THE ASSET JOURNAL

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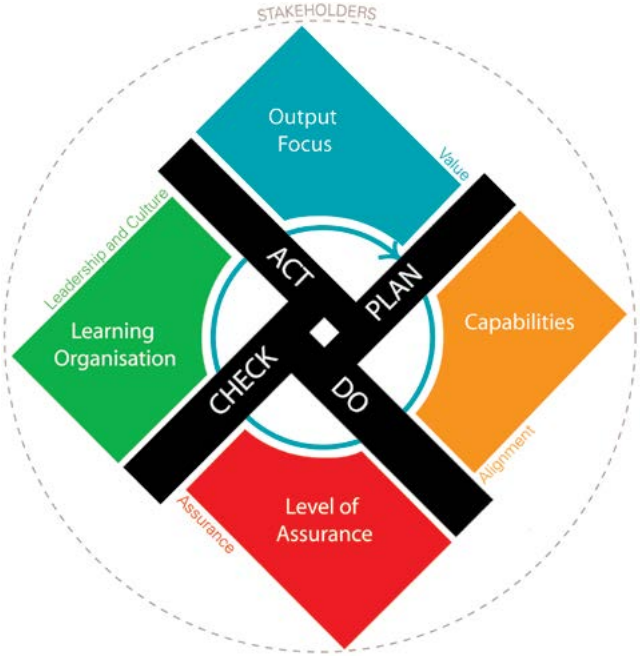
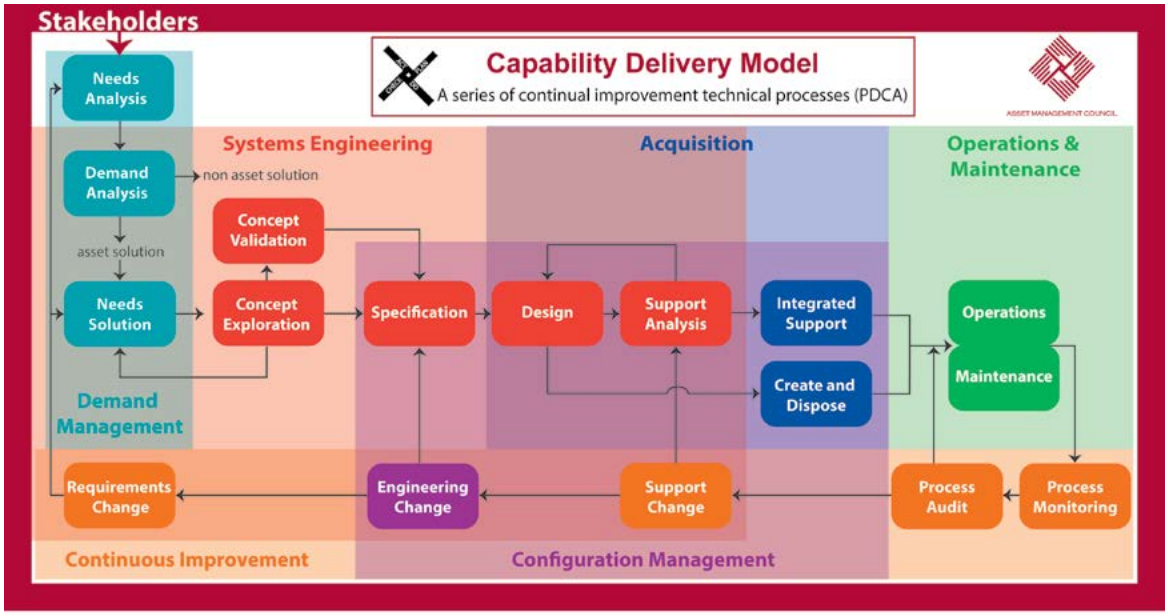




Expanding Asset Management

ASSET MANAGEMENT COUNCIL

Inside Volume 7 ISSUE Four:

- Living Asset Management
- Updating Asset Management Council Models
- Asset Mapping on the Rail Network to Improve Maintenance Efficiency
- How Business Decisions Influence the Asset Management System

ASSET MANAGEMENT COUNCIL

Spotlight on delivering outcomes

To support the Australian community, the Asset Management Council is working with its worldwide partners in the Global Forum on Maintenance and Asset Management (GFMAM) to develop a specification that describes the requirements for assessors and auditors for the emerging ISO suite of Standards on Asset Management. The AM Council wishes to support organisations implement these new standards and thus ensure the standards deliver value to Australian businesses and organisations.

Asset management enables business outcomes such as increased productivity, lower costs and reliable performance. Safety outcomes are also improved. Many remarkable organisations have already achieved these outcomes using asset management. Their collective wisdom is encapsulated in a suite of new standards due to be published in January 2014, the International Standards Organization (ISO) 5500X Suite on "Asset Management".

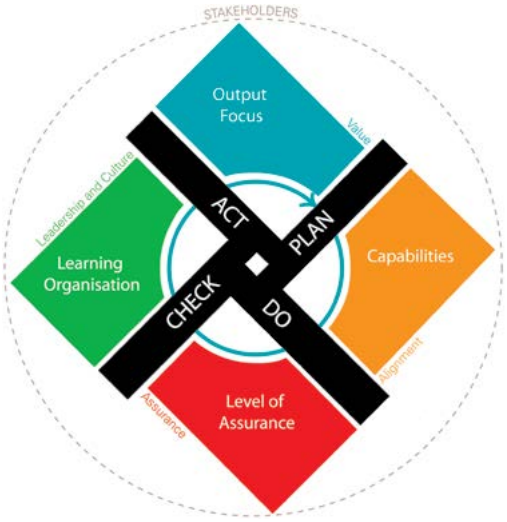
The AM Council believes that the benefits of these standards should be able to be readily harnessed by industry. The AM Council is able to provide advice and recommendations on these standards. Not only has the AM Council been working with its global network, the GFMAM to ensure Australia's international competitiveness, but the AM Council also has several of its members as key representatives on the ISO Program Committee for Asset Management.

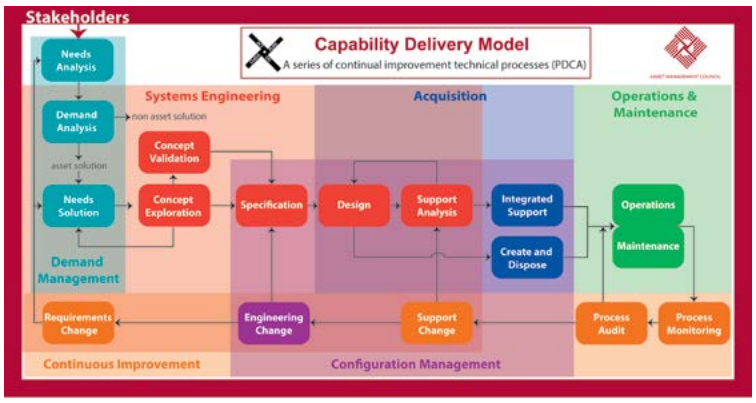
At a strategic and governance level, the key takeaways from this standard are that:

1. Leadership and workplace culture are essential in achieving organisational asset management good practice, as established by these standards, and
2. There must be alignment across the entire organisation to achieve the maximum benefit of these standards.

