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THE ASSET JOURNAL

ASSET MANAGEMENT COUNCIL

INDUSTRY AND ALLIANCE

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AMBOK

ASSET MANAGEMENT BODY OF KNOWLEDGE

ASSET MANAGEMENT COUNCIL

The Asset Management Body of Knowledge is the sum of core information for asset management

AMBoK is documented, communicated and applied to advance the understanding of asset management within the community via publications, training courses, awards, standards, competencies, certification and conferences.

For more information, please visit
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ENGINEERS AUSTRALIA
Technical Society

Ernst Krauss
Editor in Chief

2014 was a year of significance for the Asset Management Council and indeed the whole asset management world: the issue of the new ISO 55000 series created great anticipation of things to come and demanded attention from industry around the globe. The AM Council became a recognised leader in promoting not only the Standard itself, but more so the capabilities required to implement an Asset Management System that conforms to the ISO Standard.

The asset management community now can use the AM Council's Companion Guide to ISO 55001. This companion guide is essential for those that wish to implement a system that is described in the ISO 55000 series, as it clarifies further the clauses and their meaning (additional to ISO 55002).

Another tool available to industry is the Certified Asset Management Assessor program. Created by World Partners in Asset Management (WPiAM) – of which the AM Council is a founding member - this is globally acknowledged as a great step forward for the asset management community and further underpins Australia's leadership in global asset management.

This issue of The Asset Journal is reflective of that global alliance and its effects on the wider asset management community. Articles from across the globe present in this issue ideas and thoughts on asset management culture, system reliability and modern aspects of maintenance. The tutorial covers Asset Management Systems while this issue's 'Myth of Asset Management' dispels the notion that financial management has no relationship to asset management.

I invite you to provide feedback on the articles published in this and all future Journals. We would like to hear your asset management story and of your experiences in the field. Please forward comments to Madeleine Berenyi our Communications Coordinator at **publications@amcouncil.com.au.**

I thank you for your support during 2014 and wish all readers and practitioners in asset management a very happy and safe holiday period and a healthy and prosperous 2015.

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From the Chief Executive Officer

CEO,
SALLY NUGENT

Keynote Presentation at PEMAC

The Asset Management Council members and volunteers have benefited hugely from our involvement with the Global Forum on Maintenance and Asset Management, and in the ISO Project Committee for the new asset management standards that were published at the beginning of 2014.

AMBoK
ASSET MANAGEMENT BODY OF KNOWLEDGE

Our co-operation with, and contributions given and received, have enriched our Asset Management Body of Knowledge and brought international speakers to AMPEAK. Our publications – the Companion Guide to ISO 55001, and Living Asset Management - are both direct outcomes from our global initiatives. This information has flowed through to our one day Asset Management Fundamentals course, to our upgrade of the AMBoK Framework for Asset Management, and to our reputation and standing in the Australian and overseas asset management and maintenance communities.

This co-operation has also resulted in the successful creation of the World Partners in Asset

WPiAM
World Partners in Asset Management

Management, jointly owned by five not for profit asset management organisations around the globe, of which the Asset Management Council is one. WPiAM is delivering the first Certified Asset Management Assessor programme, globally. This will be a major influence on the successful implementation of asset management, which is at the heart of our vision, "enabling value from effective asset management".

It was a great privilege for me to recently visit PEMAC, in Canada, to deepen our relationship and co-operation. I had the opportunity to share some of our AMBoK material with Canadian practitioners, and hear different ways of thinking. I was also present during their Annual General Meeting at which their members voted unanimously to change their vision to "PEMAC is a national not-for-profit association providing global leadership, education and certification in asset management". We are now discussing further ways of working together, to bring more benefits and value to members of both organisations.

From my desk: Chairman's Letter

CHAIRMAN,
GLENN INGRAM

2014 has been another great year for the Asset Management Council. We released the Second Edition of our Framework for Asset Management publication, as well as the Companion Guide to ISO 55001. The Asset Management Fundamentals Course was updated, with a new work book and new exam, and AMPEAK 2014 Perth was a huge success. Globally speaking, the Asset Management Council is now a partner in WPiAM. Sally Nugent's work in bringing together WPiAM is outstanding, and is a huge achievement for all involved. The Certified Asset Management Assessor exam is the fruit of this venture and it is a valuable, globally acknowledged tool for furthering the success of the asset management community.

Recently, the Asset Management Council held its 9th Exchange Weekend. These biannual Exchange Weekends present opportunities for the AMBoK Team, Chapter Chairs, staff, Executive and Board to discuss and plan the strategy and operations of the Asset Management Council for the next six months. The November 2014 Exchange Weekend involved a number of meetings, on topics including events, publications, chapter activities and technical progress as well as a governance workshop.

A significant period of time over the Exchange Weekend was set aside to enable the finalisation of the Asset Management Council Strategic Plan for 2015-2020. This was a result of Chapter surveys that indicated the Strategic Planning process had taken too long to complete, and expressed a level of concern from the membership over its structure and lack of content.

The Board's role is to set the Strategic Objectives and ensure that the direction of the organisation is clear to the CEO and Executive to execute projects and activities that support that direction. The Asset Management Council's current Strategic Objectives are sound and therefore the Exchange Weekend was structured to workshop projects and activities to provide a clear line of sight from Strategy through Tactics to support Operational planning and execution.

This involved a Strategic Planning Workshop. The workshop involved 28 members who, in working groups, discussed the intent of each Strategic Objective and then brainstormed and grouped the tactical activities and ideas that would support that Objective. The outcomes of this workshop have identified common themes against each of the four Strategic Objectives, that can now be taken by the CEO and the Executive to structure and plan to execution. I would like to thank everyone for their hard work over the Exchange Weekend. Your time is valuable to the Asset Management Council and together we have established a path forward.

I would also like to take this opportunity to thank my fellow Directors, officers, volunteers and staff for their support during my first year as Chairman. 2014 has been a significant year for the Asset Management Council, due to all your efforts, and I look forward to 2015.

Using Physical Asset Management as a **Strategy for Cultural Transformation**

Toribio Noel L. Ilao, Physical Management Advisor
Department of Public Works and Highways
Government of the Republic of the Philippines

Tech 1

Toribio is currently the Acting Director III, Bureau of Equipment, Department of Public Works and Highways, Government of the Republic of the Philippines. Prior to this he served as Professional Physical Asset Management Advisor of the Department of Public Works and Highways for over three years.

Toribio has over 13 years of physical asset management practice and experience and internationally as an Independent Physical Asset, Maintenance and Operational Risk Management Consultant. Since 2008, he has been a lecturer on Operational Risk Management and Reliability Centred Maintenance at the University of the Philippines - Diliman National Engineering Centre.

INTRODUCTION

In the 2005 Social Weather Station (SWS) Survey of Enterprises on Corruption, The Department of Public Works and Highways (DPWH) obtained negative 66 Net Sincerity score. This is classified as Very Bad. It also placed DPWH in the top 25 of all the agencies that were individually rated in terms of sincerity in fighting corruption.

In another published report, DPWH was identified as one of the top agencies where corruption is perceived to be prevalent. In a series of surveys in 1999, prepared and reported by Transparent Accountable Governance (TAG), the top four forms of corruption in DPWH are (TAG report, 1999):

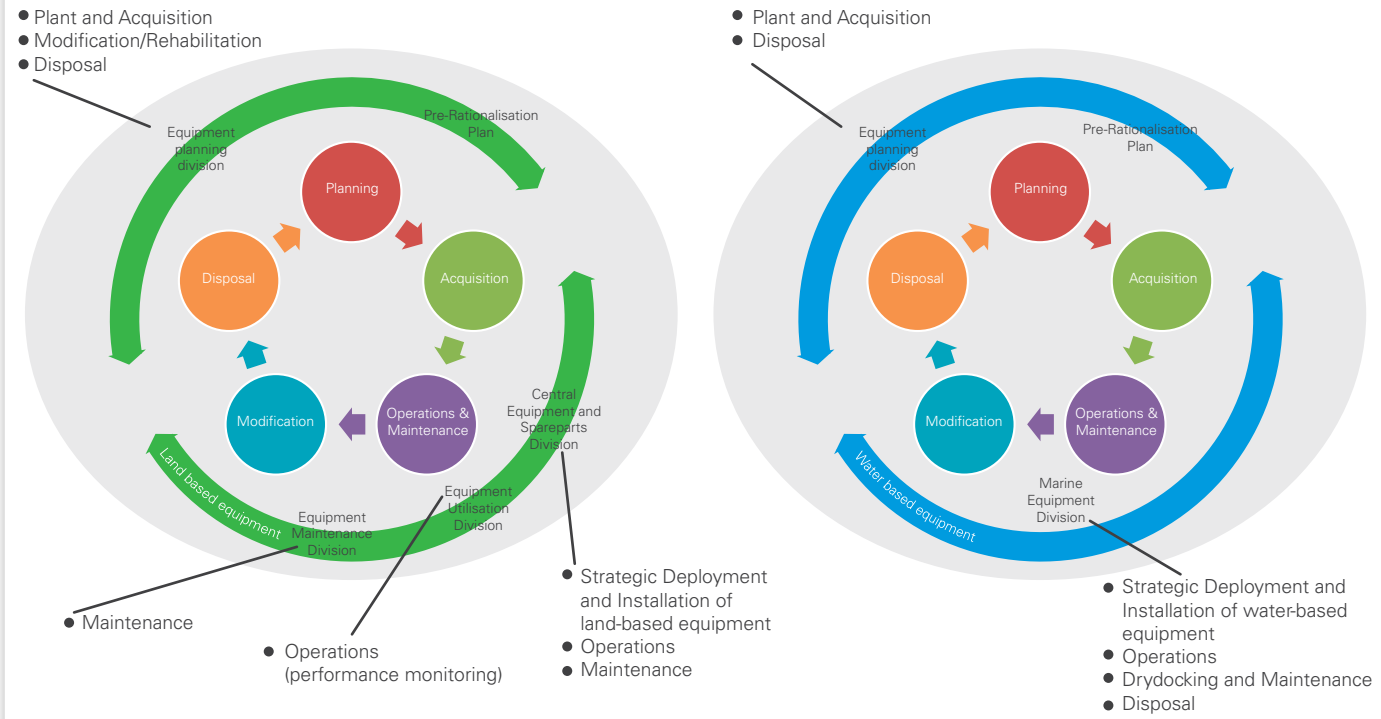
- diverting money away from projects (37%);
- asking for bribes (21%);
- overpricing (11%); and
- transparency (11%).

With this negative tag and dwindling public trust, immediately after assumption of President Benigno Aquino's Administration in 2010, DPWH embarked on a series of programs to remove this stigma. One of the core strategies adopted was the implementation of the Physical Asset Management Program (PAMP) starting with the Bureau of Equipment (BOE).

