AMQ International's

# STRATEGIC ASSET MANAGEMENT

# #329

**November 14th 2011**

**Community Service Levels, Part 2**

**In this issue:**

**In 'Coffee Shop Thoughts'** I ask the question - what did we used to talk about in asset management but no longer do? Were the issues resolved? Were the ideas bad and therefore discarded? Few of us keep records of ideas that didn't work. Here is a chance to share your recollections. **(p.2)**

**And we continue our series on Community Service Levels.**

**The NAMS Plus Templates and more Questions to guide our thinking, p.3**

**Mick Raby** continues his introduction to Community Service Levels. In this chapter. "Is your Status Quo really Quo?", he focuses on the *one key issue* that differentiates today's asset management from the past. **pp 4- 8**

**Richard Jarvis** considers how we may use the technical service standards that many organisations have now developed, to construct and support community service levels. The vehicle used is Star Ratings, which is a valuable model in its own right. **pp 9-11**

**Do consider - and enjoy!**
***Penny***

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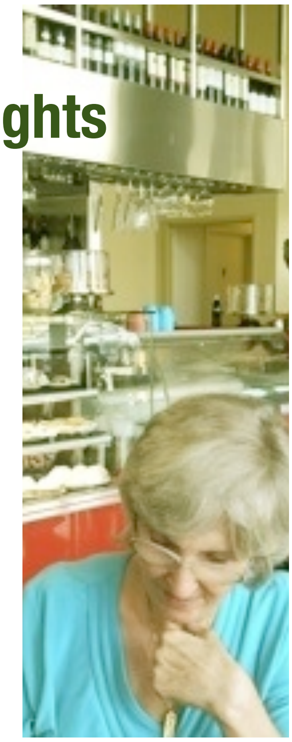
# Coffee ShopThoughts



## The story of Asset Management is largely oral history!

There is so much that we have not recorded and we rely on the memory of our ancients.  This would not matter so much if all of the good ideas we had in the past have now been incorporated into our current practice and all the bad ideas have been dead and buried.  But that is not the case.

As you will know from your own corporate history, ideas that previous asset managers considered - and wisely discarded - don't stay buried.  They lie there, underground, waiting until all those who can remember the earlier discussion are gone - and then they resurface to bedevil a new generation.  New managers may not even know that the idea has been considered before, and they rejoice - and may passionately champion - the 'new' idea.  And much time and effort passes before they, too, recognise that it is not going to fly and, in their turn, discard it and consign it to that underground sleeper cell.

## Can you help me piece together our interesting past?  What do you know of these and other topics?

### 1.The Replacement v. Historic Cost Valuation Debate

**Do you remember** when we discussed replacement cost versus historic costs in the early 1990s?  Most of the discussion was led by the NSW Treasury at the time that Nick Greiner (now Chair of Infrastructure NSW) became Premier of that State. Greiner, a Harvard graduate, believed that government should be run as a 'big business' and was therefore keen to adopt accrual accounting (the accounting used in business) so that performances in government could be compared with the private sector.  Initially the plan was to adopt historic cost values in the new accrual books because it was believed that that would be most comparable with the private sector.  Fortunately, since Australia followed New South Wales' lead, the decision was made to go with replacement costs.   *I would very much like to speak with anyone who was involved in this decision or knows of anyone who was.  Please contact me at penny@amqi.com.*

### 2. The 'it isn't necessary to depreciate assets' debate

**Do you remember** when it was argued that it was not necessary to depreciate infrastructure assets because over the lifetime of these assets, inflation would in any case reduce the real value of these assets to close to zero?   *If you were involved in any of these discussions (either for or against) or know of anyone who was, I would very much like to speak with you. Please contact me at penny@amqi.com*

## *THE NAMS TEMPLATES -*

## *AND SOME MORE COMMUNITY SERVICE LEVEL QUESTIONS*

In the last issue I asked:

> **"What is the difference between a Community Service and a Community Service Level?"**
>
> **"Can Community Service aspirations be developed generically, or are they specific and unique to each community?"**
>
> And we might want to add
>
> **"Are our measures set up so that we can offer our communities a range of levels - and provide the relevant costs?"**

### NAMS PLUS TEMPLATES

**Many councils are now using the NAMS templates,** which have proved most useful in establishing their Asset Management Plans. They do, however, have a strong technical, rather than a customer service, focus. So - in moving from the 'old' model to the 'new' (*see Mick Raby on pp 4-8*) **here are some more questions to ask:**

**Do we have enough customer service level detail to guide our technical and operational service levels?** There are just 3 very broad customer service level sub-categories (quality, function, risk and safety) as against over 30 sub-categories for the technical and operational standards. (*Have a look at the two articles on customer service levels for Parks in Issue 298 to see some of the great range of services that the community consider important - just about all of them relating to different technical and operational services.*)

**How do we ensure that technical and operational service levels support customer service levels (and don't conflict with them)** - *NAMS Users may find Richard Jarvis' paper in this issue (pp9-11) of interest in relation to this question.*

**How are the community expectations derived?** how are they verified and updated? Are they based on the community's understanding of the consequences, both financial and social?

