

Issue 188 April 3, 2006



Understanding the Renewal Gap

In this issue we present a range of discussions around the issue of analysing and arguing the case for renewal.

(1) Understanding the Renewal Gap

What it is, what it isn't, and why it matters. (Anecdotal evidence suggests that this is a much misunderstood concept, but widely used.)
pages 53-54

(2) Wielding Influence - not egotistical, simply essential!

Put your modesty on hold and see why influence is essential to the asset manager.

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(3) What asset managers know better than anyone else

and why they don't know it well enough!

page 50-51

(4) Why more Asset Management can only make the renewal picture better

Even though the initial application of asset management revealed a problem that had previously been overlooked, and a big one, nevertheless, further application of asset management will improve the picture—see why
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(5) Case Study on Reducing the Renewal Gap

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(6) Endpiece: Selling the sizzle, not the steak! (not roadworks, smoother running roads!)

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Enjoy!

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We Asset Managers are Modest Guys*, right?

So why should we be interested in wielding more influence?

Think of it
this way.

Asset Managers don't build things
And they don't maintain things

Moreover,

Asset Managers don't manage construction
Nor do they manage maintenance.

*(or, at least, when they are doing these things they are not acting in their
role of asset manager)*

What Asset Managers do is manage Asset Decisions

They may make these decisions themselves, or
They may advise others on these decisions.

Asset Managers collect and analyse information about asset capabilities and requirements (condition, suitability, longevity, demand, cost, risk, etc.) that inform decision-making

At some level these decisions may be for the Asset Manager to make

More likely it is for others to make
(e.g. Senior Executive Team, The Board, Council or Cabinet)

Either way, if you are not
being given the right the make the decision yourself, or
being sought out and listened to as a source of advice to others who do,

**Then you are not wielding influence – and if you are not
influencing the decision—you can't be doing asset
management !!**

Which leads me to my
next question.....

**What do Asset
Managers know better
than anyone else in the
organisation?**

**Answer: The total asset
portfolio picture**

Operators know well the operating conditions, capability, etc of the piece of plant that they operate.
Facility managers know well the capability, costs, potential implications of changes to the building asset that they manage
Regional managers may know the assets in their region
Functional managers may know the assets in their function (e.g. water supply, water filtration, wastewater, wastewater treatment)

But it is the

**Asset Manager who has the responsibility to know
how all of the bits fit together.**

* Gender neutral, as in the
American sense

Asset Managers Know the Total Portfolio Asset Capability better than anyone

- but do we know it well enough?

Building Asset Portfolio Management

A challenge to all academics, research students and asset management philosophers -
"Design a building portfolio performance model"

Dubai: They may all be 'green', but is it sustainable?



Network asset managers understand very well the interconnectedness of their assets. A break, or a blockage, in one section of a pipe will affect the flow through all connected pipes. It cannot, and is not, thought of as a 'stand alone' asset decision. The importance of any asset can only be understood in relation to its contribution to the total service provision. If we were to use a football analogy, network asset managers understand the idea of 'team play'. By contrast, building asset portfolio managers tend to think in terms of 'star players'.

Building Portfolio Performance Measurement

Do building asset portfolio managers have a harder job than network managers? Quite probably! Their portfolio is subject to more rapid change and is rather less predictable than for networks. The 'connectedness' is not so evident. And unlike pipes, wires and roads that can, by and large, at least claim a regional monopoly where they have control over asset decisions, building asset portfolio managers will inevitably find themselves impacting on, and being impacted by, decisions of others. This is an area in need of more tools. Tools for managing individual buildings are not enough.

An asset management strategist who has done a lot of work in this area is **David Ness** and he is currently grappling with just this problem. He points out that:

"A green building assessment, based upon an individual building, may present a misleading picture, especially when this involves the construction of a new building that can be highly resource intensive. Although the building itself may have 'green' features, better resource productivity may be achieved by taking a portfolio wide approach e.g. managing and making better use of the existing assets. Whilst the new building may be 'green', other assets in the organisation's portfolio may be allowed to run down leading to demolition and waste. It may be possible for the business needs to be met by adapting existing assets, reducing the need for construction of a new building, and with less environmental impact. So taking a portfolio approach may portray a different picture than rating individual buildings

Arguably, an organisation should take a balanced, holistic and prioritised approach to its assets and be credited with improvements in the way these are managed. It may be more appropriate to focus on certain key assets that have high-energy consumption rather than achieving a gold or 5 star rating for a low-key building (Pareto principle). From an owner's perspective, investment in environmental improvements should be balanced against other owner obligations eg safety, disability access, earthquake resistance. It may be nonsensical to pour efforts and funds into achieving a gold or platinum green rating, when the building (or others in the portfolio) has serious safety deficiencies. That would not be an optimal outcome and would not represent 'due diligence'."