By the middle of 2011, the DPWH, through the BOE, had begun the implementation of PAMP based on the tenets of PAS 55 as a start and in preparation for ISO 55001 Certification by 2015. By 2013, as an organisation-wide mandate, the BOE also prepared for the ISO 9001 Certification. Review and revision of acquisition and disposal procedures were also performed to attract more suppliers and get the right quality at the right price. ISO 55001 and ISO 9001 were some of the key strategies adopted by DPWH to, if not to totally eradicate corruption, at least minimise it.

And on February 7, 2013, in a press conference held by President Aquino, he cited the ongoing transformation of DPWH and noted, ***"Honest work resulted in savings of about P12 Billion (USD267 million), despite the government's aggressive spending in public infrastructure."***

Figure 1. BOE Mandate based on the Asset Lifecycle before the Implementation of Philippine Government's Rationalisation Plan.



Mandate of the Bureau of Equipment (BOE): Its Functions and Responsibilities

Through the creation of the Department of Public Works and Highways through Executive Order No. 124, dated January 30, 1987, the DPWH will have five Bureaus, six services, 16 Regional Offices, 24 management offices, 16 regional equipment services and 118 district engineering offices all over the country. The DPWH is the primary engineering and construction arm of the Government.

As one of the six Bureaus, The Bureau of Equipment's (BOE) mission is to "Provide technical Services of the Management and Construction, and Maintenance of Dredging Equipment, including ancillary facilities of the DPWH".

Also, "as the equipment arm of the DPWH, BOE shall continuously maintain a capable and adequate fleet of land and water based equipment to support the infrastructure programs of the government. It shall acquire State-of-the-Art equipment sufficient to meet the needs of the DPWH to cope with the rapid Infrastructure development of the country" as stated in BOE's Mission and Vision statement.

DPWH-BOE Land and Water-Based Equipment by the Numbers

DPWH has massive land and water-based equipment fleet distributed all over the country to support road and bodies of water maintenance, as well as quick response to any disaster.

BOE is the lead DPWH Office in the acquisition, maintenance, repair, disposal and management of all this equipment. Even before the effectivity of the Philippine Government Rationalisation Plan, BOE has been performing duties and responsibilities from an asset lifecycle perspective as shown in Figure 1.

A. Land-Based Equipment

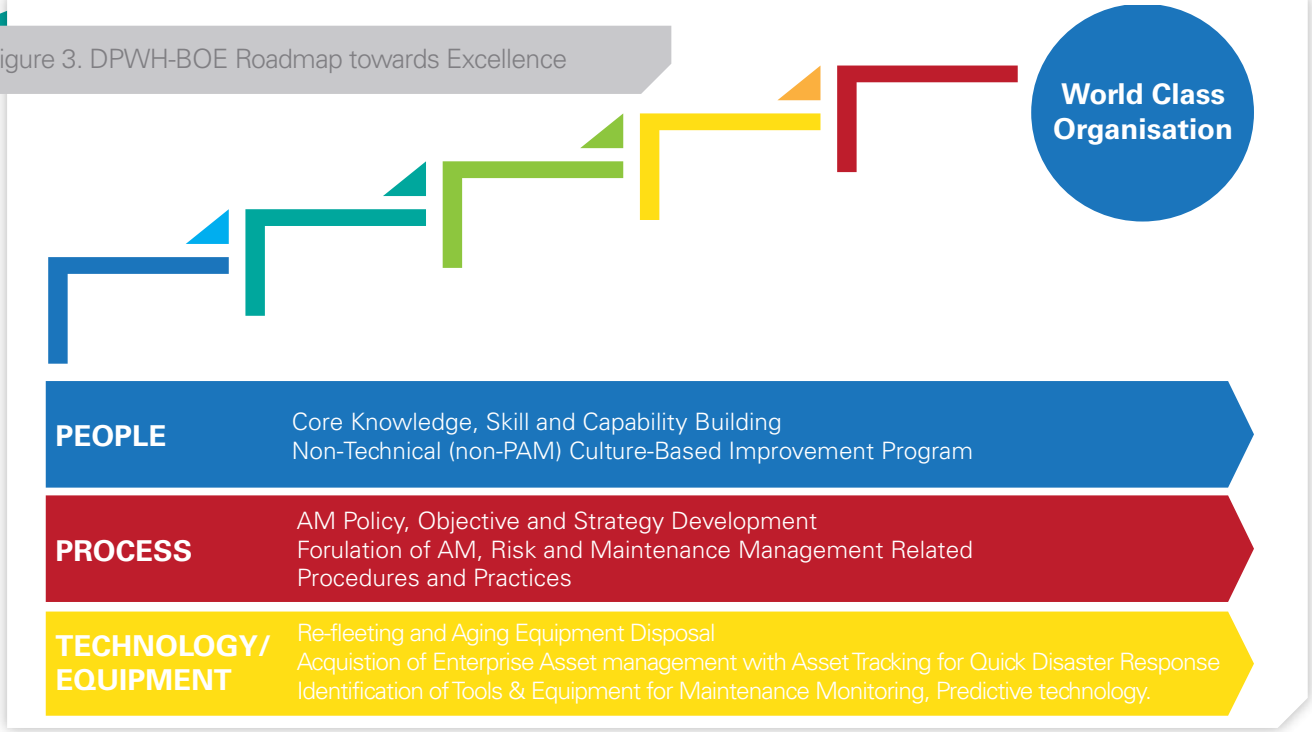
EQUIPMENT-CLASSIFICATION	OPERATIONAL	NON-OPERATIONAL	UNSERVICEABLE (For Disposal)	Total
1. ROAD CONSTRUCTION AND MAINTENANCE EQUIPMENT	1,123	750	644	2,517
2. SERVICE VEHICLE	2,125	742	919	3,786
3. SHOP TOOLS AND EQUIPMENT	696	641	1006	2,343
Total	3,944	2,133	2,569	8,646

Almost 30% of its equipment fleet was under the Unserviceable or For Disposal Category.

B. Water-Based Equipment

- 45 Various Dredge Class (Cutter, Suction, Amphibious, etc.)
- 27 Support Vessels / Attendant Plans
- 23 Additional New Units (2014)

Figure 3. DPWH-BOE Roadmap towards Excellence



DPWH 5-Year Re-Fleeting Program: Anchored on Asset Life Cycle Management (ALCM)

Because of its aging equipment fleet, DPWH-BOE is currently embarking on a five year acquisition of equipment, particularly for the Basic Highway and Maintenance Equipment and Disaster/Quick Response Equipment. With focus on the first stage of the asset lifecycle, the Bureau developed an acquisition strategy program that gives emphasis to steel grade/material property, engine performance, design, fuel efficiency, ease of use, warranty and maturity of both the product and suppliers, with an objective that at least the new equipment fleet shall attain its minimum operating life.

Disposal Strategy

Before Implementing the Re-Fleeting Program, it was decided that equipment over 20 years old should be disposed of first.

Impact of the DPWH 5-Year Re-Fleeting Program

In addition to re-fleeting and disposal, there were parallel efforts in improving the motor pool, inventory, procedures, acquisition of shop tools and equipment, training, etc. An emphasis on the procedure, acquisition transparency and changes in Technical Specification have been made which results in more suppliers joining, right quality of equipment for a minimum of seven years, right price and a very competitive bidding process. This year DPWH will be embarking in PAM Automation in the Philippines' Eastern Seaboard, to include Disaster Management with capability to track equipment availability for immediate response. With the changes made to curb corruption, BOE was able to forecast the age and reliability key performance indicators to be achieved as a result of the Re-Fleeting Program.

Positive Changes in DPWH

In one of the comments made by an ordinary Filipino citizen in the street, "Yan ang gobyerno, nagta-trabaho. Volvo pa, ang lupit." ("This is the government we want, working really hard. Wow, it's Volvo!"). Such creates a positive impact and reputation.

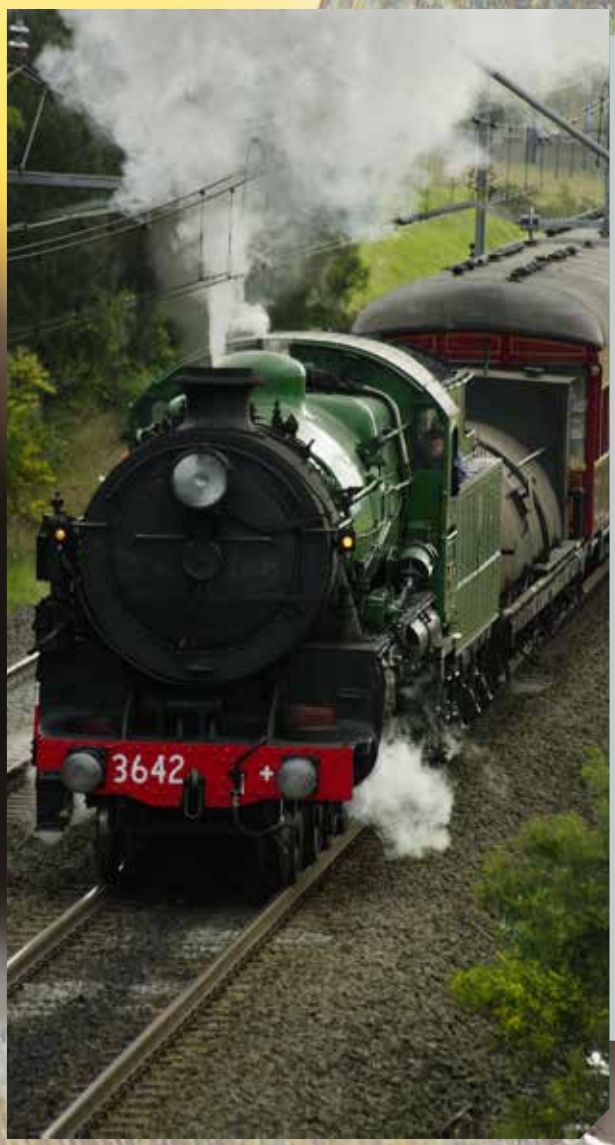
And in the July 2014 Makati Business Club's Executive Outlook Survey (which rates perception of government performance by business) DPWH placed 12th out of the 43 Philippine Government Agencies surveyed.

Conclusion

Physical asset management is one of the tools that can be used in the cultural transformation of any organisation. There are challenges in the implementation of PAMP or any program, but one of the most critical requirements is "full management support". In the case of DPWH-BOE, the clear challenge was its planned abolition, which thankfully did not come to fruition. Secretary Rogelio Singson, DPWH head, and the Management Committee are continuously providing the kind of support needed to achieve its goals. Gradually, the key beneficiaries in the Philippines are starting to feel the impact of PAMP- re-fleeting, strategic MRO, equipment resource management and the cultural transformation of the BOE personnel- both discipline and skill-wise. DPWH, as an organisation, is starting to remove its negative stigma as "one of the most corrupt government agencies". DPWH is winning the war against graft and corruption, and its adopted PAMP is one of the strategies to combat them. A fundamental requirement that for any organisation, prior to starting a PAMP (or any program for that matter) and mature to an international standard, is for the organisation to understand their own – whether it be culture, religion, political views, customs, beliefs, real situation, and so on. BOE is on a journey now – a journey to excellence, and physical asset management is a guiding path.

