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Provenance

In the art world, knowing the provenance, or the ownership history, of a piece of art, is critical to establishing its veracity and value. The same is true of any 'fact' that you wish to use to support an argument in asset management. Nothing can bring an area of research or application into greater disrepute than a cavalier disregard for the truth.

Some so-called 'facts' are little more than wish-fulfilment. Take, for example, the dictum that 'maintenance shall be 2% of value'. It is commonly used, but who knows its pedigree? (c.f. SAM Issue 39, June 30, 2000, "If 2% is the answer, what's the question?"). In this issue, see "How do facts become facts?"

In this issue

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How do facts become facts?

Repetition

He had written a paper about disability access and asked me for review and comment. As I read it, I noted his use of substantial and very favourable benefit-cost figures. Knowing how difficult it is even to conceptualise some of the benefits, let alone measure them, and finding no explanation of the figures in his paper I decided to ask him.

"Oh, never mind that", he said, "what do you think of the paper overall?"

I explained that I could not venture an opinion until I understood the data and so, after a fair amount of applied pressure on my part, he eventually said,

"*Look, I made them up*! But it doesn't matter because I am giving this paper at an international conference and someone will quote me, and then someone will quote that person – and pretty soon, *it will be fact*!"

Mis-representation

Most of the time, mis-representation is not as blatant as this.

It can be simply a matter of not paying enough attention to labelling the axis. Often we slap up a graph without identifying the axis and expect the audience to fill in the gaps from the context of the conversation. This is a lazy habit that is responsible for many subsequent misunderstandings. What we think is a trend line showing full life cycle costs, for example, can simply be a trend of operating costs. With very different implications!

Mis-understanding

Sometimes it is a matter of "do you hear what I hear?" We hear the word 'depreciation charges' for example and assume that the speaker means what we understand by the term. But does he/she? Different organisations, and especially different countries, tend to use these terms differently. Depreciation on what basis? Is it replacement cost or historic cost, or something else? Some agencies only depreciate the part of the total cost that they funded if the asset was co-funded. In Australia, this would not tend to be the case, since we are encouraged to depreciate on a current cost basis, but it is in use overseas, so quoting depreciation rates is fraught with problems.

Any overseas 'fact' is problematical for a number of reasons. (1) We may not understand what the policy is; and (2) even if we understand the policy we may not appreciate how local practice may diverge from policy.

Avoiding Being Misled & Avoiding Misleading

Ensure that you always cite your sources.

This is generally not a problem when writing published papers because there are standard protocols to follow but it pays to follow these protocols even when writing internal memos—in fact, especially when writing internal memos. Not everyone who reads your memo will have the same depth of background in the subject that you do, and they can bring to their reading a very different understanding.

Another reason for citing sources is that someone reading your memo in a year's time may not have been in the organisation when the references you cite would have been common knowledge to most.

Check your source references "one deep"

If the matter is significant , we should make a practice of always checking 'one deep' - that is, if the source that you are using cites the information as having come from somewhere else, then it pays to check that reference. They may have misquoted or mis-understood. This practice can avoid a lot of subsequent misunderstandings, but it can also yield greater understanding by seeing the way the information was originally used.

Where there is no published source, check with the author

A lot of the time, the information you may wish to use may not come from a published source; it may come from a conference paper, correspondence, informal conversation, or a reference from a colleague. The rule here should be, wherever possible, to check the 'facts' that you wish to use with the original author.

Consistent application of this rule can save a lot of red faces! A client of mine once used some work that I had done in a completely different context without clarifying the use with me first, only to be greatly embarrassed when I explained why it was not possible to extent the analysis in the direction he had chosen—especially as he had already forwarded his analysis to the Minister! So, it pays to check.

If the author has private reservations about the figures he has used, he is likely to tell you and you can take these reservations into account in your work. If he/she goes on the defensive when questioned, this too may be an indication that the figures are less robust than you might have interpreted. But most of the time the response you will get will be one of interest and delight that someone has taken the trouble to read and think about the article—and you will have a friend for life!

Always put your name and email address on what you write

Be available to those who follow you. Add your email address to every paper you write, both for internal and external use. (Internal misunderstandings are at least as great as external because generally you are more careful and circumspect when writing for external readers; for internal readers you tend to assume that 'they know'. Sometimes they don't!)

Does Asset Management Pay?

Part 1: The concepts

The arguments may become clearer, if we ask, instead "Does IT pay"?

> One response would be to say: "Well, what particular aspect do you have in mind? IT covers an extremely wide field".
>
> But another response would be to say: "How would we survive without it?"

If we take the first approach, we see IT as a collection of various applications that we can selectively apply, each largely independent of the other. This independence is necessary if we are going to estimate the costs and benefits of the individual elements.

