AMQ International's STRATEGIC
341 ASSET MANAGEMENT

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A Life in Asset Management

I recently made a presentation to the Municipal Council of Victoria's popular National LG Infrastructure and Asset Management Conference. The title they chose for my presentation was "A life in Asset Management', which I thought was particularly appropriate since I had spent the last 30 years of my life in Asset Management and, with luck, the delegates could look forward to many happy years of their life in asset management, too. So what could I say that would be of use?

The very positive response to my address, in particular from the younger members of the audience, has encouraged me to expand those ideas and share them with all of you.

Looking back, we can see that "we have been here before", the problems we face today have been experienced in some form or other before (i.e. 'history repeats itself'). However, history is never exactly the same because *we* are never exactly the same. How we have changed and what it means for asset management in the future is the subject of this short overview.

So in this issue we look at

Lessons Learnt - and why it means we must ADAPT rather than merely ADOPT
What Do We Want - to be a skilled tradesman or a professional?
The Three Stages of Asset Management
- **Stage 1: Knowing Ignorance**
- **Stage 2: Confidence**
- **Stage 3: Awareness**

I realise that many of you would expect "awareness" to be stage one, but read this overview and see if you agree that "awareness" comes later in the piece.

Please consider and enjoy,
Penny

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Lessons Learnt -
Why we must ADAPT rather than merely ADOPT

Looking back, we can see:

1. We have been here before

There are few problems that arise today that have not arisen (in some form or other) before. Issues such as determining what information we need, how to record it, how to use it, how to verify it to others (and to ourselves), how to ensure that what we have is what we need, and that it is working effectively - these are not new issues.

2. Yet it is never quite the same

The questions may be the same, but the context will have changed, our knowledge will have changed, the government and organisational structures to which we need to respond, will have changed. What these changes were and why they took place is the stuff of our AM history.

3. ADAPT rather than merely ADOPT

If the situation is never quite the same, It follows that to be successful, we cannot merely adopt what has worked in the past (or for someone else). We have to understand the circumstances in which it worked and compare it with our own. (Equally important, before we reject an option because it did not work in the past - we need to re-examine why it did not work, for perhaps today's situation is more amenable to its success.)

1. Our AM history is the key to success.

If the key to success is adaptation rather than mere adoption, then the secret to successful adaptation is **an understanding of our AM history**.

5. There are at least THREE types of asset management history

Your own organisation's history, when and how you developed, what construction problems were incurred, how they were resolved. This is important for understanding and projecting the expected lives of your assets.

Your own industry's history, what have been the significant issues and how they have been addressed. This is important for understanding your own situation in the wider industry context.

The general history of asset management development. This is the history of how asset management itself has developed, this is important for opening up your options.

It is this third history that I am presenting here.

What do you want to be - A skilled tradesman or a professional?

Let me make it perfectly clear here: organisations need both!

However professionals

- are **respected**,
- they **are rewarded,**
- and **they are listened to.**
- In other words, **professionals make a difference**.

It is important to know the latest techniques and applications and be able to apply them. This makes you a skilled technician - *able to keep the show on the road* - but it doesn't make you a professional. A professional is one who can *judge* when it is time to change the show, someone who understands what options are available, and has the knowledge to anticipate the consequences of the change *for this organisation, at this time.*

Note on the word "Professional"

The word 'professional' is used in many different ways today. At the lower end, it is merely the difference between someone who gets paid for what they do and someone who does it for interest only - the difference between a 'professional' and an 'amateur'. This does not speak to the quality of the work performed. An amateur might be far more highly skilled than someone who is being paid, as we have witnessed in any number of sports areas.

At the upper end of the definitional spectrum, 'being a professional' is a mark of status, it refers to someone who is continuously learning - and continuously seeking not only to improve their own abilities but to improve the standing of the field within which they operate. It is someone who knows the status quo but is not satisfied with it and is always looking for ways to move beyond. It is also someone who understands that change for its own sake is more disruptive than productive. Professionals thus seek not merely to know, but to understand. It is this sense of the word "professional" that I am using here.

One can also make a distinction between 'being a professional' which refers to the way that one behaves, and to 'being in a profession', which is something rather different as we examined in SAM 300 "Is Asset Management a Profession?"

Let me take you on a very brief tour through the last 30 years

A journey from the relatively simple

to growing complexity

STAGE 1: KNOWING IGNORANCE.
Mid-1980s to the Mid-1990s

We know that we don't know. Our focus was to establish the facts: what do we have, where is it, what condition is it in, and what is it worth. In Australia, this stage coincided with, and was encouraged by, the introduction of accrual accounting, with its need to record assets in the balance sheet.