Closer to the coalface, whether in operations, maintenance, finance or human resources, the requirements for a management system for the management of assets are provided in 55001. Many organisations will wish to assess where they stand within the framework of these requirements. Others may find there will be a mandated requirement to comply with the requirements of ISO 55001, both from Regulators and company boards. Many organisations who wish to purchase asset management services may also specify compliance to ISO 55001 as a minimum contractual requirement.

"As industry leaders, the AM Council aims to help your organisation implement these new standards, and ensure the standards deliver value to your organisation."





Updated Asset Management Council Models: The Asset Management Concept Model and The Capability Delivery Model

Ernst Krauss Editor in Chief

2013 has seen a number of significant developments in asset management. The impending release of the ISO 55000 series of Asset Management System Standards has been the most talked about topic in many industries and public works departments. Anticipation of the value and the guidance provided by the new standards is high, and many questions will most likely be hotly debated once the Asset Management System Standard is released.

We also heard valuable information at the AM Council's Asset Management Conference, Melbourne 2013, about developments in other countries via the Global Forum in Maintenance and Asset Management (GFMAM) members. The common imperatives emerging from discussions are that leadership and culture prevail when implementing such significant changes as an Asset Management System in a business.

Which themes and topics will occupy us next year is of course not entirely predictable, but it is most likely they will be influenced by the release of ISO 5500X Suite. Industry's reaction and uptake will initially determine its perceived and real impact and value. Dynamism characterises everything associated with asset management, and the Asset Management Council has also seen some important changes in its development of the Asset Management Body of Knowledge (AMBoK), some of which can be seen in this issue of The Asset Journal, with more to come in the New Year.

In 2014 we will look forward to strong participation of interested patrons in AMPEAK Asset Management Conference, which will be held in Perth, June 2-5. Some very interesting papers and Keynote Speakers are already lining up and some interesting discussion topics are being prepared by the AMPEAK Technical Team.

Thank you for your participation in the activities of the Asset Management Council, and we hope to see your continued participation in 2014. Compliments of the Season to all of you, from all at the Asset Management Council.

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From the Chief Executive Officer

Sally Nugent CEO, Asset Management Council

2013 has been a year of major growth and change for not only the Asset Management Council, but the asset management industry as a whole. With the imminent release of the ISO 5500X Suite on Asset Management, all the hard work by our Asset Management Body of Knowledge (AMBoK) Commissioner and team is now being brought to fruition. The AMBoK team has spent much time over the last 11 months reviewing and aligning the ISO 5500X to AM Council material, to ensure that the Asset Management Body of Knowledge remains current. This involves extensive developments and updates across a number of areas, including:

- AMBoK's new ISO 5500X Implementation Guide, the first draft of which is to be released at the National Seminar in Sydney on 25th November. This guide is to be published by the Asset Management Council as a document to assist asset management practitioners in understanding the implications of the implementation of ISO 55000 and ISO 550001.

- The Asset Management Fundamentals, one of the first of our programs to change. A full upgrade of the Asset Management Fundamentals course is to be released February 2014. I would like to thank all those who provided Expressions of Interest and Tender Submissions for this project. The quality of the response was wonderful to receive. AMCL was the successful Tenderer.

- A second edition Asset Management Council Framework document, planned for release in January 2014.

- Updated Asset Management Council models, which have been revised in light of the forthcoming ISO standard. The updated Capability Delivery Model and updated Asset Management Concept Model are displayed on the front cover of this issue, and presented with more detail on pages six and seven. Further, there will be new models and asset management maturity approaches published by the AM Council in the coming months.

We are very fortunate, as a not-for-profit organisation, to have such a wonderful group of people to help develop, support, grow and contribute to the Asset Management Council. They embody our core values of openness, trust, respect, and willingness to share. I thank each and every one of you, and look forward to working with you all again in the New Year.

From my desk: Chairman's letter

John Hardwick Chairman, Asset Management Council

As this edition of the Asset Journal hits your desks and screens, AM Council CEO Sally Nugent and I are representing you at the Global Forum on Maintenance and Asset Management (GFMAM) in Calgary, Canada.

Among topics to be discussed are the finalisation of the Asset Management Landscape project - which is to provide an international approach to the identification, and taxonomy of asset management in the modern world - as well as a global specification for ISO 55001 assessor/ auditor requirements.

I would like to take this opportunity to thank all the volunteers and officers for their hard work on these projects throughout the year. We could not have come so far this quickly without all your efforts. The Asset Management Council, and the asset management community, benefit greatly from your application and dedication to enhancing our industry.

An exciting feature that rounds out a big year for the Asset Management Council is the publication of our book, Living Asset Management, co-published with GFMAM member organisation, ABRAMAN (Brazilian Association of Asset Management and Maintenance).

Co-authoring this book with João Lafraia, President of ABRAMAN, allowed me to learn so much that I really feel that this year-and-a-half long journey was not as much about writing a book, as it was about sharing knowledge and experiences for better asset management across the globe.

Writing this book has allowed us to explore leadership and culture in asset management with many passionate, experienced people who have been so willing to share their experiences, it is truly amazing. Now we have finished, we can share these experiences with you, too. Pages four and five of this issue of the Asset Journal give an insight into the material presented in Living Asset Management. I hope it is as useful and valuable to those reading it, as it is to me.

Finally, at the end of a significant year of growth for the Asset Management Council, I would like to extend my thanks to my fellow Directors, officers, volunteers and staff for all their support in 2013. I look forward to another fantastic, productive year with you all in 2014.

Living Asset Management

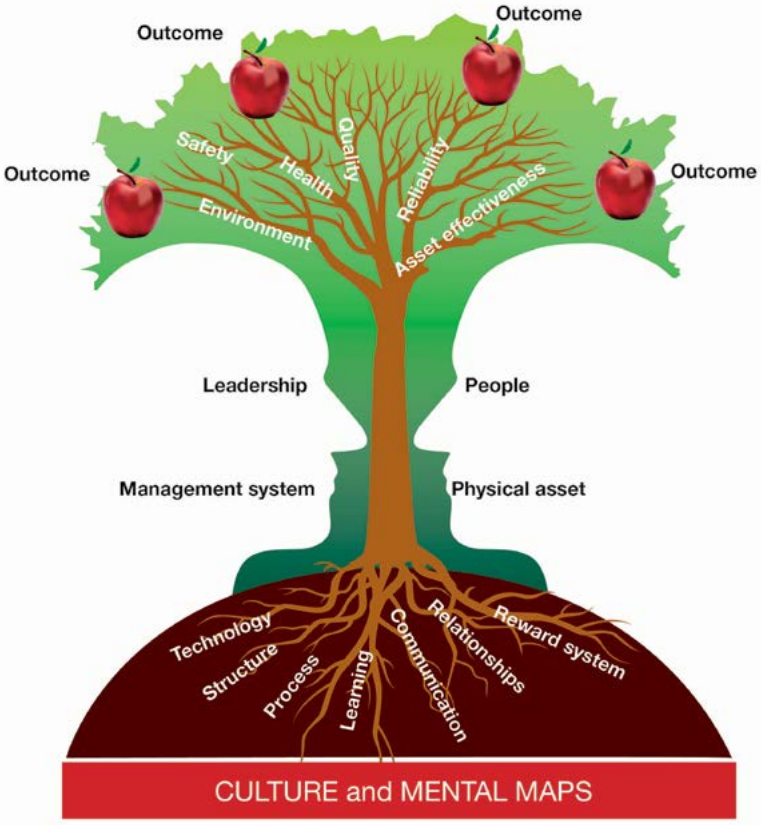
The Asset Management Council and Abraman (Brazilian Association of Asset Management and Maintenance) are thrilled to announce the official publication of Living Asset Management. Co-authored by John Hardwick (Chairman, Asset Management Council) and João Ricardo Barusso Lafraia (President, Abraman), this book addresses the necessity of appropriate leadership and culture in asset management.

