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Trust Me, I'm an
Asset Manager

What is the crucial test of success for public, not-for-profit, government entities?

In other words, where you have no bottom line, what's the 'bottom line'?

Ruth Wallsgrove, General Manager, Asset Management Strategy, NSW Railcorps, says

"Recently, colleagues and I were looking at the ultimate test for success of a public body. Conventionally, it's easy for a commercial organisation: financial return to shareholders, via profit, is the main game. But if you are not in it for profit, what's the equivalent?"

The answer, and it may seem surprising, is credibility!

Ruth explains why this is the name of the game for not-for-profits, and provides an example and a step-by-step guide to success in a billion dollar program so that you, too, can communicate with credibility.

Consider and Enjoy!

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Trust me, I'm an asset manager

Ruth Wallsgrove

Key Ideas

Value & Sustainability

The 'bottom line' for commercial organisations is share price

—a measure of the worth of the organisation to its owners and also a measure of its ability to attract funds and remain viable.

The 'bottom line' for non-commercial government organisations is trust and credibility

—a measure of the value to government of having *this organisation* provide services rather than some other, and thus a measure of its future viability

What is the crucial test of success for public, not-for-profit, government entities?

In other words, where you have no bottom line, what's the 'bottom line'?

In 3 parts in this issue, Ruth suggests an answer, provides an example of success in a billion dollar renewals project, shows you how you can do the same, and argues that transparency leads to trust

Recently, colleagues and I were looking at the ultimate test for success of a public body. Conventionally, it's easy for a commercial organisation: financial return to shareholders, via profit, is the main game. But if you are not in it for profit, what's the equivalent?

My boss was lucky enough to discuss this last year with gurus at Harvard Business School, including the inventors of the balanced scorecard. After talking with them, he proposed the equivalent is not the particular objective of the organisation ('provide water', 'deliver a good education service'), but rather 'credibility'. What we have to give to our stakeholders, above all, is confidence that we are the best organisation at delivering what is needed.

The answer is: CREDIBILITY!

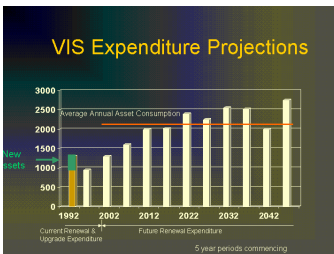
The stakeholders have to believe there is no-one better available for the most critical capabilities, or else they ought to get the alternative (eg a private organisation) to do it. And what is the most critical capability for an asset organisation? We went one stage further, as asset managers, and said that the litmus test for an asset-based organisation is credibility that we are the best available organisation at making asset decisions, including on delivery strategy.

Government has to believe that they get good value for money, the right balance of money input and service output. One day they may have an objective way to assess that best split of dollars across different agencies; until they do, trust is what they have to deal in.

Part 1: GENERATING CREDIBILITY: An Example



When they understand and agree the process, they will believe the results



Key Ideas

Accenture Study
- good asset decisions
correlate most highly with
rate of return

In the public sector, we don't
just have to be good decision
making—we have to be
trusted to have good
decision making
processes.

What is not understood
is not credible.

There is some interesting evidence that having good decision methods – decision support tools and information - is the factor that correlates most highly with return to shareholders in a private utility.

This was the conclusion from a comparison by Accenture of return to shareholders against capabilities in a range of European utilities done for National Grid in 2004. They only had to be competent at delivery, but had to be world class at asset decisions, to deliver the best return.

In the case of private companies, it does not matter so much if the shareholders understand the decision making methods, since they get the evidence they need through dividends and share prices. In the public sector, we don't just have to have good decision making. We have to be trusted to have good decision making processes.

And I believe this means transparency in decisions. That is, how we make decisions is open and accessible to stakeholders. I am not just making a point about open government, although that is important too. If the stakeholders, particularly in the government funding bodies, don't trust the method, they won't trust the answers it gives – and they won't trust us.

So the answer is: Trust and Transparency

Here's a neat example. Back in the UK, the company I then worked for was asked to help out a state owned utility which had poor asset data, no solid basis of asset management, a fairly bad relationship with its political owners and the need to justify a lot of money, in the order of billions of dollars, to upgrade the assets to bring them in line with European and British laws.

Oh yes, and they had just a few months to make their case before someone else made the decision for them. They had to get in a decision methodology to work out just how much money was needed against what level of risk, and they had to get it working fast.

But they also realised that above all they had to get a method they could sell to the government: the government had to believe the answer.

The organisation hedged its bets and used three alternative approaches, for different aspects of different assets.

The least well understood area, renewals and refurbishments for the asset classes with least data, could neither use any approach they had used before nor utilise anything very data-hungry.

