

## Future Asset Management Labour Markets

Are you experiencing difficulties recruiting the asset management resources that you need? Universities are reporting falls in the number of students choosing to do engineering and science. The construction industry is concerned at the reluctance of workers to take up work that is seen as 'dirty and dangerous' when other more attractive options are available.

At the same time as population ageing and population decline will be impacting the available labour market – our need for skilled maintenance personnel able to cope with the greater demands on assets will increase. This is Challenge Number One. Challenge Number Two is that the skills that we will be requiring of asset managers in the near future are changing. Both problems can be dealt with – but first we have to recognize and accept them.

As an individual asset manager you can do little about the total market for labour resources – but there is a lot you can do to attract, retain and improve the effectiveness of your existing resources. In this issue, I look at the consequences for labour markets of the 'big ideas' discussed in the last issue – and at some of the innovative approaches that asset managers are already adopting.

Adopting "Beyond Budgeting" may well be one of those changes you can make to get greater effectiveness from your asset management staff.

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## Future Asset Management Labour Markets

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In the last issue, we saw how society pressures would make it increasingly difficult to establish new transmission and distribution lines, new power plants, etc. and requirements on agencies to 'clean up after themselves' would make the abandonment of existing assets more expensive. The consequence of those pressures is that there will be pressure to

- Utilise existing assets more intensively, and
- Extend asset life

### Increasing need for skilled maintenance

*Older assets more  
Intensively used put  
greater demands on  
Maintenance skills*

Maintaining increasingly older, increasingly more intensively used, assets is not a task for the amateur. The demands on maintenance personnel are changing. If we are not going to make our asset management performance gains through acquiring new assets, or disposing of older, hard to maintain, assets, then the only option left is to do better operations and maintenance. New technology will help but a lot of the gains are going to depend on how well the personnel are able to respond. A couple of examples will make the point.

#### *Example: Configuration Management*

*The higher the  
utilisation the greater  
the need for system  
reliability*

Claude Piccannin, Water Services Association Australia, argues that the next big move in reducing risk will be in *Configuration Management*. He explains it this way: A team goes out to do a job, shuts off three valves, re-opens two once the task is done but gets called away to another emergency and leaves the third valve still shut. The paperwork is not done till the end of the week, by which time, the still closed valve has been forgotten. Later on, they are called to a job where the shut off is thought to affect only 4,000 – but because of the forgotten closed valve, it actually affects 20,000 and there are major problems with the Regulator. Configuration management is about getting this fine detail right *so what we think we know about the system is reliable*.

*System reliability  
requires personnel  
reliability!*

How do you overcome these people risks? Particularly when they are exacerbated by the chance that English is not the first language of any of the crew? Well, technology may help – icons on handheld recording devices can overcome the language barrier AND do the recording straight away so it is not left to the end of the week when it might be forgotten. But quality systems are also required. WSAA reports that they could get not one person in the water industry to stand up and say that they had this problem covered and the association had to go out to the electricity industry for exemplars.

Question: How good are your quality systems?

### ***Example: Need for Field Worker Judgment***

Matthew Giesmann, Asset Manager of City West Water in Melbourne, is also focussing on training and improvement in field personnel. He argues that field workers used to be given a straightforward program such as 'replace x kilometre of asbestos cement pipe'. They were not required to consider what impact that replacement would have on system reliability; it was simply not their task. They were told what to do and they did it.

***Outcome focus requires more Judgment on the part of workers***

We can't do this today, argues Matthew, because we are now focussed on achieving system reliability outcomes. Each task, and the way that it is tackled, has to be considered in the light of meeting corporate KPIs, such as keeping below the maximum number of service interruptions to any individual customer as well as minimising service interruptions overall (and many other KPIs as well.)

***And different Information Requirements***

No matter how good asset information is, there will always be more information that comes to light when you get to the job. This is particularly true for buried assets, but it is also true of other, more easily accessed assets too. Practically, as well as cost effectively, we cannot know everything that there is to be known about the asset from some head office computer.

*(Note that at one time we thought we could which led to many resources being wasted on setting up unworkable computer systems and huge unwieldy databases.)*

***If field workers don't understand corporate requirements they can't do their job.!***

To achieve required performance, field workers have to be able to assess the situation that they find in the light of corporate requirements. If they don't understand corporate requirements they can't do their job.

Matthew Giesmann is addressing this issue by conducting workshops relating corporate KPIs to the work that his field maintenance crew are doing – and is finding high levels of enthusiasm on the part of the crew. What he is effectively doing is connecting the entire agency from top to bottom through the corporate KPIs.