I date this period from the mid-80s through to the mid-90s. It is by far the simplest, least complex, stage of the three. We all move through this simple stage (illustrated here by two cogs). The earliest records date from the mid-80s through to the mid-90s, however, your own, or your own organisation's introduction to the issues associated with 'knowing ignorance' may have occurred later. In many countries it is associated with the time that their governments introduced accrual accounting which was rather later than in Australia and New Zealand.

In this first stage, in Australia, the major concern was, RECORDING, VALUATION and DEPRECIATION - driven by the need to put assets in the balance sheet. There was much DEBATE ON THE PRINCIPLES AND DEFINITIONS. A major decision was made in this period by the NSW Treasury. They opted for replacement costing rather than historic costing in adopting accrual accounting for the public sector. REPLACEMENT COST valuations shocked agencies into realising just how valuable and significant their infrastructure assets were. In the Engineering and Water Supply Department where I compiled the first replacement cost valuation for state owned infrastructure there was at first puzzlement and then genuine interest. Whenever I met the Deputy CEO whilst waiting for the lift I would be quizzed on the latest figures.

Not everyone was eager to embrace replacement cost valuations. I explained the impact of the change in valuation of the Royal Adelaide Hospital to one of the Deputy Auditors-General who was on the hospital board. It was a change that showed a serious problem looming and his first reaction was "My God, we cannot tell them (the board) that! For many then, the new information was a great concern, one that they were not ready to come to terms with. However, most engineers were pleased that their area of concern was becoming more important.

CO-OPERATION BETWEEN ACCOUNTANTS AND ENGINEERS To establish reliable figures for their balance sheets, the accountants turned to the engineers for expert assessment of asset condition, remaining life, and, where 'like for like' renewal was no longer possible because of changed technology, an assessment of the 'modern equivalent'. Later, this was extended to take account of over-capacity in existing assets that had been produced by too-optimistic growth forecasts.

ASSET INFORMATION SYSTEMS were wanted by both groups, however the engineers wanted to prove the need for *increased* funding whilst the accountants wanted to prove the need for *decreased* funding. In the 1980s and 1990s, computerised AIS were in their infancy. Much was expected from them that they could not deliver. Many asset managers postponed the hard work of thinking about what information they really needed expecting their AIS to do this for them, and everyone under-estimated the resources needed to populate the new systems with data - and the even harder task of keeping the data accurate and relevant.

Many mistakes were made in the choice of AIS and much money was wasted on systems that eventually failed. (*A story doing the rounds at this time was the marketing ploy of IBM. Their top sales person was an extremely attractive blonde whose technique was to insist that she speak only with the CEO. CEOs at this time, of course, knew nothing about computers, but who wanted to admit ignorance in front of such an attractive young woman?*)

There was, at the time, an even more basic question - OWNERSHIP. Before the need to keep good asset records for balance sheet purposes, many records had been quite poor. Quite a few councils had properties that they didn't know they owned, and land title searches showed such anomalies as that the Royal Adelaide hospital was owned by the Botanic Gardens! In Queensland and Western Australia, land titles were complicated by the need to establish aboriginal rights.

There was also much discussion at the time over who really owned government assets: was it the crown itself or the individual departments? This was resolved in the end as a matter of expediency. As there were no state balance sheets, assets were considered to be owned by the operating entity.

THE GREAT SELL OFF. The 1960s and 1970s had been years of rapid growth in Australia and state and local governments had been supported by large capital grants from the Federal Government. By the mid 1980s these capital grants were beginning to dry up and treasuries looked to replenish their funds through other means. One of these was 'asset sales'. Unfortunately the driver for these sales was not the disposal of assets surplus to requirements (which had not yet been rigorously established) but the disposal of those assets that could raise the most revenue. This complicated but did not derail the establishment of asset registers.

CHANGES IN GOVERNANCE. The context in which asset management evolved in Australia included two major changes in governance. One was a major change in attitude from 'stewardship' (keeping the show on the road) to 'management' (which, essentially, was designed to improve the show). The other was the involvement of the private sector. This period saw the beginning of OUTSOURCING and PPPs. Unfortunately for these initial contracts, they all took place when knowledge of assets and the costs of maintaining and operating them was at its lowest.

STAGE 2: CONFIDENCE
Mid 1990s - around 2010

Stage 2 in Australia was marked by CONFIDENCE. Asset registers had been compiled, assets had been valued, depreciation regimes had been set in place based on first assessments of economic life. We felt we were getting on top of ignorance and that we knew enough to tell others the essential AM messages about sustainability and about risk and reliability, availability, etc.

The graphic for this period is 4 cogs because not only were assets getting bigger and more complex, the requirements of asset management were too. Asset management at this stage was still mainly in the hands of engineers and accountants.

