



Why should we be interested?

Don't we have enough to do, simply managing our own assets, struggling to find sufficient finance, dealing with community ignorance and, oftentimes, agency indifference?

In this issue, I

- argue that all our interests are served by taking an active interest in pushing forward the frontiers of knowledge in asset management;
- look at a number of ways in which this can be done, from low cost, low resource intensive methods to full-on commitment.; and, finally,
- suggest a range of challenges that lend themselves to further development.

Contents

- | | |
|------|---|
| 728 | Three excellent reasons to engage in advancing asset management |
| 729 | Advancing Asset Management—inexpensive options |
| 730 | Advancing Asset Management—moderate expense |
| 731 | Advancing Asset Management—full on commitment |
| 732. | The Challenges—Strategic, Integration |
| 733. | The Challenges –Measurement, Analytic, Institutional |
| 734. | The Challenges –Conceptual, Accounting, Costing |

Researched and written by Dr Penny Burns, AMQ International.
Published fortnightly. Subscription, Comment, or Inquiries to

AMQ International
PO Box 75 Salisbury South Australia
Tel 618 8281 5795
Email: sam@amqi.com Website: www.amqi.com

THREE EXCELLENT REASONS TO ENGAGE IN ADVANCING ASSET MANAGEMENT

1. It motivates your staff

Being involved in a research project is exciting and challenging. But for this to happen, those engaged in the project must have real power to make a difference. It is the reverse to simply imposing change (which can be quite a turn-off) Being vitally involved in the design and execution of an asset management project can go a long way to overcoming the 'mindless compliance' that doing things the same way can engender.

2. It engages your agency and community

Asset management is often seen as one of those 'bread and butter' issues by the rest of your agency and by the community – something that has to be done but should be done quietly, without fuss, so that the rest of us can get on with the things that are really important! Well, a key research project is something that can be announced, certainly within the agency, and often within the community. Well marketed, it can have newspaper value. It shows the community that you are forward thinking. It may alert them to challenges that you are overcoming that they had not previously thought much about. (Being an unsung hero doesn't do that much for your budget.)

3. It adds value

By improving service delivery, efficiency, and cost, an asset management project contributes positively to the bottom line – even the triple bottom line.

And, perhaps, because we can!

It has been argued that humans only become human through language – that it is language that enables us to develop a culture and to have a history. Similarly it has been argued that science and innovation are our keys to the future. Well, I would argue that asset management is the bridge that takes us from the past to the future, by taking the infrastructure that supported us yesterday, making it viable today and sustainable and relevant into the future. In the last issue, I suggested that the ICOMS Asset Management conference title "Asset Management – the core 21st century competency" had a certain resonance. That is why!

How you and your agency can be involved in ADVANCING ASSET MANAGEMENT

From the inexpensive – to the full-on commitment

Inexpensive – Fringe involvement in someone else's asset management development challenge

1. Support a student!

Many universities now are teaching asset management within engineering and management courses.

- Offer a student the opportunity to write up and review a case study of work that you have already done – you get the benefit of a fresh, unbiased eye.
- Suggest a topic for short term research – and support that research through the provision of data and officer knowledge
- Financial rewards in the form of offering to print the student's research paper, or offering them vacation employment, can be a way of rewarding the choice of your research topic

2. Encourage staff members to take up further studies

and make available a range of specific challenges in asset management development that they may choose to do. For the price of course fees and time off to study, you not only get the asset management development project but you get staff training and motivation as well. (cheaper than a consultancy!)

3. Do more in-house.

Make a commitment to doing more work in-house. Use a consultant as a facilitator or mentor, but utilise the skills and resources of your own people to develop new and better ways of doing things.

For example, some time ago we wrote up the success of the Mornington Peninsula Shire Council that decided to do more of their road condition assessment in-house and, as a result, ended up knowing far more about their assets than they would have done had they gone out to consultancy – and were then able to use that knowledge to calibrate their pavement management system, thus advancing their asset management.

4. Support an active AM development team and/or individuals

Encourage focussed participation in group discussions—especially those that have clearly defined outcomes, such as the new range of discussion forums guided by international experts that are being established by the Virtual Asset Management Community—*more information in a few weeks time..*

5. Join a Knowledge Data Base

Pool your data with others and gain access to a growing and extensive knowledge database. On your own it would take years to gather the data to be able to assess the economic and functional lives of certain types of assets under certain situations. By combining your information with others in a model designed to aggregate and inform you of the group averages, you can shortcut your data acquisition times for a very small fee. The Municipal Association of Victoria is establishing such a Knowledge Data Base and we hope to bring you more information about this shortly.