The Challenge: To devise tools that reward building portfolio managers for decisions that improve the overall performance of their portfolios rather than individual buildings.

And the answer to that challenge?

Curiously, the work currently being done on addressing the **Renewal Gap** may provide some clues.

Why Asset Management NOW can only make the Renewal Problem Easier.

- **Finer categorisation**
- **More knowledge on the actual lives of assets**
- **Greater understanding of service levels**
- **More knowledge of options**

— There are many reasons why more Asset Management today makes the problem to be addressed smaller rather

When we first started to do asset management in the late 1980s and early 1990s, the first task was to bring to account assets that had not previously been recognised.

At this time, it seemed that knowing more only made the problem *Bigger!*

It was common at the time for agencies to find that they had far more assets than they ever knew they had.

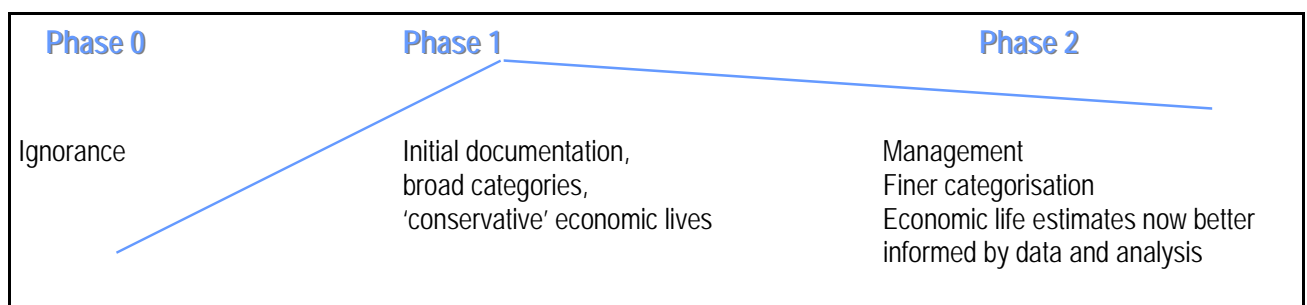
Even for agencies that had previously run accrual sets of books with balance sheets, the exercise of bringing assets up to current replacement values and accounting for assets which had previously entered the books at a nominal dollar (often assets that had been received by way of developer contributed assets, or assets that had been funded by grants from a higher level of government) led to vastly increased asset values.

One Water Authority had debt on its books recorded at \$800 million and, if pressed, most of the senior executive team would have said that the assets, if valued, would amount to around about the same amount, maybe a little more, say \$1,000 million or 1 billion. When the figures were correctly calculated as above, the asset values of that authority amounted to 8 billion! Ten times the original debt figure and at least 8 time the estimated asset value.

In addition, once agencies started to take seriously the need to assign economic lives to assets that many had previously assumed 'would last forever', there were even further shocks. The need to bring depreciation into the accounts shocked senior management into thinking about the issues.

However, once economic lives and ages were available we could begin to see what our figures were telling us was needed by way of renewal within the next 5, 10, 15 or more years. And we were able to check those estimates against our gut feel—and better, against the condition of the assets themselves. This is what Campbelltown are currently doing.

They are tackling what for many agencies, particularly councils, but also utilities, has come to be called the "Renewal Gap" problem