The focus of these years was the production of funding requirements - RENEWAL FORECASTS, and estimates of BACKLOG MAINTENANCE. Perhaps, to make these figures more compelling, and easier to understand by those who had to make the financial decisions, the uncertainties and default assumptions that underpinned them were scarcely mentioned. Asset managers unfortunately started to believe that (or act as if) their figures represented the only reality.

Yet the renewal forecasts were all derived from the default renewal projection modelling of the South Australian Public Accounts Committee in 1985-1987. The Committee's default projections emphasised the critical assumptions that had to be made to get the model to work. The reports stressed that each of the assumptions represented an area for change to bring the default projections down to a level where they could be managed. These assumptions were: (1) all existing assets will be replaced, (2) technology does not change,and (3) maintenance and renewal practices do not change. Changes in the assumptions were the recommendations made in the set of 8 reports to Parliament on the 'cost and timing of asset replacement'.

A FUNDING EMPHASIS By the time that the modelling had been adopted by state and local government bodies, the focus had moved from 'management' (i.e. making changes in the area of the default assumptions) to 'funding' (i.e. making no management change). However few treasuries had the funds to comply with the requests that were now being made.

In reaction to the failure to secure funding, increased emphasis was placed on establishing funding needs by a focus on using the outputs of RISK AND RELIABILITY modelling. Great improvements were made in these techniques and in maintenance generally.

REGULATION As Asset Managers became more confident in their abilities, organisations, treasuries and regulators started to expect more of them. Regulation, which at first had affected only the commercialised or corporatised infrastructure entities now started to impact local government.

The more that engineers focussed on increasing funding to sustain infrastructure, the more accountants and finance planners started to question financial sustainability. Using the figures produced by the engineers, regulators started to query the ability of councils to be FINANCIALLY SUSTAINABLE. Starting with the Victorian Local Government Study "Facing the Renewal Challenge" (1998) and the South Australian Local Government Study "A Wealth of Opportunities" (2002), review after review was produced to show that councils were unable to fund the cost of renewing ageing assets.

FEDERAL FUNDING At first it was assumed that if the councils could not afford to replace the assets, then the State or the Federal Government should do so. The rationale for this was that many of the assets now held by councils had been devolved from the State who were initially responsible, or had been deliberately supported by the Federal Government in the desire to make available to all Australians a level of service that would not be possible with local council rates alone. This involved the Grants Commissions, who are responsible for grants to equalise opportunities across the country and within the States, in considering how they could use their allocations to improve asset management. However whatever they sought to do seemed to favour those who had let their assets fall into disrepair and to disfavour those who had managed better. The Federal Government then opted for specific funding grants such as the "Roads to Recovery" funds made directly available to councils. Some councils used this money wisely to repair essential ageing assets, but others used the money to increase the size of their already unsustainable portfolios.

MEDIA ATTENTION A major change towards the latter part of this period was attention from the media, which continues today. Not only is the word 'infrastructure' heard everywhere, but the term 'asset management' is also appearing. An example is the case of a culvert that collapsed in a storm taking with it a car and a family of 5 who all perished. The papers referred to this as 'poor asset management', which it was. A difficulty for asset managers, however, is the public notion that infrastructure is 'a good thing' in its own right. No distinction is made between good, affordable, productive infrastructure and infrastructure projects that are a waste of money.

AUTOMATISATION A note posted on my LinkedIn History Forum reminded me that one of the outcomes of this Confidence period has been a move towards automatisation. This can be efficient, but if it limits the review of the initial assumptions built into the models, it can slow down future improvement.

ASSET CENTRIC. The dominant feature of this stage in Asset Management is that it is asset centric, based on the information we have gathered about the asset and how it works. The next stage moves into a service focus.

Stage 3 - AWARENESS

Around 2010 - ??

A reminder: the time periods chosen have been for the 'early adopters'. Few are fully in this period of 'awareness' at the moment, but an increasing number of asset managers are sensing the potential.

MORE PLAYERS The graphic for this stage is a very much enlarged number of cogs (players) and vastly more interaction. Whereas the earlier two stages were dominated by engineers and accountants, the Awareness Stage opens up the area to many new players. Economists and Finance Specialists who started to make a limited appearance when PPPs were introduced, but at that stage focussed on financing for new projects, in the Awareness stage, extend their remit to consider the ongoing financial consequences of new projects. In Stage 3 there are not only Engineers, Accountants, Economists and Finance Specialist but also Lawyers, Architects, Urban Planners, Regulators, the Community and the Media.

