Manchester	UK
Yip, Kim Seng	SPM	Singapore
Yuen, Mun Wye	SPM	Singapore
Ziying Liang	University of Manchester	UK