



STANDARDS AUSTRALIA - STANDARDS DEVELOPMENT
PROJECT PROPOSAL FORM

1.0 Proposer Details

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Draft Version 2-3-2010	Issued by Proposer for initial feedback to D.Perkins (AMC), P.Way (IPWEA), K.Martyn (Austroads), G.Williams (ENA) & J.Thomson (Standards Australia)
Draft Version 10-3-2010	Updated version issued to above group
Draft Version 11-3-2010	Distributed to attendees from the Nov 2009 and Peak Body representatives for comment ahead of the March 23 rd 2010 meeting



2.0 Standards Proposal

Name of Organisation	University of Western Australia
Subject of proposed Standard	<p>The development of three International Standards</p> <ul style="list-style-type: none"> • Asset Management – Overview, principles and terminology • Asset Management – Requirements • Asset Management – Guidelines on the application of ISO ???? <p>(where ???? represents the number to be applied to the “Requirements” standard)</p>
Scope of proposed Standard	<p>Please outline specific inclusions or exclusions and whether the proposed Standard is to be performance based or prescriptive. Please also provide an indication of whether the proposed Standard is to be a jointly developed or jointly revised AS/NZS under SA’s Memorandum of Understanding with Standards New Zealand.</p> <p>A detailed description of the scope for the three proposed Standards given in the supporting ISO Guide 72 “Justification Study” for this NWIP. ¹</p> <p>Two of the three standards proposed by the British Standards Institution (BSI) are guidance documents, the third (Asset Management – Requirements) is a performance-based specification standard. A summary of the scope of each is provided below.</p> <p>Asset Management – Overview, Principles and Terminology The proposed International Standard provides:</p> <ol style="list-style-type: none"> a) an overview of the asset management family of standards; b) an introduction to asset management; c) a description of the underlying principles of asset management d) examples of the application of asset management principles, e) a brief description of the Plan-Do-Check-Act (PDCA) methodology and its application within the asset management standards; and f) details of the terms and definitions for use in the asset management family of standards. <p>This International Standard is applicable to all types of organization (e.g. commercial enterprises, government agencies, non-profit organizations), as well as to all sizes of organization (from small to medium enterprises through to</p>

¹ An extract is provided here for those readers who do not have a copy of the NWIP.

multinationals).

This International Standard consists of guidance and recommendations and is not intended for certification, regulatory, or contractual use.

Asset Management Requirements

The proposed International Standard is performance based and specifies the requirements for an asset management system to optimally and sustainably manage physical assets and asset systems over their life cycles. It is applicable to any organization that wishes to:

- a) establish an asset management system to optimally and sustainably manage its physical assets over their life cycles or over a defined long-term period;
- b) implement, maintain and improve the management of its assets;
- c) assure itself of conformity with its stated asset management policy and strategy,
- d) demonstrate conformity with this International Standard by
 - 1) making a self-determination and self-declaration, or
 - 2) seeking confirmation of its conformance by parties having an interest in the organization, such as customers, or
 - 3) seeking confirmation of its self-declaration by a party external to the organization, or
 - 4) seeking certification/registration of its asset management system by an external organization.

This International Standard is applicable to all types of organization (e.g. commercial enterprises, government agencies, non-profit organizations), as well as to all sizes of organization (from small to medium enterprises through to multinationals).

Asset Management – Guidelines on the application of ISO?????

The proposed International Standard provides guidelines for the application of the requirements specified in ISO ??????. It provides guidance on the establishment, implementation, maintenance and improvement of an asset management system and its coordination with other management systems. It does not prescribe mandatory approaches, methods or tools for the implementation of the requirements of ISO ??????, but rather seeks to aid understanding and implementation by means of examples and illustrations. There are a number of relevant publications in Australia that could be included or referenced as Guidelines for this proposed ISO Standard, and should be considered if an Australian Standard is pursued. These publications are identified in next section (Section 3.0).

The proposed International Standard is applicable to all types of organization (e.g. commercial enterprises, government agencies, non-profit organizations), as well as



	to all sizes of organization (from small to medium enterprises through to multinationals).
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3.0 Avoidance of Duplication

Standards Australia’s accreditation by ABSDO (noting ABSDO’s Criteria for *Designation as an Australian Standard*, Section 3) requires avoidance or justification of any apparent duplication of a Standard.

<p>List any existing Standards, Codes, Guides and the like related to the proposed Standard. This should include any relevant International Standards.</p>	<p>The proposed Standard “Asset Management – Overview, principles and terminology” will align with standard ISO terminology. The proposed Standards “Asset Management – Requirements” and “Asset Management – Guidelines on the application of ISO ?????” are performance based. They will reference processes/guidelines that may be suitable to achieve performance and are available in the related Standards. The BSI submission has identified relevant ISO Standards to avoid duplication.</p>
<p>Please address any apparent or actual duplication between the existing material and the proposed Standard.</p>	<p>Within the Australian community, there are a number of <u>publically available</u> Standards, Codes, and Guides that compliment the proposed Standard. They do not duplicate the proposed Standard as many are sector specific, state specific or discipline specific.</p> <p><u>Sector-specific Guides</u></p> <p>Sector specific guides for Electrical Systems, Local Government, Roads and others will be used to provide guidance on the application of ISO ????? in relevant sectors. At present there are no such examples in the PAS 55 document so the material noted here is not duplication but a new addition.</p> <p><u>Local Government and infrastructure</u></p> <ul style="list-style-type: none"> • International Infrastructure Management Manual Version 3.0, 2006. Institute of Public Works Engineering of Australia (IPWEA) ISBN 0-473-10685-X². • Australian Infrastructure Financial Management Guidelines, 2009, Institute of Public Works Engineering of Australia (IPWEA) ISBN 978-0-646-51526-7

² IPWEA and NAMS New Zealand, Authors of the IIMM, have indicated that a review is currently underway of this document with a revised edition due to be available in the next 12-18 months. The IAM have indicated an interest in participating in this revision.

