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BREAKTHROUGH

For Practitioners, Policy Makers and Planners in Public Infrastructure

AMQ INTERNATIONAL

STRATEGIC ASSET MANAGEMENT

BREAKTHROUGH

This is an exciting time to be involved in asset management. You might think that after 20 years, everything that there is to be discovered would already have happened. But, not so. Many things are happening.

Roger Byrne continues his exploration of how to retain and further develop the skills we have acquired in the last two decades of asset management exploration. He argues that the problems faced by agencies with similar assets are the same and therefore can benefit from standard applications. (Pages 7 - 8)

Ashay Prabhu takes a different approach. He believes that after the same two decades of acquiring skills and experience we are now in a position to rigorously apply these skills to improving not assets but service delivery.

However a focus on service delivery leads us to look at assets with a different eye. Similar assets being used for different ends, in different circumstances, with different usage levels, etc. need to be seen as requiring *different* treatment. The approach he uses has the ability to integrate all asset activities from planning to budgeting, financial planning, engineering intervention and performance monitoring - all for the aim of improving service delivery. (Pages 3 - 6) This is the first part of Ashay's approach and will be continued in the next issue.

So, two very different approaches, which is right for you?

Editor: Dr Penny Burns

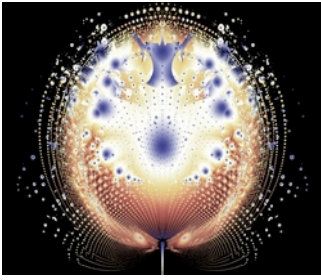
AMQ International

PO Box 75 Salisbury South Australia 5108

Telephone 61 (0) 8 8281 5795

Email: amqi@amqi.com

Website www.amqi.com



Editorial: A common journey?

When we began the asset management journey some 20 years ago we knew very little about our assets - what we had, even where they were, what condition they were in, how much they were worth, when they would need replacing or modifying and how much it would then cost.

It was thus natural that our first efforts were directed towards collecting asset data. It was also natural that, because of this effort, our focus tended to be on the assets themselves, rather than on the services that they provide.

We knew that the purpose of assets was to provide service but we did little to explore the nature of those service demands. In practice, the asset manager 'assigned' a service level, or the actual service level was the outcome, rather than the driver, of asset actions. Most often service levels were implicit, not stated and not written down. They varied with the asset manager, engineer or condition assessor. As a result there was little consistency and an inability to communicate.

This inability to communicate then resulted in the decades long debate over the size of the 'backlog' - which only exists when asset managers try to manage to a different standard than the one being funded. It also led to distrust and suspicion between professionals - engineers, accountants, planners - none of whom had the same objectives, or the same 'starting point'.

Ruth Wallsgrove, in a highly rated article "Trust me, I'm an Asset Manager" in SAM 205, showed how, if they can *understand* you they will be more likely to trust you. If you take the time to explain the rationale and the process you are adopting to decision makers, they will go along with you even when your decisions have to be based on the poorest of data. Conversely, decisions that are the product of highly technical "black box" modelling systems even with excellent data can be viewed with immense distrust.

Ashay Prabhu says something similar. "The person to whom the message is just communicated *lives in fear* because he isn't part of the journey" An astute observation.

How can we take everyone along on the journey? - councillors, senior staff, managers, fieldworkers. Because if we don't, there is no integration, no 'common purpose'.

If we are to go on a common journey, we must have a common idea of our destination - that is, we must find a way for everybody to communicate on the objectives asset management is to achieve. This also enables us to monitor and report on performance in a meaningful way.

Ashay Prabhu has developed such a fully integrated service-planning-engineering-finance model. It is truly a major breakthrough in the development of asset management. In this issue and the next we will look at the major features of this approach.

Consider and Enjoy!

**Penny Burns,
Editor, Strategic Asset Management**



A common journey
requires a common aim

If everyone in the organisation is to have the same appreciation of service levels and the need for sustainability and informed decision making then it must be done deliberately. It doesn't happen by accident.

A Common Journey

Ashay Prabhu, describes the “Service Focus”
approach to asset management taken by **ACEAM**

**“A better service, not a better asset, is a
key indicator of good asset
management”**

An **Asset Management Policy** is a key element of the asset management plan process and it sets out the high level ‘principles’, including.

- *ensuring service delivery needs form the basis of asset management*
- ‘informed decision-making, incorporating a life-cycle approach to asset management’
- ‘sustainability, providing for present needs while sustaining resources for future generations’.

The Asset Management Policy **objectives** then flow through, as described to the right.

To achieve this flow through requires asking a set of fundamental questions, starting with service levels.