**With limited budgets, which service levels have priority? How do we know?**

# The new principles of Asset Management
# - in practice

**Mick Raby**


*In part one of his introduction (SAM 328) Mick Raby dealt with the basic premise of today's asset management principles, namely that Asset Management is important only insofar as it supports the community to access the service which flows from the assets being managed. But what does this mean in practice? This is what Mick looks at today.*

## Now Watch While I Pull Some Economics Out Of My Hat

In the new world order asset renewal/replacement should now take place when either of two critical points is reached:

**either** when the Service delivered by the asset falls below the community's perception of Satisfactory;

**or** when the point of most economically effective renewal, based on engineering degradation curves, is reached.

**This marks a major change for my decision making process. There are now two variables to the equation.**

The most important point to be made here is that that if the engineering-based least cost intervention point arises *before* the Community Satisfaction floor is reached, then by definition, the service is being delivered in excess of the community's expectations, and in excess of their stated willingness to pay. This is a short hand way of saying that the provider is over providing and the cost of the over provision is being wasted.

## The Balancing Act

To ensure that no economic wastage of this type occurs the two critical intervention decision points should coincide and be reached simultaneously. But wait! The first critical point: the "least cost intervention point", is totally reliant upon hard engineering measures of degradation, is highly objective (based on Degradation Curves) in nature, and has no direct connection to the community perception of 'satisfactory service' which is underpinned by a highly subjective 'willingness to pay' test.

What chance that these two points will ever coincide in time and space? Very little chance probably. Unless of course Works Guys can identify a mechanism to 'arbitrage' the two points into balance.

The 'least cost' intervention point is a mathematical construct which is simply found by differentiating the function of the degradation curve for any particular asset. The degradation curve itself is a function of the many variables, including (for a road) subgrade type, base course type and depth, pavement type and depth, traffic conditions, weather, climate, etc. The important point is that the 'least cost' intervention point is totally dependent upon these things. That means that we can potentially shift the least cost intervention point around if we are able to change some of the variables. If we want the intervention point to occur earlier we might for example use a thinner pavement. If we wish the intervention point to occur later then we make the pavement thicker. That sort of thing.

I think the potential to achieve this balancing act for various asset classes exists but it means changing my approach.

To bring forth this latent potential I need only to throw off the shackles of my historical role and the fear of precedent which I show from time to time. I need to challenge my Golden Rule which has seen me safely through my days. I need to lose my fear of being first through the door.

## Precedent, or, Why Am I Like That?

There is a real level of safety in never being the first to try something. It saves us from the embarrassment that attends failure. Far better to wait for someone else to prove that concrete goes hard before you try to build a bridge out of it yourself. In short, it is personally safer (and in some organisations, professionally safer) to never do anything unless there is a tested, trialled and accepted Precedent. If the bridge does fall down one can always blame the precedent.

Some think otherwise. The late Lionel Murphy, Attorney General and Justice of the High Court of Australia had a couple of things to say about a reliance on precedent, and whilst he was talking about the use of Precedence in a legal sense the same thoughts probably apply here.

**"The theory of Precedent essentially means nobody should ever do anything for the first time."**

And later

**"A reliance on Precedent is an eminently reasonable approach for a country populated by 100 million sheep".**

I think he was onto something there. Quite often, Works Guy, when confronted with the requirement to maintain or renew an asset falls into a type of historically correct lock-step, and without questioning the decision to do so, replaces like-with-like. This is understandable: we all tend towards those things which, as we know through hard won experience, will work.

In my part of town this appears to lead to a widespread tendency which can, and often does, lead to situations where our definitions of say "a road" end up as heavily engineering-based descriptions such as:

**"Road – A base course of 250mm of unbound granular material compacted to 98% over a subgrade of CBR 10, all of which is then topped by a waterproof 35mm asphalt wearing course".**

To be honest this is very much the picture that immediately leaps to my mind whenever I hear the word "road". It's the same when I hear the word "sheep"; I immediately envisage a big, proud Merino ram. I know there are other worthy breeds of sheep, but I just can't see them. Apparently this is because I saw a lot of Merinos as a child. It is my experience shining through.

The danger with this type of limiting description/definition is exactly that. It can cause me to only consider minor variations on an already limited theme. This trait could be a barrier to my professional longevity if I am ever required to solve a problem for which there is no successful precedent already existing that I can pinch.

