AMQ International

Strategic Asset Management

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Time for a Stock Take?

Why leave improvement to chance?

What have we done well?

Other countries frequently look to Australia and New Zealand for guidance in asset management. But not everything that we have done, would we necessarily wish to recommend to others. Here I look at what I think we have done well.

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And what have we not done so well?

Some things that we have done did not, with hindsight, turn out as well as expected. Can we also learn from these? Only if we are up-front and honest and admit that they did not turn out well. However, even when the facts are obvious to all involved, the political necessity to protect one's back may keep those in charge still backing the same horse!

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Your View

You may not agree with my assessment. *Feel free to tell me and I will print all contrary views to stimulate the debate that a true stock take of ideas requires.*

Also in this issue

"Doing Business like a Business" by Ken Harlow, - in which he looks at the difference between the goals and methods of private and public businesses with respect to asset management. Pages 77-78

"*Tom's Bad Day, Part 2*" In which Roger Byrne shows that asset managers, being essentially such likeable people, are able to draw on the help of friends! Pages 79-80

Consider and Enjoy!

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Editorial - on taking a Stock Take

The importance of knowing the difference!

During my university teaching days I can remember a student asking me why he had received lower marks than his friend "After all, didn't I have all the points in my essay that he did?" he asked. I replied, "Yes, you did. You had all the correct points, but you also had many points that were incorrect – and *you did not show that you knew the difference!"*

And therein lies the secret of improvement. We all do things that are good and things that are not so good. To get better, we have to do more of what is good and less of the things that are not so good. But to do this, *we have to know the difference!*

In this issue, I look at what I think Australia and New Zealand have done well in asset management, and things that I consider they have not done so well. While I have done some research among leading asset managers to put this list together, it is nevertheless a personal choice and you may not agree. *Feel free to tell me.*

You may also wish to consider what your organisation has done well, and what it has not done so well. Do you have plans (or better still, *actions*) to correct what is not so good? (If not, why not?)

We often do stock takes of our assets – but stock takes of our ideas may be even more valuable.

An idea for supporting declining Rural Areas?

The Asset Management Problems of Declining Populations—and the city fringes where most of the population moves to—are serious issues for local government today. SAM welcomes contributions on this subject.

(1) Pro-Poor Private-Public-Partnerships. Malaysia is promoting a different kind of partnership arrangement: PP-PPP. This is not the form of association with large (often multi-national) private firms that is common in the West, but rather association of Government with local municipalities and neighbourhood groups – where the work is carried out by local residents and offers employment opportunities for the unemployed, senior citizens, women, students and the physically disadvantaged. The principles of Strategic Asset Management are used to identify needs and develop capacity building.

(2) Apprenticeships for Older and Retired People. Imminent Skill shortages in the building and construction trades has led to the idea that the traditional apprentice system be opened up to wider participation.

Many rural areas are now facing population decline. How can those who remain manage the task of maintaining necessary infrastructure? Will the lack of such ability force the remaining population out of rural towns and into already congested city areas?

IDEA— Can the combination of a pro-poor (pro-rural) PPP and Apprenticeships for older people be part of a solution to the asset management and maintenance of the quality of life for rural populations?

What have we done well?

1. We introduced clear, transparent asset reporting with accrual accounting.

Accrual Accounting – with balance sheets recording assets and asset usage – were introduced early in the mid 1990s into Australia and New Zealand. This form of accounting records expenses and receipts in the period in which they are incurred – i.e. 'accrued', rather than, as was previously done, in the year in which they were paid. The necessity to record the value of assets for the balance sheet was the impetus required for asset management, since it meant understanding what assets were held, what their condition was, what their economic life and residual life was, and whether they were still required for the business. While asset management actually predated accrual accounting in Australia, there is no doubt that the change to this form of accounting, was the major fillip that asset management needed.

2. We chose valuation methods that were relevant for asset management.

Valuing assets. Accrual Accounting is the normal form of accounting of the private sector. But for infrastructure Australia and New Zealand differed in two essential ways from traditional private sector valuation practices. In the first place, it insisted that the relevant value was its value today, or 'current value' rather than the value when bought, or 'historic value'. Since infrastructure assets have very long lives, historic values were considered irrelevant for management. The second, and very significant difference, was the initial emphasis on 'deprival value'. Rather than take the private sector view that the value of an asset is what *someone else* will value it at, Australia and New Zealand took the view that the value of infrastructure assets was the *value to the owner* – or the value lost if the asset were to be destroyed. (Recent international harmonisation has clouded the issue somewhat with the introduction of the somewhat ambiguous 'fair value', but the early education of asset managers has prevailed.)