Designing Modern Maintenance Programs for **Heritage Rail Vehicles** using Heritage Maintenance Analysis Methods.

Authors: Jennifer Edmonds; Asset Manager, Transport Heritage NSW
Jim Kennedy, Asset Management Council
Peter Kohler, Asset Management Council



Tech 2

INTRODUCTION

Operating large heritage rail transport equipment on the public rail system amongst normal traffic presents some unusual challenges. Large steam locomotive consists that haul up to 20 fully occupied heritage carriages, even when required for only a handful of days per year, must be as safe as normal well used rail traffic, yet be cost effectively maintained by a mixed group of paid and volunteer staff.

This paper describes the successful application of a "heritage" maintenance analysis process, developed in 2014 to develop a cost effective and defensible program for the passenger rail carriages of Transport Heritage NSW (THNSW) at Thirlmere in New South Wales. This replaces the programme originally adopted by the organisation in the 1970s.

The paper will demonstrate how decades of staff experience was cost effectively harvested to develop a defensible preventive maintenance program, which achieved a significant reduction in effort and reflected the unique usage of heritage rail assets designed for commercial operation more than 80 years ago.

Tech 2

BACKGROUND

Transport Heritage selected the rail assets for analysis based upon two criteria:

- The assets are in regular use (for a museum); and
- The assets' current maintenance programme appears expensive to implement.

Failure Mode Effect Criticality Analysis (FMECA) was used to analyse the maintenance tasks from first principles, while using the experience and data from the THNSW maintenance team and THNSW Asset Manager.

THE PROBLEM

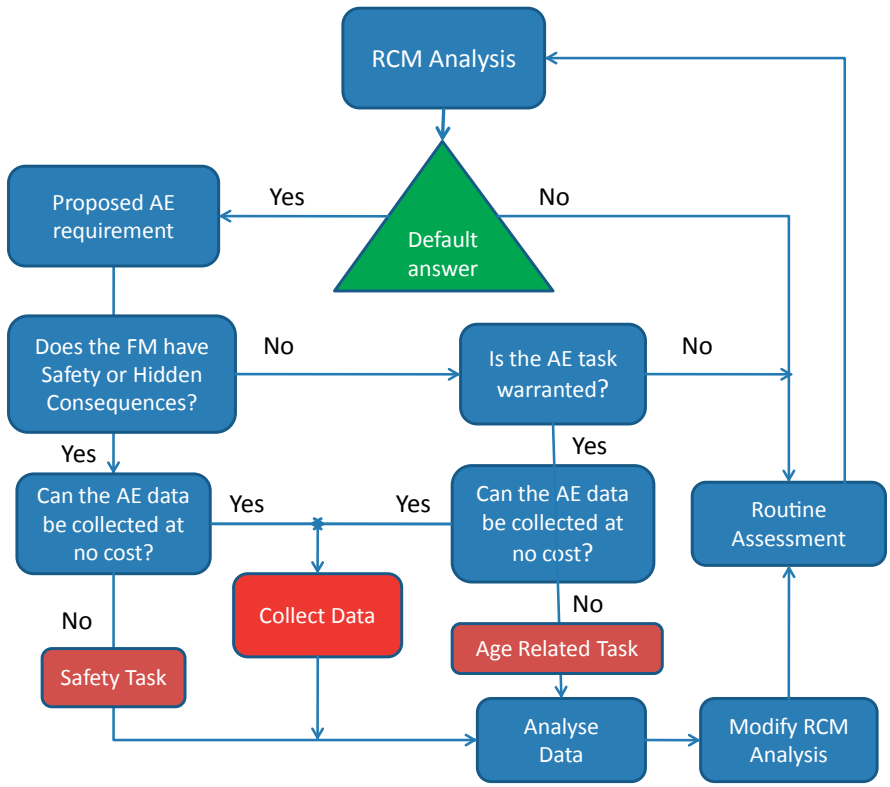
The key issues facing Rail Heritage can be summarised as follows:

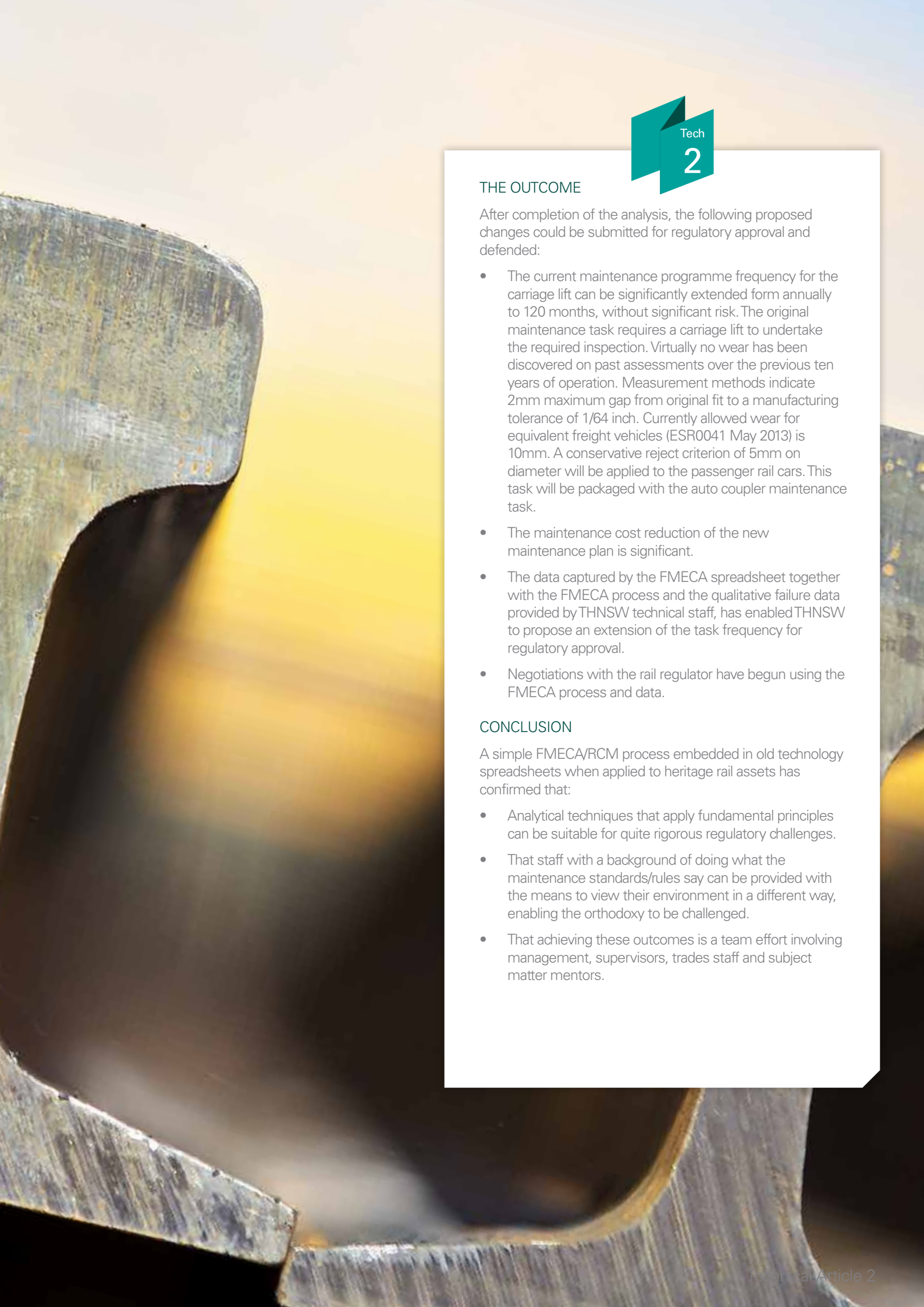
- The current maintenance schedules require the bogies to be inspected every five years – but to do so, requires the car body to be lifted from the car bogies – an expensive and time consuming activity.
- The opinion of both the maintenance staff and the THNSW asset manager is that the frequency of that maintenance task appears to be excessively short.
- The maintenance frequency is unchanged from normal in-service operational requirements by the former NSW Railways despite operational usage being significantly lower.
- Given the above, how to prove that hypothesis to the satisfaction of the THNSW team and the rail regulator.

THE METHOD

A combined FMECA and RCM process developed in 1994/95 for use a Power Station RCM analysis program was selected. In this process spreadsheet was used to capture the relevant information using low cost students on work experience from the local university that matched a logic process drawn from US Military Standard 2173 AS Reliability Centered Maintenance 1986. The adapted analytical process is noted in Figure 1 below.

Figure 1 – Adapted Analytical Process





Tech 2

THE OUTCOME

After completion of the analysis, the following proposed changes could be submitted for regulatory approval and defended:

- The current maintenance programme frequency for the carriage lift can be significantly extended form annually to 120 months, without significant risk. The original maintenance task requires a carriage lift to undertake the required inspection. Virtually no wear has been discovered on past assessments over the previous ten years of operation. Measurement methods indicate 2mm maximum gap from original fit to a manufacturing tolerance of 1/64 inch. Currently allowed wear for equivalent freight vehicles (ESR0041 May 2013) is 10mm. A conservative reject criterion of 5mm on diameter will be applied to the passenger rail cars. This task will be packaged with the auto coupler maintenance task.
- The maintenance cost reduction of the new maintenance plan is significant.
- The data captured by the FMECA spreadsheet together with the FMECA process and the qualitative failure data provided by THNSW technical staff, has enabled THNSW to propose an extension of the task frequency for regulatory approval.
- Negotiations with the rail regulator have begun using the FMECA process and data.

CONCLUSION

A simple FMECA/RCM process embedded in old technology spreadsheets when applied to heritage rail assets has confirmed that:

- Analytical techniques that apply fundamental principles can be suitable for quite rigorous regulatory challenges.
- That staff with a background of doing what the maintenance standards/rules say can be provided with the means to view their environment in a different way, enabling the orthodoxy to be challenged.
- That achieving these outcomes is a team effort involving management, supervisors, trades staff and subject matter mentors.

Synergy Between Methodology and Technology to Improve **System Reliability**

Sridhar Ramakrishnan, P.Eng, MMP
Director, Plant Engineering & Maintenance Association of Canada (PEMAC)
Reliability Improvement Manager, Suncor Energy Inc., Canada

Tech 3

Sridhar is a Professional Engineer with 25 years of experience in operations, maintenance and reliability functions in upstream oil and gas industry, both at onshore and offshore installations.

He is currently working as Reliability Improvement Manager, with Suncor Energy Inc., Sarnia, Canada. In this role, he is responsible for identifying and stewarding the Reliability Improvement efforts at Sarnia Refinery.

He has Maintenance Management Professional (MMP) certification, and is trained as an RCM2 Facilitator. On a part time basis, he teaches MMP modules on "An Integrated Strategy for Maintenance Management", and "Developing & Implementing Maintenance Tactics".

He has published papers and articles in various conferences and journals.

