



**WPIAM**

*World Partners in  
Asset Management*

# GLOBAL CERTIFICATION SCHEME (GCS)

JUNE 2020

ISBN: 978-0-6487155-5-9

- This presentation provides an abbreviated overview of the GCS with a view to conveying key concepts and a high level view of the approach
- *It does not replace in any way the full GCS Position Paper and associated detailed specifications*

# WPiAM Context

---

## WPiAM Key Objectives:

- Be a global multi-lingual **certifier of personnel in the market place**
- Maintain a database of questions and answers suitable for certifying ISO55001 auditors and assessors in the minimum required knowledge and comprehension of asset management
- Create a **global certification scheme (GCS)** for asset management (AM)
- Demonstrate the values of integrity, collaboration and duty to the public

## New Product Development:

- Provision of a **structure of certifications** (also known as “designations”) that:
  - enable the competence of individuals to be compared on a **global basis**
  - represent recognition of **competency to perform key AM roles and require demonstration of a mix of appropriate qualifications and evidence of application**

# ...Road to Date

---

## ❖ CAMA (Certified AM Assessor)

- Online examination: testing **knowledge** and comprehension of AM
- .....combined with a cv with 5 years AM experience demonstrating **understanding of the AM environment** – certifies **competency** to effectively **assess AM Systems** (in terms of ISO 55001) or, more broadly known as “AM Frameworks”
- Application: **either internal or external assessment** of AM Frameworks in organisations – to identify conformity of AM practise
- To date: 784 certified CAMAs in 7 countries

- ❖ .....The GCS now extends this within a broader set of certifications that apply to **Practitioners** in AM

# Specific Objectives of the GCS

---

- Promote **broad recognition** of the value of AM professionals
- Promote **ownership and pursuit** of AM by individuals as a profession
- **Attract & retain** competent people in the AM profession, at all levels
- Promote **career advancement, global transportability** and **augmentation of other professions** in the field of AM
- Facilitate **transferability** across industries and countries
- Specify minimum AM **competency** for typical AM roles
- Recognise skills and knowledge achieved via **different pathways** and operational environments
- Provide an initial GCS framework as a **platform for periodic review** of opportunities to improve

# Definitions used in the GCS

---

- **“Certification Scheme”**: competence and other requirements related to specific occupational or skilled categories of persons (ISO 17024)
- **“Competence”**: ability to apply knowledge and skills to achieve intended results (ISO 17024)
- **“Assessment”**: process that evaluates a person’s fulfillment of the certification scheme (ISO 17024)
- **“Qualification”**: demonstrated education, training and work experience where applicable (ISO 17024) – *Note: work experience is an alternative route that may be considered in lieu of academic or training qualifications*
- **Designation**: an official name, description or title (Oxford English) *Note: such as CTAM, CPAM, and CSAM*

# .....More Definitions

---

- **“Asset Management System”**: management system for asset management whose function is to establish the asset management policy and asset management objectives (ISO 55001)
- **“Asset Management Framework”**: an asset management framework is a set of documents, systems and processes that addresses an organisation's asset management responsibilities (Local Government & Municipal Knowledge Base)
- **“Specification”**: an act of identifying something precisely or of stating a precise requirement (Oxford English)
- **“Domain”**: a specified sphere of activity or knowledge (Oxford English)  
..... *and in the GCS: includes a ‘subject’ (or group of subjects) in the GFMAM Landscape*

# AM Landscape Subjects

## STRATEGY & PLANNING

- AM policy
- AM strategy & objectives
- Demand analysis
- Strategic planning
- AM planning



## AM DECISION-MAKING

- Capital investment decision-making
- O&M decision-making
- Lifecycle value realisation
- Resourcing strategy
- Shutdown & outage strategy



## ASSET INFORMATION

- Asset information strategy
- Asset information standards
- Asset information systems
- Data & information management



## ORGANISATION & PEOPLE

- Procurement & supply chain management
- Asset management leadership
- Organisation structure
- Organisation culture
- Competence management



## RISK & REVIEW

- Risk assessment & management
- Contingency planning & resilience analysis
- Sustainable development
- Management of change
- Asset performance & health monitoring
- Asset management system monitoring
- Management review, audit & assurance
- Asset costing & valuation
- Stakeholder engagement



## LIFECYCLE DELIVERY

- Technical standards & legislation
- Asset creation & acquisition
- Systems engineering
- Configuration management
- Maintenance delivery
- Reliability engineering
- Asset operations
- Resource management
- Shutdown & outage management
- Fault & incident response
- Asset decommissioning & disposal





“Domain”: Subject or group of subjects from the AM Landscape (GCS Specifications)

# Example of Domains

## STRATEGY & PLANNING

- AM policy
- AM strategy & objectives
- Demand analysis
- Strategic planning
- AM planning

## AM DECISION-MAKING

- Capital investment decision-making
- O&M decision-making
- Lifecycle value realisation
- Resourcing strategy
- Shutdown & outage strategy

## ASSET INFORMATION

- Asset information strategy
- Asset information standards
- Asset information systems
- Data & information management