3. We developed a common language through Asset Management Guidelines

Guidelines. Starting with the Total Asset Management Manual in New South Wales in 1992, which became the basis for all State and Commonwealth guidelines in Australia, and the National Asset Management Manual for local government (Australia, 1995), the forerunner of the very successful joint Australian and New Zealand "International Infrastructure Management Manual" now adopted by many countries throughout the world, guidelines have provided a common language by which asset managers can communicate with each other. It isn't perfect and terms continue to evolve, but it has made such evolution possible.

4. Our professional bodies took up the challenge.

Professional Engineering Associations. In both Australia and New Zealand, the professional engineering bodies, especially those with a strong local government connection, (IPWEA- NAMS AU and INGENIUM – NAMS NZ) have been instrumental in developing tools, methodologies and training for asset managers.

5. We have had government support – especially through the Auditors-General

Government. The Auditor General in New Zealand (who also has responsibility for local government) was particularly pro-active in initiating the need for asset management plans by requiring all councils to submit ten-year cash flow statements. The nature of the asset management plans was not specified and this allowed councils to experiment and develop. Recently the local government act was changed in NZ to mandate Asset Management Plans and local government participation. In Australia, Auditors-General have been active in auditing for asset management performance.

What have we done not-so-well?

1. We made mistakes with Asset Information

We recognised early that good asset information was the key to progress. But we made several mistakes in those early days.

(1) We jumped into recording everything that we possibly could without stopping to consider just exactly what we wanted to do with the information. As a result a lot of effort was wasted by getting (a) the wrong information (b) the right information in the wrong form (e.g. wrong level of detail or aggregation, wrong timeliness)

(2) We thought that 'getting the right information system' would obviate the need to actually think about what we needed. There was a lot of misplaced confidence in the early days about the ability of AIS to 'do our thinking for us'. (In our defence, this was the early days of computing and little was known by anyone.) Later, we realised the importance of choosing the right system to suit the style of the organisation as well as the nature of the assets being managed.

(3) We generated asset information for the wrong reasons! We used our AIS to 'prove' we needed more money, rather than to find ways of 'doing more with less'. This attitude was promoted by the recognition that maintenance was not being given the consideration it needed. But in many cases, we overplayed our hand! Many organisations devoted much energy to 'proving' extensive 'maintenance backlogs'. When, as in the case of privatisation, these organisations were made responsible for funding their own maintenance, in many cases these backlogs miraculously disappeared! (cf the SA Audit Commission Report of 1994)

Today *While it would be no way true to say that all of these mistakes have since been rectified, leading asset management organisations have recognised and are dealing with the issues these early mistakes caused.*

2. We moved too quickly, and with insufficient knowledge, into Out-sourcing

The major problem with out-sourcing is that public agencies were forced into it before they

- Knew what their asset costs were
- Knew which assets were essential to their needs and which were not
- Had very much experience in contracting or skills in contract management

Many maintenance managers eagerly embraced the new contracts because they saw it as a way of establishing priority for maintenance funding via contracts. Unfortunately, this also limited their ability to change to new processes, or even to dispose of assets that were not required (but were under contract).

Over time the public sector has lost the ability to evaluate maintenance and management contracts and the ability to manage them because contract managers no longer have up to date practical experience of the tasks.

Today *Leading organisations have addressed this issue by bringing the out-sourcing personnel in-house and integrating operations with their own functions.*

3. Insufficient Checks and Balances for Private-Public-Partnerships

The major issue here is the loss of accountability. There is no standard way of setting up the contracts and stating the required outcomes so that performance can be checked against agreements. Contracts are frequently 'commercial-in-confidence' and Auditors-General can no longer access information that would enable them to do for the PPPs what they could previously do for the public performance of such projects. The secrecy of the contracts also lends itself to corruption. Senior bureaucrats handing down favourable responses to private investors have been awarded lucrative positions in the companies, and governments have been seen to distort the provision of government services to increase private returns (e.g. closing roads to force traffic onto toll roads.)