**Service delivery objectives
are the key!**

- At the **strategic level**, the service delivery objectives and requirements of the asset management policy are set out in the council’s plan.
- At the **operational level**, they are converted by the asset management plan into specific actions involving both asset and non-asset alternatives.
- This delivery of the **asset management plan** is combined with ongoing monitoring to verify its implementation in accordance with the parameters set by the asset management policy and strategy.
- **Performance measurement** links the strategic and operational levels to assist council to determine if it is achieving its desired outcomes in the most effective manner.
- Through the use of evaluation and reporting, performance measurement **raises the council awareness of the responsibilities, opportunities and risks inherent in asset management**

A Common Journey starts with a Common Destination - AGREEMENT ON SERVICE LEVELS

What level of service will we be providing and have we checked affordability?

note that all of the following questions flow from this first one, although the process is clearly an iterative one

What do we own and how does it fit with the level of service?

Where are our assets located and how do they fit with services we have to deliver?

What is the present condition and capacity of our infrastructure?

What level of funding is required to deliver the desired level of service?

What level of funding is needed to keep providing the satisfactory standard of service?

How will we fund the service delivery?

What will we expect to achieve for it and is this objectively measurable?

What is our project level CAPEX plan for renewal, upgrade and maintenance?

It therefore pays to spend as long as possible to define service levels

Most councils spend infinite time in calculating funding gaps (e.g. backlog maintenance) that have little relevance to service levels. *And nowhere near enough on developing the service levels themselves.*

Who should be involved? Councillors, Managers and Johnny in the truck. They all have a valuable perspective on what is desirable and possible.

What services do we think we provide?

What services should we be providing?

What services do the users want?

What services do we actually provide?

Fair Idea?

Good Idea?

No Idea?

Why do we need to know?

1. The trick is to be able to define the services and our methods of delivery

Sample Vision of a Major Metro Council:

Recognised, **well defined** services that we deliver on

2. And to convert strategic objectives into the service delivery framework

Sample Strategic Objective:

Maintain Council buildings to the **appropriate** standards through:

- Developing and maintaining an **accurate** register of structures/buildings the Unit is responsible for.
- A **Planned** Maintenance Program encompassing periodic, predictive and preventive maintenance.
- An Unplanned Maintenance Service encompassing repair and replacement of **faulty** building assets.
- Developing and implementing a **Rehabilitation and Renewal Program** for building assets.

Converting strategic objectives into the service delivery framework is about understanding

What is the service that :

- **We think we are to provide.**
- **We are being told we should provide.**
- **Our customers believe they should be provided.**
- **What we are really providing.**
- **What we can afford to provide.**

And It is about Understanding and Defining:

Asset Hierarchies

And this means recognising that physically similar assets differ in their needs and service capacity according to how they need to be used, i.e. feeder road or main road (function), where they are located, wet coastal strip, dry inland (region), the level of usage (perhaps city v country) and according to how the assets themselves are perceived (i.e. prestige buildings v standard). Once your assets have been categorised, they therefore need to be assigned to hierarchies: **functional, region based, usage based, or perception based**

Use hierarchies to drive services. It must be a 'way of life'. Communicating the message is then easy.



Service Activity	Intervention Level *	Repair/Action Activity	Hierarchy	
			Action/Response Times	
Repair Hydrant Replace Hydrant Locate and expose hydrant	Inspection based for faulty or hidden hydrants or incident report based.	Work Practices Guidelines (W002)	Hierarchy A Hierarchy B Hierarchy C	24 HOURS 2 days 7 days
Clean. Paint, mark hydrant	Standards Apply Legislation driven			Programmed zonal by contract

Asset Hierarchies are derived from the service levels

Here is another example to illustrate this key asset management component



Service Activity	Intervention Level *	Repair Activities	Response Times	
			Arterials	Collectors
Patch and provide smooth turning access	Intersection access cracked deformed for more than 50% of intersection area. Potholes >300mm wide and/or >50mm deep	(ACEAM # 506)	Locals	30d
			Mini-locals	90d
			Collectors	150d
			Arterials	200d

The importance of consistent assessment

The ACEAM approach is based on informed decision-making. This requires that the information used be reliable, relevant - and consistent. This is why this approach requires the development of in-house manuals that are simple, clear and well understood by all field operatives. Photos and descriptions are used for this purpose and developed in conjunction with council staff.

Moreland City Council, which has adopted this approach for assessing its road assets, not only has a manual for condition assessment but also has a system for checking reliability and consistency over time. This greatly adds to the confidence with which decision makers can apply to information and recommendations emanating from use of the system processes.