Sridhar is a Director with PEMAC, and was also the chairperson for PEMAC annual conference MainTrain 2014 in Niagara Falls, Ontario, Canada.

INTRODUCTION

By identifying the right methodology, applying it correctly, complementing the efforts through innovative use of available technology, and implementing the recommendations within a planned time-frame, the team built a platform to save millions of maintenance dollars in future by improving equipment safety and reliability.

"What I hear, I forget. What I see, I remember. What I do, I understand".

Confucius

"Innovative practices combined with true empowerment produce phenomenal results."

Captain Michael Abrashoff

Steam Assisted Gravity Drainage (SAGD)

Suncor Energy Inc. was expanding its bitumen production facility in northern Alberta, Canada. This facility uses Steam Assisted Gravity Drainage (SAGD) to extract bitumen from the underground reservoir. The surface production facilities include steam generation, production and injection well pairs, oil production, oil separation, water treatment, utilities, and the entire required infrastructure for storage and pumping. More than 90% of water is recycled in the above process.

Tech 3

Boiler feed water is the heart of any Steam Assisted Gravity Drainage (SAGD) operation. However, ensuring uninterrupted supply of high pressure feed water (HP BFW) to the boilers is a challenging task because the process design is a complex network of heat exchangers and prime-movers, controlled and protected by advanced instrumentation and control systems. Failure of assets in this complex network interrupts steam generation, which directly causes deferment of bitumen production and thereby the revenue of the company.

There was an opportunity to develop a robust failure management program on such a critical system by using a combination of right methodology selection (RCM - Reliability Centered Maintenance) and utilisation of a novel tool, Production Simulator. Doing so during the detailed engineering phase of the expansion project (before commissioning and start up) was intended to help reduce the total (life cycle) cost of ownership, in addition to improving the safety and reliability of the system.

RCM ANALYSIS ON HIGH PRESSURE BOILER FEED WATER SYSTEM

The team chose the most robust reliability methodology available in the industry, Reliability Centered Maintenance (RCM) based on Society of Automotive Engineers (SAE)'s JA 1011 and 1012 standards.
The team developed an RCM Standard for the business unit; it was based on SAE's JA-1011 and JA-1012 standards. Among others, this standard was reviewed by the RCM consultants before being approved by the senior management. The actual RCM analysis was done by following the business unit RCM standard, in two consecutive weeks in September / October 2011. There were about 10 participants including the RCM Facilitator and a student-scribe. The consultant mentored the facilitator through this analysis. Table 1 provides a high level quantitative summary of the analysis.

Item	Quantity
Number of participants	10
Total Man-hours spent	1200
RCM Analysis Hours	80
Number of Systems	1
Number of sub-systems	13
Number of primary assets (tags)	48
Total number of assets (tags)	404
Number of Functions	44
Number of Functional Failures	63
Number of Failure Modes	280

Table 1: This table provides a quantitative high level summary of RCM analysis

CHALLENGES THE TEAM FACED

The new system and the assets in the system were tied-in to the previously commissioned project. All the assets in the system were new, thus they did not have any failure or repair history in the CMMS system. Nor did we have anyone with prior operations or maintenance experience on those specific equipment in that operating context. To add to the challenges were the facts that the facility is located in a remote location in northern Alberta with long, frigid winters. Because of remoteness of location, the operations and maintenance personnel follow a 7 days or 14 days fly-in/ /fly-out duty pattern.

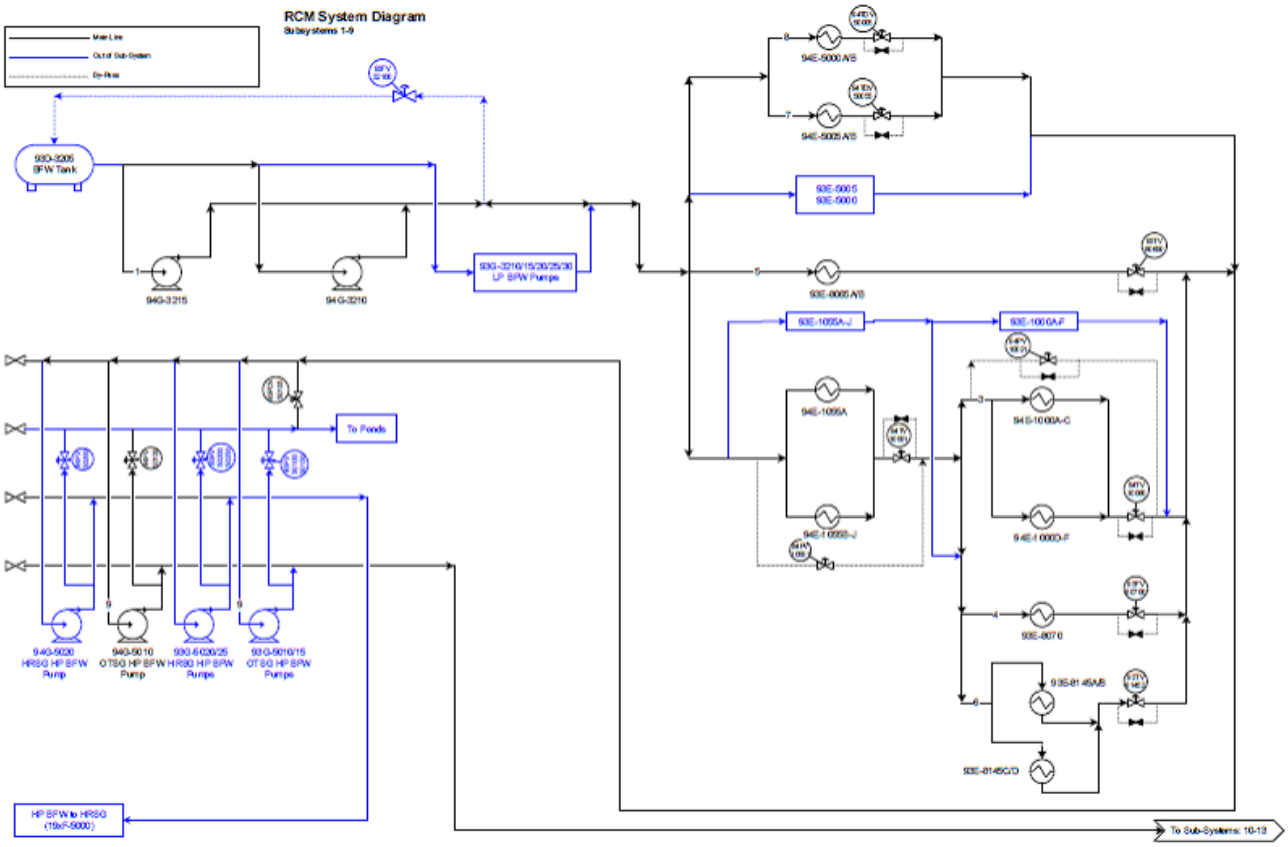
Some of the challenges were overcome by using Production Simulator (also called Operator Training System) that was already available to train new operators who were being hired to operate the facilities once they went on stream. The team inputted failure scenarios in the simulator and observed the effects of those failures, These were then used to answer questions 4 and 5 of RCM on failure effects and consequences, thus helping through the RCM analysis.

KEY FINDINGS

This analysis indicated that an extremely strong front end engineering design process was followed on the previous project. It was evident in the impact of the system configuration including redundancy, protective systems, parallel process streams, bypass systems, etc. The design of the system was found to be so robust that there was only one failure mode that could cause total failure of the primary function (other than the loss of utilities). A couple of key findings and recommendations are mentioned below.

1. Identified one failure mode (failure of a pressure transmitter) that has the potential to shut down production from both, stages 3 & 4, causing a production loss for 18 hours (about 40,000 barrels of deferred bitumen production). This was confirmed by using the production simulator too. This is now being considered for redesign by installing an additional pressure transmitter with a selector installed on the common header.

2. Identified the need to purchase some critical spares, including spare tube bundles for 6 of the 11 heat exchanger sets within the RCM boundary. Loss of any of these exchangers would result in production deferment. These spares would cover both, stage 4 as well as stage 3 equipment.



LESSONS LEARNED

Through this massive, intensive effort, the team has learnt some important lessons to help improve in future RCM endeavors. They are mentioned below:

1. Choose smaller system: The system chosen was very large, containing 404 pieces of tagged equipment. Even though the RCM analysis was done to the required level of quality by dividing the team into sub-groups based on discipline (mechanical, electrical and I&C) and collating the results, it will be better to do RCM on smaller, but multiple systems.

2. Scheduling of analysis: This analysis was done full-time through two consecutive weeks. Future analysis are better spread over a longer period, say one day per week over a two-month period, or two consecutive days every two weeks in a two month period.

3. RCM is not HAZOP: Some participants in this analysis had strong background in HAZOP. Because of that, the team sometimes conjured up unlikely scenarios that caused avoidable digressions. In future analysis, the team has to disengage from HAZOP mindset, and the facilitator needs to do a better job in managing the discussions.

GOING FORWARD

RCM is a living program; this analysis was just the beginning on the journey towards operational excellence. It has to be carried through the life cycle of the high pressure boiler feed water system. Therefore once all the recommendations are implemented, their effectiveness will have to be evaluated and necessary adjustments have to be made after about one year of operations.

CONCLUSIONS

Thus, RCM analysis carried out on a new system, with the analysis complemented using a production simulator at no additional cost, helped develop a robust maintenance and reliability strategy for a critical system having over 400 tagged maintenance significant assets, in addition to some re-design recommendations one of which alone had the potential save up to $ 1 million as failure avoidance cost.

Global News

World Partners in Asset Management Present the Certified Asset Management Assessor (CAMA) Exam

WPiAM
World Partners in Asset Management

Engagement by the Asset Management Council Technical Team with Chapters throughout Australia and New Zealand for their input – as well as PEMAC – secured 44 experienced and diverse asset management practitioners from the mining, utilities, Defence, aviation, infrastructure and consulting sectors; five teams delivered critical questions that now comprise the CAMA exam. Questions showing diversity in exploration of the process of information extraction; diversification and depth of knowledge and understanding required to deliver appropriate responses and demonstrate capabilities.

This remarkable feat was made possible by passionate involvement and contributions from volunteers. It was managed through efficient use of technology; weekly teleconferences, email submissions and demanding question reviews. Each team was tasked with establishing key questions across 85 competencies from the GFMAM Competency Specification for an ISO 55001 Asset Management Auditor / Assessor. All questions underwent rigorous psychometric testing through to final selection by the Exam Director and SMRP experts.

Exam participation to-date shows 100 people having sat the CAMA exam across Australia, Canada and Brazil. Globally acknowledged as a great step forward for the asset management community, this successful launch shows Australia's leadership in global asset management. CAMA is also run and recognised throughout France and the USA.

Origins in the GFMAM

Established in 2010, the Global Forum on Maintenance and Asset Management (GFMAM) consists of ten not-for-profit maintenance and asset management organisations from around the world. An enduring objective of the GFMAM is to facilitate the exchange and alignment of maintenance and asset management knowledge practices; the lever which commenced the universal branding and unification of asset management, by way of the Asset Management Landscape (gfmam.org) and its subsequent updates.