Today *While overseas, Australia and New Zealand are frequently seen as innovators and leading practitioners for their work in PPPs, it is noticeable that those first to embrace these contracts are also, with experience, the first to abandon them. (e.g. in NSW and NZ. And the Victorian Education Department having first announced that its new schools would be provided by PPPs have now announced it will not.)*

DOING BUSINESS LIKE A BUSINESS
OR,
IS ASSET MANAGEMENT REALLY DIFFICULT?

Ken Harlow, Director of Management Services, Brown and Caldwell

A propos of recent discussion in SAM on public values and public infrastructure, here is an excerpt from a recent paper sent me by Ken Harlow. In which he asks the question we are all asking nowadays: "How does public infrastructure differ?"

Introduction

"We need to do business more like a business." What does this mean? Should public utilities act like private companies?

We often hear top managers say, "We need to do business more like a business!" These managers usually have in mind things like clearer strategic direction, more efficient use of resources, stronger systems of accountability, and so forth.

Laudable goals to be sure. But asset management puts the whole issue in a much clearer perspective. What does "doing business like a business" really mean? Do we simply need to follow the private sector model? Let's see.

The Private Sector Model

It is generally accepted that the role of management in a private sector company is to maximize the wealth of its owners. The word "wealth" is somewhat tricky because it must take into account both current and expected future earnings, reinvestment of earnings in the business versus dividends paid out to owners, performance compared with the overall market, exposure to business risk, and other factors. For a publicly owned company, the "wealth" of the owners is reflected in the value of its stock. That value is determined in the marketplace by investors (owners in fact) who analyze the business and buy or sell ownership shares based on their expectations of future returns compared with other possible investments.

So the primary concern of the private sector manager is financial return. Within that framework, the manager operates under certain constraints imposed by law or regulation. Such constraints may involve antitrust, product safety, hiring and personnel matters, and protection of the environment. A responsible manager will comply with these constraints but will not usually be proactive. Since the constraints are seen as factors that limit financial return, compliance means following the letter of the law and nothing beyond that.

In short, the manager is responsible to the company's owners, not to the larger community. He or she is constrained by law from certain activities that may have socially harmful consequences, but within those constraints there is a clear goal—to maximize the financial wealth of the owners.

The Public Sector Model

Public sector agencies are in a different situation. Their "owners" are usually also the customers for the services the agencies provide. We'll refer to these owners/customers as the "community."

If a public agency were to follow the private sector model, it would deliver the cheapest services possible because that would maximize the community's wealth—but only in the narrowest possible sense. In their role as customers, the community may also value reliability and quality of service, things that may cost a bit more but that they may well find worth the added price.

The "owners" of a public agency are the community it serves. And they're the "customers" as well. This changes things—a lot!

Furthermore, the activities of public agencies impact the community in other significant ways as well. Their services provide the basis for economic development and a rising tide that "lifts all boats." On the other hand, they tear up the roads, imposing on the community the economic costs of traffic delays, lost business income, and residential disruption and inconvenience. They run the unavoidable risk of violating regulatory strictures, potentially causing the community to pay substantial fines and to incur other significant costs as well. They use valuable real estate, making it unavailable for other purposes. And the list goes on.

So in the model for the public sector, "wealth" is defined in the broadest possible sense—the so-called triple bottom line that really implies overall quality of life. In short, a public agency tries, or should try, to:

1. Understand the levels of service that, given their financial, environmental, and social costs, provide the best value proposition to the community.

2. Deliver those levels of service with the lowest impact to the community, taking into account the same financial, social, and environmental factors.

This is obviously different from the private sector model, and the difference arises from the larger duty of a public agency and the fact that its owners and customers are the same group of people.

So Why do We Call it "Asset Management?"

The discussion above applies to *all* public agencies. Police, fire, parks and recreation, social services, and so on should all be concerned with the value they provide, and they should understand value in terms of the benefits their services bring to their communities and the costs, broadly defined, of those services.

Curious? Want to read more? Then go www.bcwaternews.com/AssetMgt/

Where Ken continues his argument. (Lots of other interesting stuff can be found here too.)

Note: If you are reading this online, just click above.

Tom's Bad Day—Part 2

The Story So Far...