ADVANCING ASSET MANAGEMENT

Moderate expense options

For moderate expense, consider joint involvement in asset management development

1. Engage in joint development with another organization.

This could be a regional study, a combined state-local government study, a project organised by a professional body, or a group exercise such as the South Australian Local Government's Asset Management "Step by Step" program, or the Municipal Association of Victoria's similar mentoring study, the "Step" program.

2. Join forces with an academic institution – this can be a high return exercise.

A good example is LOGOMETRIX, a flourishing performance measurement tool specifically designed for local government. From its humble beginnings with only one Victorian Local Government Authority (LGA) the project expanded significantly. It is now a collaborative project with nine local government partners, a software developer, a law firm, the Institute for Social Research (Swinburne University of Technology, Hawthorn, Victoria Australia) and UNITEC Institute of Technology, Auckland, NZ.

Not only do council participants now have a tool designed specifically for them, but its commercial status ensures that they will continue to benefit from future developments *and that it will be kept up to date*. While the financial profits are probably well rated by the councils they are really a side issue when the other benefits are considered.

3. Beware the temptation to be your own promoter!

It is tempting to think that you can offset the costs of asset management development carried out for your benefit by extending the product to others. Rarely are government agencies or even businesses in a good position to engage in the commercial production of the results of commissioned research. A number have tried – and failed! Not because of the products, which were very good, but because they underestimated the marketing and development costs. Better to team up with someone who can do the job properly.

ADVANCING ASSET MANAGEMENT

Full Commitment Options

A number of leading organizations, for example, the NSW Treasury with its Total Asset Management Manual and the Victorian Treasury with its Asset Management Series, have committed large resources to developing asset management guidelines and make them freely available on the web.

Also agencies such as the SA Local Government Association and the Victorian Dept of Victorian Communities (or Office of Local Government as it was at the time) had carried out extensive audits of asset management practices and gathered asset management data that they have made extensively available. This is a practice that is to be encouraged.

1. Don't hide your light under a bushel!

Consider asking your web provider to set up a page on your website entitled "Managing your assets" (if you are a council or government department) or "Managing our Assets" if you are a statutory authority – in which you publish such things as your Asset Management Plan; asset management audits, or summaries thereof; discussion papers on the issues affecting sound management of your assets, and the results of any asset oriented study that you conduct, explaining to the community the importance of what you are doing on their behalf to make your assets more reliable, more available, more useful.

2. Take to the stage!

A good way of using your in-house or commissioned work to advance the entire field of asset management is to speak about the work in public forums. There was a phase in which CEOs were reluctant to tell the unvarnished facts and wanted them embroidered out of all recognition when studies were publicly reported. However, with greater maturity, there are signs that in many places that phase is now behind us and we can honestly report what worked – and what didn't. But there is a physical limit to how much public speaking your well intentioned, articulate in-house staff or consulting team can do, so

3. Place it on the public record

Publish in professional journals, put the presentation papers on your website, - or tell me! "*Strategic Asset Management*" would be happy to hear from organizations that have made some break-through in asset management – big or little.

So, you want to move Asset Management forward,

WHAT ARE THE CHALLENGES WE FACE NOW?

A few years ago, Michael Garvin, Professor of Civil Engineering at the University of Columbia in the United States, summed up the challenges facing asset management. He grouped these challenges under five headings: 1. Strategic challenges; 2. Integration challenges; 3. Measurement challenges; 4. Analytic Challenges, and 5. Institutional Challenges.

Naturally he focussed predominantly on the challenges facing engineers but, recognising the multidisciplinary nature of asset manager, I have extended Garvin's list to include:

- Conceptual challenges
- Accounting challenges
- Costing challenges

These are not the only challenges we face—but there are probably enough here to be getting on with!

1. Strategic challenges

Procurement processes. Many alternative arrangements for facility delivery, facility operation and maintenance, and systems operation and maintenance are available today; we need to learn how to evaluate and choose the appropriate one.

Comment: Despite a number of reviews and studies, the advantages of PPPs and PFIs over improved and better-specified in-house work are not clear. '10% gain' figures are much quoted but not well documented – and it is not clear what precisely is yielding the benefits, if they exist. Here is an area that is crying out for rigorous analysis – and clear definition

Defining system objectives.

This task is becoming more complex as we broaden our range of stakeholders to include not only the different supplier levels, but also community stakeholders and this will certainly introduce competing objectives. Hence Ralph Godau's definition of asset management (SAM 132) which has, at its first element, "managing relationships with stakeholders". Defining and understanding triple bottom line objectives would fall into this category.

2. Integration challenges

Integrating functional and condition-driven requirements. Functional requirements dominate at the policy and service provider level, but it is condition-driven requirements that mostly occupy the thoughts of operations personnel and middle level tactical managers.