***Maintenance personnel are not mindless cogs, robotic people with spanners.***

Both Claude and Matthew have recognised, and are addressing, the fact that we are now more reliant on the skills and abilities of our people. No longer are they mere mindless cogs; robotic people with spanners!

We have all experienced *the construction stage* where the focus was on building more and more (which peaked in the late 1960s in Australia and probably in Europe also) and *the information gathering stage*, where the focus was on gathering more and more data.

We are now in the *'Third Age'*, where the focus will be on *assessing and analysing the data in the light of changing circumstances*. This is hard to automate. We are going to have to rely on our people – and that means training them to understand the corporate objectives.

## The Shape of Workforces of the Future

Perhaps it is time to rethink our attitude to our workforce?

*Does maintenance have to be seen as 'dirty, dangerous, and low class'?*

Traditionally jobs in construction and in infrastructure more generally have been seen as dirty and dangerous – and not suitable for women.

But can we afford to discard one half of a declining workforce? Maybe we don't have to! .

*Attracting women and the older worker*

- (1) Global integration, the Rise of Environmentalism, Loss of Trust in Professionals and consequent greater community involvement in decision-making are going to require different skills of the Asset Manager, in particular skills in negotiation and communication. In these skills, women – and older men, for that matter – may well have advantages. In this way we can enlarge the future pool of employees.

*Upskilling*

- (2) Upgrading the role of the field worker by linking his work to corporate KPIs and recognizing the value of his judgment, makes each field worker an integral part of management. Such workers are worth more and the jobs may therefore become more attractive.

*Reducing the need*

- (3) We may not have the relevant data for life cycle costing, but 'life cycle thinking' is within range of all. Choosing the higher construction cost – lower future maintenance option for new construction could be seen as a wise insurance move, ensuring continuity and reliability of supply.

*Changing the task*

- (4) Designing for modular maintenance, where faulty parts can be removed, replaced with a functioning module with the maintenance on the faulty one carried out in clean and safe maintenance repair workshops could open up the market to women and to older workers.

These are just some of the options that we need to start planning and adopting now. Importantly, we need to change the labour market's perception of maintenance as 'low grade, dirty, dangerous, and not well paid.'

*Implications for Outsourcing?*

### Outsourced Maintenance Contracts

How do you structure your outsourcing maintenance contracts to create an incentive for the contractor to maximise YOUR corporate KPIs?

We will look at this in a future issue of SAM.

# Beyond Budgeting in Sydney Water's Asset Management Division

An Interview with Aubrey Joachim, Financial Director

***Beyond Budgeting—  
the answer to more  
than one challenge***

**Editor:** Because of the highly integrated nature of the work that we do nowadays, experience shows that a really good solution doesn't solve just one problem; it solves several!

Beyond Budgeting is just such a 'good solution'

Good engineers include contingency amounts in their budget estimates. The amounts will vary according to the uncertainty involved and could be as low as 10-20% or as high as 50-70% (or more). Now the nature of a contingency is that is an amount that MAY be needed and maybe not. Suppose the contingency amount is 50% and the probability of it not being needed is 40%. This means that 20% of the budgeted amount is excess – money that could have been spent elsewhere but is tied up where it is not needed.

The use of contingencies is a major reason why departments underspend.

Accountants know this and try to 'correct' by allocating engineers less funds than are requested. *(engineers then ask for more, accountants raise the discounting factor – a vicious circle that generates bad feeling all round.)*

Engineers also know that money not spent will reduce their likelihood of their budget requests being met in future so if the money is not needed – *it will be spent anyway!*

Sydney Water's *Beyond Budgeting* Approach deals with this problem beautifully.

***Aubrey Joachim, Sydney Water:***

***We needed to reduce  
Our budget by over  
5%  
- without risk to our  
assets!***

We needed to reduce our overall budget from \$600m to \$565m. The task was to do this safely without putting the assets at risk. I tried the normal route of asking each of my section leaders to suggest areas where cuts could be made but this resulted in suggestions for cuts of only about \$2m. It was time to try something else.

I studied the budget lines to see what items were mandatory given the way that Sydney Water operated at the time (we have since learnt to pare these back, too) and what was essentially discretionary. Then I asked each of my business managers how much flexibility they had built into their budgets. What is it, 50%,

40% - I was like an auctioneer! We settled on 30%. 30% of the discretionary items accounted for about \$100m.

I figured if I could influence the managers not to spend \$35m of this amount, we would make the corporate savings requirement.