Roads

- Austroads Guide to Asset Management (8 parts)³, 2006, ISBN 1 9211 39 358

Offshore oil and gas

- National Offshore Petroleum Safety Authority (NOPSA) Safety Case Assessment Policy, 2010, N 04300 PL0052.

Electrical and Gas Networks

- Energy industry guidelines, published by Energy Networks Australia
 - NENS01-2001 National Electricity Network Safety Code
 - ENA Guideline for a national standard for energy network safety schemes for electricity

General

- What is Asset Management? Guidance note available from the Asset Management Council.

Australian State-specific guides

There are also State-specific guides relating to Safety case development and Electrical Codes of Practice. While we do not anticipate duplication between these and the proposed standard, given the harmonisation work across the States in Electrical and OHS, it will be prudent to check that principles of the proposed Standard are aligned with these.

- Victorian Government Legislation & Regulations
 - Electricity Safety (Management) Regulations 2009
 - Gas Safety (Safety Case) Regulations 2008, Version 001
 - MH/INT/07/267 Worksafe Focus Rule FR14 Safety case assessment guidance – Safety assessment, Rev 2
 - MH/INT/07/296 Worksafe Focus Rule FR11 Safety Case assessment guidance, Rev 3
 - major incident and major incident hazard identification
- NSW Government Codes and Guidelines
 - Code of Practice Distribution Risk Management 1998
 - Code of Practice Electricity Transmission and Distribution Asset Management 2009

Discipline-specific AS/ NZS Standards

There are a number of Australian and NZ Standards that provide either sector specific guidance or technique specific guidance for practitioners. They do not duplicate the proposed Standard which provides an over-arching set of principles

³ The World Roads Association has a Glossary of Terms including Asset Management definitions.

for asset management, not a how-to guide.

- AS 4568-2005 Preparation of a safety and operating plan for gas networks
- EM 010-2007 Safety Case Guideline, 2nd Ed
- AS/NZS 4804:2001 Occupational health and safety management systems – General guidelines on principles, systems and supporting techniques
- AS/NZS ISO 19011:2003 Guidelines for quality and/or environmental management systems auditing
- AS/NZS 4645.1:2008 Gas distribution networks Part 1: Network management
- HB 436:2004 Risk Management Guidelines, Companion to AS/NZS 4360:2004
- AS 2885:2007 Pipelines – Gas and Liquid petroleum (Parts 0, 1 and 3)
- AS/NZS ISO 31000:2009 Risk management
- AS/NZS 4536:1999 Life cycle costing – an application guide
- AS IEC 60300 series on Dependability management (various dates and titles)
- AS/NZS 15288:2003 Systems engineering – System life cycle processes
- AS IEC 60812:2008 Analysis techniques for system reliability –procedure for failure modes and effects analysis
- NZS7901:2008 Electricity and Gas Industries – Safety Management Systems for Public Safety

This extensive list of asset management documents across asset classes has developed as the discipline of Asset Management has emerged. It is timely to agree terminology and principles and to develop an agreed process for assessing the way asset owners are implementing Asset Management without replicating or removing the existing Asset Management Guides which are in many cases industry specific.

The close relationship between safety systems management and asset management will need to be carefully managed in the development of this ISO standard,



4.0 Strategic Priorities

This proposal aligns with the Memorandum of Understanding with the Commonwealth Government, Standards Australia to focus its resources on public interest priorities of the following areas: .

- Building and utilities;
- The environment, and sustainable development;
- Energy options and management;
- Service sectors, including healthcare;
- Voluntary standards for formerly regulated areas; and

<p>Please indicate how your proposal aligns to a current public priority and the impact of not proceeding with the project.</p>	<p>Alignment with Public Priority⁴</p> <p>Asset management is a highly topical subject, with interest globally from both public and private sector organizations who utilise their assets for the provision of services critical to customers and society (e.g. utilities, transport, power generation, defence, manufacturing, fleet management, property, local and national governments). There is similar and increasing interest also from corporate investors and regulators, who wish to be assured that the assets are being managed safely, effectively and efficiently with appropriate consideration of short term priorities, long term sustainability, risk management and value-for-money. This assurance is needed even more acutely in the current climate of intense financial pressure, aging physical infrastructure, growing performance demands, risk and environmental uncertainties.</p> <p>In Australia there has been considerable debate around current and future management of infrastructure assets. In the last four years we have seen the formation of a number of new national bodies to guide policy and action in infrastructure. Examples include, but are not limited to, Infrastructure Australia and the Australian Council of Local Governments (ACLG), the \$25m Local Government Reform Fund.</p> <p>At the inaugural meeting of the ACLG in 2008, the Prime Minister Kevin Rudd said <i>“Look at the creaking nature of some of our infrastructure and the age of it, it doesn’t tale you long to figure out that we’ve got a bit of a problem on our hands. And, you know, it’s time, as a nation, that we got serious about it”</i>. He then went on to say <i>“Let’s get our asset management right for infrastructure. Let’s get our</i></p>
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⁴ The Author would like to acknowledge the help of Greg Williams from ENA and Peter Way from IPWEA in preparing material for this section.