## Is There A Cure?

AM theory appears to make more sense when asset definitions focus instead on the Service which is to be delivered by the proposed Asset. For example an alternative possible Service-based definition of a Road might be:

**"Road – An asset of any configuration which allows personal vehicular transportation to occur safely and at a time of the users choosing".**

What! You mean I don't have to keep building roads out of unbound base course material?

Utilising such Service-based definitions can potentially serve to free the mind of historical precedent and open the possibility that new ideas, some worthy and some outrageous, will be dropped on the table for exploration. These discussions can lead to some interesting and potentially beneficial opportunities to change the status quo, especially if the status quo is on the fast train out of town.

## Is Your Status Really Quo?

In the Fairfield context local roads tend to be historically constructed quite simply and along the lines of a beautifully aesthetic 35mm deep asphalt wearing course over a 250mm (if we're lucky) unbound granular base. Hence, my previous comment about mind pictures which are commonly based on what we already know.

This combination of materials and methodology, combined with the current Fairfield-specific renewal regime sees approximately 21km of road renewed each year. We have done it this way for a long time because it works. It suits Fairfield's subgrade conditions, traffic loads, and our current budgets. It is the Status Quo. It is based on Precedent.

A careful analysis of past results indicates that under this like-for-like replacement regime the wearing course can be expected, on average, to last 20 years and the base course 40 years. At today's costs of production and with the same materials mix the regime is "sustainable" in so far as the rate of replacement will keep pace with the rate of deterioration. In other words the average quality of network will remain unchanged if we continue to do what we have been doing.

The like-for-like assumption however begins to falls over in the face of repeated annual cost escalations which cannot be matched by annual revenue (budget) increases. This is the situation which now characterises the problem faced by most NSW local government bodies. It is certainly so in Fairfield, and it also applies of course not only to roads but to all other Asset Classes for which we are responsible.

The like-for-like approach, if continued under the conditions of a widening cost/revenue gap results in backlogs of work which are left undone and assets which are left un-renewed.

How does the backlog make its presence felt on the ground? In accordance with the Service focus of AM theory the answer is most likely a tangible reduction in the Level of the Service provided by the assets which form the backlog.

Sporting fields which can no longer safely support sporting events or roads and footpaths which can no longer safely carry residents from one part to another are grossly inadequate examples but suffice for the purposes of the explanation.

Happily, the current Fairfield “backlog” across all asset classes can reasonably be categorised as “small” and is therefore currently manageable in so far as the Service Levels provided by the Fairfield stock of assets have not yet been significantly detrimentally affected.

This situation will however rapidly worsen over future years unless something “gives”. I have finally accepted that the “giving” is unlikely to be in the form of increased budget allocations. This acknowledgement has led to the early consideration of other ways around the barn.

Coming up next: Pt 3 of Mick Raby’s Introduction to Customer Service Levels -
**“When your status refuses to quo”**

Mick is a very practical Works Guy and he would not dream of suggesting that you do something that can’t be done - and so, in the next SAM issue, he will give you some examples of the way in which you can rethink the way you manage the physical capabilities of the asset to more closely match what the community wants and can afford to pay for. He does this for roads. It is up to you to do it for other assets as well.


Fed Ex - famous for its slogan 'when it really has to be there overnight'! And perhaps the prime example of where technical and customer service standards coincide.

# Using Technical Service Levels to develop Community Service Levels

## Richard Jarvis

### Approach Taken

This approach recognises that technical service standards already exist and considers whether they can be used as a proxy for developing customer service levels. The vehicle for this is the star ratings approach. *(For previous discussions of the use of star ratings in asset management see SAM 224 and SAM 225 in the archives.)*

*This article is based on a discussion with Richard Jarvis over his paper "Developing Levels of Service Ratings" to the IPWEA Conference, September 2011.*

### Why this can work

"Most organisations can quote technical performance measures for the services they deliver. These may be in terms such as the frequency of the service, responsiveness to deficiencies, or a measurable characteristic of the quality of the asset delivering the service. They are most commonly specified in terms that are similar to intervention levels.

Technical measures of performance may be for example, a bus travels a route every hour, or a blocked sewer shall be attended to within 3 hours of notification, and the drinking water shall pass a potable water quality test.

The technical performance measures give information about the condition of the asset or the way the asset is applied to provide the service. They are rarely outcome measures that are aligned with the needs of the customer. But they often do indicate changes in service provision that impact on service outcomes. So we can apply some technical measures as proxy measures of service outcomes.

Technical levels of service can be readily measured. Levels of Service are commonly more qualitative. So how does one set about making the linkages between the measurable and the qualitative?