João Ricardo Barusso Lafraia is the author of the Handbook of Reliability, Availability and Maintainability, Leadership for Safety, Health and Environment and co-author of Strategic Reliability Management, Creating the Habit of Excellence, Value-based Leadership. He has also authored several articles and lectures on Management Excellence Reliability and Environmental, Health and Safety. He is currently the general manager of Refining Operating Efficiency at Petrobas, Brazil. He is the President of Abraman (Brazilian Association of Asset Management and Maintenance) and holds the Executive position with the Global Forum on Maintenance and Asset Management (GFMAM).

John Hardwick is the Group Executive, Network Strategy of Networks NSW. John has a background in the NSW Electrical Industry with 30 years' experience. He completed a Masters of Business Administration at the Australian Graduate School of Management. John was responsible for all maintenance and replacement programs and expenditure on Network assets in Ausgrid for 10 years. John is currently the Chairman of the Asset Management Council and the Chairman of the GFMAM.

Living Asset Management highlights our abundant potential to develop and change leadership, culture and behaviour so that asset management will produce the outcomes we want.

Physical assets and management systems are visible and tangible like the trunk and branches of a tree. Leadership, emotions, culture and behaviours are invisible and intangible. Yet, they are essential to an organisation. Just as a tree is not merely a collection of trunks, branches and leaves, neither is an organisation merely a collection of assets and their plans and processes. Without the right leadership, culture and behaviours, an organisation cannot produce its desired outcomes, just as without the right soil, nutrients, environment, and gardeners, a tree cannot produce its fruit.



This is not to say the physical, hard side of asset management is not important, it is. The efficient and effective use of physical assets is a key enabler that allows organisations to perform well: they can lower cost and risk, and elevate performance and share price when managed correctly.

Assets exist to provide value to the organisation and its stakeholders, and it is how the organisation manages its assets that will determine the realised value. However, key determinants that support the management of physical assets are the right leadership, behaviour and associated workplace culture.

Asset management is more than assets and management systems. Asset management encompasses safety, human health and environmental preservation as well as organisational performance and the value delivered.

The challenges of asset management involve issues of cultural change and leadership. Many asset management issues require changes in habits, mental models, emotions and behaviours. These involve the dynamics of cultural change and its close relationship with organisational design, leadership styles, process and procedures, management systems and organisational maturity.

Living Asset Management provides an overview of the foundations of asset management and then explores the impact that organisational design, leadership styles, process and procedures, emotions, behaviours and cultures can have on the organisation's performance and the value delivered.

For more information, or to order your copy of Living Asset Management, contact the Asset Management Council by phone on 03 9819 2515 or by email at publications@amcouncil.com.au

Martin Kerr, Asset Management Strategist and change and business improvement leader with 20 years' experience in the transportation and manufacturing industries, on Living Asset Management.

I really appreciated the logical layout of Living Asset Management and how aligned it is with ISO5500X. The analogy of the Fruit, the Tree and the Orchard is the perfect backbone to the book; it is both neutral and non-mechanical.

The countless models and tie-backs to the soft side are robust and there are enough 'hooks' for seasoned asset management practitioners, as well as the 'newbies'. The leadership theme, and how simple it is, will strike anyone who reads this book. A big take away is that not only can leadership be triggered anywhere and at any time, but that anywhere leadership is triggered, it contributes to the big picture.

Executives will appreciate Living Asset Management's holistic nature and alignment to outcomes and sustainability. There is enough substance here to either start them on the leadership journey, or understand where they are on the journey, and support them in moving forward. For the front line managers, it's a shot in the arm because it is all about people and how they can make a difference (as they do with safety every day). For the technical person, this book is a lot to swallow but again, presents material in a manner that is both encouraging and useful.

The case studies clearly demonstrate that the simple method of bridging the 'hard stuff' with the 'soft stuff' using visual management is a simple and powerful message.

The asset management maturity phases are well explained and even without a formal maturity assessment people will know where they are.

The diagrams provide enough linkage to the sub-topic and at the same time provide a compass to external reading, if the reader was so inclined.

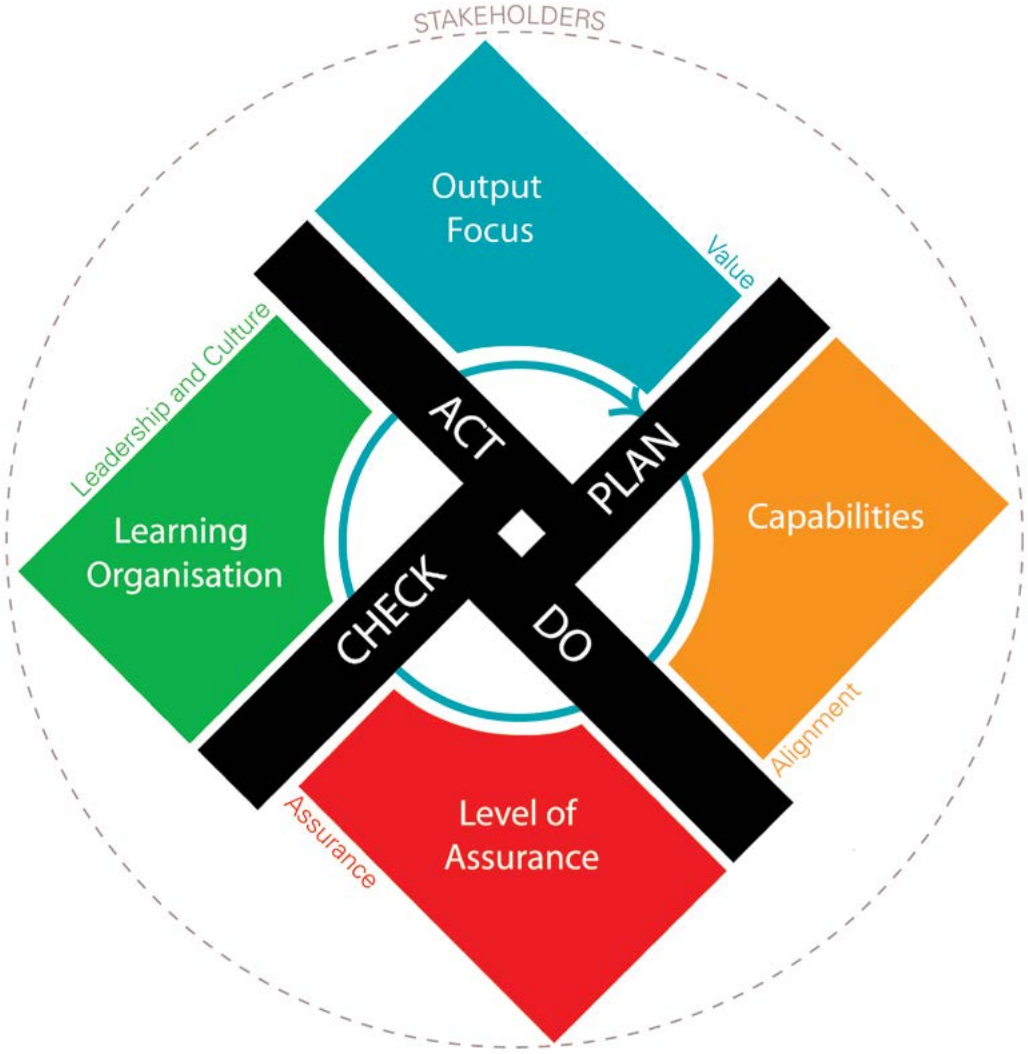
The Asset Management Concept Model

The purpose of the Asset Management Concept Model is to present and document the principles of asset management.

