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For Practitioners, Policy Makers and Planners in Public Infrastructure

AMQ INTERNATIONAL
STRATEGIC ASSET MANAGEMENT

Anyone for Benchmarking?

Should you benchmark?

Yes, if... Know the preconditions for successful benchmarking

Yes, but..... Recognise the signs that will tell you whether your efforts will be a waste of time.

Using just three examples of benchmarking **pp.2-5** I illustrate the principles about when (and when not) to use or engage in benchmarking. **pp. 5-6**

The Leader of the Pack

However, even at its best, benchmarking is only a 'catch-up' game. If you want to be 'as good as' the others, then benchmarking works. If, however, you want to be 'ahead of the pack', you need to set your own directions. One council that has done this brilliantly is Hamilton City Council in Ontario, Canada. Here is a council where it is asset management that determines its capital planning and implementation. Hamilton recently initiated the first Canadian National Asset Management Conference - 'for local government by local government'. See how 'accountineering' works for them, perhaps it could for you? **pp 6-8**

Consider and Enjoy! **Penny Burns**

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Benchmarking Case Study 1.

Benchmarking Asset Management in the Water Industry - Water Services Association Australia

Characteristics: ***industry and asset specific, transparent, detailed understanding, self assessment and audit check, designed for the benefit of participants***

Source: *Water Asset Management International*. 1.1 March 2005. Andrew Foley "Benchmarking Asset Management"

WSAA wanted to produce a benchmarking framework that was transparent and gave the participating utility or the regulator information as to how performance could be improved.

To do this it developed a framework of 7 functions - Fig 1 - where functions #2-6 are guided by #1 and supported by #7.

WSAA Framework

1. CorporatePolicy and Business Planning
2. Asset Capacity Planning
3. Asset Acquisitions
4. Asset Operations
5. Asset Maintenance
6. Asset Replacement/ Rehabilitation
7. Business Support Systems

Figure 1
Framework

These functions were then systematically disaggregated into a hierarchy of parts which could then be assessed, scored and aggregated to give an overall score for the function. An asset management profile can then be established for the utility. Fig 2. Ultimately, all assessment is done at the measures level; however, due to their discrete nature no comparison across organisations is meaningful below the process level. See Fig 3 for a diagram of the scoring mechanism.

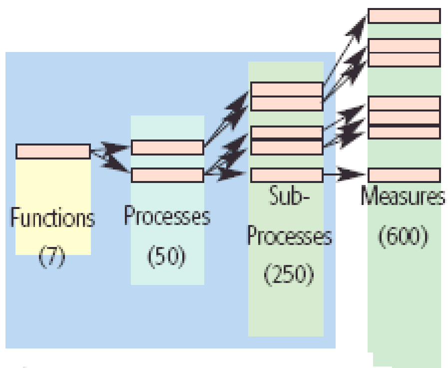


Figure 2
Hierarchy of processes and measures

The transparency and detailed disaggregation is one of the features of this benchmarking which make it so useful for participants. Another is the coverage. The framework was implemented as part of a major urban water industry subscription project. A total of 23 utilities participated in the project, 19 Australian, 2 New Zealand, 2 USA.

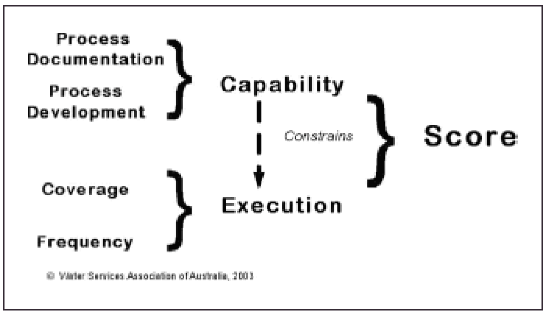


Figure 3
Diagram of the scoring framework

Then there is the thoroughness. A full day workshop was held at the start of the project to communicate the detail and use of the online framework, outline the audit verification process, agree on key dates, milestones and deliverables. Each participating utility undertook a self assessment that took from 4 to 12 weeks to complete depending on the size of the organisation. Generally the self-assessment was undertaken as part of a series of workshops in which key utility and external service provider staff related to the process or function being assessed was involved. The self assessments were then audited.

The auditing of the self assessment was undertaken by WSAA accredited auditors. Accreditation was completed over two days and provided the auditor with a detailed working knowledge of the framework's measures and scoring. The role of the audit was to validate independently the self-assessment. The auditor sought to ensure consistency of understanding of the measures and scoring to ensure the assessment accurately reflected the utilities score in asset management. The audit was premised on a sample of approximately 25% of the measures contributing to around 45% of the score.