*infrastructure planning right. Let's get our infrastructure maintenance and replacement strategies right. And let's do so on a **nationally consistent basis** so that we can, before too many years elapse, look at a genuinely integrated national infrastructure plan, which is relevant for communities in a local authority in the south-western tip of Western Australia, as it is for Palm Island off the coast of North Queensland. That is, that the methodology for arriving at an assessment about what infrastructure is needed is common. The conclusions of each community will be different. But we'll have a **reliable basis** upon which to reach those conclusions."*¹

¹Extract from http://www.aclg.gov.au/media_centre/audio/pmclose_transcript.aspx

The move to a set of nationally consistent performance based Standards for Asset Management aligned with the aims set out in the Prime Minister's speech will assist in meeting this Public Policy goal. It will also support work announced in May 2009 by the Local Government and Planning Ministers Council to develop a nationally consistent asset management framework, including the elements of an asset management plan, to support improvement in local governments' asset management performance and sustainability⁵.

Alignment across and within sectors

Maturity in asset management practice and outcomes varies considerably across sectors. Some sectors, with existing guides and strong technical leadership, are a considerable way down the pathway towards 'good' asset management practice. For them, the appearance of a prescriptive Standard is likely to have limited benefit given investment they have made in developing and deploying their own frameworks. However, an outcomes-based Standard, as embodied in PAS 55, that defines a set of common expectations/ requirements may be a welcome development.

For sectors with less mature Asset Management practices, and no widely accepted framework or coordinating body, a Standard setting out a framework and requirements for managing assets, from the development of strategy, through to the establishment of information systems and onto operational implementation and assessment procedures, would be a welcome development. An overview of the different sectors is shown below.

⁵ http://www.lgpmcouncil.gov.au/publications/sus_framework.aspx

Table 1: Guidance documents in various sectors of the Australian AM community

Asset Sectors (in Australia)	Guidance documents (used by those organizations with AM teams)⁶
Local Government & Infrastructure Assets	IPWEA's International Infrastructure Management Manual (IIMM) and NAMS/ IPWEA publications. LG Association AM Programs in various States. National AM Framework documentation.
State Government Assets	Internal, IIMM & proprietary frameworks
Water and Waste Water	IIMM, PAS 55, Internal and proprietary frameworks
Electricity Transmission & Distribution	Federal & state regulation, IIMM, PAS 55, AS XXXX, Industry codes, standards & guidelines, Internal frameworks
Gas Transmission & Distribution	Federal & state regulation, IIMM, PAS 55, AS XXXX, Industry codes, standards & guidelines, Internal frameworks
Transport – Rail	PAS 55, Internal frameworks
Transport – Roads	World Road Association Dictionary Austroads Guide to Asset Management
Defense Assets	Internal frameworks
Mining & mineral processing	Internal frameworks & PAS 55 (limited uptake)
Oil & Gas Production	Asset Integrity and Internal frameworks

The BSI-PAS 55-1 and PAS 55-2 Specifications, on which the ISO application is based, were originally developed by the regulated sector in UK in 2004. Adoption of the specifications was quick particularly from the gas regulator Ofgem. Following

⁶ In addition to the Guidance documents listed here, there are a number of proprietary Asset Management Quality Frameworks developed by consulting groups and peak bodies. They are not listed here as the material in the Frameworks is not publically available.

consultation with stakeholders Ofgem proposed that all regulated companies should achieve Asset Management certification using PAS 55 in 2008. The UK Water body UKWIR also issued AM guidelines aligned with PAS 55. In the Australian context, regulation of water, gas and electricity is managed at the State level and there are different requirements and processes in each state. In a small country like Australia this creates additional costs on the regulated bodies and a duplication of administrative and development processes.

In spite of some leading edge practices in certain sectors, recent Infrastructure Report Cards show there is still opportunity for improvement in infrastructure management practices (including asset management). This is summarized below.

Table 2: Extract from Engineers Australia Infrastructure Report Cards

	2005 National Report Card ⁷	2010 Victoria Report Card ⁸
Roads	C+	C+
Rail	C-	D
Potable water	B-	C
Wastewater	C+	B-
Electricity	B-	C-
Gas	C+	C
Ports	C+	C+

B Good. Minor changes required in one or more areas to be fit for current and anticipated purpose.

C Adequate. Major changes required in one or more areas to enable infrastructure to be fit for its current and anticipated purpose

D Poor. Critical changes required in one or more areas to be fit for current and anticipated purpose.

National Electrical Harmonisation Process

In the electricity sector the Ministerial Council for Energy has a number of projects⁹ which are likely to impact on Asset Management practices. In 2007, Council of Australian Governments (COAG) committed to work through the Ministerial Council on Energy (MCE), to improve the consistency of state-based regulations that apply

⁷ Infrastructure Report Card (2005), Engineers Australia, ACT.

⁸ The 2010 version of the Infrastructure Report Card is due to be published in July 2010. State versions have started to be issued; the first is for Victorian Infrastructure Report card 2010, Engineers Australia, February 2010 ISBN 978-0858258754. This is included here as illustration of the current state. Other states will be available from May 2010.

⁹ MCE 2009 Discussion Paper – Harmonisation of Energy Supply Industry Technical and Safety Regulation, Ministerial Council on Energy, Canberra; MCE 2009 Energy Technical and Safety Harmonisation Enhancement Plan, Ministerial Council on Energy, Canberra .

to the energy supply industry (ESI). This includes occupational health, technical and safety requirements. In 2008, the MCE established the Energy Technical and Safety Leaders Group (the Leaders Group), to develop an Energy Safety and Technical Harmonisation Enhancement Plan to provide a framework for greater harmonisation in the ESI. In 2009, the National OHS Scoping Paper, released by the Workplace Relations Ministers' Council, recognised that the ESI may require additional specific legislation to address special issues (due to specific technical requirements) not covered by Safe Work Australia's national OHS harmonisation process. The MCE agreed in principle to a Plan to progress recommendations for an Intergovernmental Agreement, development of an Australian Standard for electricity (the Energy Network Safety Scheme), new governance arrangements, improvements to worker mobility and related initiatives. This Plan requires harmonisation between the Energy Supply Industry Safety Committee regime and Safe Work Australia processes.

