

ASSET MANAGEMENT COUNCIL

# OVERVIEW

# ASSET MANAGEMENT COUNCIL

## **We are:**

- Committed to the promotion and education of optimal asset management and maintenance practices in industrial, commercial, academic and government organisations
- A Technical Society of Engineers Australia
- A not-for profit
- An organisation consisting of a Board, Secretariat (Melbourne based) and 10 Chapters across Australia



# ASSET MANAGEMENT COUNCIL

## **We provide:**

- ✓ Asset Management Certification Scheme, launched in 2009
- ✓ Asset Management Fundamentals courses across Australia
- ✓ ICOMS Asset Management Conference – 250+ attendees at conferences
- ✓ Membership – currently 1200+ members including 65+ corporate
- ✓ Asset Management Awards - organisations, professionals and students
- ✓ Asset Management Body of Knowledge
- ✓ The Asset Journal
- ✓ Monthly eNewsletter
- ✓ Online Business Directory



# ASSET MANAGEMENT COUNCIL

## Affiliations:

- ABRAMAN, Brazil
- SMRP, USA
- GSMP, Arabian Gulf Region
- EFNMS, Europe
- IAM, UK
- FIM, South America
- PEMAC, Canada

## Patron:



## Gold Corporate Members include:



# CERTIFICATION



## Individual benefits:

- Recognition of one's skills and knowledge
- National system (international links under development)
- Pathway for professional development

## Organisation benefits:

- Workforce attraction and retention
- Increased opportunity for recruitment
- Professional development for staff





*Development of the Scheme supported by:*



ASSET MANAGEMENT COUNCIL

# CERTIFICATION



Post Nominal	Certification Level	Standard
 Certified Associate in Asset Management	Certified Associate	3000_114
 Certified Practitioner in Asset Management	Certified Practitioner	3000_115
 Certified Senior Practitioner in Asset Management	Certified Senior Practitioner	3000_116
 Certified Fellow in Asset Management	Certified Fellow	3000_117



# COURSES



## Asset Management Fundamentals (AMF) Course:

- Equips participants with an understanding of how business can benefit from effective asset management
- Suitable for people from many areas including:
  - ✓ Production
  - ✓ Maintenance
  - ✓ Risk Management
  - ✓ Accounting
  - ✓ Engineering
  - ✓ Procurement



# COURSES



## Asset Management Fundamentals (AMF) Course:

AMF participants learn how to:

- Define asset management as a life cycle process
- Identify the key concepts that underpin asset management
- Identify available asset management tools and techniques
- Identify opportunities for business improvement



# MEMBERSHIP



- Individual Membership (students and professionals)
- Corporate Membership – Gold, Silver, Bronze (organisations)
- Annual Subscription



# MEMBERSHIP



Membership Benefits	Individual	Corporate
Website access to members-only area and past conference papers	✓	✓
Membership rates for all Asset Management Council events	✓	✓
Attendance at Chapter Technical Meetings	✓	✓
Participation, eligibility to vote & to be elected to office in local Chapter	✓	✓
CP Eng post nominal credits (via Engineers Australia)	✓	✓
Name, web address and profile on Asset Management Council Website		✓
Listed in all eNewsletters and Journals		✓
Discount on booths at ICOMS Asset Management Conference		✓



# AWARDS



***Celebrating the significant contribution individuals and organisations are making to the advancement of asset management in Australia, and internationally'***

- Awards Ceremony held during ICOMS Asset Management Conference
- 6 Awards:

## **Individual Awards**

Student Awards

Leadership Award

Asset Management Council Medal

## **Organisation Awards**

Asset Management Awards

Founders Plate

Nominee Award



# AWARDS



## Asset Management Awards

### *Rewarding continuous asset management improvement*

- Asset Owners, including joint submissions with Service Providers, can apply
- Four Levels of AMA achievement: Bronze, Silver, Gold, Platinum
- Submission will receive an independent on-site inspection report on their asset management practices
- Previous recipients include:



Boeing – Hawker de Havill  
Skilled

City Rail (NSW)

EnergyAustralia (NSW)

HMAS ANZAC

MTR Corporation (Hong  
Kong)

Powercor (Australia)

Transfield

United Group Rail



# ASSET MANAGEMENT CONFERENCE



- Objective is to promote, foster and enhance the science and practice of asset management and maintenance
- Involves eminent Key note speakers, current Technical Paper presentations and Workshops
- Annual conference, held in different locations across Australia each year



# ASSET MANAGEMENT CONFERENCE



## Past highlights:

- Global Forum on Maintenance and Asset Management (GFMAM) first symposium (2009)
- Opening address by the Hon. Dr Barry Jones AO (2009)
- Keynote Speaker Nancy Regan, The Force Inc, Alabama USA (2009)
- Welcome by Bruce James, CEO, Transfield Services Australia (2008)
- Opening address by Tim Shanahan, The University of Western Australia (2008)



# THE ASSET JOURNAL



- Mission is to create a broad awareness of the value of asset management, nurture a common understanding of asset management and provide a portal to asset management knowledge and resources.
- Official publication of the Asset Management Council
- Commenced in 2007
- Also available electronically



# THE ASSET JOURNAL

## Common Errors in Maintenance & Reliability Theory

technical article 10

Reliability and Maintenance are areas that have interested mathematicians, statisticians and operational researchers as well as engineers. Reliability started in the military area with the V1 or doodlebug German missile of the Second World War (WWII), but was afterwards regarded as mainly a design tool for electronics. As a result, the received theory assumed that failures were Poisson events, even after Walodz Wilcoff (1951).  
Also in WWII, the first problem tackled by the mixed group of British scientists who pioneered Operational Research (OR) was maintenance of aircraft. They realised two things of lasting importance that have since been too often forgotten. First, a thorough understanding of the problem is essential before attempting a model or an OR solution and second that you cannot optimise anything without good quality surrogate data.  
Over time, misunderstandings due to different perspectives in mathematics, statistics and operations have led to some serious and recurrent errors. As in most fields, theoretical errors have led to unfortunate practical consequences.