NEW AGENDAS. These new players bring with them different interests, knowledge and techniques - and different agendas. The Environmental Scientists are concerned with the impact that assets, and their construction and management techniques, have on the well being of the environment. The Lawyers want to frame everything in terms of who is legally responsible. The Architects are concerned with image rather than function. The Regulators are interested in measurements and holding agencies accountable. The Community is being pushed in all of these directions by whatever the latest line is taken by the Media. This is a much more complex world.

This new world is characterised by a new AWARENESS. Specifically we are becoming aware that we don't have all the answers - indeed, we are not even sure that we are asking the right questions. The Confidence that we experienced in the last phase is giving way to a new sense of inquiry. There are bigger issues that are not yet resolved that will impact the way we manage. Issues arising out of the global financial crisis, climate change and the world reactions to, or rejections of, it. Or issues such as changing demographics and world migration patterns. Everything is back up in the air again.

WE HAVE BEEN HERE BEFORE -
but each time it is different

History repeats itself - but not quite. Issues of interest in the 1980s and 1990s - recording assets, valuing and depreciating them, are still with us (as a quick glance at the IPWEA's Asset Mates Forum will show) but the answers we can support are different.

THE RULES During the mid 1980s to mid 1990s in Australia there was scope for invention: there were few existing rules, and we could write them to suit the needs of asset management. It was those who had an interest in asset management that pressed the claims of accrual accounting for the public sector (against the quite vocal opposition of accounting academics and the more passive resistance of the Australian Auditors-General who were not sure that their auditors would be able to manage the change and feared the chaos that might ensue). In those early years it was possible to have condition based depreciation (based on demonstrable need from the asset management plans) accepted in New Zealand for councils.

STANDARDS AND REGULATIONS Today there are established standards and more regulation that applies. These standards have been designed to suit those who manage them. Thus accounting societies have determined that we should use straight line depreciation. This is a great tool for accounting for what has happened and for determining cost allocation, but it is less useful for engineers trying to anticipate when to intervene - and how.

MORE DATA - but now that we have more data more is being expected of it. Initially it was just sufficient to collect data, and we did. In the stage of AWARENESS, however, asset managers are being expected to justify their data collection, verify the accuracy and relevance of the data they hold, and to use it to produce useable information for action. Data quality is becoming as important to asset managers as the data quantity used to be. Early adopters in this third stage are finding that although they have more data, they are not necessarily able to extract more meaning from the data. A knowledge of statistical techniques is thus becoming more critical.

RENEWAL IS NO LONGER AXIOMATIC. In this next stage, renewal no longer takes place merely because an asset is aged. Asset managers are expected to justify the continuing need. Moreover, as disposal of assets itself is often a hazard to the environment, there are increased pressures on safe disposal of old assets.

AFFORDABILITY. In the first stage, the focus was on what we had and what condition it was in. In the second stage, the focus was on its productivity and its reliability. There was also the beginnings of interest in environmental sustainability (although as measures of environmental sustainability were generally lacking this was more a discussion point than an applied methodology.) The focus in the second stage was on funding renewal. The question of whether our portfolios were long term affordable to the community hardly arose. This is now becoming THE important question.

We have to ADAPT, not merely ADOPT

What used to work will not necessarily work in the coming more complex, multi-player world where more is expected of us and previous solutions may no longer be 'good enough'.

WHAT DOES THIS MEAN?

- It means we need to know more than just what is currently the acceptable practice because it won't be acceptable much longer.
- We need to know the circumstances that have led to the present practice to determine when and where changes need to be made.
- We need to know more than how our assets work - the information from the AIS - we need to know what is driving the demand for them and how this is changing.
- With more players entering the field we need to be able to speak more languages, in other words we need to understand the requirements of these other players. They also need to understand ours.
- Communication skills thus become far more important than the ability merely 'to get the technical job done'.

RECORD KEEPING

- Change is ongoing, records have to serve the needs of future change.
- Greater regulation means greater need for detail and relevant degrees of accuracy - the detail and the relevance may well be determined by others.
- With more players in the game, records need to be expressed in ways that are meaningful for them. (Incidentally, whereas in the past, 'community consultation' has often been interpreted as how to get the community to accept our ideas, this is likely to change to trying to understand their ideas.)

THIS HAS BEEN A VERY BRIEF OVERVIEW.

AM is becoming more professional - are you?

Where can you find the history that will mark you out as a Professional?

Universities teach principles and current practice but few teach the history of AM - and the reason they don't is very simple - it has not yet been written down. It is still an 'oral history', in the heads of those who have lived through the stages, and can still remember. Our memories are like all memories: vague, inaccurate and really not to be trusted. But taken together, they increase in reliability.

Whether you are a senior player in Asset Management or new to the field, each of you can play a part in producing a reliable history of the way that asset management has developed over the past 30 years so that we can be aware of fads that resurface from time to time and know what worked in other places - and why, and what didn't work - but might work now.