The Asset Management Concept Model presents the principles of Output Focus, Capabilities, Level of Assurance and Learning Organisation. These principles are directly aligned with the ISO 55000 fundamentals of Value, Alignment, Assurance and Culture and Leadership.

The Asset Management Concept Model also depicts the implementation of asset management principles through quality processes based on the principles of the Plan Do Check Act continual improvement process.

The relationship with stakeholders implied in the Asset Management Concept Model represents stakeholder value established within the broader organizational context.This is not to say the physical, hard side of asset management is not important, it is. The efficient and effective use of physical assets is a key enabler that allows organisations to perform well: they can lower cost and risk, and elevate performance and share price when managed correctly.

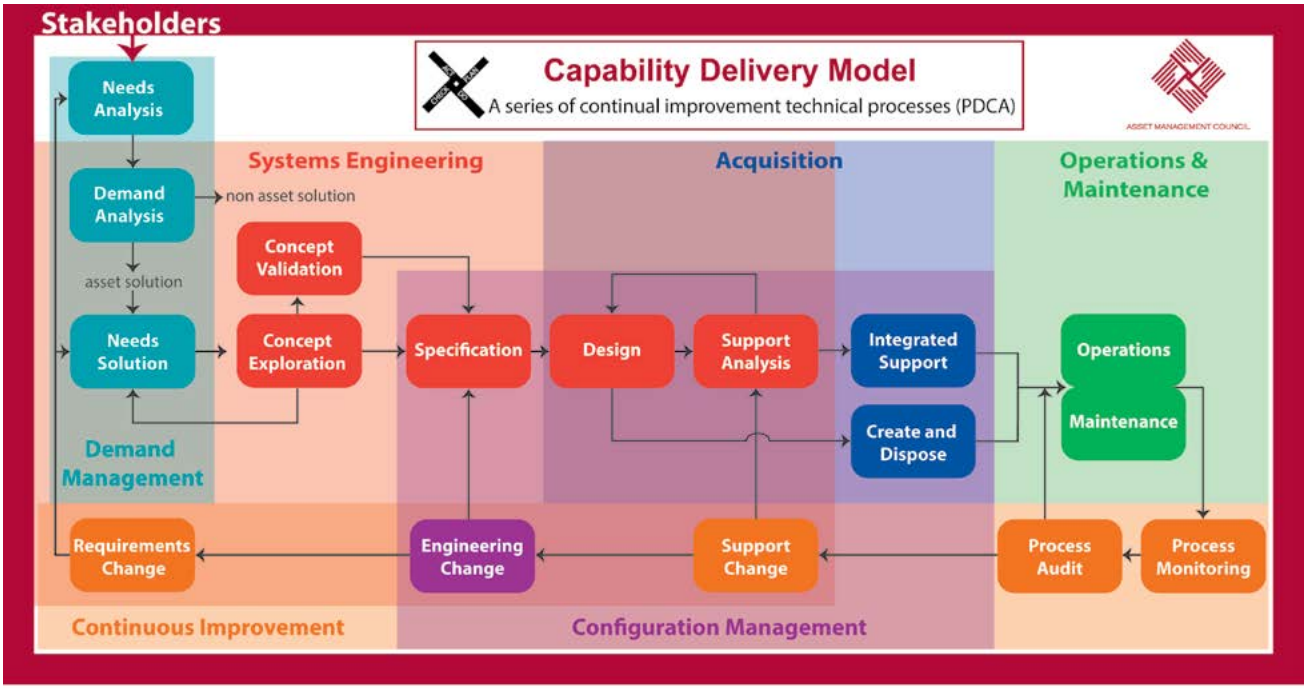


The Capability Delivery Model

The purpose of the Capability Delivery Model is to illustrate typical technical processes of asset management as implied by the quality processes in the Asset Management Concept model.

The Capability Delivery Model presents a series of processes across the asset life cycle of new or existing assets in a Plan Do Check Act cycle. The representation of familiar functions such as Demand Management, Systems Engineering, Acquisition, Configuration Management, Operations and maintenance and Continuous Improvement demonstrates the scope of asset management and the multi-disciplinary nature of the processes required to achieve its outcomes. As with the Asset Management Concept Model stakeholder value is recognized as a key input.

The Asset Management Council is currently developing an Asset Management Systems model that describes Asset Management within the context of the components of a management system as described in ISO 55000 and associated standards. This model will be published in the near future.



Asset Mapping on the rail network to improve maintenance efficieny

Mike Mundy[1], Heinz Volma[1], Tony Will[1], Barry Billings[1] and John Moroney[2]

[1]Transfield Services (Australia) Pty Limited

[2]Australian Rail Track Corporation

ARTC is a private company that owns and maintains the 'below-rail' standard gauge freight network in SA and WA. ARTC leases the network in Victoria, NSW and The Hunter Valley, along with track up to Acacia Ridge in Queensland.

This paper outlines a project supporting the consolidation of all ARTC rail asset data into their Enterprise Asset Management System within 12 months, ready for the renewal of Alliance-based Maintenance Contracts for Track and Civil works in SA, WA, part NSW and Victoria (along with signalling in Victoria). The freight network in NSW and part of Queensland is maintained by ARTC directly and not under an Alliance Agreement. The ARTC national freight network is illustrated in Figure 1.

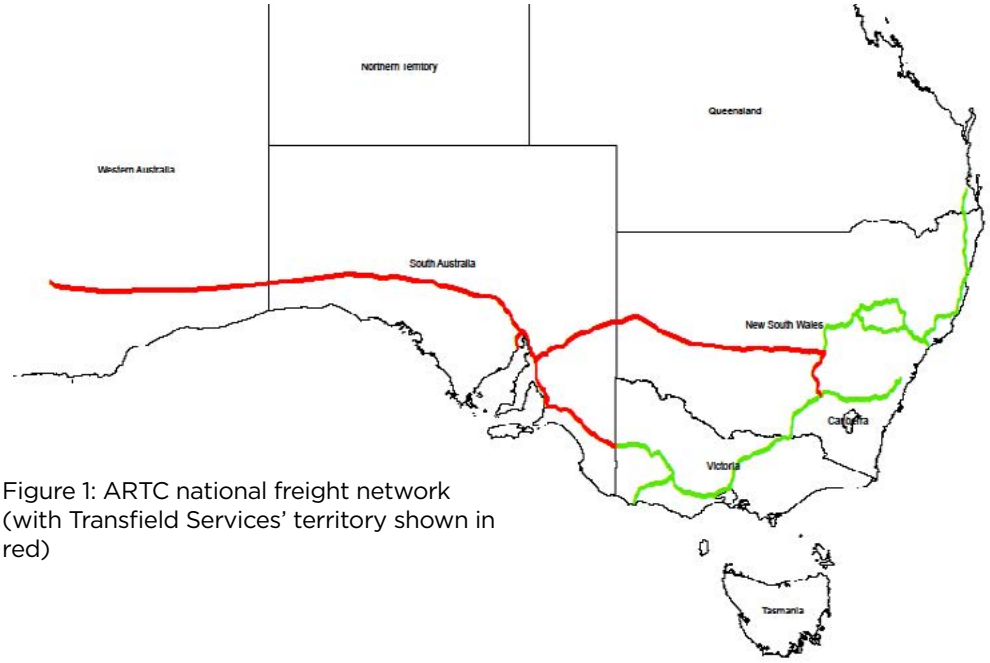


Figure 1: ARTC national freight network (with Transfield Services' territory shown in red)