The ESI has considered the various management systems standards available to the energy industry in Australia for the management of technical safety, and identified the potential for PAS-55 to be referenced in an Energy Networks Safety Standard as the basis for asset management systems and practices.

In Victoria, the Energy Safe Victoria (ESV) agency has identified PAS-55 as a relevant specification for good asset management systems. ESV publishes guidelines for interpretation of the Victorian legislation and regulation of the energy supply industry, and conducts stakeholder engagement forums on a regular basis. As a regulator, ESV has strongly indicated its view of PAS-55 and other management system standards, such as ISO9001, as being foundation standards in energy businesses. The Victorian view appears to be shared amongst energy regulators around Australia. There are many activities underway on which energy regulators participate and infer that asset management standards, such as a version of PAS-55, could be and likely will be referenced in state and federal legislation.

National OHS Harmonisation Process

In 2008, the Council of Australian Governments (COAG) formally committed to the harmonisation of occupational health and safety (OHS) legislation by signing an Intergovernmental Agreement for Regulatory and Operational Reform in OHS (IGA). The IGA outlines the commitment of all jurisdictions and the Commonwealth to the development and implementation of model OHS legislation as the most effective way to achieve harmonisation of OHS Laws in Australia.

Safe Work Australia is developing national model OHS legislation. The model Work Health and Safety Act, supported by model regulations and codes of practice, will be adopted by all Australian jurisdictions. The model Work Health and Safety Act and administrative regulations were released for public comment in September 2009 and agreed by the Workplace Relations Ministers Council (WRMC) in December 2009.

Model regulations for all other matters, including electricity, are now in development. These model regulations are to be released for public comment in late 2010 and submitted to the WRMC for agreement in June 2011. By December 2011, all jurisdictions will have enacted the model Act and model regulations and completed all related transitional arrangements to enable a commencement date of 1 January 2012.

A key element of the reforms sponsored by SafeWork Australia is the notion of a Safety Case or path to a safer outcome. The Safety Case approach provides for a goal-setting, performance-based regime that is in line with the approach taken by the proposed Standard.

Impacts of not proceeding

Impacts of not proceeding identified in the BSI submission include:

- The continued proliferation of multiple definitions for Asset Management terminology
- Challenges in establishing acceptable performance for infrastructure services across different jurisdictions and asset classes
- The perceived barriers to improvement in Asset Management resulting from a lack of agreed expectations about what makes 'good' asset management.
- Inability to provide guidance to both public and private sector organizations on what an optimized asset management system should comprise.
- Challenges to users of public infrastructure in understanding key concepts in delivering asset management
- Continued focus on short term decision making and annual budget cycles, especially in government, that impact the long term sustainability of the assets. This is exacerbated by the pressures now growing on investment, cost controls, sustainability, value-for-money criteria and the public perception of risk in many areas of business and public service.

In the Australian context there are some additional impacts that a more consistent national approach which we would hope to evolve out of work on this Standard would address. They include a continued lack of agreement between the various States on asset management expectations, terminology and concepts particularly as they relate to regulated industries such as electricity, gas and water. This results in additional costs for national organizations operating across multiple jurisdictions.

Over the last 20 years there has been a range of public policy documents published that highlight the need for more robust, demonstrably repeatable process in the management of assets. Some relevant examples of those documents are listed below:



- The Parliament of the Commonwealth of Australia, Joint Committee of Public Accounts and Audit, Report 363, Asset management by Commonwealth Agencies, July 1998
- Australian National Audit office, Financial Control and Administration Audit, Audit Report No. 27 1995-96, Asset Management
- Guidelines for managing Risk in the Australian Public Service, MAB/MIAC Report No. 22, October 1996, Australian Government Publishing Service
- Improving Asset Management in the Public Sector, May 1991, Australian Government Publishing Service
- Strategic Asset Management Framework, 2nd Ed, February 1997, Government of South Australia

Summary

There is sufficient evidence across a number of industries that good industry practice can be defined and benchmarked with reference to a standards framework, particularly one that is outcomes based. Within the energy, transport, oil & gas, telecommunications and facilities industries there is also a growing desire to adopt a uniform language in asset management, generically applied across industries but interchangeable and commonly understood. The drivers for these changes are essentially government audit and review processes, where assets in the public space are visible, and subject to various levels of government scrutiny over performance, quality, condition and cost. The extent to which this public interest is exercised is dependent on the extent of government regulation, but there is no doubt that with an increasing need to get more from less, representatives of the Australian public are raising the bar for owners and operators of physical assets.

5.0 Contractual Obligations for Standards Australia

Are you aware of any contractual obligations for Standards Australia relating to your proposal? If you are, please indicate how your proposal aligns to these obligations.

The author is not aware of any contractual obligations for Standards Australia relating to this proposal.