With the Landscape and the publication of ISO 5500X Asset Management Standard, the GFMAM created the 'Competency Specification for an ISO 55001 Asset Management Auditor/Assessor' to support the competence of people who audit or assess organisations to ISO 55001. A joint venture, World Partners in Asset Management (WPiAM), was formed to deliver outcomes from this specification.

WPiAM comprises ABRAMAN, the Asset Management Council, PEMAC, SMRP, and more recently France's IFRAMI, and is responsible for delivering the Certified Asset Management Assessor (CAMA) exam, a first for the asset management community.

CAMA: A strategic move for all aspiring asset management professionals

Certified Asset Management Assessors will be recognised throughout Australia, Brazil, Canada, France and USA. Certification complies with ISO 55001 Asset Management standards in core requirements and knowledge; ISO 17021-5 (Conformity assessment – Requirements for bodies providing audit and certification of management systems - Part 5: Competence requirements for auditing and certification of asset management systems); and ISO 19011 (Guidelines for auditing management systems).

Certification will ensure the quality of assessors and the quality of ISO 55001 methods, and confirm competency in knowledge and comprehension in asset management systems. Designed for asset management professionals with at least five years' experience to further their knowledge and advance their careers. This certification has been developed under strict controls and involved leaders from a range of key industries, where effective asset management is paramount. Tested for content validity and appropriateness, the CAMA exam has also undergone stringent Beta testing.

Register your interest in the CAMA exam, February 2015 Email: training@amcouncil.com.au

Global News

As WPiAM continues to expand, the CAMA exam will attract an ever increasing global audience. Today, peak bodies in member countries include: Australia, Brazil, Canada, France and the USA. Other GFMAM member organisations are also considering running CAMA examinations, including the Southern African Asset Management Association (SAAMA). It is a strategic move for all aspiring asset management professionals to secure the CAMA qualification, which will ultimately result in a common language and a tool to interpret asset management practices across the globe.

Outstanding results from the CAMA exam launch

October 2014 saw the successful Australian launch of the first CAMA exams. The Asset Management Council is delighted to announce the results and advise that the first group of 50 CAMA professionals are currently being issued with official certificates from World Partners in Asset Management (WPiAM).

Due to unprecedented demand, another CAMA exam sitting was offered in early December 2014 in several metro Australian cities, as well as in Canada, and will be offered again in February 2015. Exam candidates must have a minimum of five years' experience in asset management and have a strong working knowledge of ISO 5500X.

The two hour exam contains over 100 questions -from a bank of over three hundred - generated by leading practitioners from across the globe, ensures exam integrity through question variation. Trial candidates in Australia and Brazil provided valuable feedback on suitability of exam content; and statistical analysis of results for the trials set an initial pass mark for the exam. Psychometric testing and peer review of individual questions further enhanced the quality of the exam for candidates.

Observations to date show a good distribution of results across the different combination of exam questions amongst candidates with industrial, geographical and cultural diversity. This provides strong confidence that the CAMA exam is an effective method for identifying required asset management knowledge for ISO 55001 Assessors.

The Asset Management Council is now receiving requests from across the globe to run the CAMA exam. We will keep you informed as more dates become available.

Deryk Anderson, Exam Director, AM Council, on creating the CAMA exam

The development of the CAMA exam was an international effort. We created a database of over 300 questions using input from fifty asset management professionals across two continents. The question collection task was carried out within an ambitious timeframe; every subgroup of volunteers hit their targets, and the resulting questions were of a very good standard. Remarkably, all of this was achieved without a single face to face meeting being held. Weekly teleconferences and e-mail submission and review of questions proved an effective means of achieving our outcomes.

CAMA at a Glance

Based on GFMAM's (Global Forum on Maintenance and Asset Management) 'Competency Specification for an ISO 55001 Asset Management Auditor and Assessor' document, the CAMA exam was developed by leading not-for-profit asset management organisations which form WPiAM and include: ABRAMAN, the Asset Management Council, IFRAMI, PEMAC and SMRP.

Compliance with the Competency Specification for an ISO 55001 Asset Management Auditor and Assessor'; ensures that successful applicants have the minimum required knowledge to be an ISO 55001 assessor. This requires compliance with the following:

- **ISO 55001: Asset management – Management systems – Requirements**
- **ISO 17021-5: Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 5: Competence requirements for auditing and certification of asset management systems**
- **ISO 19011: Guidelines for auditing management systems.**

All of these are covered by the CAMA exam.

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- ISO 17021-5: Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 5: Competence requirements for auditing and certification of asset management systems
- ISO 19011: Guidelines for auditing management systems.

All of which are contained in the CAMA exam.

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WPiAM
World Partners in Asset Management

A Primer for the "Companion Guide to ISO 55001", and Underpinning Framework

Authors: Jim Kennedy, Peter Kohler, Deryk Anderson, Michael Killeen, Gary Winsor and Sally Nugent, Asset Management Council, Australia

Introduction

In January this year, as the new ISO 5500X Asset Management Standards were being published, the Asset Management Council developed a Companion Guide to assist its members and stakeholders to implement the Standards, and in particular, ISO55001, the Requirements Standard.

The Companion Guide is designed to be used as a workbook, to enable practitioners to assess and develop their organisation's effective use of the ISO 5500X standards. The material within the Guide draws substantially from the Asset Management Body of Knowledge (AMBoK).

Asset Management Body of Knowledge (AMBoK)

For the past two decades, the Asset Management Council has used an asset management framework comprising a definition, principles and its asset management models. These models are intended to develop a common understanding of asset management and to provide the asset management community with a concise picture of the principles, concepts and processes of physical asset management.

Importantly, this framework, together with the Asset Management Council vision, values and code of ethics provides for the governance, development, provision, maintenance and improvement of the services of the Asset Management Council.

Developing services for the asset management community involves the processing of a range of inputs. Such inputs, for example, may include standards, technical writings and stakeholder requirements etc.; while the resulting services include AMBoK activities, training, events, forums, conferences, publications, and building individual and organisational capabilities.

The framework, and related activities, is shown at figure 1 below.

Fundamentals and Principles of Asset Management

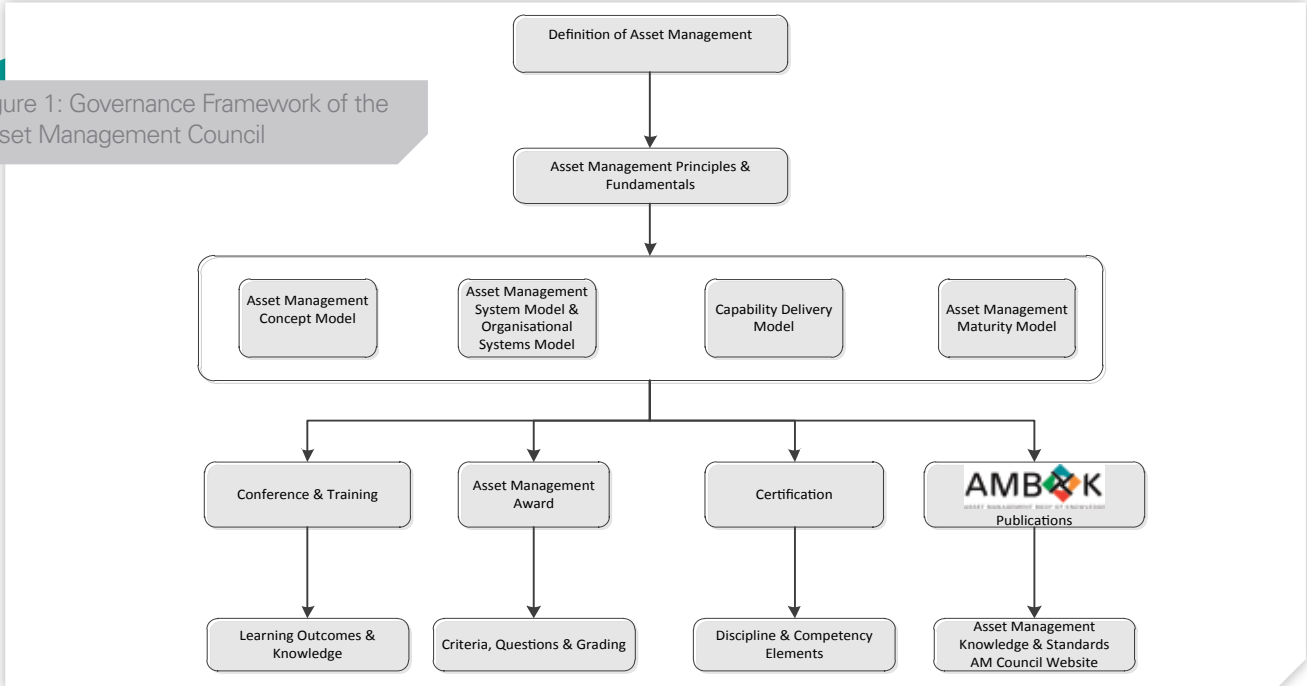
The Asset Management Council views asset management to be founded on a set of principles. If any one of these principles is missing from the management of assets, the organisation will likely see a reduction in the value that its assets provide. These principles should directly influence an organisation's asset management systems and plans.

ISO 55000 - Overview, principles and terminology describes four fundamentals upon which asset management is based. It also provides an overview of asset management and asset management systems, and provides the context for ISO 55001 and ISO 55002.

Principles and Fundamentals of Asset Management

The ISO 55000 fundamentals and summaries of the Asset Management Council's asset management principles are presented below (for more detail on the Asset Management Council's Principles of AM, the see AMBoK Publication 000: Framework for Asset Management, Second Edition). Each list identifies the components essential to asset management.

Figure 1: Governance Framework of the Asset Management Council



Asset Management Council Principles

Output Focus

The first key principle of asset management is that an organisation and its assets must have an "output focus". This focus on the delivery of an output must be matched to the organisational objectives as described in agreed policies, strategies and plans. These business objectives will usually be defined in the external agreements that the organisation has committed itself to achieve.

Capabilities

The second principle is "capabilities". Capabilities are inherent in organisations and assets alike. To achieve outputs requires capabilities. Asset management is not about the physical asset itself – it is about what the asset can do - the asset's capability.
The achievement of the required output will usually require, not only requisite asset capability, but also other enabling capabilities such as operating instructions and maintenance and spares. These support capabilities are themselves enabled by other enabling capabilities such as finance, human resources, information technology and corporate guidance.

Level of Assurance

The third key principle is "level of assurance" or level of uncertainty. That is, what is the level of confidence that the asset will achieve its intended or designed outputs of safety, service and cost effectiveness? "Certainty" and its reciprocal "uncertainty" are all about risk, which links the context of use to the achieved outcomes.

Management of risk is a key role of asset management. It provides a level of assurance that the systems and equipment that comprise assets, will deliver the required measurable and testable capabilities. Thus, the concept of "level of assurance" is actually incorporated with the concept of an "output".