In 2009-2010, a joint project was undertaken between the Australian Rail Track Corporation (ARTC) and Transfield Services to carry out a major upgrade and validation of the master asset data for the interstate rail network, within Transfield Services maintenance territory of South Australia and Western Australia. This included a re-map of the spatial location of all assets maintained on this network and the roll-out by Transfield Services of field and office GIS functionality for its existing SAP asset management system. A manned hyrail vehicle (Figure 2) was fitted out with laser sights, an Omnistar HP solution RTK GPS receiver - capable of 4cm location accuracy, a coupled dead-reckoning system and a custom-designed asset 'hot-logging' software system.

This vehicle has been used to rapidly map the asset information along a number of rail corridors, amid frequent freight and passenger train movements. The primary objective of this part of project was to validate previous asset data lists and generate a new complete and reliable list, both textually and spatially. The new data list has enabled ARTC and Transfield Services to definitively update their enterprise asset maintenance databases, being Ellipse and SAP, respectively, with a common list. In the same timeframe, Transfield Services rolled out its GIS enhancement to its SAP asset management system, including adding GIS capability to its existing 'Field Force Automation (FFA)' enterprise mobility solution. This system has been successfully implemented by Transfield Services in both the road and rail environments to realise improved service capability and a 'state-of-the-art' system for asset maintenance attendance, both preventative and reactive.

Figure 2: GPS hyrail vehicle

The system is being evolved by Transfield Services to enable fully integrated GIS-based collection of valuable condition-based information. Such information allows Transfield Services to better understand and predict asset performance.

The mobility solution supports the following key processes:

- Field inspections, asset condition information including readings and ratings (being developed);
- Defects details, captured by GPS co-ordinates and supplemented by track kilometrage or landmarks, including:
    - » Type of defect and attendance priority of the asset;
    - » Possible cause of defect, particularly where this may be recurrent and preventable; and
    - » Defect attendance information, including remediation action required and preventative maintenance suggestions.
- Routine and corrective maintenance including receiving and managing work orders;
- Asset identification, via GPS co-ordinates;
- Asset updates;
- Work order creation for find and fix work;
- Viewing all assets and their history;
- Viewing planned work and defects (open and closed); and
- Timesheeting.

At the conclusion of the project, the assets data within both Ellipse and SAP was well validated, accurately located and consistent with uniformly applied naming conventions. This type of quality asset data ensures a solid foundation for sound asset management.

The project 'Close-Out Report' identified further follow-on actions such as:

- Keeping the asset databases up-to-date on an on-going basis by synchronising the two databases, Ellipse and SAP;
- Field data collection of additional assets, such as loops and sidings, as well as asset changes which occur under configuration change projects; and
- Using this asset and track baseline data to overlay condition data - collected by inspection vehicles (AK Car and Ultrasonics Car), as well as data Program Works (tamping, grinding, re-railing, etc.) and from Track Maintainers.

In addition, Transfield Services has an on-going program for improvement and enhancement of its asset management system, including the mobility solution. Investment by Transfield Services in implementing its mobility solution in the rail environment, has allowed ARTC to benefit by the efficiencies that such a system delivers to works management practices.

This is a summary of "Asset Mapping on the Rail Network to Improve Maintenance Efficiency" by Mike Mundy, Heinz Volma, Tony Will, Barry Billings and John Moroney. To read the full paper, log on to the Member Zone at amcouncil.com.au.

How Business Decisions Influence the Asset Management System

Asset management is, first and foremost, about achieving business goals while managing performance, risk and expenditure. But, how is asset management actually linked to what is happening on a corporate level? How can we ensure that senior management decisions become transparent and executable for asset management practitioners? And how can asset managers get business decision-makers to listen to their questions and find the answers?

Quite naturally, CFOs are striving to grow revenue and profit margins, but of course also care about customer satisfaction and risk. Asset managers have to support these goals by reducing maintenance spend and maximising return on assets, but they also face unique challenges like aging assets, instability of production levels and compliance issues. In order to derive the relationship between strategy and asset management, let's first look at the strategic choices a company has.

Theoretically, an organisation can select to:

- Concentrate on the core market or stay in a niche;
- Compete on price or quality or uniqueness of product; or
- Adapt to or change the rules.

Effectively, there are only a couple of combinations that normally lead to success. These are:

- Segmentation, with narrow production scope but very proactive and flexible according to market demand;
- Differentiation, with high quality demand and very reliable delivery; or
- Cost leadership, with low production cost at a given level of quality.

WHAT DOES THIS HAVE TO DO WITH ASSET MANAGEMENT?

To answer this question let's first recall what asset management is all about. Considering PAS 55 or ISO 55000, asset management is a process of identification, design, construction, operation, and maintenance of physical assets which, for an asset intensive organisation, is vital to success. Asset management is about optimising cost, risk, and performance; but, what does this mean? It means that performance goals for asset management must be set in a way that supports the overall strategy. Success is then the confidence that you can reliably match these KPIs.

A key issue in asset management is the availability of information at the right time, in the right format, before the right person, against the right query, and at the right level.

Dr.-Ing. Achim Krüger started his career as an officer with the German Air Force. He held several positions in the areas of maintenance of helicopters and transport aircraft as well as systems engineering, before he worked in higher commands as a logistics general staff officer. Joining SAP Germany in 2002 Dr. Krüger first served as a consultant before establishing the SAP for Defense & Security industry portfolio at SAP AG. After several other duties in Solution Management and Development Dr. Krüger is now responsible as a Vice President for SAP's solutions in the area of Enterprise Asset Management. Dr. Krüger obtained a degree in aerospace engineering from the University of the Federal Armed Forces at Munich as well as a degree in economics from the University of Hagen. For his thesis on the fatigue life behaviour of metallic materials he was awarded a doctorate in engineering.

Social networks are becoming more and more prevalent in this context. Nowadays, information can be accessed from everywhere, applications get delivered independently from hardware and context information is available. Moreover, data from operational and business systems is getting merged, ending up at least in a virtual "real-time data platform" so that instant insight can be achieved from having all information available in the same place.

How do we use all this data and information to connect asset management goals to overall strategy success? If strategy is deciding what to do, execution is all about making it happen, and the main requirements for successful execution are:

- Clear goals for everyone in the organisation, that are supportive of the overall strategy;
- A means of measuring progress toward those goals on a regular basis; and
- Clear accountability for that progress.

Beyond that, good execution requires having a "systematic way of exposing reality and acting on it," [Larry Bossidy / Ram Charan in their book "Execution"]. Most organisations don't face reality very well.