6.0 Preferred Pathway for Development

<p>Please list information which will assist consideration and discussion of your preferred pathway.</p>	<p>In light of the interest in this proposed Standard from across the Australian AM community, and the resource limitations at Standards Australia, the Standards Australia Project Lead has proposed the <u>Committee-driven</u> option. This path will need to be confirmed at the March meeting.</p> <p><u>Proposed Pathway : Committee driven</u> Highly autonomous Committees develop approved Standards to ABSDO requirements with defined technical and secretarial support from Standards Australia. The Committee drives the project. What makes it different? ~ A highly autonomous Committee is empowered to act within Standards Australia's Standards development structure and take drafting and secretarial responsibility. ~ Primarily relies on resources and expertise from Committee members and relevant stakeholders.</p> <p>Benefits ~ The Committee sets its own timeframes for Standards development projects based on available resources. They determine resource allocation. ~ Committees have the opportunity to demonstrate an industry leadership role. ~ The Committee operates under Standards Australia's accreditation and Professional Indemnity insurance. ~ Not solely reliant on Standards Australia resource availability.</p> <p>Funding arrangements are yet to be agreed and will be discussed at the March 2010 meeting.</p>
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7.0 Stakeholder Support

<p>7.1 Please identify the relevant stakeholders required to develop the proposed Australian Standard and/or those stakeholders impacted by the proposed Standard (including name, position and contact details for primary contact of each</p>	<p>A number of Peak Bodies were represented in the initial stakeholder meeting on 17th November 2009 (please note that this list contains only those representing peak bodies, not individuals representing for profit organizations). The names and addresses of the primary contact for each of these stakeholder groups is provided below.</p> <p>On 23rd February 2010 a letter was sent by the author to the CEO (or equivalent) of 54 Peak Bodies in Australia who may have views on the development of the proposed Australian Standard. These Peak Bodies represent Independent Professional/ Technical bodies, Employer/ Employee groups, Research Institutions, and Regulatory/Government bodies at a National level. While it is possible that some groups have not been identified, a good faith</p>
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stakeholder).

effort has been made to alert the AM community to these ISO developments.

Manufacturers/ Suppliers (MS)

Energy Networks Association (ENA)

Level 3, 40 Blackall Street,
Barton ACT 2601

Contact: Mark Amos (Director Infrastructure Policy) or Greg Williams
Represented at the 17/11/09 meeting by Ed Gaykema

Independent Professional and Technical Bodies (IPTB)

Institution of Public Works Engineers Australia (IPWEA)

Level 12 447 Kent St
SYDNEY, NSW 2000

Contact: Chris Champion
Represented at the 17/11/09 meeting by: Peter Way and Chris Champion

Asset Management Council (AMC)

PO Box 245 SURREY HILLS
VIC 3127

Contact: John Hardwick (National Chairman)
Represented at the 17/11/09 meeting by: John Hardwick, Sally Nugent, Jim Kennedy and Derek Perkins

Austroads

Suite 2, Level 9,
287 Elizabeth Street, Sydney
NSW 2000

To be represented at the March meeting by Kathryn Martin (Austroads Assets Program Manager)

Australasian Corrosion Association Inc.

1/458 Middleborough Road,
BLACKBURN
VIC 3130

To be represented at the March meeting by Ian Booth (CEO)

Australian Petroleum Production & Exploration Association (APPEA)

GPO 2201 Canberra
ACT 2601

To be represented at the March meeting by Neil Fairweather

Regulatory and Controlling Bodies (RCB)

NSW Independent Transport Safety and Reliability Regulator (ITSRR)

PO Box A2633

SYDNEY SOUTH
NSW 1235
Contact: Len Neist (CEO)
Represented at the 17/11/09 meeting by: Peter Kohler

Research & Academic Organizations (RAO)

CRC Mining
PO Box 523
KENMORE EAST
QLD, 4069
Contact: Professor Mike Hood (CEO)
Represented at the 17/11/09 meeting by: Dave Daines

University of NSW
SYDNEY
NSW, 2052
Contact: Professor Hilmer (VC)
Represented at the 17/11/09 meeting by: Professor Jean Cross

University of Wollongong
Northfields Avenue
WOLLONGONG
NSW, 2522
Represented at the 17/11/09 meeting by: Professor Richard Dwight

University of WA
35 Stirling Highway
CRAWLEY
WA, 6009
Contact: Professor Robson (VC)
Represented at the 17/11/09 meeting by: A/Professor Melinda Hodkiewicz

CRC CIEAM
GPO Box 2434
BRISBANE
QLD, 4001
Represented at the 17/11/09 meeting by: Professor Mathew (CEO)

Planning and Transport Research Centre (PATREC)
GPO Box U1987
Perth WA 6845
Wish to stay informed through: Greg Martin

Union and Employee Bodies (UE)

Association of Professional Engineers, Scientists and Managers, Australia

	<p>(APESMA) 163 Eastern Road South Melbourne Vic 3205 To be represented at the March meeting by Charlotte England (APESMA member and Corporate Relations Manager Commercial for Chifley Business School) and Tom Carpenter (Principal Developer of Chifley's Vocational Certificate in Physical Asset Management)</p>
<p>7.2 Please advise if there is an existing Technical Committee and/or relevant body of work within Standards Australia.</p>	<p>In the BSI submission, a wide range of other ISO and IEA technical committees that may have interest in this project was noted. They recommended that a new ISO Project committee be established, this has been agreed to be ISO.</p> <p>Similarly in Australia there is no existing Technical Committee for Asset Management but a number of Standards Australia technical committees that may have an interest. The author proposed that a new AS Project committee be established.</p> <p>These include, but are not limited to:</p> <ul style="list-style-type: none"> • Dependability committee • Water Asset Management committee • Risk management committee • FMEA committee • AG008 Gas Distribution • EL52 Electricity Distribution
<p>7.3 Based on your consultation with relevant stakeholders, does development of the proposed Australian Standard have sufficient support to proceed?</p>	<p>This will be addressed after the March 23rd meeting</p>
<p>7.4 If further consultation is required, please indicate your proposed approach and timeframe to achieve sufficient support.</p>	<p>This will be addressed after the March 23rd meeting</p>

8.0 Risks and Opportunities

8.1 Identify any risks or opportunities that may affect the successful completion and/or implementation of the proposal. Include details of areas of uncertainty that might enhance or prevent the project achieving its objectives.