## Includes:

- Editors column, Chairman's letter, CEO's column
- ICOMS Asset Management Conference Proceedings
- Technical Articles such as:
  - 'Safety Reliability or Performance?', GD Murphy & J Hill (Issue 1, Vol 3)
  - 'Common Errors in Maintenance & Reliability Theory and Practice', D Sherwin (Issue 1, Vol 3)

## Common Errors in Maintenance & Reliability

technical article 2

**D Sherwin**  
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**The (Mythical?) BATHTUB Curves**  
There are in fact two separate concepts in Reliability that produce a generalised curve with the shape of a longitudinal section through a bathtub, which is usually divided into three phases, two curved and one straight and level between them.  
One refers to the hazard rate function  $\lambda(t) = \frac{f(t)}{R(t)}$  in p.d. (probability) of a population or large sample of nominally identical parts that fail once and are discarded, plotted against the age of the parts at failure. Figure 1. Associated with this part bathtub, there exists a statistical distribution of failure times from which the hazard rate is derived. This distribution has a mean that is called the MTTF (Mean Time To Failure, which is not the same as a system Mean Time Between Failures, MTBF, see next sentence).  
The other type of bathtub curve (Figure 2) plots the total instantaneous Rate of Occurrence Of Failures (ROCOF = 1/MTBF) to all series parts and stages of a maintained system of many renewable parts against the age of the system from brand new or since major overhaul. Each failure, renewable part or t has age  $t_i$  and hazard rate  $\lambda(t_i)$  at system age  $x$ . Then the system instantaneous ROCOF is defined by

$$\lambda(x) = \sum_{i=1}^n \lambda_i(t_i) \quad (1)$$

6 The Asset Journal | Issue 1 | Volume 3 | 2009





## Supporting Body of Knowledge

- Established agreed Asset Management Models

*A framework of understanding the “why, what and how” of asset management*

- Links Asset Management Disciplines & Competency Areas to Competency Sets

**7 Disciplines to 30 CAs to 250 CSs**

- Links CAs to national/international AM Standards

**About 600 existing AM Standards linked**

- Links CAs to existing Competency Units

**About 1200 from a set of 44,000 from NTIS and other relevant agencies  
(EFNMS,  
IAM, EA etc)**

- Asset Management KPIs to be added shortly
- Links to Accounting competencies & Certification shortly

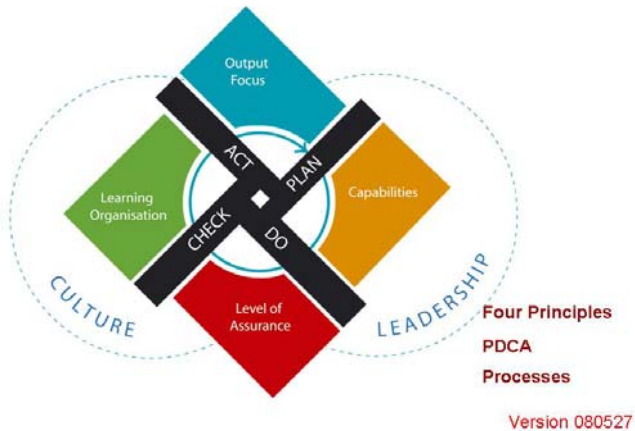


# ASSET MANAGEMENT BODY OF KNOWLEDGE

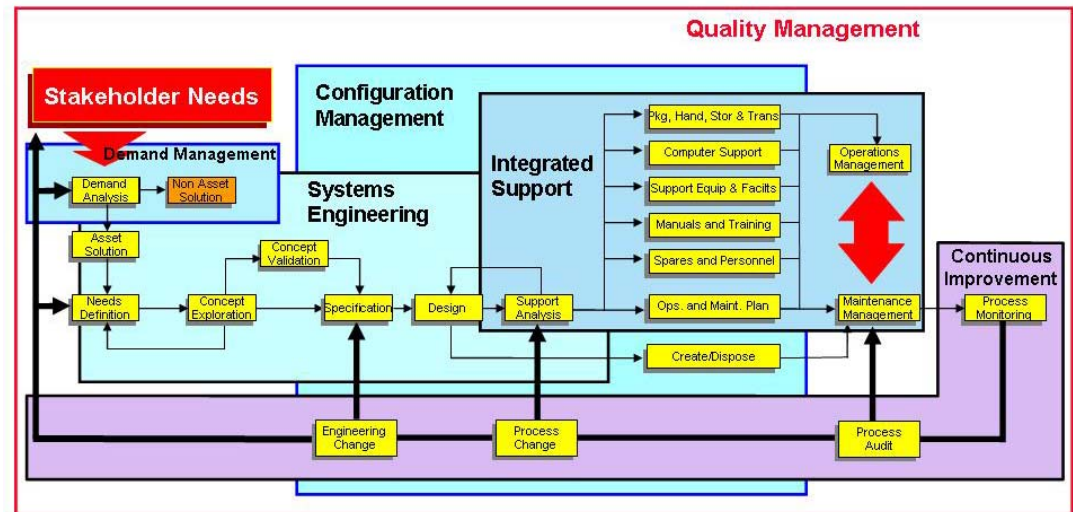


**AMBK**  
ASSET MANAGEMENT BODY OF KNOWLEDGE

## Asset Management Model



## Process Model



## Asset Management Definition

*'Lifecycle management of physical assets to achieve the stated outputs of the enterprise'*



ASSET MANAGEMENT COUNCIL