It's management's job to make organisations face reality and deal with it. Doing so means that the organisation can model the whole business process with all the relevant information. Only then can you apply predictive models to forecast future state and proactively meet the resulting challenges. The respective action needs to be smart and context sensitive. Important enough, it's still not primarily about data and information, but about the human factor. To this end, operations will no longer be directed via top-down deterministic plans, but be organised through dynamic networks that are aligned via synchronised KPIs. The relationship between information and humans has to be enabled via best-in-class user experience including proper visualisation and connection into social networks for success.

Let's have a look how this can work in practice: PSA Peugeot Citroën provides an excellent customer example of leveraging information to make success happen.

What are the insights we gain from this example? As we can see, it's all about linking processes, people, and information. Information technology, if designed with the right purpose in mind, can be instrumental to this end. After organisations have placed a large emphasis on collecting and integrating data, the effort must now be placed on linking the data collection to the organisations' decision making processes. It is no longer an issue that data is not available; it is about navigating through an ocean of data, deriving information and making it available to the decision makers in a digestible form.

Leveraging technologies like in-memory analytics, mobile and social can take care that strategy is not just a "pattern in a stream of actions" (Mintzberg and Waters, 1985), but a purposeful activity. If successfully completed, asset management becomes a discipline that goes from a just reactive mode to supporting operational excellence, and finally linked to the strategy provides competitive advantage.

Influenced by leapfrogging technologies like machine-to-machine communication, even smarter assets, and the convergence of operational and business IT, cyber-physical systems are emerging where human beings drive decisions within connected networks. Some experts consider this to be a new industrial revolution; people in Germany call it "Industrie 4.0" (refer to http://www.acatech.de/industrie4.0). Processes move from complex flows to synchronised information and mere local views are replaced by business insights on a corporate level. Hence, it can become much easier to link strategy to execution. Unfortunately, the ecosystems are, at the same time becoming more and more complex and dynamic. Product and asset lifecycle overlap, and asset management is being driven by connected teams, comprising OEM's, service providers, and owner/operators.

While there are still challenges concerning standardisation of content as well as concerning data protection and privacy, the only way to adapt to this changed situation is about building platform where trusted information can be shared. Teams can then be aligned with clear objectives and responsibilities.

CUSTOMER CASE STUDY

PSA PEUGEOT CITROËN

- Industry: Automotive
- Revenue: €48.4 billion (2009)
- Employees: 186,220 (2009)
- Headquarters: Paris
- Web site: www.psa-peugeot-citroen.com

KEY CHALLENGES

- Improve maintenance efficiency and effectiveness
- Replace disparate plant maintenance software at 33 global sites with a single information system
- Harmonise plants' rules and processes

FINANCIAL AND STRATEGIC BENEFITS

- Undergoing savings by applying processes and follow up with the application
- Carried out preventative maintenance better
- Increased equipment availability
- Established product feedback loop to engineering

OPERATIONAL BENEFITS

- Made productivity and organisational improvements throughout the plants
- Achieved production and quality targets
- Eliminated re-entry of data

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Mintzberg, H. and Waters, J. A. (1985) Of strategies, deliberate and emergent, Strategic management journal, ISSN 01432095, 6 (3) 257-272.

AMPEAK ASSET MANAGEMET CONFERENCE

ASSET MANAGEMENT AMPEAK
PROMOTE EDUCATE ASSIST KNOWLEDGE

The Asset Management Council and your local hosts the WA Chapter Committee welcome your participation at the AMPEAK Asset Management Council Conference, Perth 2014, June 2nd-5th; globally the longest running asset management conference.

As the asset management discipline grows and diversifies, so too has our leading national conference, moving from ICOMS (International Conference of Maintenance Societies) to AMPEAK: promote, educate, assist, knowledge, representing the peak of asset management. AMPEAK is your professional pathway to asset management excellence. and a meeting point for dynamic thought leadership.

KEY TOPICS

- ISO 5500x implementation and beyond
- Gaining productivity and cost effectiveness through asset management maturity
- Safety and risk management
- Infrastructure
- Maintenance management
- Managing remote assets

KEYNOTES

Changing Definitions of Asset Management

Leading the presentations on ISO Implementation will be **Thomas W. Smith, MS, Program Director in the Department of Engineering Professional Development,** University of Wisconsin-Madison. He served as a U.S. Delegate and Task Group Leader for the International Standards Organization (ISO) Program Committee on Asset Management. Mr. Smith has published a number of papers and articles on asset management and is the author of the summary chapter on ISO 55000 for the Handbook of Asset Management.

Presentation Summary: The new ISO Standard 55000 for Asset Management impacts both the formal and informal definitions of asset management. It also provides a significant support and guidance for asset managers seeking to improve the practice of asset management and expand their influence in the organisation.

Danny Elia, Investment Director, IFM Investors will also join the program keynotes with insights from the finance sector.

TUTORIALS

Tutorials are a valuable part the conference program, enhancing and diversifying the styles of learning opportunities.

1. Measuring Reliability; Tips and Tricks for a Reliability Practitioner, by Mark Mackenzie, K2 Technology

The Tutorial will cover:

- Why measure reliability and what are the benefits
- How should reliability be demonstrated/tested
- How to specify reliability requirements
- How to use reliability to focus effort

2. Developing and Implementing Asset Management Plans By Nick Hastings, Principal Consultant, Albany Interactive Pty Ltd

The tutorial will cover:

- Know your assets; physical role, financial role, condition
- Capability demand, supply and asset gap analysis
- Asset renewal planning process
- Creating the business case
- Acquisition projects outline

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AMPEAK ASSET MANAGEMENT CONFERENCE

WORKSHOPS, COURSES & SITE VISITS Friday 6th June

1. Creative Technique to Evolve Condition Based Maintenance Strategies, SAP

Traditionally we have solved problems by overlapping what is viable from a business sense with what is technically feasible. Design Thinking is an approach to solving problems that starts with what is desirable from a people perspective. Design Thinking is generally considered the ability to combine empathy for the context of a problem, creativity in the generation of insights and solutions, and rationality to analyse and fit solutions to the context.

The intent of this workshop is to combine the collective ideas of the workshop participants and apply a Design Thinking approach to Condition Based Maintenance. The outcome will be a comprehensive approach to real time monitoring and analysis of condition based data in order to maximise equipment uptime and operational efficiency.

2. Asset Management Fundamentals, AM Council

This one-day training course helps participants understand the fundamentals of asset management and how those fundamentals can provide benefits to an organisation.

Course Objective

Define asset management within the context of ISO 5500X, Landscape and AMBoK

- Identify the principles that underpin asset management
- Identify available asset management tools and techniques that are applicable within organisational context
- Identify opportunities to apply these learnings to improve individual and organisational performance
- To recognise and quantify your learning, there is an online exam initiated on the day of the course.

3. Site Visits

This one-day tour will take in the following industry sites:

- Perth Desalination Plant
- Henderson complex
- Roy Hill Control Centre

ANNUAL DINNER AND AWARDS NIGHT

Our Annual Dinner and Awards Night brings together all the individuals and organisations who are recipients of the Asset Management Council Awards. The Awards recognise the organisations and individuals who have made significant contributions to the advancement of asset management in Australia, and internationally.

This year, the dinner will be hosted at Fraser's, Kings Park – a place that celebrates the best Western Australia has to offer in food, wine and service, set in one of the most spectacular locations in the state.