Examples of risks¹⁰ that could affect the project have been listed below.

Risk	Likelihood	Consequence	Risk treatment
Process Risks			
Failure to notify key stakeholders of the process	Possible	Major	Ensure that an initial approach is made to all stakeholders who may be impacted by/ or seek to be involved in the process
Failure to identify the correct person within each stakeholder group	Probable	Minor	Ensure administrative process follows up with each group after the initial letter
Failure to engage and align work with the COAG OSH and Energy Safety reform agendas	Possible	Major	Identify stakeholders who are familiar with both COAG and Energy Safety groups and ensure liaison and regular updates.
Failure to give stakeholder groups sufficient time to consult internally	Probable	Moderate	Communicate timetables to stakeholder groups when they are made available by ISO and Standards Australia.
Failure to raise funds to send Australian representative(s) to ISO meetings	Probable	Severe	It is not clear what is the best path forward here with this many stakeholder groups and interests.
Failure to get the ISO group to acknowledge and incorporate the materials and ideas from the Australian community	Possible	Severe	Attempt to have more than one Australian representative at key ISO meetings. Ensure representatives are well briefed.
Absence/ unavailability of the committee chair	Probable	Moderate	Ensure that there is a support group in place who can step into the chair role. Make sure all documents are available to them. Keep Standards Australia briefed.
Failure to manage administrative processes to ensure	Possible	Severe	Two of the stakeholder groups have offered assistance with

¹⁰ Based on HB 436:2004 Risk Management Guidelines – companion to Australian Standard AS/NZ 4360:2004

effective, timely consultation with stakeholders			administration. A transparent process using a RACI will be developed. Please note that 1) the chair has no administrative support from her institution so this must come from external groups and 2) Standards Australia does not provide this support.
Domination of the Australian debate by a single organization/ group of organizations	Improbable	Major	The role of the chair is to ensure that the views of all stakeholders are represented.
Solution Risks			
Australian community does not adopt wholly or in part the resulting ISO standard	Possible	Major	If the final outcome does not meet the needs of our community then this may be appropriate but we must ensure that if this decision is made that it represents the balanced view of the Australian community and not the interests of a few.
Interrelationship between Safety regulations and OSH regulations with proposed Asset Management cannot be adequately managed	Possible	Major	Ensure we understand the root cause(s) of the mismatch or lack of agreement. Assess and discuss risks of failure to align.
The diversity of industry participants cannot agree on common ground	Probable	Moderate	Focus on the principles, allow for diversity of approaches, sector specific practices, and innovation
The process takes so long that the Standard is obsolete on publication	Possible	Severe	Ensure that feedback from stakeholders is discussed in ISO meetings. Staying in touch with on-going developments.
The Standard is prescriptive rather than outcomes based.	Improbable	Severe	Early notification to the Australia stakeholder group and consultation on appropriate pathways should this occur. If the

			Australian Standard is an adoption of the proposed BSI specification then this is outcomes based.
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Likelihood	Description ¹¹	Consequence	Description
Probable	The event is expected to occur within the time frame of the project	Severe	Most objectives cannot be achieved
Possible	The event is not expected to occur in the time frame of the project	Major	Some important objectives cannot be achieved
Improbable	Conceivable but highly unlikely to occur during the project	Moderate	Some objectives affected
		Minor	Minor effects that are easily remedied
		Negligible	Negligible impact on objectives

8.2 Detail what actions should be taken to treat these risks to ensure the Net Benefit is achieved or exceeded. The cost of these risk treatment actions, if material, should be included in the project budget and should be part of the Net Benefit Case.

The risk table above provides a list of proposed risk treatment actions to mitigate the measures.

Most of these risks can be managed by effective project management and stakeholder consultation.

The key unresolved risk is one of funding for

- a) meetings e.g hosting of teleconferences etc,
- b) travel to attend ISO meetings, and
- c) time and support by Standards Australia beyond the base level.

Items a) and b) are discussed into the Cost section of the Net Benefit case.

Some member organizations have offered to subsidize the cost of travel and accommodation for their representative acting as a delegate to the ISO meetings.

Some stakeholder organizations (ENA, IPWEA, AMC) have access to teleconference

¹¹ Based on HB 436:2004 Risk Management Guidelines – companion to Australian Standard AS/NZ 4360:2004



	<p>facilities and city based office space. Other interested organizations may be prepared to provide facilities for meetings as required.</p>
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9.0 Post Implementation Review of the Standard

<p>9.1 State your proposed or recommended post implementation monitoring strategy for the performance of the Standard and indicate why this is appropriate.</p>	<p>It is perhaps too early in the process to address this question. We are some years from the development of a Standard. We will take advice from Standards Australia and consult with the Asset Management stakeholder group to establish an effective review process if and when an Australian Standard is accepted.</p>
<p>9.2 State when a review of the Standard and its operation should be undertaken, who should lead this monitoring and review activity and indicate which other parties should be involved. This review should involve the application of suitable analysis to determine the lessons learnt from both the successes and failures associated with the project.</p>	<p>Please refer to response in Section 9.1</p>

10.0 Purpose and Demonstration of Net Benefit

11.0 Additional Information



Please attach any other information or comments (if any) which support this proposal or assist its consideration.

12.0 Declaration

Please print then sign this declaration, then forward it and your attached documents to Standards Australia. The signature of an authorised representative of the proposer/s constitutes this Declaration and is required prior to formal consideration of this proposal.

The information provided in this application is true and accurate to the best of my/our knowledge. As a representative of the proposing organisation, I believe the proposed Standard will result in Net Benefit* to Australia.

