Setting a good standard in asset management

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Introduction

There is accelerating international interest, debate and development in the more disciplined, value-maximised management of business assets over their life cycles. This is yielding surprises, some very big opportunities and a growing consensus about what needs to be done. Leading organisations are eliminating up to 30% of the 'total cost of ownership', raising performance, reducing risks and extending asset lives considerably – and such opportunities do not seem to be limited to specific industries or asset types. Improved standards in asset management should therefore be regarded as a business imperative – a competitive edge in a commercial environment, and a core feature of responsible governance and transparent good sense in the public sector.

The language

However there is still a lot of confusion about the subject: there are many different views on what comprises an asset, and what asset *management* involves. Financial asset management, for example, is widely recognised as a juggling of capital worth, yield, risk and sustainability in cash, stock and other investment options. The management of industrial or infrastructure assets, in contrast, is seen by some in terms of portfolio acquisitions and disposals, and by others as a matter of engineering, technical and operational challenges. And there are significant groups for whom asset management means just the maintenance of equipment, or the identification and location tracking of moveable items.

Assets & Value

Assets are assets by virtue of their actual or potential *value*. Assets exist in many forms (such as people, equipment, reputation, data, contracts and cash) and they provide value in different ways (financial returns, service levels, customer satisfaction, regulator confidence and other benefits), over various timeframes. Assets are also often highly inter-connected: their value is realised through their *combined* performance within complex systems, such as electricity networks, manufacturing processes or transport systems. Furthermore, they present different decision-making challenges and requirements for investment, utilization, maintenance and renewal/disposal during the different phases of their life cycles. Seeking the optimal mix of value-for-money from individual assets, while optimising systems performance and maximising whole portfolio value is thus a complex business (see figure 1).

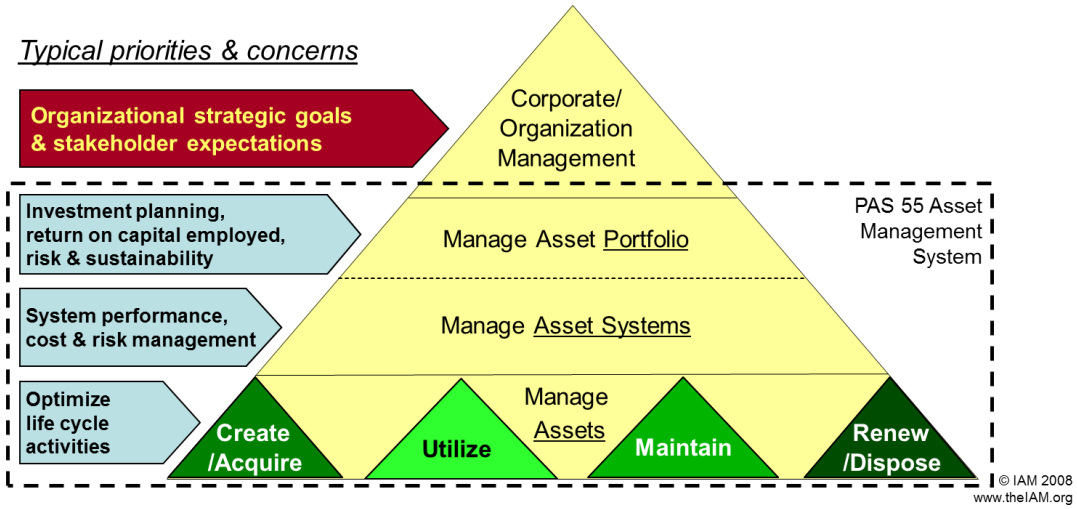

Figure 1. Multiple requirements in managing assets

In addition to this complexity, asset management has to consider the dynamic nature of stakeholder expectations, asset risks (their performance, reliability and degradation), the volatile economic environment, uncertain supply chains, climate change and workforce competency/demographic concerns. So this is why the development of guidance and standards during the last 15 years has been useful in sorting out what needs to be done.

A potted history of modern asset management

Aside from the long-established financial services community, the disciplined, risk-based and whole life cycle-optimised approach to asset management has emerged from two primary sources: the North Sea oil & gas sector in the 1990's, and the public services sector in Australia and New Zealand during the same period. In both cases, a 'perfect storm' of financial crises, safety incidents (such as Piper Alpha) and changes to legislation forced a fundamental re-think about existing silo'ed departmental behaviours and short-termism. The subsequent transformations in planning, cross-disciplined collaboration, risk management and sustained performance were remarkable. In 1994 the Institute of Asset Management (IAM)[1] was formed to share and spread the good practices - leading, in 2004, to publication of the first ever 'Publicly Available Specification' (BSI PAS 55) for the optimal management of physical assets. PAS 55 defines 28 key requirements for achieving maximum net value through a joined-up approach for asset management.