Learning Organisation

The fourth key principle of asset management is a "learning organisation" where lessons are harvested from measuring and analysing performance and learning is disseminated and actioned. An organisation that actively seeks change in environment or domain knowledge and adapts to improve its products or services is a learning organisation.

ISO Fundamentals

Value

Asset management does not focus on the asset itself, but what the asset can do for the organisation and its stakeholders, that is, what value it can provide. Assets can deliver tangible and intangible, financial and non-financial value.

To determine an asset's value, a management system for the management of assets (the asset management system) employs decision-making processes that incorporate stakeholder determined criteria.

Through this management system, asset management plans can be developed and implemented that achieve the required asset performance and hence deliver the value to the organisation.

Alignment

Implementing an asset management system enables the organisation to translate organisational objectives into technical and financial processes, plans, activities and tasks, by applying a systematic and systemic approach to decision-making.

This fundamental is focussed upon the achievement of organisational objectives and goals by planning, specifying, designing and implementing a system to manage assets. This system also should meet relevant company, industry and regulatory technical and financial standards.

The asset management system supports competent employees make timely and accurate decisions by providing a transparent, traceable and logical link between decisions, activities and tasks of employees to the organisational objectives.

Assurance

The need for assurance arises from the need to effectively govern an organisation. Assurance applies to assets, asset management and the asset management system.

Stakeholders require surety that assets and the associated management system can and will deliver what is required of them. To achieve this surety, senior management regularly reviews the processes that link organisational objectives to the required business functions and the performance of both the asset management system and the assets.

The continual improvement of both the asset management system and the performance of assets is part of the assurance function. This acts to continually assure stakeholders that the assets will meet requirements.

Leadership

Leadership and commitment from all levels of management is essential for successfully establishing, operating and improving asset management within the organisation. The leadership style of an organisation should support both the achievement of organisational objectives and the relationship to the actions of employees. For asset management to be successful, employees should understand these objectives, and their role in achieving them. Such commitment should ideally come from all levels of the organisation.

Regular consultation with employees and service providers about changes or improvements to the asset management system is important as employees must be competent in completing their responsibilities, whilst working toward the collective organisational outcomes and goals.

This is a excerpt. To view the full article, log in to the Member Zone at amcouncil.com.au.

Asset Management Council Stakeholder Survey Results
Wave 2

Earlier this year, the Asset Management Council developed a Stakeholder Survey. Both Asset Management Council members and the general asset management community were asked to participate. The Second Wave of the Stakeholder Survey was launched in October.

The aim of the surveys is to answer the following questions:

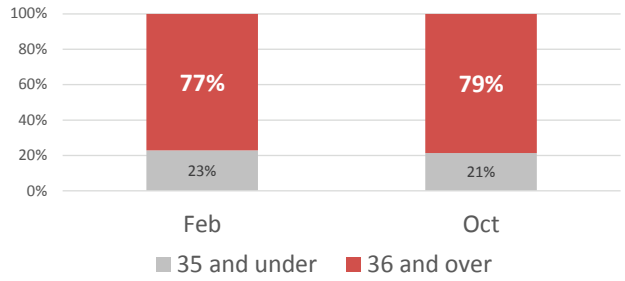
1. Who are our stakeholders/members?
2. Why are have our members joined the Asset Management Council?
3. What do our stakeholders want from the Asset Management Council?
4. How are we measuring up?
5. How can we improve our services?

A summary of the results are presented here. Thank you to everyone who participated. Your comments and support have already gone into helping shape the Asset Management Council's 2014-2018 Strategic Plan.

Demographics

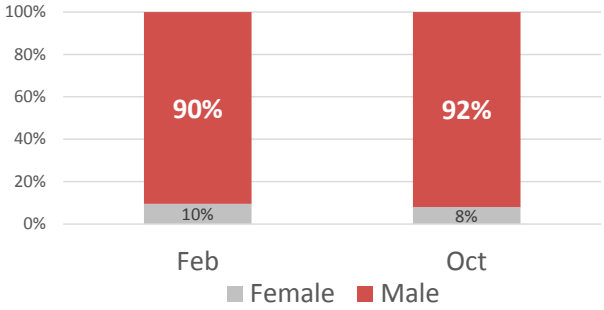
Age

There is no change between the two waves in the age range of the respondents. Over ¾ are over 36.



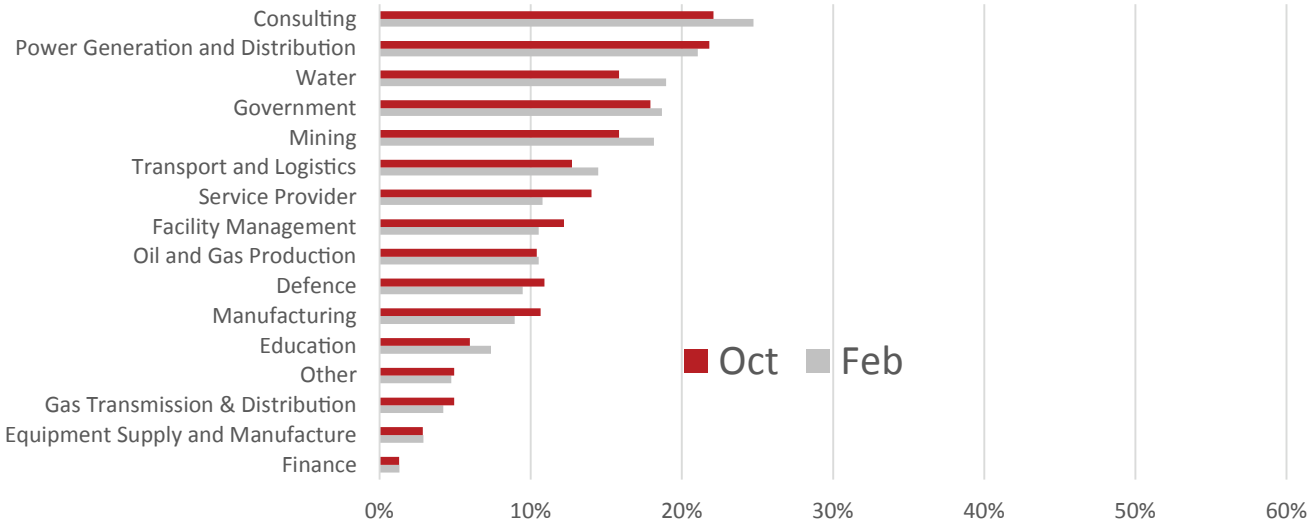
Gender

There is no change between the two waves, with 9/10 respondents being male.



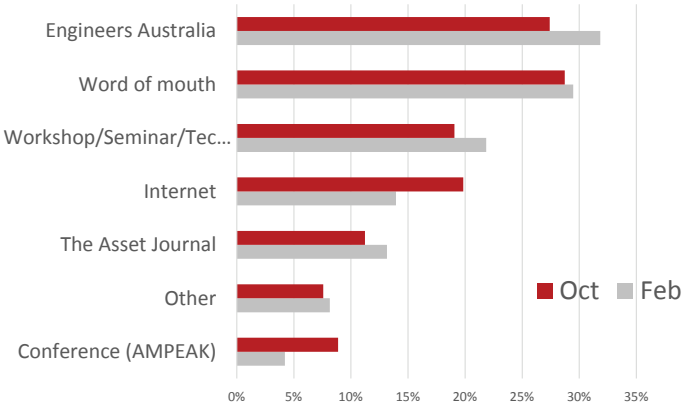
Industry

Consulting, Power Generation and Distribution are still the highest ranking industries, with significant decreases in water consulting and mining.



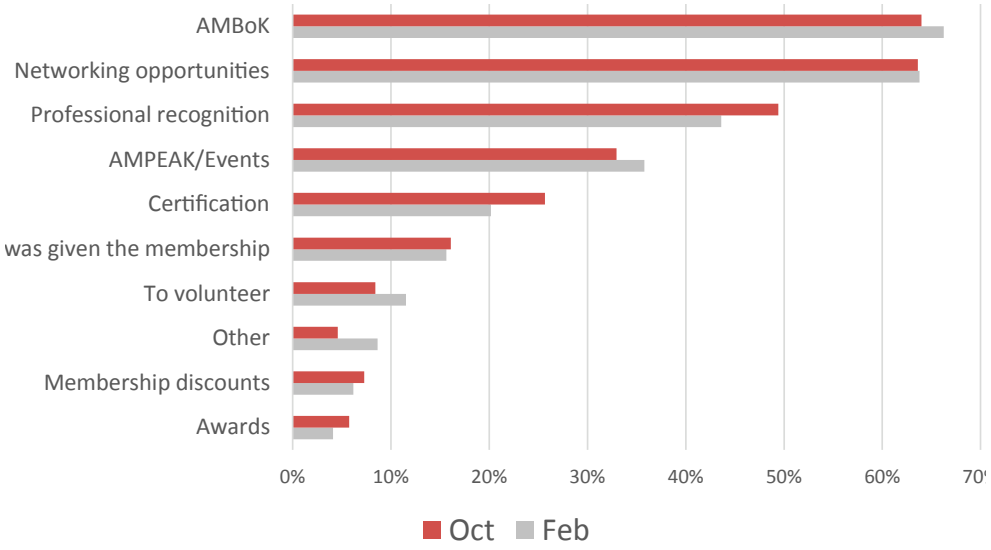
How did you first hear about the Asset Management Council?

Word of mouth and Engineers Australia remain the top two sources of awareness, despite a significant drop in Engineers Australia and a significant increase in Internet awareness.



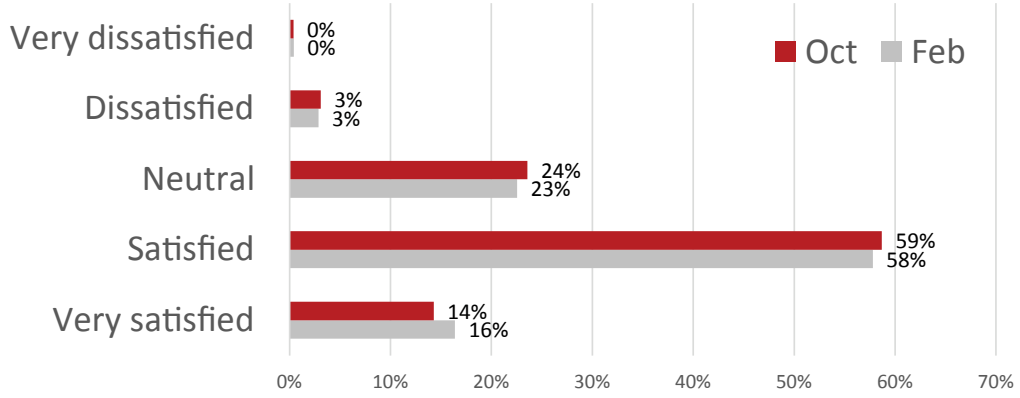
Why did you join the Asset Management Council?

