



## Certified Practitioner in Asset Management (CPAM)

This document specifies the requirements for PEMAC's "Certified Practitioner in Asset Management". PEMAC CPAM certification has been accredited by the World Partners in Asset Management (WPiAM) [www.wpiam.com](http://www.wpiam.com) which means that when you are assessed as having met the requirements for CPAM Certification by PEMAC your certification will be recognized globally where CPAM, and its equivalents are recognized.

In the specification elements below, where bold italicised text is used, further information is detailed in the "Range Statement" section of the document.

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<b>Certification Level</b>	<b>Certified Practitioner in Asset Management (CPAM)</b>
<b>Certification Level Descriptor</b>	<p>The knowledge and skills to take responsibility for the establishment, updating and management oversight of application of a specific <b><i>Domain</i></b> within an integrated <b><i>Asset Management Framework (AMF)</i></b> and prepare and recommend policy, objectives, strategy, tactics, processes and procedures to drive application and improvement, requiring:</p> <ul style="list-style-type: none"><li>• Awareness and understanding of all the recognised Domains of Asset Management (AM), their inter-dependency, and integration.</li><li>• Awareness and understanding of the key requirements for an integrated <b><i>AMF</i></b>.</li><li>• Competency across a <b><i>Domain</i></b> of AM.</li><li>• Meta-cognitive Skills.</li><li>• Leadership and management skills; and</li><li>• The ability to communicate knowledge and ideas to a variety of audiences.</li></ul> <p>No licensing, legislative, or regulatory requirements apply to this certification at the time of publication.</p>
<b>Application of the Certification</b>	<p>This certification is applicable to practitioners (or advisors thereto) responsible for the establishment, updating, and management oversight of the application of a <b><i>Domain</i></b> of AM that is significant to the organisation's <b><i>AMF</i></b> across a significant area of business. Importantly, this framework must inform, and be informed by, the organisation's strategic objectives.</p>

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Certificants, as a **Proficient** leader responsible for a **Domain**-specific team or as a **Domain**-specific expert, will:

- Recommend policy, strategy, tactics, processes, and procedures; and
- Drive AM application and ongoing improvement

within their **Domain** of AM in line with and, as an essential element of the organisation's **AMF** required to deliver against the AM objectives of the organisation.

### ELEMENT

Elements describe the essential outcomes of a certificant for this competency.

- 1 Review and recommend Asset Management policy

- 2 Provide inputs to the review and development of a Strategic Asset Management Plan (SAMP)