Taken up initially by the UK power and water utilities, the PAS 55 standard is now a worldwide success, translated into 6 languages and being adopted in railway networks, mining enterprises, food manufacturers, airports, pharmaceutical companies, local governments, hospitals, petrochemical plants and facility management services. It has consistently helped to organise priorities, coordinate resources and provide better transparency on what needs to be done, when and why to deliver better value-for-money.

A management system for asset management

Building on the successes of PAS55, and following 2½ years of consultation with 26 participating countries, a full ISO standard (ISO 55000 series) is shortly to be published[2]. This provides the necessary rigour and independent validation mechanism for assuring and

[1] See www.theIAM.org
[2] See www.ISO55000.info

demonstrating good asset management. It is designed to integrate with existing management systems such as ISO 9000, ISO 14000 and OHSAS 18000, and it is safe to assume that it will rapidly become an expected competency for any asset-managing organisation.

So what does a management system for asset management look like? Well, Figure 2 shows the basic structure, within which there are some core themes:

- A clear 'line of sight' has to be established between business goals and execution of day-to-day activities. Those responsible for practical asset management tasks need to understand the *why* as well as the how.
- Vested interests, budget protectionism and short termism all damage value. So conflicting priorities and departmental silo's have to be broken down. This often involves significant culture change, and new performance criteria to encourage proactive, collaborative behaviours instead of fire-fighting and point-scoring.
- Better and more consistent, risk-based decision-making is a key feature of good asset management. Many organisations chase greater *efficiency*, sometimes even to the extent of doing the *wrong* things faster, cheaper, better. Leading asset management organisations can demonstrate what is worth doing, when and why, and can quantify the impact of deferment or not doing things.
- Continual improvement is much talked-about, but more rarely evident as an organisational habit. An asset management system establishes such a discipline, at multiple levels of learning, innovation and feedback.

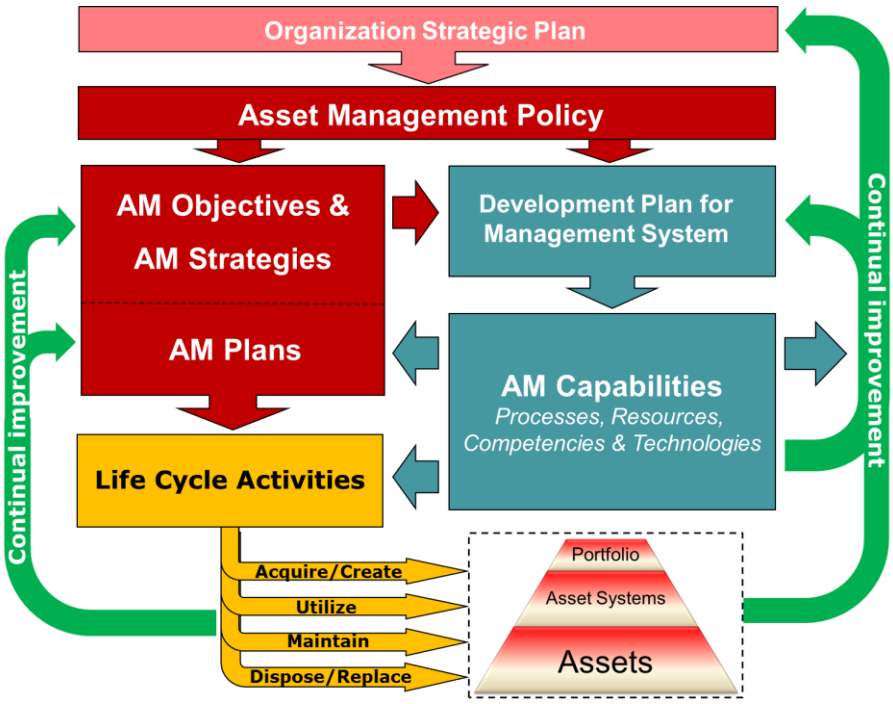

Figure 2. Overview of an asset management system

BENEFITS

The outcomes of concerted efforts to better asset management, taking all the challenges into account, have been remarkable. The hard evidence of results is greater than many would have believed possible:

- CLP Hong Kong: 90% reduction in system downtime ("customer minutes lost"), reducing tariff charges by 40% and increasing the network/asset portfolio by 20%.
- Nuon Holland: 30% 'total cost of ownership' savings
- Chilean copper mine (ore crushing plant): 3-10% increased throughput with 30% reduction in maintenance costs
- New South Wales government: A$11M/year budget savings
- Baltimore power generation: 29% increased output at no extra cost

CONCLUSIONS

The prizes are clearly large, and the lessons share-able (the same issues, challenges and opportunities lie in most industry sectors). There are many blind alleys, however, and it is easy to slip backwards if, for example, senior managers change, or people believe that a technology-led 'solution' will solve all the problems. Maturity development in asset management is a subtle, multi-faceted roadmap, but the prizes are huge and the evidence of what needs to be done is increasingly available.

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