PARTNER PROGRAM

A three-day program for the partners of delegates wishing to make the most of their trip to WA. The Partner Program will include dolphin watching whilst cruising the inland waterways of Mandurah, a visit to Abingdon Miniature Village, getting back to nature at Caversham Wildlife Park and indulging in the Swan Valley at the Margaret River Chocolate Company and the beautiful Sandleford Winery.

SOCIAL PROGRAM

From the Welcome Function and Trade Exhibition opening on Monday 2nd until the Farewell Drinks and Exhibition Close on Thursday 5th, over 300 delegates will be networking and exchanging ideas:

Monday 2 June: Exhibition Set up, Registration Opens, Welcome Cocktail Function

Tuesday 3 June: Welcome and Opening Keynote, Sessions/ Exhibition/Innovator's Platform, YAMP Networking Evening

Wednesday 4 June: Sessions/Exhibition/Innovator's Platform, Annual Dinner and Awards Night (off-site)

Thursday 5 June: Sessions/Exhibition/Innovator's Platform, Farewell Function and Exhibition Close

Friday 6 June: Workshops & Site Visits

If you'd like to:

- attend
- sponsor and exhibit
- volunteer your time or get involved in some way

Please contact

Zoë Fitzpatrick, Event Coordinator

Email: AMPEAK@amcouncil.com.au

Call: 03 9819 2515

Visit: **www.amcouncil.com.au/conference**

DATES FOR YOUR DIARY

ASSET MANAGEMENT COUNCIL

Training Courses

Asset Management Plans

This one-day training intensive assists participants in developing an Asset Management Plan for their enterprise. Participants will learn to identify the content of a typical Asset Management Plan and the benefits of a properly constructed plan.

Asset Management Fundamentals

This one day course provides participants with an understanding of the fundamentals of good asset management, covers the knowledge and skills required, and illustrates how business can benefit from effective asset management capability.

Should you pass the accompanying online exam, you will receive a Certificate of Achievement. This contributes to 50% of the required points to become a Certified Associate in Asset Management (CAAM) and is evidence to current and future employees of your deeper understanding of asset management related topics and issues.

2013

November

Monday 25 Sydney: National Seminar - Aligning your Organisation with ISO 55001

This one-day national seminar addresses the 'How to' for ISO 55001 implementation leaving you with tools and a framework for moving forward.

December

Thursday 12 Melbourne: Technical Session - Topic TBA

Friday 13 Perth: Asset Management Council, WA Chapter Annual Function

2014

February

Thursday 6 Sydney: Asset Management Fundamentals

Thursday 13 Melbourne: Asset Management Fundamentals

Thursday 20 Perth: Asset Management Fundamentals

March

Thursday 13 Canberra: Asset Management Fundamentals

Thursday 20 Adelaide: Asset Management Fundamentals

Thursday 27 Brisbane: Asset Management Fundamentals

April

Thursday 3 Newcastle: Asset Management Fundamentals

Thursday 17 Sydney: Asset Management Fundamentals

May

Thursday 1 Darwin: Asset Management Fundamentals

Thursday 1 Tasmania: Asset Management Fundamentals

June

Friday 6 Perth: Asset Management Fundamentals

2 - 5 June Perth: AMPEAK Asset Management Conference

AMPEAK
PROMOTE EDUCATE ASSIST KNOWLEDGE

August

Thursday 14 Sydney: Asset Management Fundamentals

Thursday 21 Perth: Asset Management Fundamentals

September

Thursday 4 Canberra: Asset Management Fundamentals

Thursday 11 Adelaide: Asset Management Fundamentals

Thursday 18 Brisbane: Asset Management Fundamentals

October

Thursday 23 Melbourne: Asset Management Fundamentals

For more information on Asset Management Council events, contact Zoë Fitzpatrick, Event Coordinator at training@amcouncil.com.au

ISCA announces dates for Gala and Conference with tickets now available – don't miss the early bird rate!

Join your colleagues at the Inaugural ISCA Gala and Awards Night on Thursday 13th March 2014 as Industry celebrates the successes and achievements in infrastructure sustainability.

There will be three Awards on the evening:

IS Award: This award is for an IS certified project/ asset which demonstrated outstanding sustainability achievements.

Champion Award – Organisation: This award is for an organisation which has made an outstanding contribution towards infrastructure sustainability.

Champion Award – Individual: This award for an individual who has made an outstanding contribution towards infrastructure sustainability.

The Gala will be held in conjunction with the Infrastructure Sustainability Conference, on Friday 14th March 2014, which will facilitate knowledge sharing amongst infrastructure sustainability practitioners and establish a regular forum for networking. The Conference will also provide a platform for industry leaders to share their lessons learnt, successes and aspirations, attracting speakers and attendees from:

- Public and Private sector project development and procurement decision makers
- Asset owners and operators
- Government departments and agencies
- Construction contractors
- Professional services providers

The venue for both events is Doltone House – Hyde Park (Level 3, 181 Elizabeth Street, Sydney).

A reduced package ticket is available to attend both events.

ISCA is inviting organisations and individuals to support these events as participants and sponsors. Speaking opportunities at these events as well as branding and marketing options are available.

For more information, please visit isca.org.au or contact tcarter@isca.org.au.

Parsons Brinckerhoff's Tessa Ogle secures a double-win at the 2013 Telstra NSW Business Women's Awards

Parsons Brinckerhoff General Manager for Oil and Gas, Tessa Ogle, has been named New South Wales winner of two 2013 Telstra Business Women's Awards – the Private and Corporate Sector Award and the Young Business Women's Award.

Telstra judges said they were impressed by Ms Ogle's strong strategic vision and commitment to drive change in her industry.

Parsons Brinckerhoff President and Chief Operating Officer, Asia-Pacific, Mr Guy Templeton commended Ogle on her significant achievement.

'Tessa's pre-eminence in an industry that is still predominantly male-dominated is testimony to her passion, determination and continuous hard work.

'Starting out as a market analyst, she is now our first female General Manager for Oil and Gas after achieving a series of 'firsts' for this business in the oil and gas, iron ore and solar energy sectors,' said Mr Templeton.

Ms Ogle, who has worked with Parsons Brinckerhoff since 2005, says that the 'Young Business Women's Award' is one that she is particularly grateful to receive.

'I have always been a self-starter and I possess a strong work ethic. I'm keen to encourage young women across all industry sectors to make their mark and work to realise their own career goals. The journey can be a demanding one, but it also provides us with the potential for significant personal growth and career satisfaction.'

'I believe that diversity across both management and development is fundamental to business success; companies such as Parsons Brinckerhoff have taken great steps to redress imbalance particularly in the past decade, but there is plenty of room for improvement and women within the industry can be great champions for change.'

Ms Ogle is part of an elite group of state and territory winners that will now proceed to the national finals in Melbourne on 14 November.

Risk Reliability and Life Cycle Cost

Challenges to Life Cycle Costing

LCC or whole of life approaches have been applied in military asset acquisition programs for decades. Their intent has generally been as a measure of assessing the relative worth of alternate solutions as part of the trade study process in systems engineering.

In a maturing quasi-commercial environment, fuzziness in the roles, accountabilities and specification performance requirements can result in a number of conflicting agendas amongst the asset management process participants:

- Project Engineers want to minimise capital costs;
- Maintenance Engineers want to minimise repair hours;
- Production wants to maximise outputs;
- Reliability Engineers want to avoid failures;
- Accountants want to maximise project net present value; and
- Shareholders want to increase their wealth.