The WSAA benchmarking thus took pains to ensure that the work was **relevant** to the participants (the framework was designed by an industry working group); that it was **understood** (workshops); **audited**; **consistent**; based on **measures** rather than opinion, and had **good coverage** (23 participants). It also understood the ***limitations of benchmarking*** - "The framework now provides the user with a roadmap as to how performance can be improved by providing direct inter-business with *appropriate industry peers*. It must be emphasized, however, that *the framework does not indicate whether improvement in any particular area is warranted*." (My emphasis)

Benchmarking Case Study 2

Benchmarking Storm Water Asset Management in Local Government and Bulk Water Authority.

Characteristics: ***Benchmarking used as information presentation device. For the benefit of Audit. Small numbers. Mixed representation. External assessment only.***

Source: Managing stormwater flooding risks in Melbourne. *Report of the Victorian Auditor General, 2005.* Section 4 "Is Drainage Asset Management Effective?"

This audit study considered the stormwater management effectiveness and the effectiveness of stormwater asset management for 6 councils and the Melbourne Bulk Water Authority. Using the International Infrastructure Management Manual for best practice criteria, the report set out the components of a best practice asset management plan and assessed actual practice against best practice, examining whether the 7 agencies had:

- clearly stated their goals and objectives; linked these to the organisation's wider goals; and ensured that they were supported by the community
- understood the levels of service they were providing and how these compared with community expectations
- predicted changes in future demands on the drainage system and made plans to manage these changes
- prepared comprehensive plans to manage assets to an agreed level of service through each stage of the asset lifecycle while minimising lifecycle costs
- understood and communicated the financial requirements of managing drainage assets

- implemented processes and support systems to ensure decisions were well founded and logical
- implemented planned actions in line with established procedures, timelines and budgets
- measured their performance and implemented a process that would ensure continuous improvement.

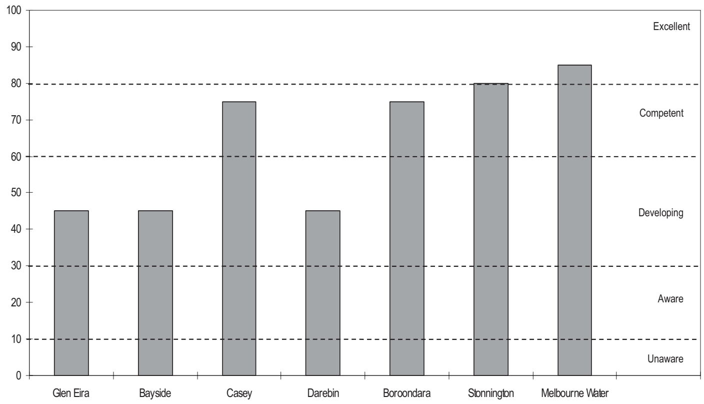
Assessment of the above was by external assessors on a 5 point scale (Unaware, Aware, Developing, Competent,Excellent). See, e.g. Fig 4D from the Audit Report opposite.

There is no further disaggregation.

The information presented was used by the Audit Office to make recommendations as to performance improvement - and this is the point at which the work becomes problematic.

Stormwater service is only one of many services that councils need to provide and it cannot be assumed that 'best practice' in *this* service should be the highest priority for each council regardless of its stage of development or position in the asset life cycle. (cf the explicit recognition in the WSSA that performance improvement would not necessarily be warranted.)

FIGURE 4D: RATING—UNDERSTANDING OF CURRENT SERVICE LEVELS AND COMMUNITY EXPECTATIONS



Source: Victorian Auditor-General's Office.

Another difficulty is that Melbourne Water is probably not an 'appropriate peer' with whom the councils can be compared. Compare this with the WSSA study where participants had reasonably common interests and abilities.

Finally, this benchmarking study was not for the benefit of the participants but for the regulator/ auditor. With only 6 council participants for comparison, performance recommendations do not have much overall support. And the BM study itself simply states that improvement is possible - but not that it is warranted, or (if warranted) how to go about it.

Benchmarking Case Study 3

Benchmarking Organisational Asset Management - Academic study

Characteristics: Wide range of industry types, broad processes, individual assessment, opinion based,

Source: *'*Benchmarking your organisation's infrastructure/industry assets management'. by RF Stapelberg, Centre for Integrated Engineering Asset Management. Paper presented to 2007 ICOMS.

Our final case study is a broad brush academic study. Like the two previous studies it starts with a framework explaining what is understood by asset management. Each of the 12 modules in the framework are then explained further in terms of major components. No information is presented in this paper as to how the survey was carried out, who took part, what questions were asked, etc. The 'results' are therefore not transparent and can neither be understood nor assessed as they stand. The figures presented would appear to be an average for each 'industry class' of self assessments based on opinion and a 5 point scale. The wide range of sectors covered suggest consistency would have been difficult, if not impossible. The report says that participants include State Treasuries, local government authority, built environment, roads, transport, water, power, defence, education, and manufacturing/mining/process - but there is no information on how many respondents were in each category or who they were. The intention of the study was said to be 'to determine the status of asset management'. But without transparency and detail it is difficult to see how this objective could be interpreted or evaluated. It is also difficult to see what value participants would have got from the efforts they put forward or what can be done with the information. Which brings us to what we can say about being involved in benchmarking:

Conclusions:

Meaningfulness lies in the detail. The more detail the more meaningful. With detail, you can see where you differ from others and why. In other words the answers make sense. Detail means taking one answer and asking why? And then asking why again for increasing layers of detail.