## ORGANISATION & PEOPLE

- Procurement & supply chain management
- Asset management leadership
- Organisation structure
- Organisation culture
- Competence management

## RISK & REVIEW

- Risk assessment & management
- Contingency planning & resilience analysis
- Sustainable development
- Management of change
- Asset performance & health monitoring
- Asset management system monitoring
- Management review, audit & assurance
- Asset costing & valuation
- Stakeholder engagement

## LIFECYCLE DELIVERY

- Technical standards & legislation
- Asset creation & acquisition
- Systems engineering
- Configuration management
- Maintenance delivery
- Reliability engineering
- Asset operations
- Resource management
- Shutdown & outage management
- Fault & incident response
- Asset decommissioning & disposal

Examples:

- Manager: AM Planning Unit
- Manager: Project Management Unit
- Manager: Supply Chain Unit
- HR Manager
- Risk Manager
- Manager: Engineering
- Data Manager
- Head: AM Division



# GCS Requirement Principles

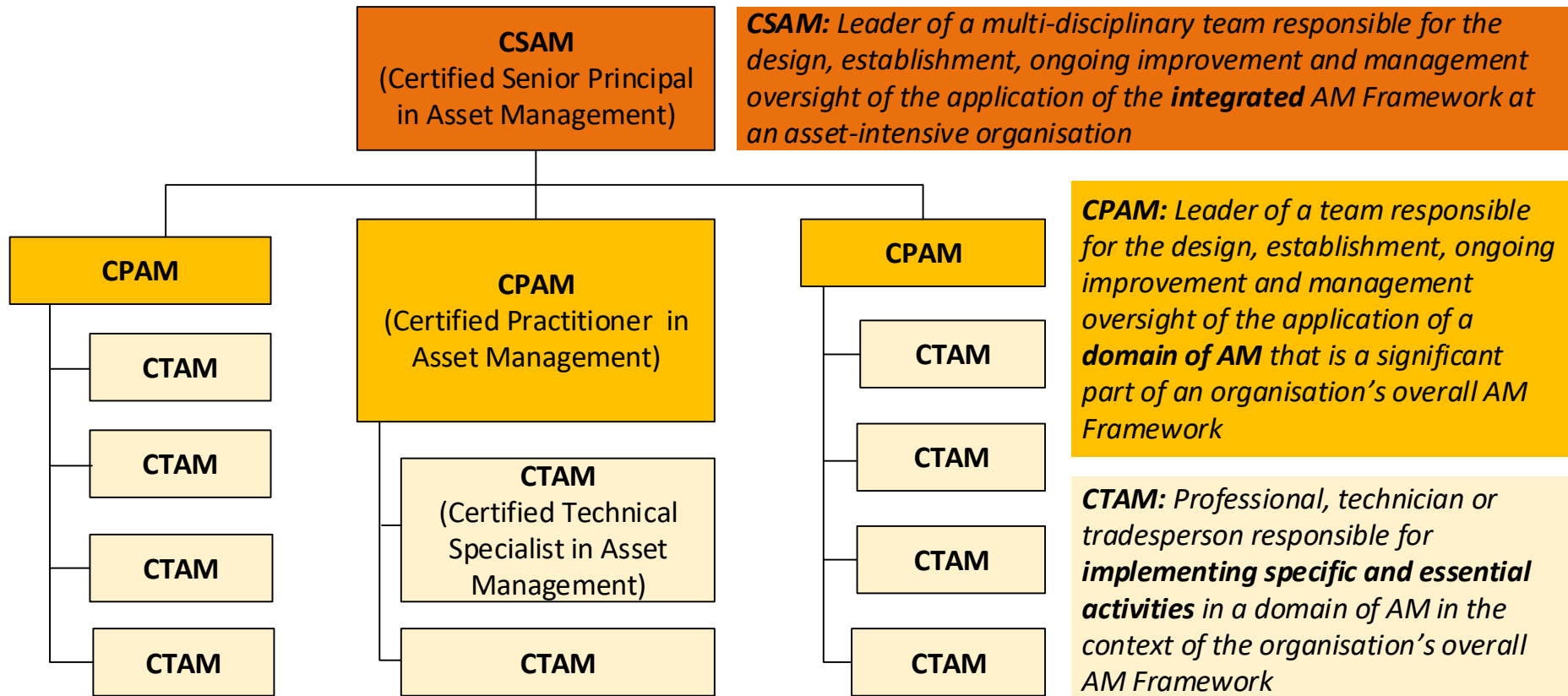
---

Central theme: successful AM is founded on effective **TEAMWORK** (“AM”:  
Coordinated activity of an organization to realise value from assets (ISO 55001))

Candidates must therefore:

- Not only perform their **own specific role in a competent** manner (that are the subject of other industry / professional certifications) .....they must also:
- Have a keen awareness and **appreciation of the fit** of these endeavors with those performed collectively in line with the organisation’s AM Framework, operationally, tactically and strategically .....; and
- Demonstrate active **participation in the assembly, maintenance and implementation of the integrated AM Framework** (as applicable to their role)