In the next issue, Ashay will show you how using these service based asset hierarchies can

- aid communication**
- optimise budgets**
- determine - and demonstrate - longer term financial requirements, and**
- simplify valuation and depreciation**



Retaining and Expanding Good Ideas

Roger Byrne, GHD

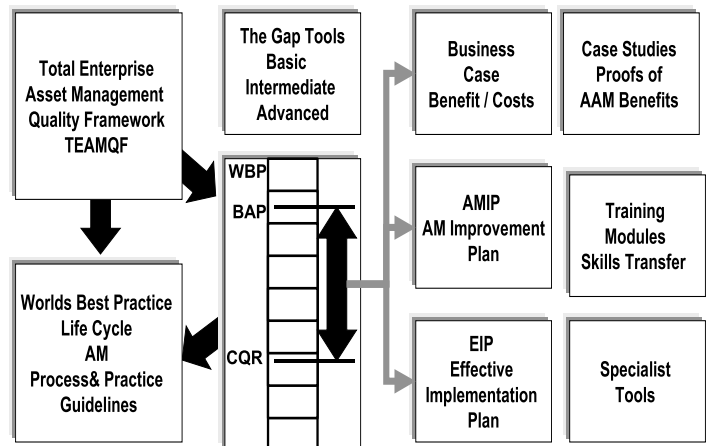
In the last issue of SAM, Roger Byrne reported on a GHD survey that showed many of the good practices adopted by clients in the past had not been kept up. In this issue he suggests what can be done to ensure good ideas are not lost.

The AMPLE Project – Web Based Learning Experience

This project attempts to address all the issues raised from these surveys that Roger Byrne reported on in the last issue of SAM and the feedback from clients.

It is a web based Asset Management Program Learning Environment (AMPLE) that includes the following major modules:

- The TEAMQF Quality Framework – TEAM stands for Total Enterprise Asset Management and draws attention to the need for all organizations to work as a single team and cover all assets in their portfolio or system.
- Best practice asset management processes covering the entire life cycle with direct relationship to the TEAM quality framework listed above.
- Best practice – practices related to each asset type or group covering all municipal service programs
- The gap analysis tools – three levels – that enable users to understand their current quality rating (CQR), compare / benchmark this with a vast database of similar clients, and set their improvement targets for both short term and long term objectives.
- Benefits module that enables you to determine the benefit that will be achieved in driving improvement three main parts
- The Asset Management Improvement Planning module that allows you to determine the most appropriate improvement program that will deliver the ‘best bang for your buck’ while moving you to a sustainable asset management organization. It will give you a ‘Roadmap’ for the journey, but you will control how far, how fast, and how much you spend on it.
- The effective implementation module that covers all the issues that ensure successful implementations including planning, cultural change and organizational support issues.
- The training or Learning Environment modules that enable staff at all levels in the asset management program to learn using a web based curriculum. These programs can be developed for your industry and your business covering all issues that you need to address. This is best shown by the Figure



AMPLE Product is based on allowing agencies to achieve ISO quality accreditation for Life Cycle Infrastructure Asset Management

Linking This To Education / Training

The Educational aspects of asset management are not being effectively addressed. Industry associations and other commercial training agencies are undertaking nominal training activities that are driven as much by commercial profits as by educational aspects. We need to face the skills needed and also enable us to replace baby boomers that have held high positions in local government for many years.

We have not considered the key issues of the identifying and understanding the skill sets required, developing the necessary curriculum's, and then drive national training through the normal education systems we will never make the changes required. The AM positions, there roles and responsibilities need to be better developed and a educational qualification / accreditation / reward system needs to be further developed.

We also need to address the ways in which we train existing staff at all levels. We have an enormous backlog and self-driven distance learning arrangement and the web is the way to do this.

In terms of educating our future industry leaders we need AM to be tied into the needs of the individual service industries and the key elements required for good succession planning as well. The figure shows how AM, IT & Data will feature in all future municipal management programs.

The National AM Committees When I commenced in AM we had no forum for debating these issues. Australia lead the way with the National Asset Management Steering (NAMS) committee formed in 1991/92 who were responsible for completing the initial Australian Manual (1993). This was closely followed by the New Zealand equivalent in 1995. Now we have a network of similar bodies developing across the world. We all face identical

challenges – delivering best value (lowest sustainable TBL cost) infrastructure services to our present and future generations of customers.

- Our problems are identical.
- The best appropriate life cycle processes are the same for all of us.
- The best practices for each asset type are the same.

We now recognize that the differences that need to be accommodated are:

- The current status of the organization in regards to their AM management quality (CQR)
- The size, value and condition/ performance of their asset portfolios.
- The expectations of their customers and their willingness and ability to pay for the levels of service required.
- The regulatory framework under which each body operates.
- The financial viability of our organizations to undertake this work and drive their AM Improvement program

We believe that the latest approaches being developed do enable all these issues to be addressed and applied via a 'one world' model that can be tailored to suit each individual agency within the greater jurisdictions:

- A single agency – e.g. a water utility
- A combined agency – e.g. a municipality that delivers all typical services
- A state wide approach
- A Federal / National approach