Benchmarking is more meaningful when confined to one industry or one process. Benchmarking over many different industries or processes must necessarily involve a great many variables that it is not possible to explore.

Benchmarking is more useful if participants are striving towards common ends. Regulated industries are a good field for benchmarking as they are likely to have reasonably common economic, safety, technical, and service aspirations - largely determined by their regulators.

Benchmarking is more useful if the data is presented unemotionally. An objective assessment of "More" or "Less" of an attribute is more valuable than some external subjective assessment of "poor" or "good". This enables an organisation to assess performance against need. It is not necessarily the case that 'more is better'.

Benchmarking is more useful the more information is available. Knowing that you need to improve in a particular area is not really helpful unless you can see how to do it - this brings us back to detail.

Benchmarking is more useful when it is designed by those who are active in the field, and thus understand the processes from a user's perspective.

When taking part in Benchmarking

think of it as a capital investment in management information - and do a thorough capital project business case!

Look at the type of outcomes projected. Are the designers clear on the outcomes and the uses for them? Are they outcomes that you can use to improve your performance?

Look at the scope of the exercise. Is it relevant to your needs? Who is going to take part? Do they have the same needs and aspirations as you? Will their involvement be relevant and useful to you?

Look at the quality of the design and the designers. Is the design relevant to you? Do the designers have thorough practitioners' understanding of the processes being benchmarked?

When designing a benchmarking exercise,

be clear what the end objective is. If the number of participants is necessarily small, be extra careful in interpretation. And always, the more detail, the better.

With Benchmarking: The More You Put In - the More You Get Out!

Benchmarking done well can help you reach industry best practice - but the best that *that* can do is put you 'in the pack'

But if you aspire to be

The Leader of the Pack

then you will need to do more, you will need to set your own directions and chart your own course. Like **Hamilton City Council** (Hamilton, Ontario, Canada) In this council strategic asset management determines every capital planning decision and action.

Case Study in Asset Management Organisation

Hamilton City Council

Hamilton, Ontario, Canada

Their Asset Management Credo

The Role of Asset Management

We Do Not Operate, Maintain or Construct Anything

We Develop and Program Capital Projects

We Co-ordinate Surface and Sub-Surface Needs

We Supply Life Cycle and Financial Analysis

We Try to Get the Most Asset for the Least Money

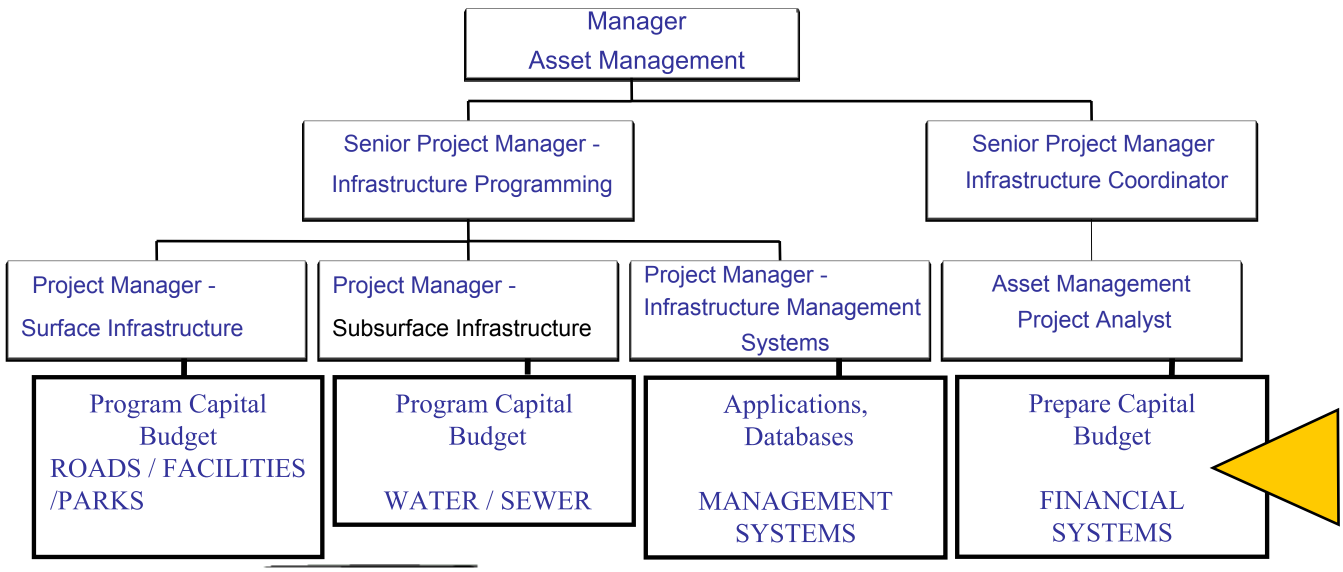
The City of Hamilton has a population of 500,000, 6200 lane kilometres, 2100 km of watermains, 2500 km of sewer mains, 700 facilities, 5520 acres of parkland and 430 outdoor facilities plus fleet.   It is a sizeable establishment.