If we take the second approach, we see IT as 'a different way of doing business'. Again we may see that IT is a collection of various applications but now we are focussing on the *inter-relationships between them.*

Back in the early 1970s we tended to take the first approach, but agencies are now recognising the dangers in this ad hoc approach that takes no account of the inter-dependencies and are developing corporate IT Strategies.

The same approaches can be taken to the question "Does Asset Management pay?" - do we see (and thus try to evaluate separately) the benefits and costs of

- Asset information systems
- Improved asset condition assessment and modelling
- Improved understanding of service delivery requirements and customer needs
- Better asset communication, internally and externally,
- Etc.

Or do we see that each of these is of very limited value without the others? If we do, then the benefit-cost assessment approach does not have much to offer.

If we recognise that asset management is not merely a set of tools and techniques, but an attitude, an approach, a 'way of doing business', then we need to decide whether this a 'way' that we wish to adopt.

My view is that this is a bit of 'no-brainer', as the Americans say. It translates into asking

> Would we be better off if we knew what assets we have?
> Would it help to know what condition they are in?
> And the expected rate at which they will deteriorate or become obsolete?
> Is it useful to know what the asset costs of existing and proposed services are?
> Etc.

It is not a difficult task for those of us who have already moved, at least part of the way to introducing asset management, to answer 'yes' to all of these.

Once we have given this answer, the question changes. It is no longer "Does Asset Management Pay" but rather

"Given that we are going to move to better asset management for long term business survival:

- What do we need to do? (our changed asset management practices)
- What do we need to know? And
- How do we get 'there' from here?

Consider the different ways that we would go about assessing that perennial question "What asset information system should I get?"

If we take the view that an AIS is a 'stand alone' decision, we are likely to

- Ask other people what systems they have
- Look at the specifications of different systems available
- Construct a list of required and desired information
- See which system provides the best fit
- Compare the price against a pre-determined budget

However, if we take the view that an AIS is part of the way in which we are going to collect and handle asset knowledge in our agency, then we are likely to

- Focus on what customer services we need to or would like to be able to supply
- What information we need about our assets and their performance to ensure that we are providing an efficient service
- What information we need about service delivery requirements to ensure we are providing an effective service
- Look at our organisational structure and how information is used and will be used and who it will be used by
- Spend as much, if not more time, developing the data than in selecting the system to hold the data
- Probably opt for a knowledge management solution
- Communicate our findings throughout the process to the organization as a whole and to the Board, so that
- When a decision on cost needs to be made, it will be on the basis of value to be received, rather than a pre-determined budget.

When IT was first introduced in the 1970s, we saw it as 'stand alone' IT applications. We now think in terms of an IT strategy.

When AM was first introduced in the 1980s, we also saw it as 'stand alone' applications – asset registers, asset valuations, asset management plans.

Now we are thinking in terms of a corporate "Asset Management Strategy"

Does Asset Management Pay?

Part 2: Measurement

Example 1: A council had spent almost $2 m on collecting asset information. It had invested in an expensive AIS and set up a special unit to oversee the data collection and input. The unit was called "The Asset Management Unit". The unit produced regular routine reports on asset holdings, value and condition that they distributed to all service directors – who found little value in them and tossed them in the bin! After several years of this, councillors pulled the plug on the unit and declared, "We've tried asset management, and it didn't work"

Were they right?

Example 2: An organization called for a VM study to be carried out on a new project. The study identified areas where savings could be made. When the savings were tallied they amounted to $2 m. The cost of the VM exercise was $100,000. (After the study was completed, most of the costs 'trimmed' from the original budget were quietly put back in again by the project protagonists.) The organization claimed that the VM study had a benefit: cost ratio of 20:!.

Was it right?

Example 1.
In example one, the council implicitly defined asset management as 'the collection and dissemination of asset data'. The unit did not *analyse the data* nor did it speak to the directors about *what information they needed* to make better decisions

- in other words, it did not turn the data into useful 'decision-worthy' information.

Useful information is a necessary part of asset management – but only a part! Without action, the information is useless. Full asset management requires good information, good processes, good understanding and decision-making and good action. In other words, asset management is a hamburger 'with the lot'!

So, the answer is NO. The council did not try asset management and it failed. They *had failed to try asset management!*

Example 2.
Value management studies are part of good asset management process. They enable a better fit between the desired service and the asset supplied. Good value management studies do not only remove items that are not adding to service delivery, thereby making savings, but they make changes that directly increase service, i.e. value-adding changes. But can we assess the B:C of the study at 20:1?

And the answer is: maybe! If the benefits and savings identified by the study can be implemented *at no further cost*, then yes. But if other costs (design modifications, perhaps) need to be made to achieve the savings or benefits then these need to be taken into account. VM is only part of the total AM story.