### PERFORMANCE CRITERIA

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

- 1.1 **Domain** and **AMF Documents and Artefacts** relating to the policy development associated with the **Domain** are identified and confirmed.
  - 1.2 Policy options and tactical **Activities** relating to the **Domain** are identified, analysed, and selected in consultation with stakeholders.
  - 1.3 The policy articulates the AM principles relating to the **Domain** to be adopted by the organisation in managing its assets.
  - 1.4 The policy relating to the **Domain** is documented, adopted and, where appropriate, communicated to stakeholders.
  - 2.1 Relating to the **Domain**: relevant **AMF Documents and Artefacts** are identified and confirmed, change / improvement needs, and tactics are noted, stakeholders consulted, implementation procedures are noted, and an implementation plan adopted.
  - 2.2 The required **Domain** inputs to the development / review of the SAMP are identified, established and levels of confidence determined.
  - 2.3 With relevant stakeholder involvement, a holistic assessment of the **Domain** input to the strategic AM context and status is made and confirmed; gaps in the availability of reliable **Domain** information are
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- identified, the organisation's AM objectives relating to the **Domain** are established / reviewed in line with organisational objectives; **Domain** inputs are provided as a contribution to identify holistic strategic options and integrated strategic AM scenarios (relating to assets, and management practice).
- 2.4 As a member of an AM Team, or as a **Domain** expert, the strategic merits of various AM scenarios are reviewed, a preferred AM strategy is determined with stakeholder input, documented, and formal organisational adoption is secured.
- 2.5 As a member of an AM Team representing a **Domain**, or as a **Domain** expert, a strategic brief is prepared to inform the preparation of the AM Plans relating to significant asset portfolios / sectors, and where applicable, highlighting common themes, alignment, integration and coordination needs.
- 3 Provide substantive contribution to the review and development of AM Plans
- 3.1 The availability and relevant content of previous **AMF Documents and Artefacts**, decision making rules and identified needs for improvement of AM Plans, are documented. The strategic brief for each of the AM Plans is confirmed in consultation with the respective stakeholders. The tactics, schedule, and allocation of responsibilities for the preparation of the AM Plans, including the **Domain**, are determined, and agreed.
- 3.2 The modelling, analysis, determination of appropriate lifecycle management tactics, assessment of prevailing AM Practices, determination of an improvement plan and preparation of the AM Plan relating to the particular **Domain** of AM is undertaken in compliance with the strategic brief, the applicable **AMF Processes and Procedures**, and quality requirements, in consultation with other stakeholders and/or Domain experts, as necessary.
- 3.3 The quality of the **Domain** inputs to the AM Plans is reviewed and addressed. Where applicable, corrective action required as a result of third-party reviews is addressed.
- 4 Ongoing practice improvement
- 4.1 Monitoring and **Reporting Obligations** of the **Domain** relating to the implementation of AM Plans
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- are agreed. This relates to the target asset lifecycle interventions and AM practice improvement actions, as applicable to the **Domain**.
- 4.2 Agreed reporting is made relating to risk, financial and performance management, as applicable to the **Domain**.
- 4.3 Corrective steps are taken as agreed/approved by the organisation's responsible person.
- 5 Review and develop **AMF Documents** and **Artefacts**
- 5.1 Existing **AMF Documents and Artefacts** and procedures for the review, development and documentation relating to the **Domain** are confirmed. Previously agreed AMF Document and Artefact improvements needs relating to the **Domain** are identified, reviewed, and noted (within the context of an AM Improvement Plan). The implementation tactics including change management, required **Activities**, allocation of responsibilities, and schedule for preparation / review are agreed with the respective stakeholders.
- 5.2 Development and improvement inputs relating to the **Domain** are provided, adjustments / corrections are made as required based on quality reviews, alignment across **Domains** / disciplines and stakeholder feedback, and progress is reported.
- 6 Implement effective and efficient planning
- 6.1 **Activities** in the **Domain** of AM are planned to be implemented in an effective and efficient manner in line with the relevant aspects of the organisation's **AM Processes and Procedures**, AM Plan, and Operational Plans, and the available resources. The plans are prepared taking into consideration organisation-approved decision-making criteria.
- 6.2 **Activities** in the **Domain** of AM are implemented in a **Proficient** manner, in line with statutory requirements, legal/regulatory requirements and industry-recognised good practice, and in line with the relevant aspects of the organisation's AM Processes and Procedures, AM Plan, and the available resources.
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| <b>7</b> | Report AM<br><b>Activities</b>                      | 7.1 | <b>Activities</b> in the <b>Domain</b> of AM are reported in a relevant, timely and accurate manner in line with the relevant requirements of the organisation's <b>AM Processes and Procedures</b> , AM Plan, and the available resources.  |
| <b>8</b> | Drive ongoing<br>practice<br>improvement            | 8.1 | Needs and opportunities for ongoing improvement of practice in the <b>Domain</b> of AM are identified and reported in the AM Plan in line with the relevant processes in the organisation's <b>AM Processes and Procedures</b> , in consultation with relevant stakeholders, and in context of the benefits to the organisation-wide AMF.  |
|          |   | 8.2 | Solutions and implementation plans are identified in consultation with other stakeholders to address practice improvement needs in the <b>Domain</b> of AM, bearing in mind the AM objectives, context, implications, and benefits to the overall AMF. These are reported in line with the relevant processes in the organisation's <b>AM Processes and Procedures</b> and in consultation with relevant stakeholders. |
|          |   | 8.3 | Approved plans for implementation of practice improvement in the <b>Domain</b> of AM are implemented in consultation with other stakeholders.  |
| <b>9</b> | Monitor the<br>implementation of<br>AMF improvement | 9.1 | The process and requirements for reporting progress and quality in the implementation of the agreed improvements to the AMF (within the context of an adopted AM Improvement Plan) relating to the <b>Domain</b> of AM is established in consultation with the respective stakeholders, documented and communicated.   |
|          |   | 9.2 | The quality of the practice improvements in the <b>Domain</b> of AM is assessed according to agreed procedures, and corrective action taken where necessary. Reporting on progress and quality is made to the organisation's committee responsible for AM / responsible person.  |