Since setting up its asset management section more than 5 years ago, it has adhered to the premise above - we don't DO, we DECIDE! In fact their entire rationale for being is in the research, development and co-ordination of work - as distinct from the work itself.

> **"The one and only rule of asset management** - if a service is not fully funded, it is not sustainable. And if it is not sustainable, it will eventually fail or fall to an unacceptable level"

To ensure sustainability, asset management not only draws up the budget, it is headed up by an accountant! He works closely with the engineers.See the organisational chart below

Asset Management Team



Programming not Projects

In Hamilton, the emphasis is on ‘programming’ not ‘projects’. Budget preparation is an element of asset management and subject to the overall policy and direction of asset management.

The State of the Infrastructure Report, which Hamilton issues each year, sets out the roadmap. (You will find it on their website, http://www.myhamilton.ca/NR/rdonlyres/9513BF04-C983-4F5F-AE33-221B38534FEE/0/SOTI_REPORT_II.pdf)

You will note the following features:

It is

A **revenue plan**
An **order of magnitude**
Long-term and strategic
Service based
Life-cycle based

It is not:

A budget
Fixed time/**short-term**
Tactical/operational
Project specific

And what is
“ACCOUNTINEERING”?

Helping engineers ***think*** like MBAs

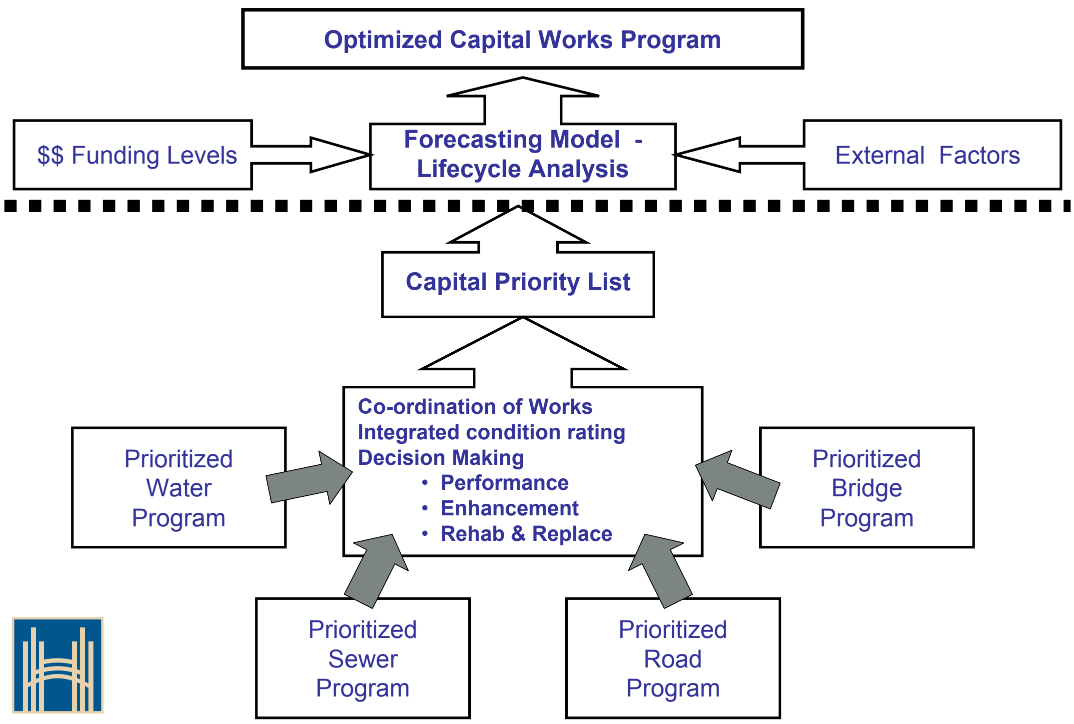
and ***act*** like engineers

AND

Helping accountants ***think*** like P.Eng.s

and ***act*** like accountants

the ideal of multi-disciplinary co-operation!



Hamilton
Public Works