### The breakthrough

***I told the business managers that from now on they didn't have a budget!***

*I told the business managers that from now on they didn't have a budget!* They were to spend what they needed to spend on the mandatory items and business managers would decide on discretionary items as a group at our monthly meetings. We developed a set of criteria and weightings, based on the achievement of corporate objectives and on which we all agreed and then, as a group, we would judge the value of the proposed project in the light of these corporate objectives. We used a simple 1-5 rating. A project that we agreed *could* have an impact in nine months time might be given a weighting of one; whereas something that faced imminent collapse would score a 5.

Now that we have been doing this for four years any business manager raising an urgent project *who had not foreshadowed* the probability of this problem earlier would not be well regarded by his peers. So we are encouraging early anticipation of problems.

We rank all of our projects and when we reach the amount available we stop. But projects can move up and down the rank order according to extra information or change of circumstances and we can, and do, introduce new projects.

If a large project has not met the necessary EPA and other clearances as we approach the end of the year and we know that there is no chance of it getting started in the current financial period, we bring up another project from lower down the list.

***Overcoming the Silo problem***

***Editor:*** This has not only solved the problems of underspending and spending 'just to use up the budget' but it also solved the traditional 'silo' problems where each business unit focuses only on its own goals and not those of the corporate whole. But how did the staff react?

***Aubrey Joachim.*** At first the staff found it difficult to adjust to the changed circumstances, actually everyone, from top executives to the plant managers, went crazy – but no one quit on the strength of it. As I talk about our experience to meetings presented by the Beyond Budgeting Round Table of which I am a member, the greatest problems seem to be experienced by the accountants rather than the engineers. The accountants feel that they are losing control and becoming 'less important'. In fact, the reverse is true! Accountants are becoming more valuable as 'financial analysts' than they ever were as mere 'bean counters'.

***We reduced  
Over 1400  
Accounting Lines  
To just 22!***

We started with over 1400 accounting lines. Sometimes it got pretty silly. Business managers had to forecast, for example, about 18 months ahead of time, what they were going to spend on training courses. They had no idea who they were going to train or what training would be required. When a course came up, the question was not 'How is this going to add value to the corporation?' but rather 'Is there enough money in the budget?' By focussing on what is mandatory and what discretionary we have now reduced this to just 22 categories.

Initially we focussed on managing the discretionary amount. But now we are tackling the mandatory levels as well. We have good cost histories and I say to the business managers, you know your cost trendlines, how about aiming to reduce them? We are now moving on to Activity Based Costing and we have been using the Balanced Scorecard Approach for some time.

Beyond Budgeting is about delegating responsibility for performance back to the business managers. No longer do they need to worry about matching dollar amounts, they can focus on performance. I monitor both the mandatory and the discretionary spending and we have got to the point where we pretty much understand what's driving our underlying costs. If these go outside an expected range, I can ask "What went wrong?" and start looking at possible problems immediately. For example, the business is very much affected by the weather. In dry weather there are a lot more pipes cracking and in wet weather there are more things like overflows of the sewer system.

***"We don't have the budget is no excuse for not coming up with  
Innovative Ideas once  
Beyond Budgeting is in place"***

***Increasing the  
Scope for  
Innovation***

But Beyond Budgeting is not only about cutting costs! Not only do we not waste money doing things that do not need to be done – we also avoid falling into the trap of not doing good things 'because we don't have a budget'. Any innovative and valuable idea can be raised at the monthly meetings and it is assigned a rank value, enabling it to compete with other projects.

They have their production meetings and they can see costs at one plant have been trending down and swap ideas on how this is done. I don't think anyone is holding onto ideas; it's just that this highlights what is going right, as well as what is not working."

*(Ed: When I asked which business units had come with innovative ideas, Aubrey sounded puzzled at the question– not surprisingly since his reply was "Well, they ALL have!". He has kindly offered me the opportunity to speak with these business managers when I am next in Sydney and I hope to be able to share some of these innovations with readers later in the year.)*

## And now for something lighter

*Asset modelling frequently requires an innovative approach to asset classification!  
Next time you are faced with this challenge you may like to take  
Inspiration from the following!*

### Classification of the Animals of the World (from the Chinese)

**Those that belong to the Emperor**

**Embalmed ones**

**Those that are trained**

**Suckling pigs**

**Mermaids**

**Fabulous ones**

**Stray dogs**

**Those that are included in this classification**

**Those that tremble as if they were mad**

**Innumerable ones**

**Those drawn with a very fine camel's hair brush**

**Others**

**Those that have just broken a flower vase**

**Those that resemble flies from a distance**

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