In the last SAM issue, Roger Byrne began his story of Tom., the Sewage Engineer

Let us quickly recap what went wrong for Tom

- His assets were badly malfunctioning but he didn't know why
- It has been happening for a long time and getting worse
- His equipment is just barely meeting environmental and safety regulations
- Little has been spent on keeping it up to scratch
- Senior people are leaving and their knowledge is going with them
- The organisation is not good
- His crew don't know what they are doing and are demoralised
- The budget is already overspent
- As Tom says 'things are out of hand'

The first thing you notice is that this list is that doesn't have to have to apply to a sewer, it could have been a housing development, a shopping centre, a roadway, or a water distribution service. All the problems that Tom faces would be faced in these areas too.

Now read on…….

By Roger Byrne, GHD

Part 2: With a little help from his friends.

The morning after the lift-station overflow, Tom calls an old college colleague, Ashley Jackson, who manages a large beer brewery in the private sector. They meet for lunch and Tom spills his guts about his problems. Ashley suggests he look into incorporating some concepts of advanced asset management, which is what she is doing. She describes where she is going in her own asset management initiative at the brewery, then promises to e-mail him a set of five core questions that she uses to guide her asset management decision-making. He spends some time that afternoon studying the five questions

Core Question 1: What is the current state of my assets?

Core Question 2: What is my required "sustainable" level of service?

Core Question 3: Which assets are critical to sustained performance?

Core Question 4: What are my "minimum life-cycle-cost" CIP and O&M strategies?

Core Question 5: Given the above, what is my best long-term funding strategy?

Tom is struck by the realization that his assets are actually being "consumed" in the day-to-day generation of services – that is, in achieving the mission of the Utility, he is literally "using up" his assets. He has never thought of it that way before. He realizes that, unlike Ashley, he has no idea of what his real "consumption rate or costs" are – how fast his plant and pipe are being used up. And, more importantly, that without such information he is running blind. "No wonder events are overrunning me!"

He suspects that his level of reinvestment is wholly inadequate. He putters around and locates the annual financial statements sent over last year by Finance and runs some numbers. His calculations show that the Utility currently reinvests less than one-half of one percent of the "book value" of the utility's assets each year. This means, he suddenly realizes, that at a ½ percent per year rate, he anticipates his assets lasting 200 years!

"It's no wonder the performance of my system is diminishing even though I'm spending more and more on maintenance – mostly emergency maintenance at that! But I need better facts to confirm this if I am to have any chance to make a case for increased reinvestment.

"To really understand what it costs to provide services, I have to know what assets I have and where they are. Then I have to know what their remaining useful lives are – that is, what condition they are in."

Tom starts to see, albeit sketchily, that the real issues here are *management* issues – an integration of engineering science with more advanced management concepts than what he has been accustomed to. As the Utility Manager, his role in the organization is really more about *managing* his assets rather than just "*engineering*" them.

Tom realizes his immediate data collection effort actually divides into two core efforts:

Systematically documenting what we have, where it is, and what condition it is in, and

Understanding the actual consumption rate of our assets, or, more fundamentally, their true remaining useful value.

Once he has real data about each, he can then better determine where to send his maintenance people, when to repair and when to replace, and which assets to renew, build or acquire. He senses that he has just taken a major step into new territory – a different way of thinking.

Tom starts with the challenge of defining what assets he has. He already knows that collecting data is expensive.

"What data do I really need? What data do I have? How do I organize my data so that it feeds my information and knowledge needs?"

Tom goes searching for data about his assets. To his dismay, he discovers data stacked haphazardly in piles and boxes. No systematic data record or database exists. He has no single, current listing or register of what he owns. Worse, what data he does have does not "fit together" - his GIS data does not "fit" with his CMMS data, which does not tie to Finance.

And much of the information he depends on is "mortal" data – in the heads of his most experienced people. He sees the real issue is one of silos – everyone has a "different piece of the elephant!"

"We've got to find a way of getting the right information to the right person, in the right format, at the right time if we want to make good decisions.

But things are about to look up for Tom—and everybody like him. See the next issue.

Key Points

We have to know what we have before we can manage appropriately what residual life is left

Everything in AM starts with the Asset Registry

The 'data standard' is the key building block for AM asset registers

Associated Techniques

Asset registry/inventory

Data standards, asset hierarchy

System maps

Delphi approach to locating other sources of data

Process diagrams

"Handover" procedures