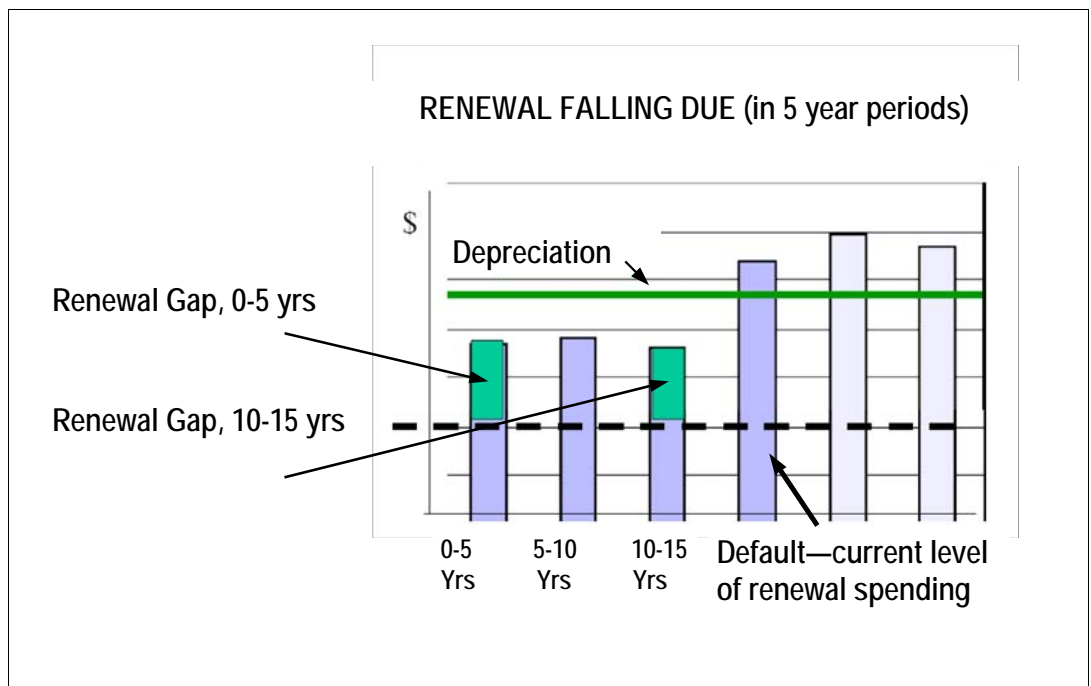
Understanding the Renewal Gap

What is the Renewal Gap?

The Renewal Gap is the **difference between the actual amount of renewal due over a given period and the amount of money allocated to renewal spending over the same period.**

Thus we cannot talk about a Renewal Gap unless we also define the period of time we are speaking about.

If there is no Renewal Spending plan, the default assumption is that the current level of spending will be continued for the period.



What is NOT a Renewal Gap?

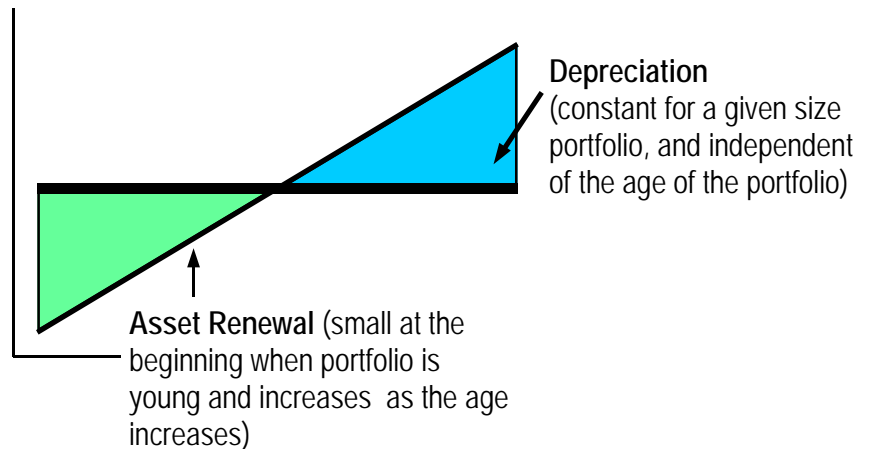
The Renewal Gap is **NOT** the difference between Depreciation and what is currently being spent on renewal. This is a common misconception.

If you look at the diagram you will note that depreciation exceeds the renewal required in the first 3 five year blocks. However, by the time that we reach the fourth 5 year block, and the 5th and 6th depreciation is LESS than what is required to fund renewal falling due.

The truth is that depreciation *bears no relationship* to the **current need for renewal spending**. Young portfolios will need little renewal spending, whereas older portfolios will have requirements for renewal spending that exceed the current level of depreciation.

In the illustration we see a maturing asset portfolio. As time passes, more and more renewal will fall due. We can express this as follows

The relationship between depreciation and renewal falling due changes as the asset portfolio ages.



Schematically, we can see that depreciation will always exceed the amount of asset renewal falling due when the asset portfolio is young,

In the diagram renewal is shown as a straight line but infrastructure renewal is more of a curve starting low, moving slow, speeding up towards the end. So, in fact, a larger part of the asset portfolio's life will be spent in the green segment (to the left of centre) where the amount of renewal needed is less than depreciation.

The dangers of assuming depreciation = renewal requirements

It is a common misconception to argue that we should be spending on renewal at the level of depreciation. **Common—and dangerous!**

Danger 1.

Not only will this overstate the problem for most agencies NOW (and give rise to a 'cry wolf' reaction when the supposed 'need' is not met and nothing critical happens) BUT when portfolios move into an age of intensive renewal (the blue segment to the right of centre above) there will be no argument left to ensure that you get the funding you need!