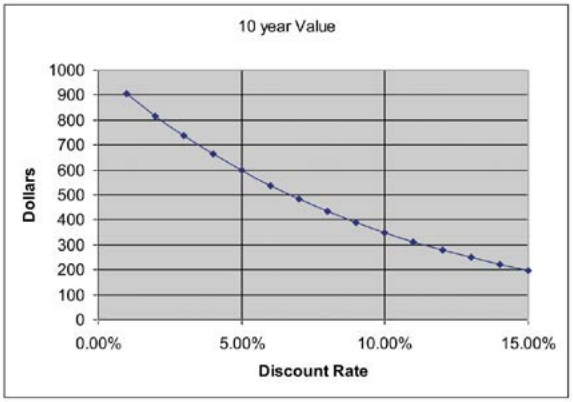
These conflicts can be resolved by management through the use of systems engineering as an integrator and LLC as a measure to understand the impact of configuration solutions. Resolution should be based on science not on personal power gradients or short term expediency.

A major challenge in the development of a comprehensive systems engineering and LLC capability is the establishment of a robust capability comprising human resources and appropriate tools. These include reliability, availability, maintainability and supportability modelling tools and logistic support analysis tools to assist the determination of future maintenance and service loss cost streams.

Influence of Discount Rates

The subject of discount rates is too complex to cover in any detail in this tutorials. Further reading is available in the International Infrastructure Management Manual Section 3.5 Financial and Funding Strategies as well as comprehensive coverage in AS 4536 with some additional information about cost estimation techniques.

A basic fact of LCC analysis is that discount rates



can have a significant influence on the design solutions particularly when long lived assets are involved. Such assets are usually quite robust and have few maintenance costs until their later years when high discount rates negate the value of any expenditure. Typically, governments through treasury define the discount rate to be used for business investment. In New South Wales this is 7%.

The adjacent graph shows the erosion in value of $1000 over 10 years as the listed discount rate is increased from 2% to 15%. At 2% the value of $1000 is $800 and at 15% the value is $200.

Some have argued that the discount rate should reflect the long life of the assets and the lack of risk in public ownership and responsibility (deep pockets). A figure of 2.5% has been proposed for such assets reflecting the long term (200 year) difference between inflation and earned interest rates .

Next: Design for the Life Cycle

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ASSET MANAGEMENT COUNCIL

ASSET MANAGEMENT COUNCIL

Perth Chapter News

The Education team were looking at a way to promote Asset Management.

For some time there has been some concern with the lack of young engineers within the Asset Management Council. To address this shortcoming a number of initiatives were investigated. One of the initiatives to help engage with young engineers and encourage their potential as future asset managers was to sponsor a prize relating to Asset Management.

The Education Subcommittee were tasked with finding a suitable prize criteria and establishing ongoing sponsorship of the prize. The Education Subcommittee proposed a $500.00 cash prize to be paid for by WA AM Council funds and a year's membership to be paid for by National AM Council funds. The criteria for awarding the prize was for the highest grade achieved (selected by the unit coordinator) for the engineering unit that most closely aligned to Asset Management principals.

After reviewing the content of several university units it was agreed that Edith Cowan's ENS2170 Principles of Industrial Maintenance was the most suitable unit. Discussions with the Faculty of Computing, Health & Science at Edith Cowan were overwhelmingly supportive and the prize criteria were submitted for their approval. The prize (The Asset Management Council Principles of Industrial Maintenance Prize) will be awarded to the highest grade attained in the Principles of Industrial Maintenance each year for the next three years.

As part of the agreement a member of the WA AM Council committee will address the class extolling the virtues of asset management as a career option and some of the areas of work that would be available should any of the students wish to pursue this option. The WA Chairman has delivered this presentation highlighting career options within the asset management field. A WA AM Council committee will also present the prize at Edith Cowan's annual prize ceremony.

The first student to receive this prize completed the Principles of Industrial Maintenance unit in semester 1 of 2013. He will be awarded the prize at the next award ceremony.

This initiative has allowed a relationship to form with Edith Cowan University that would not have otherwise been possible and enables the WA Chapter to actively promote and support the Asset Management Council's Young Asset Management Professionals program.

Brisbane Chapter News

The October Asset Management Practitioner seminar was a huge success attracting approximately 60-70 attendees. The Brisbane Chapter events are promoted via the Engineers Australia, Queensland Division events page which attracts a broader cross section of the engineering community. This is a win for both the Asset Management Council (promoting asset management) and Engineers Australia (providing CPD). The theme of the October seminar was loosely based on CMMS and corporate member organisations were invited to provide case studies. Presentations were provided from Leighton Contractors (LCPL), Maintenance and Project Engineering (MPE) and SBS Global.

Luke Riddell from Leighton Contractors showcased the integration between works management systems, GIS and decision support tools to provide risk based asset lifecycle modelling. Steve O'Keefe from MPE informed us that the time is right to make the leap to a paperless works management system. Rory Bell provided a case study of asset management improvement at Fulton Hogan NZ including many tips for a successful implementation.

Membership Application

ASSET MANAGEMENT COUNCIL

ASSET MANAGEMENT COUNCIL LTD

A Technical Society of Engineers Australia

ABN: 15 141 532 747 www.amcouncil.com.au

Phone: +613 9819 2515 **Fax:** +613 9819 2615 **Email:** info@amcouncil.com.au

Thank you for joining the Asset Management Council. Please complete all sections. Phone or email with any queries.

PERSONAL DETAILS (Please print in BLOCK CAPITALS)

Title (Please circle) Dr Mr Mrs Ms Miss Other (Please specify) Sex (Please circle) F M

Family Name Given Names (in full)

Date of Birth Engineers Australia Membership No

CONTACT DETAILS (Please print in BLOCK CAPITALS)

Preferred Address: ☐ Private Address or ☐ Business Address

Position

Organisation

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City State

Country Postcode

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AREAS OF INTEREST (Please tick)

Technical Topics

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- ☐ Maintenance Plan development and implementation
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- ☐ Other:

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- ☐ Skills development
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- ☐ Water and Utilities
- ☐ Infrastructure
- ☐ Other:

Return completed Membership Application with payment to:
Asset Management Council
PO Box 2249, Hawthorn VIC 3122 Australia

GROUP AFFILIATION

☐ Young Asset Management Practitioners (18-35 year olds)

CHAPTER AFFILIATION (Please tick one)

☐ Newcastle ☐ Canberra ☐ Sydney ☐ Illawarra ☐ Mackay
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MEMBERSHIP FEES Effective 1 July 2013 (Please tick one membership type only)

Individual Annual Fee (including GST)

☐ **Member** $148.50
☐ **Student** $33.00

Corporate Annual Fee (including GST)

☐ **Platinum** $9,240.00 ☐ **Gold** $3,520.00
☐ **Silver** $1,760.00 ☐ **Bronze** $907.50

EA Members may receive a discount when selecting Asset Management Council (TS-13) on annual EA renewal.
GST (10%) does not apply to overseas memberships.

CORPORATE MEMBER NOMINEES

Platinum – 30 nominees, **Gold** – 10 nominees, **Silver** – 10 nominees, **Bronze** – 5 nominees

	Name	Email	Date of Birth (Mandatory)	AM Council Chapter
1				
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Contact Asset Management Council to provide more corporate nominee details.

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Method of Payment (please tick one and enclose payment)

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