## How it works

Community & Service Outcomes are at the top of the management spectrum of organisations providing services to the community and are spelt out in the various statements of corporate intent and outcomes defined in terms of what customers values, such as

- Accessibility
- Affordability
- Community Control
- Community Involvement
- Customer Service
- Fairness/Consistency
- Flexibility
- Health and Safety
- Quality/Quantity
- Reliability
- Responsiveness
- Sustainability
- Whole Community Benefit

But back of each of these community service values are many supporting technical service standards which can be used to describe and analyse the current position, the desired position and the gap between the two that needs to be filled. Take Accessibility as an example. See below:

| Step 1 | | | Step 2 | | Step 3 | Step 4 | Step 5 | |
|---|---|---|---|---|---|---|---|---|
| GENERIC FORMAT - Top down Analysis >>>> | | | <<<< SPECIFIC Bottom Up Analysis | | Scoring Definition | Expected Rank | Ranking | |
| Assessments | | | Attributes | Criterion | Definition | Expectation | Score | Gap |
| | Accessibility | | | | | | | |
| 1 | Sufficient access available to all intended users | 1. Sufficient, convenient and safe access available to all intended users and their needs | Disabled Access | Equity & Compliance of ramps, doorway widths, vertical transportation, disabled facilities, primary design (or retrofit) | 5: 100% compliance with AS1428; 4: 100% compliance without equity; 3: Partial compliance; 2: Minimal compliance; 1: None - does not comply | 2.5 | 1.0 | -1.5 |
| | | | Adequacy of provision | Geographic basis of the population served | 5: Adequate; 3: Insufficient/ Moderate over-supplied; 1: Inadequate/ over-supplied | | 3.5 | 1.0 |
| | | | Locational Convenience | Connected to transport modes, parking, easy & safe approach. | 5: Well connected; 3: Needs Improvement; 1: Poorly connected | | 2.0 | -0.5 |
| | | 2. Sufficient information about facilities, activities provided/available and (if necessary) their access | Way finding | Signage, entry & access lighting, legible layout | 5: Well signed and access; 3: Needs Improvement; 1: Poorly signed and access | | 2.0 | -0.5 |
| | | | User information & guidance readily available | Hire information, user instruction & Help desk. | 5: Well publicised at web, council newsletter, sign posted; 3: More information needs to provided; 1: No information | | 1.0 | -1.5 |
| | | 3. Appropriate management of asset for all users | Safety & security | Reported user perception | 5: > 80% feel safe; 3: > 40%; 1 > 1% | | 2.5 | 0.0 |
| | | | Operating Hours | Adequate hours - user survey | 5: Adequate; 3: Insufficient/ Hours can be reduced; 1: Inadequate/ Over-supplied | | 5.0 | 2.5 |
| | | | | | | Sub Total For: | 2.4 | -0.1 |

## Discussion

Penny: **Are there potential difficulties in using this approach?**

Richard: The use of star ratings, itself, does not create problems but it can bring existing problems to the fore. For example, to improve service levels with maximum efficiency it is necessary to look both the areas which are being under-serviced and to those that are being over-serviced. Those in the latter area may fear a loss of budget. Consequently there can be disputes over the determination of what actually is the current service level and what it should be. In defence they may focus on just one aspect and deny the validity of the overall average customer service level that it generates. There is also the feeling that everything must be a "5" regardless of the benefit: cost to the community.

Penny: **How can determination of actual and desired service levels be resolved?**

Richard: The community is the ultimate decider but a close approximation to the community viewpoint can be achieved by assembling a representative community group within council. Many council workers live in the area and receive regular feedback from the community. The community group needs to reflect the demographics of the area. The role that they occupy in council is not important for this task, they are there as part of the community. So anybody from the CEO to office staff to field workers can take part.

Penny: I agree. Boroondara *(SAM 90*) did some excellent work in determining the relative proportions of different groups in their community (e.g. % unemployed, single mothers, ethnic groups, retired people, etc) and Peter Buckland effectively used an in-house group to reflect the wider views of the community in his work on valuing the how much society is prepared to pay to avoid a sewer spill. *(SAM 204)*

Penny: This is an interesting use of technical service levels in support of customer service. **Can all the technical service levels developed in council be used in support of some customer service, or could there a potential conflict between the two?**

Richard: Technical measures have known limits, and should be selected with care if they are to be applied as proxies for measuring community levels of service. In making the choice, consider the outcome that would be driven by changing the achieved star rating.

Some community values may not be suitably measured by a technical measure, but need inputs from the community. Once an initial rating structure is in place, the choice of measures should be validated by asking the community if the measure operates appropriately, and to rank their expectation.

**Richard Jarvis** is Technical Principal in Asset Management at Opus International Consultants. He has had extensive experience over 30 years in managing public infrastructure. Richard may be contacted at richard.jarvis@opus.com.au