Danger 2.

Some councils would find that their asset portfolios fall into two groups, an old established core, for which asset renewal may now, or soon, be moving into the section where funding renewal exceeds depreciation. And newer fringe developments that have renewal needs far less than depreciation.

In the past they have relied on using the 'surplus' of depreciation over renewal falling due on the newer set of assets, to accommodate the greater needs for the older set of assets.

In this way they have tended to mask the growing renewal requirements for both segments.

Campbelltown City Council is working on gaining better knowledge to reduce the size of its Renewal Gap

And you can do it too!

Last year, SAM produced a template prepared by John Howard, that showed how councils (indeed any organisation) could, by better understanding their assets, reduce their renewal gap and their depreciation.

This template is in **Issue 161** accessible in the Subscriber Archives. If you can't access this because you don't have a username and password for your subscription, write to me at info@amqi.com

Paul Di Iulio and **Andrian Wiguner** have applied the **SAM 161** template at Campbelltown City Council in South Australia to great effect. This is a current work-in-progress, but initial findings have been very encouraging.

At this stage, information is based on a 70% sample for road seals for which rather better data is more easily available, and a 20% sample for pavements.

These samples have enabled them to determine different economic lives for roads in poor, reactive, soils and for those in good, stable, soils; and for roads that have intensive use and others that have less intensive use.

Applying – as explained in the template in SAM Issue 161 - an age filter and examining the condition of aged roads, Campbelltown was able to make better judgements on economic life. If a road with a nominal life of 60 years was still in good condition at 70 years of age, and if this was the norm rather than the exception, then logic says that the original estimate is too low and needs to be extended. Standardising for soil types and road usage also helps to refine the true economic life.

Local roads in Good soil

pavement lives extended from 60 to 75 years
seal lives extended from 20 to 25 years

Poor soil

pavement lives extended from 60 to 75 years
seal lives extended from 20 to 25 years

Very poor soil

pavement lives extended from 20 to 40 years
seal lives constant at 20 years.

As a result, Campbelltown have managed to **refine their economic life estimates** for local roads as opposite:

Importantly, they have reduced the extent of the immediate renewal problem and improved the overall renewal problem. For example, for hot mix seals, extending the economic life by 5 years has reduced the amount of renewal due within the next five years by **58%**,. Even the amount falling due within the next ten years falls, though by a smaller amount as would be expected, by **8%**.

The importance of checking

At first blush it might appear that roads in poor soils would have shorter lives than roads in good soils, and that may yet prove to be the case, but at the moment there is not data to back this up, so both have been treated alike.

All in all, the Renewal Gap exercise is reducing what had been seen as a BIG problem, down to a MANAGEABLE one.

A 15 year life extension on 60 years represents a 25% reduction in the depreciation on those assets.

The benefits for Campbelltown Council include

- Reduction in unnecessary expenditure
- Improved understanding of the network

With benefits for Campbelltown Residents of

- Less disruption for residents
- Better targeting of real need allowing more timely attention to urgent issues

When their calculations are complete, this will feed into corrected figures for depreciation which will benefit Campbelltown Council by

- Reducing the size of the operating deficit
- Improving Council long term sustainability

End Piece - Selling the 'sizzle' not the steak, *Or, selling the outcomes not the process*

"Why aren't you spending more on the roads in my electorate?"

"Because they don't need it"

Explaining why stable soils in one area require less attention to roads than the reactive soils in another can be a fruitless exercise *if road works are themselves seen as a benefit.*

A focus on what we **do**, rather than **what benefits the users receive**, may have created a rod for our own backs. If repair is seen to be a 'good thing' every time we use asset management to reduce the amount of road works needed, someone is going to feel deprived!

But I suspect that someone is **not** the user of streets free of road works disruptions! Who would rather have to cope with this? Users don't like road works. They don't like the noise, the dirt, the disruption. Ask them!



Asset managers, by reducing the amount of unnecessary road works, are providing a real service to users – so why not do what the savvy businesses do - market the results?

Airlines like to boast about reliability; Electricity and Water Utilities take pride in reducing the number of times and the length of time that their customers should experience an interruption to their service. Why not start selling the benefits of asset management in terms of reduced road works disruptions? (And we need to start with the decision-makers!)

Sell the benefits of what you do, rather than the effort that you go through!

In other words, sell the "sizzle", not the steak.

Failure to do this will mean that all the good asset management work you do in reducing the Renewal Gap, will not be appreciated at all!