Name	Dr. Melinda Hodkiewicz
Date	
Signature ¹²	

* As defined in the NSO Guide to developing the Net Benefit Case

¹² Not signed as of issue 11/3/10 pending review by stakeholders at the 23/3/10 meeting



PRO-FORMA

Net Benefit Case

<p>Executive Summary</p>	<p>There is evidence across a number of industries that good industry practice can be defined and benchmarked with reference to an outcomes-oriented and risk-based standards framework. Within the energy, transport, oil & gas, telecommunications, local government and facilities industries there is also a growing desire to adopt a uniform language in asset management, generically applied across industries but interchangeable and commonly understood.</p> <p>The drivers for these changes include</p> <ul style="list-style-type: none"> • Government audit and review processes, where assets in the public space are visible, and subject to various levels of government scrutiny over performance, quality, condition and cost, and • Awareness at executive management levels in public and for-profit organisations of 1) the need to understand and actively manage asset risk, 2) the potential commercial and cost benefits of improved asset management practices, and 3) the need to manage stakeholder expectations regarding levels of service delivered by physical assets. <p>There is a need for a more nationally consistent approach to the management of assets that provide services and products to the Australian community. The availability of an Australian Standard will assist in this.</p>
<p>Need</p>	<p>The need for a consistency in defining asset management outcomes was summarized by the Prime Minister Kevin Rudd in 2008 (quoted in full in Section 4.0). He called for asset management to be done <i>“on a nationally consistent and reliable basis.”</i> His speech acknowledged that <i>“we’ve got a bit of a problem on our hands. And, you know, it’s time, as a nation, that we got serious about it”</i> and we need to <i>“get our asset management right for infrastructure.”</i></p> <p>This proposal to develop an Australian Standard comes at a time when there is increasing awareness at executive management levels of 1) the need to understand and actively manage asset risk, 2) the potential commercial and cost benefits of improved asset management practices, and 3) the need to manage stakeholder expectations regarding levels of service delivered by physical assets.</p> <p>The goal of the proposed Australian Standard is to have a set of documents that are accepted and adopted by the Australian asset management stakeholder community as representing requirements for an asset management system to</p>

	<p>optimally and sustainably manage physical assets and asset systems over their life cycles.</p> <p>Key objectives of the process are to</p> <ol style="list-style-type: none"> 1. Ensure that current 'good' practices developed by, and active in, the Australian asset community are promoted in the ISO process and reflected in the resulting ISO Standard. 2. Ensure that the Standard reflects an outcomes-focus and accommodates a diversity of approaches. 3. Manage the stakeholder consultation process in an inclusive and transparent way. 4. Represent the views of the majority of the Australian Asset Management community to the ISO committee. <p>The outcomes of not pursuing the ISO (and related Australian) Standards, are:</p> <ol style="list-style-type: none"> 1. Continued balkanization in approach to Asset Management within and across stakeholder groups in Australia; 2. Inability to agree on the <i>nationally consistent and reliable basis</i> for asset management desired by the Prime Minister Kevin Rudd; 3. Separation from the international community in terms of accepted practice in Asset Management. This may have negligible impact in stakeholder groups in which Australian practice leads international practice but negative impact in other, less mature, organizations and asset classes.
Options	<p>There are four potential outcomes from this process:</p> <ol style="list-style-type: none"> a) Do-nothing option: Australia does not participate and continues to see a proliferation in approaches to asset management in Australia with differences across asset groups, and at local, state and federal levels. b) Desired option: Australia actively engages with the ISO process and produces a Standard acceptable to Australian stakeholders with no changes. c) Alternate option 1: ISO Standard development completes but the Australian community requires significant modification to meet its needs. d) Alternate option 2: ISO Standard development completes but the result is not accepted and adopted by the Australian community. Different sectors continue to develop and adopt their own frameworks. <p>Which outcome we end up with depends on the engagement of the Australian stakeholders and their ability to input to, and influence, the ISO committee.</p>

<p>Costs and Benefits</p>	<p>This section describes the potential impacts (benefits and costs) of an Australian Standard. Cost implications are common across the different criteria and will be discussed at the end.</p> <p><u>Benefits</u></p> <p>Public Health and Safety</p> <p>The PAS 55-1 specification includes specific sections on Contingency planning (4.3.4), Training, awareness & competence (4.4.1), Risk management (4.7), Investigation of asset-related failures, incidents and non-conformities (4.6.2), and Audit (4.6.4).</p> <p>Historically, asset failures have caused loss of life through fires, explosions, road and train crashes, and toxic spills. Examples include the</p> <ul style="list-style-type: none"> • Esso Longford Gas Plant explosion 1998 • Fires in Tenterden, WA (2003) and Toodyay, WA (2009) associated with electrical distribution assets • Minneapolis, USA Bridge collapse 2007 • Piles Creek , Somersby NSW Culvert Collapse 2007 <p>An organization with processes and decision making practices that demonstrate they are planning ahead and managing assets over the life cycle for the benefits of their stakeholders, will also be actively managing safety, unplanned asset failure and asset risk. Adoption of processes to meet the requirements of the proposed Standard will likely be seen as part of a suite of efforts to manage public/ workplace health and safety improvement.</p> <p><i>Expected net benefit: Positive</i></p> <p>Social and Community Impact</p> <p>Provision of appropriate infrastructure in acceptable condition is crucial for our society. The intergenerational equity effects of failure to invest in maintenance or the long term costs of investing in white elephants are being increasingly considered as the sustainability agenda is progressed. The development of national and state policies for infrastructure management and distribution of considerable funds through Infrastructure Australia and others makes this a crucial and evolving space. In 2009-2010 alone the water industry will be overseeing projects with a value greater than \$14 billion¹³. How can the Government ensure that it is getting value for money for these investments over their life cycle and that they are assured of appropriate levels of service at acceptable levels of risk? Asset</p>
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¹³ WSAA Report Card 2008-2009, available from <https://www.wsaa.asn.au> accessed 2/3/10

Management requires the asset owner to explicitly address the level of service which will be provided to the community. There are sections in the PAS 55, particularly in Section 4.3 (Asset management strategy, objectives and plans) that require asset owners to demonstrate how they would deliver service objectives.