Integrating asset classes and sectors. There are few services that are provided by only one asset class. Generally asset classes, eg rolling stock, track, and signals; and asset sectors, such as

passenger and freight traffic are separately managed and maintained. Safety, reliability and efficiency, however depend on integrated decision-making – and this is becoming more difficult with the current tendency towards the creation of separate ‘business units’. An area for investigation?

Linking appropriate management and decision support systems. Existing databases and computer models are generally structured to support asset classes, not asset collections, and cannot ‘communicate’ effectively with one another. Integration challenges are also organisational challenges – how we organise for improved asset management is currently absorbing the attentions of many agencies. This is an extremely fertile area for dissemination of ideas and experience.

3. Measurement challenges

Identifying appropriate indicators. How we identify what REALLY matters for service delivery outcomes, what should be regarded as ‘intermediate’ indicators for management purposes and measured frequently (daily, weekly, monthly), and what should be regarded as ‘external reporting’ indicators to be measured yearly – and what are the crucial links between them: these are still open questions.

Establishing comparative baselines, for both internal and external comparison purposes—the science of establishing sound baselines would make a good short student project.

4. Analytic Challenges

Improving data collection and management. In the early days of asset management when so little was known that *any* data was considered better than none, a great deal of emphasis was placed on data *collection*. Today we are learning that there can be quite a gap between data and information and we are becoming more selective: collecting less, analyzing and updating more. Techniques for building in automatic cleansing and updating mechanisms are much needed.

Constructing and evaluating alternative lifecycle scenarios. Although the principles of life cycle analysis are not new, the development of methods and tools are still being developed. The task, moreover, is becoming more complex as we consider not simply the impact of maintenance on renewal costs but also its impact on operational costs and risk. A good area for case studies.

Incorporating flexibility. Events over a lifecycle are uncertain, so scenario modeling is a useful adjunct to the more quantitative life cycle modeling approaches. Asset management would be advanced by the development of libraries of scenario studies.

5. Institutional Challenges

Improving communication across the organization Organizations are now experimenting with cross functional groups or asset management co-coordinators. There is no ‘one right way’ to improve communication, but as individual task complexity grows, the communication channels become both more important – and more difficult. Scope here for discussion and debate.

Defining roles of public and private sectors. Even such a seemingly simple task as defining ‘what is core’ and must therefore be retained in-house, is proving more elusive than expected. Moreover, when private sector contractors work alongside the in-house team, the boundaries are becoming more and more blurred. Where do we go next? Time to document experiences.

6. Conceptual Challenges

Clarifying Objectives. A major challenge today, as the community takes a bigger role in determining objectives for service delivery and asset management, is to define, measure and manage 'service levels' -- defined in customer rather than provider terms.

Linking Activities to Outcomes. Many organizations define objectives but fail to relate the activities that they do to the objectives defined: this is a task that still needs doing.

7. Accounting Challenges

Accrual Accounting. In the days of cash accounting, no account was taken of asset deterioration in the books of account. Today, it is still not much better in some countries. In the USA, for example, water agencies are only required to use historic cost – and so far only for those assets acquired in the last 5 to 10 years. No accounting is required for older assets; the very assets that most need to be examined! Techniques need to be refined to enable those agencies yet to commit to current valuations to be able to do so with ease—and documentation of the benefits achieved by those who have 'gone before' would help motivate.

International Harmonisation. The rules are still being made, even as countries are being expected to apply them. This is likely to be the cause of yet more problems that will need to be overcome in the management of infrastructure assets and others in the years to come. Lots of scope here.

8. Costing Challenges

Historic Costs. Agencies that use historic cost for their infrastructure assets are unable to tell how much of the asset is being used up each year or per unit of consumption - in real, current day, terms. Without this, appropriate costing is more or less a guess. And there is still the vexed issue of 'green fields' versus 'brown fields' valuations. Mechanisms are needed to enable asset managers to get the information they need, whilst still enabling accountants to do the job that they are required to do.

Life cycle data. Even where full replacement costing is used absence of good life cycle data presents its own costing challenges and make it impossible to determine reliable annualised costings that can be used for decision-making and pricing—creation and contribution to knowledge data bases is the way of the future.

Activity Based Costing. Few agencies have good activity based costing in place to tell them how much each activity costs. Simple 'how-tos' accompanied by documented practical experiences would be valuable.

So, many challenges! (So little time) Have they all been overcome? Hardly! Clearly we have much work yet to do. And still we have not listed all of the areas in which asset management advancement is needed. I have not mentioned the environmental interface issues, just touched on the community participation issues, not mentioned at all the problems of protection of critical infrastructure or how we cope with the coming demographic changes. And there are more.

Send your challenges to me at info@amqi.com