# Illustration of Organisational Roles



# Specification Criteria

---

- **Knowledge**
  - Qualification in the respective Domain (linked to the role)
  - Qualification in AM
  - .... *or Recognition of Prior Learning (RPL) and additional workplace experience*
  - AM examination (for CSAM and CPAM – CAMA or equivalent)
- **Experience**
  - Involvement in and exposure to the Asset Management industry
- **Skills**
  - Participation in informing and preparing key elements of the AM Framework (CTAM and CPAM in the respective domains – and CSAM in overall integration)
  - Leadership and management
- ❖ .....Significant asset portfolio (CSAM)
- ❖ .....Significant area of the business (CSAM & CPAM)

# Bloom's Taxonomy

		Cognitive Dimension				Affective Domain (Attitude)	AM Domain	Ability	Leadership & Management	Role
		(Knowledge) Remembering	Understanding	Applying	Analysing					
CSAM	Knowledge Dimension	Metacognitive			Order, Explain, Differentiate, Analyse	Receiving, Responding, Valuing, Organisation, Characterisation	Specific AM Discipline, AM Framework/System	Communicate complex knowledge and ideas, manage integration	Leader of AM Team and/or Domain expert	Leader, Manager, Practitioner and/or Expert Advisor
		Procedural	CAMA (or equivalent)		Classify, Experiment, Calculate					
		Factual/Conceptual		Summarise, Interpret						
CPAM	Knowledge Dimension	Procedural	CAMA (or equivalent)		Classify, Experiment, Calculate	Receiving, Responding, Valuing	Specific AM Discipline, AM Framework/System	Communicate knowledge and ideas	Proficient leader and/or Domain expert	Practitioner and/or Expert Advisor
		Factual/Conceptual		Summarise, Interpret						
CTAM	Knowledge Dimension	Procedural	Awareness		Classify, Experiment, Calculate	Receiving, Responding	Specific AM Discipline	Procedural application of knowledge and ideas	Technically proficient	Technical Practitioner
		Factual/Conceptual		Summarise, Interpret						

# Career Progression

---

**Experience and competency in Asset Management**

**Enhanced qualifications including CAMA (or equivalent)**

**Experience and competence in contributing to Asset Management**

**Domain  
experience,  
competency and  
fit-for-purpose  
application**

**Underpinning  
Domain  
knowledge**

**Competency (depth of knowledge, experience & application)**

**Breadth of AM subject areas/domains**

# Other Guiding Principles

---

- CSAMs and CPAMs – will generally be practitioners *in asset-intensive organisations*, though the certification also includes **external “advisors” / Domain experts / consultants** at the respective levels
- **Alternative certification routes** may be accommodated – though require longer work experience; undergo more rigorous review of workplace artefacts and the applicant’s participation; and an interview
- **Continuing Professional Development (CPD)** will be required to maintain the certification (as with CAMA)
- **Country-specific guidelines** provide explicit and simple interpretation of the requirements to guide candidates, as well as noting the fit of the GCS with existing qualifications, certifications and statutory requirements across applicable industries
- The arrangements indicated in the guidelines are reviewed and confirmed by **WPiAM to ensure a consistent approach**

# Key Application Requirements

Assessor Role	Practitioner Roles		Minimum Experience	Minimum Knowledge	Minimum Skills
External or in-house Assessor	External Advisor	In-house Practitioner			
	CSAM	CSAM	8 years	Domain + AM qualifications (Degree level*) + AM exam (CAMA or equivalent)	Competency-based qualifications Demonstration of responsibility for AM Framework (AMF), monitoring implementation, improvement, integration, and AM leadership
CAMA	CPAM	CPAM	5 years	Domain + AM qualification (Advanced Diploma level*) + AM exam (CAMA or equivalent)	Competency-based qualifications Demonstration of responsibility for domain, recommends domain aspects of the AMF, understanding of domain impact and fit in the AMF, domain leadership and management
		CTAM	2 years	Recognition as technical practitioner ^ + AM qualification (baseline awareness certificate*)	Competency-based qualifications Demonstration of responsibility for proficient and effective planning, implementation, and reporting of specific activities within a domain; understanding of fit in the AMF, and ongoing improvement
<b>Artefacts</b>					
General CV & overview of asset portfolios - corroborated		Qualification Certificates (relevant to country*) or evaluated RPL		Key documents relevant to the role in AM workplace (eg Policy, SAMP / AMP, AM Processes and Procedures, Practice Improvement Plans etc) - certified by a responsible person	
<b>Response to queries.....&amp; interview (optional – eg confidential artefacts and / or alternative quals)</b>					
<b>Commitment to Code of Ethics</b>					

\* Country-specific interpretation – Bloom's Taxonomy

^ Country & industry-specific interpretation



# Summary

---

- The requirements for **candidates** applying for award of GCS designations are significant: domain and AM-specific qualifications (or vocational training) and artefact submission – as well as minimum years' participation in the field of AM
- The requirement for **assessment of candidates' applications** is also substantial – WPiAM members in the respective countries will undertake the assessments based on country-specific plans assessed to be in line with the GCS

# Discussion

---