Expected net benefit: Positive

Environmental Impact

The primary impacts on environmental factors from adoption of the Standard are likely to be in the areas of

- Energy conservation and efficiency
- Asset Life extension
- Adaptation to climate change, and
- Reduced incidence of asset failures (Past asset failures have caused environmental impacts e.g. fires, combustion of noxious gasses, leakage of toxins into waterways)

As these are long term benefits the process improvements are likely incur costs now with benefits deferred to later in the life cycle. All these opportunities require a clear understanding of the performance and condition of the assets (PAS 55-1 Section 4.6) and risk-assessed Asset Management Plans (Section 4.5).

Expected net benefit: Cost now, deferred benefit.

Competition

Australia is home to many international organizations. For these groups, there are potentially two benefits of the Standard

- Opportunity to align Asset Management expectations to a common framework across international boundaries. This would facilitate benchmarking, information exchange and sharing of best practice.
- Ability to conform to global norms when pursuing supply, product sales, EPCM, and other services/ contracts.
- The ability of Australian industry to compete on an international level is also constrained by bottlenecks and congestion at ports, on railways, roads and public transport in some part caused by lack of clarity in asset management decisions.

Expected net benefit: Positive

Economic Impact

The benefit of 'good' asset management is hard to measure but the impact of poor asset management (like quality) is not. Some examples of the latter are:

- Loss of power in our major cities due to transformer and other failures

- Main sewer or water line failures
- Loss of power generation capacity due to gas line failure (If we consider the Varanus Island fire in June 2008, the economic impact of this “*disruption in gas supplies...is expected to cost the Western Australian economy around \$2 billion in Gross State Product (GSP) terms.*”¹⁴)

While it is compelling to focus on major failures, there is a hidden cost of poor asset management practices. The impact of not doing the right work, at the right time, in the right way. Poor decisions on asset selection that result in higher life cycle costs for a lower purchase price, and the costs and risks of deferring maintenance. Having appropriate processes in place that allow organizations to demonstrate appropriate asset selection and asset management plans, will reduce the risk of short term decision making and in some cases premature loss of assets.

The total value of the assets in government control and those assets managed by private sector providing services for the public is significant. Good asset management delivers a fit for purpose asset at least cost to the taxpayer or customer. In private industry it is sometimes easier to implement cost control but the public assets the mechanism are not as well advanced.
Expected net benefit: Cost now, deferred benefit.

Costs to the Australian community

What costs are likely to be involved for organizations that adopt the proposed Standard? The answer to this depends on the maturity of the individual organization and the specific technical support available in the sector. Organizations with existing asset management teams will likely see some minor additional work associated with demonstrating alignment to the Standard’s expectations and in data collection. Obviously, organizations starting from scratch will expect to incur costs associated with hiring new staff, training existing staff and possibly using consultants.

In some sectors, particularly Roads and at the Local Government level, much work is in place to support asset management development. If, in the development of an Asset Management Standard, there was a significant move away from the PAS 55 model with its implicit recognition of a diversity of approaches but a common set of principles and outcomes, this would likely result in increased costs to groups who have already invested in sector specific frameworks.
Net benefit: Costs for implementation

¹⁴ http://www.aph.gov.au/senate/committee/economics_ctte/wa_gas_08/report/c02.pdf accessed 2/3/10

	<p><u>Legislation</u>¹⁵</p> <p>Regarding the potential for the Standard to be called up in legislation, the proposer understands that this is not currently the situation but that is likely to change in the Energy (gas and electricity) sector over the next two years. The potential for PAS-55 or the ISO standard to be referenced in regulation or by other standards will be discussed with stakeholders at the March 23rd workshop.</p> <p>The Ministerial Council on Energy is conducting a reform program of energy standards and regulation, in attempt to harmonise the arrangements across Australia. In addition, the author has been made aware that SafeWork Australia has actively engaged representatives from industry in discussion about the relevance of management and performance standards, such as PAS-55 and AS 4804 to the assessment of a generic safety case.</p> <p><i>Net benefit: Positive due to 1) reduction in duplication and 2) harmonisation of regulations</i></p> <p><u>Costs for participants in the Standard development process</u></p> <p>Participants should be able to participate in development of the Standard with minimum financial outlay. However, we will have to agree as a group how to fund representation at the ISO meetings. As a guide, participants who wish to attend the London meeting in April 2010 should expect the following costs</p> <ul style="list-style-type: none"> • Return airfare Economy London ~ A\$2500 • 5 nights in London at Grange Langham Court Hotel ~ A\$ 910 (PDS110/night ex VAT) plus Meals etc • Estimated budget ~ A\$4000 plus taxes <p>Standards Australia staff have indicated that international projects typically cost \$6000 to \$9500 per meeting (~5 days long). So if a typical ISO project is 6 meetings then for one person funding to attend international meetings may be in the range of \$20,000 to \$60,000.</p>
Conclusion	<p>There are net benefits to the Australian public, the taxpayer and asset owners of improving asset management practices. The proposed Standard is a step along the way to achieving this providing it allows for a diversity of approaches, sector specific practices, and accommodates innovation.</p> <p>It is recommended that Standards Australia support the development of an outcomes-based Standard for Asset Management for the Australian community.</p>

¹⁵ Acknowledging the input of Greg Williams (ENA) to information reported in this section.