AMBoK and Networking remain the highest ranked reasons for joining. There is a significant increase in certification and professional recognition as reasons for joining.



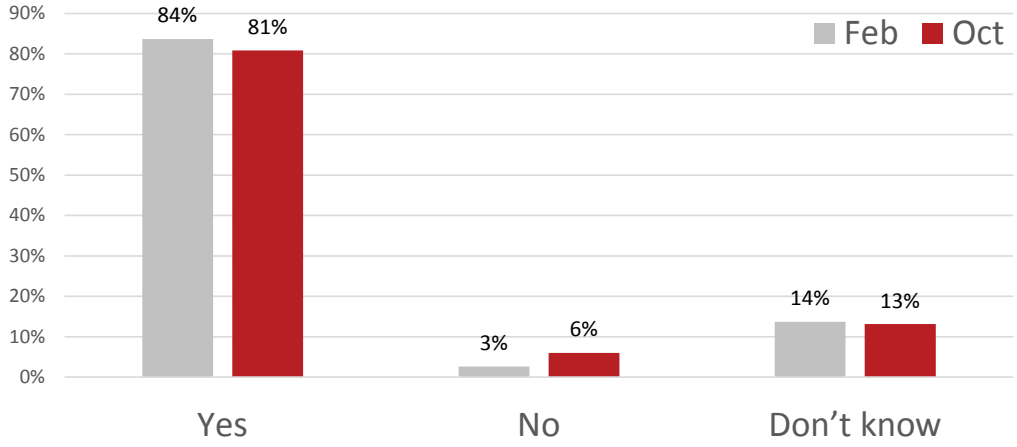
Membership Satisfaction

Almost ¾ members remain satisfied or very satisfied with their membership, as per the previous wave.



Recommend the Asset Management Council

Over 80% would recommend the Asset Management Council, with no significant change from the previous wave.



Tutorial 3

Introduction to the Asset Management System

ISO 55000 describes key elements of an Asset Management System. As defined by ISO 55000, an Asset Management System is "The set of interrelated or interacting elements of an organization to direct, coordinate and control asset management activities (i.e. establish policies and objectives, and processes to achieve those objectives"

What is a management system?

A management system describes the policies, objectives and processes/procedures an organization needs to consistently meet its objectives.

In a small organization there may not be a formally documented system, just 'our way of doing things', which is not written down. However, the larger the organization the more likely it is that there are written instructions about how things are done. This makes sure that nothing is left out and that everyone is clear about who needs to do what, when and how. When an organization systemises how it does things, this is known as a management system.
ISO 55001 uses and defines the Asset Management System. An effective management system has many benefits including:

- More efficient resource use
- Improved risk management
- Increased customer satisfaction as services and products consistently deliver what they promise.

There are benefits and cautions associated with certifying your Asset Management System to ISO 55001.
This does not mean getting certified is a bad idea – just that the downsides need to be considered along with the benefits and managed accordingly.

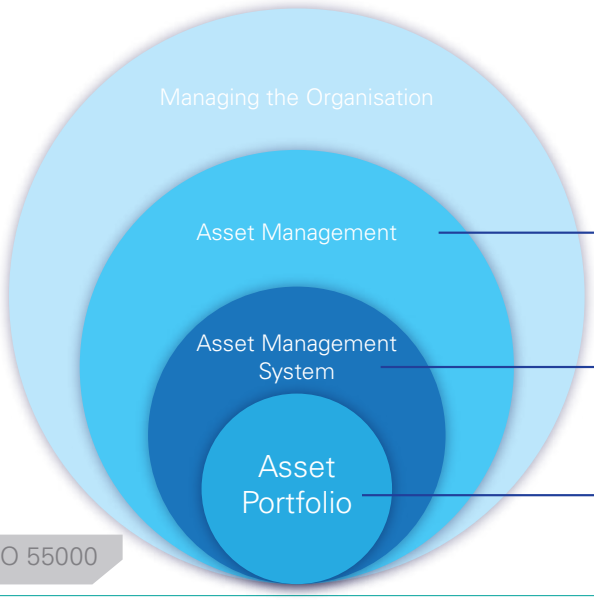
Pros and Cons of Asset Management System Standards

Pros

- Provides a common framework and vocabulary for an asset management system
- Top management benefits from new insights and cross functional integration
- Often gain quick-wins such as risk reduction, opportunity identification or process improvements
- Certification provides a level of assurance of an organisation's asset stewardship capabilities to external stakeholders

Cons

- Can encourage a 'compliance culture' where certification becomes the goal
- Organisations lose sight of the real drivers to improve their asset management capabilities
- Does not help organisation's determine 'best appropriate practice' for their business
- Does not necessarily deliver all the benefits of asset management without the right leadership and culture



Coordinated activity of an organisation to realise value from assets

Set of Interrelated or Interacting elements to establish AM Policy, Am Objectives and processes to achieve those objectives

Assets that are within the scope of the management system

Reference: ISO 55000

Asset Management System Model

This model outlines the content of a typical asset management system, and suggests a method for how an organisation implements asset management. The AM System Model is implemented in the organisation to achieve the stakeholders' needs that are defined in the Concept Model from the previous tutorial.

You will note that, once again, the role of leadership in good asset management is key. In addition:

- Stakeholders are a common link in all the asset and organisational models
- Plan Do Check Act (continual Improvement) principle is evident in all models
- Each AM principle is common to all three asset models and is implemented within the Asset Management System.
- The technical processes shown in the asset management systems model are typified by the processes in the Capability Delivery Model.

The AM Council models are intended to be used collectively rather than individually.

Asset Management System Artefacts

There are three artefacts of an asset management system as required by ISO 55001. These are:

- Asset Management Policy
- Strategic Asset Management Plan
- Asset Management Plan(s)

Organisational System Model

Asset management is only one function in an asset-intensive business. It is important to understand the relationship with other functions, and even more to align all the functions and their management systems with stakeholder expectations. There are bound to be requirements for common and integrated processes across the different management systems, for example on handling asset costs, and managing risks.

The AM Council's Organisational System Model shows how the Asset Management System Model integrates with other management systems such as safety, financial, and environment that collectively support the organisation in delivering its defined outputs to the stakeholders. It is important to be clear about the integrated relationship between asset management policy and other policies required (and defined by other ISO standards) such as safety, environmental, financial, and human resources in meeting the organisation's objectives

The organisational strategic plan may be made up of the collection of several strategic plans from all the organisation's management systems. For asset management this means (in ISO 55000 terminology) the Strategic Asset Management Plan may be one of several strategic plans. The Strategic Asset Management Plan should identify how the organisation's objectives have been translated into asset management objectives, as well as the definition of the organisation's AM system, and how it will be used to achieve the AM objectives is critical to ensure alignment of all objectives.

A Strategic Asset Management Plan (SAMP) is defined in ISO 55000 as:
"documented information that specifies how organisational objectives are to be converted into asset management objectives, the approach for developing asset management plans, and the role of the asset management system in supporting achievement of the asset management objectives."
Note 1: A strategic asset management plan is derived from the organisational plan.
Note 2: A strategic asset management plan may be contained in, or may be a subsidiary plan of, the organisational plan.

Next issue: Stakeholder Requirements and Asset Management Objectives

Myths of Asset Management

Myth #3: The management of assets has little to do with financial management.

Myth

Asset management is a stand-alone activity undertaken by technical professionals who shouldn't be influenced by or need to integrate with the financial management function and nor should they need to consider the impact of their decisions on the financial outcomes of the organisation – their primary concern is the optimum technical outcome.

Introduction

Financial management is considered by many to be a complex web of interrelationships created by the use of terms like debits and credits, the balance sheet, the profit and loss statement, cash flow statement and, to many, obscure business requirements like International Financial Reporting Standards (IFRS).

On the surface of it these financial requirements couldn't possible be related to asset management. When broken down though, financial management is very simple as represented by the acronym REAL. The elements of REAL are closely linked to asset management in terms of the effect financial management can have on asset management and the effect asset management can have on financial management.

In this article we will define REAL, look at how the financial REALity is impacted by and impacts on asset management and provide a teaser on the relationship between more complex elements of financial management and asset management. The article will then look at some key asset management processes that impact on financial management processes and provided some specific case studies that identify the relationship between asset management and financial management.

What is REAL

Put simply, finance is about four characteristics:

1. Revenue: The gross inflow of economic benefits during the period arising in the course of the ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants

2. Expenses: Decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrences of liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

3. Assets: A resource that is controlled by an entity as a result of past events from which future economic benefits are expected to flow to the entity.

4. Liabilities: A present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.

These are represented in financial statements such as an organisation's profit and loss statement, their cash flow statement and their balance sheet. The relationship between REAL and these statements, along with common terms like 'profit' are shown in Figure 1.

Outlook	REAL		Represented in…
Short term	Revenue	Expenses	Profit & Loss/Cash flow
Long term	Assets	Liabilities	Balance sheet

Figure 1: The relationship between REAL and the financial statements The difference between cash flow and, profit and loss

Initial approaches to determine organisational profitability were commonly called the "cash accounting" method where the business recorded income and expenditure as the events occurred irrespective of the duration covered by the activity. For example the capital purchase of a new asset would be recorded in the year it was paid for, not the years in which it was delivering value. This approach distorted the short-term picture of organisational profitability.

Accrual accounting, and in particular the role of depreciation, was introduced to assure that the equity value of the organisation, and the determination of profitability represented by short term cash flows, was accurate.

Accrual accounting reports income when products are produced (not when they are sold) and reports expenses when inputs are used (not when they are purchased). The process uses the traditional cash method of accounting during the year but adds or subtracts inventories and production inputs on hand at the beginning and ending of the year.

The impact of accrual accounting on the management of large infrastructure assets was significant and now required greater accuracy in an understanding of future financial commitments such as the value of infrastructure consumed in producing the organisations income. In this role significant maintenance actions that add equity value such as overhauls or renewals can be considered as expenses in one year that add value in future years.

The role of maintenance expenses incurred in one year for the purpose of future benefits in subsequent years can be similarly recognised under IFRS and the maintenance event cost 'depreciated' over the maintenance cycle. This is in fact the role of depreciation to present an accurate assessment of the consumption of asset value in a particular year.
Table 1 (page 26) outlines some common scenarios and the effect each of these would have on the cash flow, P&L and Balance sheet and answers the questions posed by Figure 3.

Asset management processes that affect financial management

As the Asset Management Council's Organisational Management System Model shows how asset management exists as one of a number of management systems within any organisation (see page 23 for more information).

One of these 'other' management systems is the financial management system and it is heavily influenced by the asset management system. Whilst the anecdotal evidence and the requirement of ISO 55000 to strike the balance between the:

- Asset performance;
- Cost of that performance;
- Risk (residual) resulting from the asset achieving that performance for that cost.

…clearly support the contention that asset management and financial management are linked, the idea warrants further analysis.

Consider the elements of the APQC (www.apqc.org) process taxonomy for finance and their relationship to the asset management system elements shown in Table 1. Clearly there is a strong process link between asset management and financial management.