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- 9.3 Corrective steps are undertaken as instructed by the organisation's committee responsible for AM / responsible person.
- 10** Align and integrate **Domain Activities** across the AMF
- 10.1 Ensure alignment and effective integration of relevant inputs from the respective **Domains** of AM applicable to the AMF of the organisation, including integrated and aligned **AM Processes and Procedures**, AMF Documents and Artefacts, and technical analysis and modelling in the preparation of SAMPs, AM Plans, Operational Plans and reporting
- 10.2 Appropriate application and interpretation of Financial Aspects of AM relating to the **Domain**, including statutory reporting where applicable, are displayed.
- 11** Provide competent leadership and management
- 11.1 Leadership and opportunities for personal development in the **Domain** are provided to stakeholders from backgrounds.
- 11.2 A supportive workplace culture is adopted that validates and assures robust understanding of AM principles by the stakeholders in the respective **Domain**.
- 11.3 Professional judgement in the **Domain** is demonstrated
- 11.4 Sound technical judgement and awareness and understanding of industry practice is applied in the **Domain**.
- 11.5 A robust understanding of AM principles is demonstrated in establishing solutions in the **Domain**.
- 11.6 Stakeholders of the **Domain** are engaged to determine their respective needs.
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11.7 Effective leadership is provided to a team in the **Domain**, where relevant.

11.8 Effective written and verbal communication skills are displayed.

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## REQUIRED SKILLS AND KNOWLEDGE

### ***Required skills:***

Demonstrated successful application, relating to a significant asset portfolio (in terms of its nature, size, and risk exposure), of the following competencies, relating to a Domain of AM significant to the organisation, in line with recognised good practice:

- Review and recommend AM Policy.
- Provide inputs to the review and development of a Strategic Asset Management Plan (SAMP).
- Provide substantive contribution to the review and development of AM Plans.
- Monitor implementation of AM Plans.
- Review and develop AMF Documents and Artefacts.
- Monitor the implementation of AMF improvement.
- Implement effective and efficient planning.
- Proficient implementation.
- Report relevant AM Activities.
- Drive ongoing AM practice improvement.
- Align and integrate Domain Activities across the organisation's AMF; and
- Provide competent leadership and management.

### **Required knowledge:**

1. A minimum qualification in an AM Domain discipline(s) related to the role (or recognised knowledge developed in the workplace).
  2. A minimum qualification or recognised training in asset management that meets the following level of cognition (thinking, learning, and understanding, based on the 2001 revised version of Bloom's Taxonomy):
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- a. Cognitive dimension: applying.
- b. Knowledge dimension: procedural; and
- c. Matrix activity: classify, experiment, calculate, summarize, and interpret.

This will typically be a university or recognised training provider degree, though a lower level base qualification together with appropriate experience may be assessed to be equivalent - (Note: generally, the lower the level of base qualification the more practical experience in line with the required knowledge and skills of this specification will need to be demonstrated); and

3. A pass mark in the Certified Asset Management Assessor examination (set by the WPiAM) or equivalent (as agreed by WPiAM).

*Note: The level of cognition (thinking, learning, and understanding) in the core **Domain** discipline is specific to that discipline and not necessarily the same as the AM level required. WPiAM and its partners will typically require applicants to submit a copy of their core discipline qualification, certification or licence issued by an appropriately accredited agency, training provider or government agency.*

### **Required experience:**

A minimum of 5 years' experience within an AM environment. *Note: Depending on an AM professional's roles and responsibilities over his/her working life, and the scale, complexity and criticality of the **Activities** of the organisation(s) and the respective asset base, the time needed to build a portfolio of demonstrated successful application of AM practice may require additional time, i.e. time served needs to be contextualized by varied application in a blended combination of the underpinning discipline and broader AM practice.*

## **RANGE STATEMENT**

The Range Statement relates to the certification level competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any 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.

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<b>Domain-subject equivalence</b>	<p>In the Global Certification Scheme, a ‘Domain’ is considered equivalent to the reference to ‘subject’ (or group of subjects) in the Global Forum for Maintenance and Asset Management (GFMAM) Landscape.</p> <p>Domain may also refer to the tactical AM of specific asset types or classes, critical assets, or spatially discrete asset groupings such as facilities, networks, or process lines.</p>
<b>Proficient means:</b>	<p>Holding technical and / or professional qualifications in the respective area of proficiency. Areas of proficiency could include: technicians, technologists, tradesperson or professionals in one of various disciplines such as maintenance, maintenance planning or scheduling, project management, accounting, engineering, architecture, spatial planning, or management sciences.</p>
<b>Activities comprise:</b>	<p>Application of tools, processes and practices utilised by an organization to manage or make decisions with respect to:</p> <ul style="list-style-type: none"><li>• Legislative requirements;</li><li>• Risk, performance, and financial management;</li><li>• Asset performance, capacity, utilisation and criticality;</li><li>• Asset availability, reliability, maintainability and supportability;</li><li>• Asset acquisition, creation, operations, maintenance and disposal;</li><li>• Environmental and social impacts;</li><li>• Safety</li><li>• Cost/affordability/willingness to pay;</li><li>• Asset value and depreciation;</li><li>• AMF performance;</li><li>• Workplace resourcing, competency, and culture; and</li><li>• Alternative technologies.</li></ul>
<b>Data and Information means:</b>	<p>Relevant knowledge of asset characteristics, performance, condition and management processes or associated financial data to permit efficient and effective operation, maintenance and management of the asset in order to meet organizational objectives.</p>