A Quantitative Risk-to-Service Method

The approach we proposed was a quantitative risk to service method almost identical (by co-incidence) with the approach Hunter Water has developed. If you have been lucky enough to hear Peter Buckland on the latter's approach (*Ed: or you have read the last issue of SAM!*), you'll already understand the basic idea. It's a good approach technically – well, I am biased enough to think it is the best.

You can take a whole organisation through it very quickly, even from scratch and with poor data, because it fully exploits local and technical asset people's knowledge. But it's not the cleverness of the algorithms, the speed or the robustness that really makes it stand out. It's that it is above all a structured process that people go through, not a piece of software or a set of calculations. At every step of the way, you can explain what is being done, and why.

The Key is Whether Stakeholders believe they Understand the method

Actually, the test is not whether you can describe a method, but rather whether the stakeholders (and the internal people involved) believe they understand it.

They do not have to be able to do it themselves, or understand all the technicalities, to believe it.

Sadly, people can be bamboozled by a 'black box' approach because it has big names (eg a couple of professors or a large management consultancy) behind it, but it's a much poorer approach to confidence. Not everyone is always impressed by professors or large consultancies, and if the answers don't match expectations there's trouble.

If, on the other hand, you can explain the approach, take the stakeholders through it so they feel they get every step and follow how you get from one end (the data) to the other (the conclusions), they will be so much more inclined to believe the answers.. **and to trust you.**

You will gain credibility if you divorce the answers from the process

–and first ensure that your audience understands and believes the process.

This is what we did, with politicians and civil servants as well as all the internal staff whose input was needed for the process: we talked them through the process, well before there was any recommendation. **'If we follow this process, will you believe the answers?'**

So one part of the asset base went through the process, and a multi million dollar value program was developed in three months. It also picked up other assets as it went along – any where it turned out the data wouldn't fit the alternative more data hungry black box methods.

The government believed the answer, and the program that used this process was the only one of the three that was accepted; the other two were severely cut back.

Part 2: The PROCESS

Key Ideas

Quantify Risk

Start broad, refine later

Talk your Stakeholders through the process

So what was the process that was so successful? Here is...

A step by step guide to a billion dollar program

The approach we used is very similar to that described by Peter Buckland in issue 204. I can't promise you'll be confident to do it yourself just on the basis on what I write here. What I want to do is rather show how we went about communicating it to stakeholders, so that they trusted it. There is nothing exotic in this method – that's the point.

Note to the wary before we start: risk is the currency you want to use for asset decisions. Many people still fear that you can't put a dollar value on risk, but in fact it's easy... if you don't try to get those ten decimal places straight away. What it needs is a clear definition of just what a risk is to. I suggest you think about risks to service – that is, anything that affects a direct measure of service to customers; and then ask what it costs you when customers are affected.

In NSW we have interesting discussions about cost to the community, but in the UK it's now generally accepted in infrastructure that it is much better to look at the cost to your organisation. It's clearer and the data is easier to get at, and above all if it really costs the community it'll come back to cost you anyway.

Do not lose heart: the alternative to risk-cost estimates are qualitative scales that are bound to be wrong in obvious ways (eg 'very high' is unlikely only to be 5 times worse than 'very low' on a five point risk scale), and this quantitative approach at least starts to get the order of magnitude as well as the relativities right.

Step zero: Talk your stakeholders through the approach

Step one: Quantifying risks

Starting from levels of service, a central team develops the costs to the organisation of not meeting those measures, in other words the cost of service failures. You ask, how can the assets fail the stakeholders? This gives you the categories of consequences: for water, these would include interruptions to supply, inadequate pressure, poor quality, pollution from non-

compliant waste water treatment, and not forgetting excessive cost.

For each category, you then look at the likely costs, to develop your scale of severity of consequence.

For example, an interruption to supply may cost you directly through overtime for emergency repairs, or in compensation to customers (the UK has an agreed payment to any customer left without water without notice for more than 12 hours). It may cost you in suboptimal spending on the asset (if you had replaced it earlier the whole life cost would have been less), in management activities, in poor publicity, even in legal costs. In this example, you may assume that 100 customers without water for 12 hours costs you 100 times one customer without water, or you may have reason to scale it otherwise.

Dollar Quantification



Forget about the bull's eye—just get on the board!

Once you have your first list of costs, you can refine it by tracking actual costs in future.

Step one gives you the impact or consequences of asset problems. This should be checked with internal managers.

Step two: Facilitated workshops to specify root causes, probabilities and solution options

A facilitator who knows what they are doing, and armed with spreadsheets for capturing the outcomes, takes a very small group of local and central asset experts through a normal root cause analysis: what can happen to cause a service failure. They also get the experts to look at probabilities – how likely is such a root cause to happen to this particular asset and bring about the service failure?