(However, the fact that many of the changes were subsequently revoked is a loss to be ascribed to poor management – but it does not diminish the value of the VM study itself)

Does Asset Management Pay?

Part 2 (cont): Measurement

Example 3: An organization applied itself to improved asset management practices, information and understanding over a period of years but its maintenance and asset management renewal costs continued to increase.

Had asset management failed?

The issue at stake here is not whether costs are higher than they were at some time past – but rather 'are they higher than they would have been in the absence of asset management'? Consider

(1) The measurement of the hypothetical 'otherwise' situation

If an organization has let its assets run down, then it will take an increase in maintenance and renewal to re-establish a given service quality. Good asset management can minimise the level of increased costs but, depending how late in the picture it is adopted, it may not be able to avoid them altogether.

Can the hypothetical 'otherwise' situation be modelled? Often, it can. With good information on the assets and by extrapolating the continuation of past poor asset management practice, a reasonable comparison may be possible. We can then compare today's actual costs with the costs of not adopting asset management. To do this 'otherwise' modelling requires quite a deal of information, for example:

- Is the business growing or contracting?
- How good was their capital expenditure validation or justification process before introducing AM?
- What did they know (pre-AM) about the real state of their assets?
- What is the value, condition and recent performance of the entire asset portfolio?
- How efficient were they (pre-AM)?
- How appropriate were past maintenance practices?

(2) Disentangling changed service conditions and the impacts of other management changes that have occurred during the same time period.

This is often more difficult. For example, Australian organisations have greatly benefited from improved asset management attitudes and practices and better information over the past ten years or so, but many other things have been happening at the same time. Organisations have experienced the impact of the National Competition Policy; business rationalisation strategies and policies including the economic impacts of liabilities and responsibilities transferred between organizations; changed attitudes and policies with respect to contracting out; greater private sector involvement in public sector service provision and the pressures that this has induced on in-house service delivery; changed (often more stringent) regulatory frameworks; and changed taxing and dividend/return on asset policies, to mention a few.

How much of the improvement in organisational health has been because of asset management and how much because of the other changes? These things are essentially unknowable, and made more so by the unpredictable interactions between the different policy setting changes.

Success Stories

(In this "Year of the Built Environment", the Virtual Asset Management Community at www.amqi.com will be mounting an exhibition of success stories in "Sustaining the Built Environment" - please send yours for the exhibition. To: amqi@amqi.com)

✓**1.** One public utility needed to replace ageing bridges. The plan was to do what had always been done: build new concrete spans. Senior managers, however, delved deeper. They determined it would be **cheaper to build steel-girder spans**, which still would meet safety and environmental requirements and be more appropriate for the forest environment. Over 11 years, the utility will replace 19 bridges with steel spans for a total of $3 million. Concrete bridges would have cost $11 million.

✓**2.** In an innovative approach to capital project management, Managers also ordered a long-range plan for the road system to see if any roads could be closed, which might **eliminate the need to replace some of the bridges.** Five are now under consideration.

✓**3.** On an examination of **the trends of rate increases**, one agency noticed that they had been increasing about 6 percent a year, and the pattern was expected to continue another 10 years. The Director foresaw a ratepayer rebellion if the department didn't change its ways. "It was time to step back and say, 'How can we make decisions differently?'" It was the incentive the agency needed to rethink and when they started to do so, many opportunities to reduce costs and improve outcomes were found.

✓**4.** "We thought that there was little we could do about our costs because we had already outsourced just about everything. Outside firms do 90 percent of our capital improvements. But we found that we were able to make a **10 percent cut** in that budget. It created "some angst" among private contractors, but we worked through that."

✓**5.** "We have formed Asset Management Committee, which our Capital Director heads. He and other senior managers **meet twice a month to review all capital projects over $250,000.** Committee members clearly define a problem and outline project objectives. **They examine alternatives, calculate life cycle costs, and weigh "risk costs,"** such as what would happen if a pipeline replacement is delayed and the pipeline bursts.

✓**6.** "Most of the focus is on individual projects, but we found that it was also worthwhile to **look at programs**, such as our customer call centre. We found that on weekdays, between 2,000 and 3,000 calls are logged. On Saturdays, when the utility paid employees overtime, the average was between 200 and 300 inquiries, at a cost of $8 to $9 a call. We decided to close the centre on weekends.

✓**7.** "We developed an Asset Strategic Plan and Maintenance Strategic Plan and now we are able to **make informed decisions** on which facilities to hold, upgrade, maintain or dispose of."

✓**8.** "Our facility plan has led to revised maintenance schedules and it has **influenced Treasury** to grant us the funds to bring forward some major tasks that have greatly reduced the number of complaints we have received."

✓**9.** "Our asset strategic plan and risk management guidelines have informed our negotiations with Treasury on funding and has led to **a major upgrade program to remove liabilities**."