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### **AM Processes and Procedures** are:

The integrated operational processes, models, roles and responsibilities, and support systems adopted by the organization to give effect to its AM Policy, AM Objectives and AMPs.

### The **AM Framework (AMF)** is:

The system of management adopted by an organization to implement AM, including **AM Processes and Procedures**, AM Policy, AM Objectives, SAMP, AMPs and strategic, tactical and operational management systems.

### **AMF Documents and Artefacts** include:

Documentation and artefacts that collectively constitute or are needed for implementation of the AMF. AMF Documents and Artefacts may be discrete or an AM construct, but also may be evident from drawing relevant parts of other organisational management systems, processes, and practices into an aggregated equivalent. For example, the organisation-wide document management system tool may be part of the AMF.

### **Operational Plans** include:

The **Activities**, operational procedures, and resources adopted by the organization to implement the respective **Activities** within an Asset Management Framework.

### **Meta-cognitive skills** are:

The ability to 'think about thinking'. In this context, demonstrated application of meta-cognitive skills is about organisational metacognition – understanding and then managing in response to how and why the organisation thinks and acts in particular ways or follows particular processes and practices. Evaluation and selection of the most appropriate processes and practices as a learning organisation, developing and maintaining an appropriate culture, performance management, driving appropriate changes to the operating environment and determining appropriate methodologies, processes and practices for setting objectives, implementation, review, analysis and decision making constitute aspects of meta-cognitive thinking.

## **EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, and the Range Statement.



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Critical aspects for assessment and evidence required to demonstrate competency include:

Evidence of the following is essential to qualify:

- Summarized overview of the nature and duration of total work experience (minimum of 5 years in AM)
- Summarized overview of the nature, dates, and duration of AM work experience, including the nature, size and criticality of the asset portfolio, and respective AM roles.
- Corroboration of the experience and contribution / role of the applicant by a registered professional.
- Submission of key artefacts to support the competency assessment, for example: a plan for the implementation of the Activities relevant to the respective AM Domain; stated Domain performance requirements and confirmation of compliance; status reports; AM Practice Improvement Plan and reports on its implementation for the Domain;
- Commitment to the Code of Ethics.
- Evidence of Domain qualification and experience
- Evidence of AM qualification and experience

Evidence of continuing professional development as prescribed by PEMAC will be required for each recertification period to ensure continued competence.

Assessment must ensure access to evidence of the nature, scale and criticality of the asset portfolio.

**Context of and specific resources for assessment:**

**Method of assessment:**

A range of assessment methods are used to assess practical skills and knowledge. The following are appropriate to this designation:

- Review of artefacts submitted by the applicant, supported by a declaration by the applicant and reference to confirm the specific role of the applicant in the preparation of the document.
- Review of the applicant's response to queries / clarifications requested by the assessors; and



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### Guidance information for assessment:

- Interview (optional – where necessary to confirm or clarify competency).

Holistic assessment relevant to the industry sector, workplace and job role is recommended.

In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge.

Assessment processes and techniques must be appropriate to the language and literacy capacity of the candidate and the work being performed.

Where the candidate was part of a team that co-developed submitted evidence, their role must be clearly defined and may require confirmation from the workplace and interview by the assessor or other validation to demonstrate knowledge and ability.

Applicants may be operating within a mature AM environment or one that is in a formative phase. The organisational maturity within which the applicant is operating will inevitably impact on the way an applicant has undertaken their respective Activities and hence evidence presented, and therefore needs to be taken in to account. It is the applicant's competence that is being assessed, not the organisation's maturity.

Country-specific interpretation of qualifications and, where necessary, other requirements stated in this specification, will be confirmed by WPIAM.