It is true that people close to the assets are fairly likely to overemphasise probabilities, not least because they really don't want the failures to occur – and of course they know money for solutions is riding on their answers. They should be gently challenged to produce data to support their probability, starting (but not ending) with how many times it has actually happened in the past.

We did this in two different ways depending on the criticality of the asset.

Firstly, after agreeing the top 200 priority assets in each class – the largest, most complex, most problematic – these

small expert panels carried out the root cause and probability analysis for each of these individual priority assets.

Secondly, a central panel looked at root cause and probability for a whole type of asset, and then a more local panel assigned probabilities to the rest of the individual assets. The 80:20 rule is an asset manager's best friend.

These workshops also looked at solutions, and estimated how much risk any given solution would remove, either by lessening the impact or lowering the probability, or both. Some solutions obviously lessen more than one risk. The dollar value of the risk reduced and the residual risk is naturally the impact in dollars multiplied by the probability.

Step three: Off-line costing

All the solutions were then costed by an established costing team, using fairly well established unit rates & scale up factors.

Step four: Ranking by biggest bang for the buck

For every solution option for every asset, the cost is divided by the risk reduction. The best solutions remove the most risk for the least cost.

When you add up the costs of the best solutions and plot residual risk against cost, you get an uncannily smooth curve which tells you, and your stakeholders, how much risk the organisation carries against what expenditure. They decide how much risk they are prepared to carry against what spending they are prepared to invest.

Step five: Refine the data later

If you bought a black box technique, what it would probably give you is essentially some way to assign likelihood of failure to an asset of a particular age, condition and past performance by using a standard model for that kind of asset. In fact we utilised a standard technique - Weibel curves - to estimate future risk. These are all good things to use, but someone still has to decide both the consequence of failure, the range of possible solutions & their costs – and of course someone had to decide on that model of likelihood of failure, too, and the relationship between the likelihood of the asset failing and its actual impact on service. Nothing gets away from the fact that someone decides all of this, on the basis of imperfect data and knowledge, and if it isn't you – why are you doing the job instead of them?

Part 3: TRANSPARENCY AND TRUST



Transparency led to confidence, internal as well as external. The organisation could get on with this program, while continuing to have to argue about everything else.

Internal confidence does matter too, because the organisation itself, including its technical planners and local asset managers, has to believe the answer. It's all too often that some part of the internal asset functions disputes the resulting program, usually believing it's too small or focused wrongly, disputing even to the point of effectively sabotaging it in practice. I also think it makes it so much faster to come up with the program in the first place, if people accept the approach.

But above all, if you want to get the funding and get on with the work, the government stakeholders have to believe you.

Has everyone around now got it? Unfortunately, there are still people in that sector who think they want something that uses much more data and a fancy piece of software, because that will make it more 'accurate'. I think they will continue to be proved wrong, not least because no matter how much we spend, most of the data will never be good enough to make a 10 decimal place difference in the decisions.

It's a fundamental misunderstanding to think that 'data' delivers better answers to complex questions than expert knowledge, when that knowledge is exploited through a structured approach. It's a late 20th century ideology, in fact, that has led many organisations to spend money

on essentially pretty dumb IT instead of developing their asset people and processes. But I am glad to say that others around the world are coming to the same conclusion

One implication, if you have come this far with me, is that a critical test for any decision methodology is how well it can be explained to people. I don't mean 'how to justify it to a tabloid journalist', and in the first instance I am not talking about explaining it to lay people in a community, whose interest in decision methodologies may not initially be very large. Explanation in a community is another topic we should keep talking about.

But the funders will be interested in the details of the process of making decisions and they want to believe they understand it, as do internal asset staff.

Any method that makes it easier for them to see into the decisions is a good thing; any approach that makes it harder is not. This is not a plea for less sophisticated techniques, nor an absence of complex algorithms. We need sophistication and those algorithms. But experience has taught me that people will trust the algorithms (even ones they don't understand and couldn't compute themselves) if the framework is sufficiently clear; if you can take them through the steps, and they get the point at each step.

This rules against any complex third party decision support tool that *you* don't fully understand – no matter how clever the professors or how big the firm flogging it is.

It's all about credibility, and that, I believe, means transparent process. In fact, it means above all process. It's how the actual decisions makers come up with the decisions, not the name of the software tool you bought or the guy who originally came up with the technique. 'Technique' is not what you have to worry about most: there's plenty of it around, and besides, all the techies are really pushing the same ones. Think about all the steps, and above all worry about it as an end to end process, where every step does make sense and can be justified and, yes, is as good as it can be.

[Trust me on this.](#)