Depreciation and Renewals

The model for replacing an aging asset with a new or overhauled (as good as new) asset is shown in Figure 2.

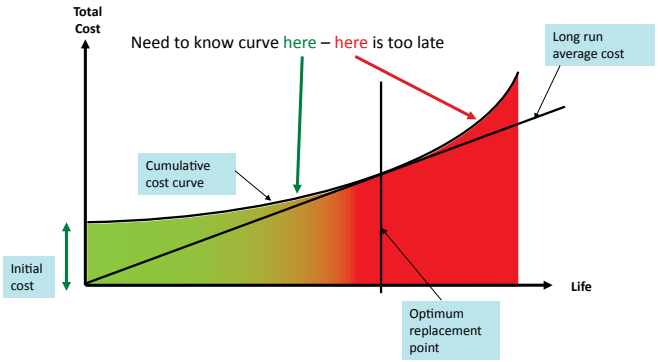


Figure 2: Optimal replacement point for aging assets

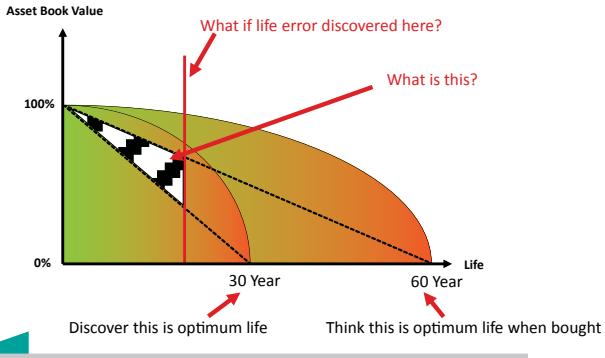


Figure 3: The effect of a depreciable life error

As can be seen, the outcome is determined by the ability of the organisation to collect all costs necessary for the continued operation of the asset of interest. In accounting terms, the asset replacement will occur when the marginal cost of ownership becomes greater than the average cost to that point. The average cost per year to that specific point on the curve is now exceeded by the next year's annual cost (assuming continuous growth as represented by the curve). The financial assessments assume that the asset has been fully depreciated at the point of replacement or allow for the undepreciated amount to be 'written off'. Failure to accurately determine average life and properly depreciate against that future life may result in residual costs that must be written off at the time of replacement. This will change the cost dynamics of the optimising equation. Figure 3 demonstrates the potential impact of depreciation arrangements that do not reflect the potential economic life of the asset.

Case studies on the impact of failing to integrate asset and financial management

There are many public domain case studies of significant adverse events caused by a failure of large organisations to connect the implications of financial management decisions and the resultant adverse organisational impact. A well-documented example is the Texas City Explosion of 2005 at the BP Refinery where global corporate budget cuts of 25% of fixed costs were mandated without an assessment of potential impacts. The focus on production and short-term profit discouraged expenditure on non-productive effort such as preventive maintenance, reliable safety systems and investment with paybacks greater than a year. Business unit managers (e.g. Texas City) rarely stayed beyond 15 months before departing for another facility and leaving the consequence of their asset related financial decisions to those that followed.

The explosion and its outcome of 15 deaths, 180 injured, and billions of dollars in corporate losses was clearly linked to local decision-making that increased (invisible) risk in a bid to achieve (visible) reductions in expenditure and hence corporate profit.

Closer to home, Wolff and Aubury, in their article, Crack Attack documents how the failure of key asset management processes lead Ansett to be grounded in key operating periods such as Christmas and Easter – periods of peak revenue for airlines – which ultimately resulted in the erosion of public confidence and their entry into receivership.

Summary

This article sets out to establish the relationship between financial management and asset management, thereby testing (de-bunking) the **myth that:**

"Asset management is a stand-alone activity undertaken by technical professionals who shouldn't be influenced by or need to integrate with the financial management function and nor should they need to consider the impact of their decisions on the financial outcomes of the organisation – their primary concern is the optimum technical outcome."

Financial management revolves around four measures, revenue, expenses, assets and liabilities (REAL). The treatment of some transactions is different between pure cash (seen in cash flow statements) and an accrual accounting view (seen in P&L statements). The accrual accounting method recognises the period in which the expenditure is adding value, rather than the period in which the transaction was acquitted.

Not only do asset management activities affect financial outcomes but there is a strong interdependency between asset management and financial management processes. Of the nine process categories of financial management shown in Table 1, asset management processes impact at least five of them to a medium degree or greater. These two management systems are intrinsically linked and the myth is clearly debunked.

Next Myth: That OEM provided maintenance can be unreservedly followed – because after all, they know the asset best!

Table 1. Relationship between Financial and Asset Management Processes

	APQC financial management process category	Strength of relationship	Associated asset management process
1	Perform planning and management accounting	High	The asset management plan is the creation of a defensible budgetary request for funds necessary to achieve organisational outputs over the duration of the plan and informs the financial forecasting process. The categorisation of work as major periodic maintenance, minor maintenance and capital will strongly influence the budgeting process and financial outlook.
2	Perform revenue accounting	Medium	Asset management planning. Outages for major periodic maintenance/shutdowns will directly affect revenue
3	Perform general accounting and reporting	High	• Cost tracking and control directly affects P&L and balance sheet outcomes as discussed below. • Stores and rotable and repairable management directly affects both the P&L and balance sheet
4	Manage Fixed Assets	High	• Cost tracking and control directly affects P&L and balance sheet outcomes, • Managing the life of assets, when and how they come on line and are subsequently capitalised • Ensuring the condition of assets remains appropriately aligned to the book value and there is no impairment (refer to the note below)
5	Process payroll	Low	• Labour management
6	Process accounts payable and expense reimbursements	High	• Supplier and purchase order management • Commitment accounting is informed by asset management plans and purchase order creation
7	Manage treasury operations	Low	Long term cashlfow and funding requirements, particularly for capital expenditure items with major foreign exchange exposure is Informed by the asset management and strategic asset management plans.
8	Manage internal controls	Low	Adherence to internal spend controls including financial delegation
9	Manage taxes	Very low	

AASB_Glossary_30_September_2012.pdf
http://www.aasb.gov.au/admin/file/content102/c3/
Wolff and Aubury, Flight Safety Australia, March – April 2004

AM Council News

Adelaide Chapter Technical Session Report

The Adelaide Chapter of the Asset Management Council recently hosted a technical presentation whereby 20 local asset management professionals enjoyed drinks and nibbles while listening to Anthony Roe talk about Asset Component Management and Emily Spurling discuss ASC's Changing Roll in Asset Management. Deryk Anderson spoke about current Asset Management Council initiatives and activities. After the presentations there was an informal swapping of stories, lessons learned and networking within smaller groups.

Adelaide Chapter Chair Tom Birdseye would like to thank Anthony, Emily and Deryk for presenting at the session. If other Adelaide locals have any asset management journeys they would like to present - whether of technical or abstract nature - please email ChapAdel@amcouncil.com.au

Tasmania Chapter Event Recap

Once again a successful technical seminar was held in Campbell Town, Tasmania. Sxteen delegates attended from all over Tasmania including representatives from TasWater, TasRail, TasNetworks, Hydro Tasmania, Local Government and Engineering Consultancies.

Mo Barghash gave a presentation on the latest news from the Council and an update on ISO 5500X assessor requirements.

Jon Drew - General Manager, Assets, TasRail - gave a presentation of the journey of asset management since he started with TasRail in June last year. He outlined his framework for successful asset management and identified areas where the organisation was developing a major move to drive better performance with a greater emphasis on a preventative maintenance regime.

Anthony Januba is a specialist in protection control for TasNetworks. His presentation centred on methodology for assessing risk of protection equipment failure for making decisions on repair refurbish or renewal. This risk's costs are affected by failure from age, spare parts availability and manufacturers support all of which drive the economic renewal justification.

Andrew Sneesby from GHD gave an outline of an asset management framework that helps track asset management activities through their lifecycle. The intention was to show how this framework fits within the technical processes of the Asset Management System ISO 5500X asset management system model.

Thank you to everyone who presented, as well as to those who attended.

The next Tasmania event is scheduled for February 2015.

Sydney Chapter Event Recap

Recently, the Sydney Chapter Committee joined Sally Nugent and Eva Wispereit from AM Council National office to inspect the facilities at Sydney Showground, Sydney Olympic Park for AMPEAK 2015.

Many ideas were thrown around to transform what is essentially a blank canvas into a dynamic, engaging and comfortable space. With the experience provided by Frank and Paul from ProShow Productions, who have been engaged on a number of previous AM Council Conferences, I'm confident we'll get a fantastic result.

Following on from the site inspection, we moved to the Novotel with additional members of the Sydney Chapter, where we had the pleasure of listening to two great topics:

- Becoming an ISO55001 Assessor/Auditor (Sally Nugent - Asset Management Council)
- Future scenario's in the Electric Distribution business; Scenario planning and signposting (Tony Saker and Ed deVroedt - UMS Group)

What I found informative about the ISO55001 presentation, is that the Asset Management Council is about to sign up to a worldwide joint venture with a number of other international asset management bodies, delivering the first certification for asset management assessors. It is really pleasing to see how engaged and proactive the AM Council is in the international asset management community. Now there is a clear pathway for Australian companies and individuals interested in pursuing formal certification assessing compliance to ISO55001.

The presentation about disruptive technologies in the power industry presented scenarios that are both exciting and confronting. New technology in local power generation and storage is redefining the way in which the power industry will operate in the 21st century. At some point in the not-so-distant future, the generation and distribution business models may become unsustainable, putting in jeopardy the existing and future investments in distributed power infrastructure. Understanding this and transitioning from the current to future state without major disruption to the customer is the challenge of both governments and private enterprise.

– Paul Stanford, Deputy Chapter Chair, Sydney Chapter

Meeting Point: Dates for Your Diary

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.

2015

February

Thursday 5 **Sydney**
Asset Management Fundamentals
Thursday 12 **Melbourne**
Asset Management Fundamentals

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March

Thursday 12 **Canberra**
Asset Management Fundamentals
Thursday 19 **Perth**
Asset Management Fundamentals
Friday 20 **Perth**
Asset Management Plans

For more information on
Asset Management Council events,
contact Eva Wispereit, Events Assistant at
eva.wispereit@amcouncil.com.au

AMPEAK 2015, Sydney, 24-28 May
Sydney Showground, Sydney Olympic Park

Call for papers

Organisations and institutions are encouraged to apply to present their asset management technical developments through peer reviewed papers and interactive workshops. Make your contribution:

Paper and Workshop Abstract Submission Close – Friday 30 January 2015

1st Draft Paper, Submission Close – Friday 27th February 2015

Final Paper, Submission Close - Monday 6th April 2015

Sponsor and Exhibitor Opportunities

Please download our sponsor and exhibitor brochure, on the conference page of our website: amcouncil.com.au/conference.html

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- ☐ Shutdown planning and the maintenance interface
- ☐ Asset Management
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