ISSUE 310 FEBRUARY 21

AMQ INTERNATIONAL
STRATEGIC ASSET MANAGEMENT

WHAT ONLY EXCELLENT AM CAN DO:

Providing a solution to the increasing infrastructure deficit problem will take more than excellent AM. It will take the combined intelligence and willingness of asset managers, financiers, infrastructure designers, planners, politicians and the community.

But **only excellent AM can extend the time** we have to find the solution

: extending the lives of existing infrastructure by timely maintenance and good renewal decision making

: ensuring the whole organisation understands AM - from the CEO to field workers.

: being open to new ideas.

The articles in this issue can help:

Daryl Mather looks at data needs for renewal decision making in "Captured by Data" p.3

Janaka Seneviratne looks at explaining asset management to field workers p. 6

And I introduce you to an interesting Canadian discussion on the Infrastructure Deficit in "WORDS MATTER", p. 2

Enjoy!
Penny

Editor: Dr Penny Burns, AMQ International
PO Box 75 Salisbury South Australia 5108
Telephone 61 (0) 8 8359 0559
Email: amqi@amqi.com Website www.amqi.com

View from the Coffee Shop

WORDS MATTER

The words we use condition the way we think, the problems we see, and the options we consider - consider 'boat people' v. 'refugee' or 'terrorist' v. 'freedom fighter'

Wally Wells, who heads up an asset management group in British Columbia, Canada, sent me the following, from his latest BC News, for comment:

'INFRASTRUCTURE DEFICIT? Government and non-profit groups use the terms surplus and deficit. We incur a deficit when we spend more than we have or OVERSPEND. But our problem with our infrastructure is we spend less than we should or we UNDERSPEND. So we are really creating a negative legacy or Infrastructure LIABILTY or GAP. It clearly is not a deficit.

People 'hear' the word 'deficit' and assume the accountants will fix it all. But people 'listen' to the words 'liability or GAP' and often ask questions or realize some actions are necessary. Similar to what is often stated as a future environmental legacy or liability.

So let's start getting it right and drop the term 'deficit'. What we continue to create by underspending is an infrastructure LIABILITY or GAP. Let's start using the write language and tell our politicians and our taxpayers about our infrastructure liability. We in our industry can equally do ourselves a favour by switching to meaningful story telling terms. Let's work at getting it right and conveying the correct message."

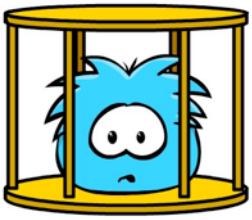
COMMENT WANTED

AND YOU CAN HEAR THE CRITICAL 13 MINUTES OF MY KEYNOTE ADDRESS ON THIS SUBJECT AT:

http://soundcloud.com/paul-prairiedog/prairie-dog-niskeynote

AND GET THE HIGHLIGHTS VERSION IN THE PRAIRIE DOG BLOG (4th item down)

http://www.prairiedogmag.com/?paged=4



Different tasks require different data.
Daryl Mather argues that knowing the difference is critical to your success
Only then can you avoid being ....

Captured by Data

by Daryl Mather

Renewals and Capital Maintenance

Renewals and other areas of capital maintenance planning have long been a vexing issue for asset intensive organisations. Accurate forward asset planning provides a strong baseline for unit pricing, solidifies NPV projections, and eases access to financial markets.

In the private sector, tightly financially regulated markets, or PPP environments, it has an even more direct impact – reducing the profitability of the entire contract, or regulatory period.

Forward planning requires an awesome amount of data to be answered accurately. A need that ERP vendors globally have been rushing to fill for the last decade, yet despite the large scale price tags of these systems many companies continue to find they do not have the asset data they need when formulating their asset management plans.

The implementation of these products, when bought for this reason, often focuses on optimising processes to capture the dynamic data on asset failures, which is then used throughout the system. MRO style inventory management algorithms, for example, use this information as one of the key inputs to determine minimum stocking levels, reorder points and the corresponding reorder quantities.

However, although sold as a panacea, this actually runs contrary to the role of physical asset management.

The problem with data

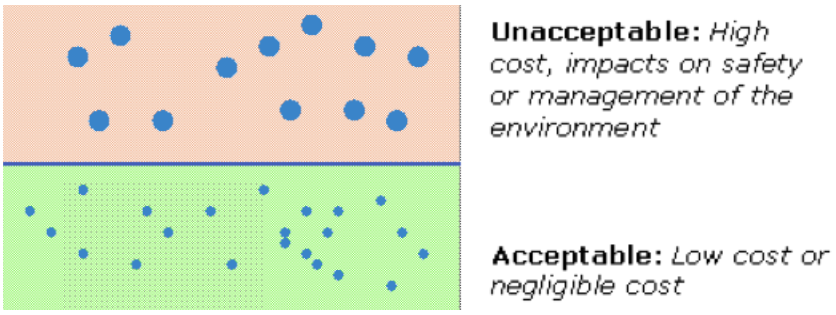
In an increasingly automated and mechanised world, our responsibility is the safe and cost effective management of critical failures. This message could not have emerged more clearly from the recent Deepwater Horizon and Hatfield Train disasters. These are failures that we, or society, deem unacceptable, with consequences in areas of health and safety, environmental integrity, or serviceability.

Acceptable and Unacceptable Failure

Immediately we start to see the emerging conflict between physical asset management and the data driven approach promoted to sell ERP systems. In Figure 1 we can see the difference between acceptable and unacceptable failures. Acceptable failures are those that have negligible cost impacts only, and there are many of them typically. Their impacts are negligible costs only. In these cases we can allow them to occur, capture data, and use advanced reliability methods to develop adequate maintenance policies for them.

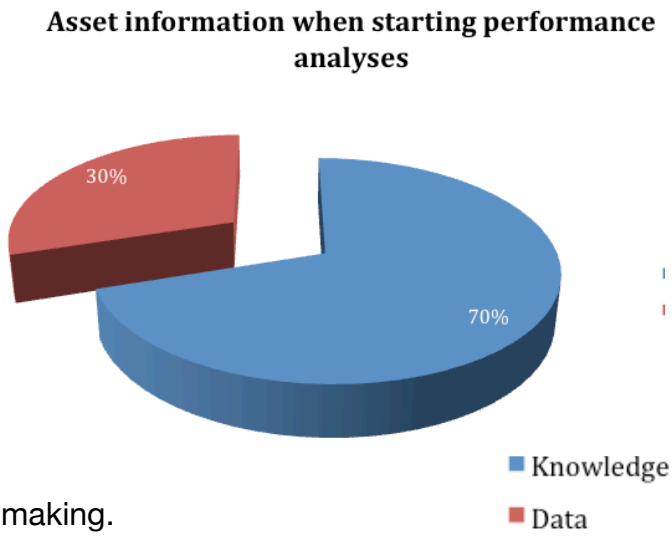
But the Unacceptable failures, those on the top of the image, represent the critical failures. These are failures that have consequences in safety, environmental integrity, damage to human life or economic impacts that we see as not acceptable. It is unethical to allow these to occur. Particularly not in the volumes required to make high confidence decisions.

Figure 1 - Acceptable and Unacceptable failures



Knowledge and Data

This is one of the reasons why so many companies are data poor, even with new technologies increasing the flow of performance data every day. In fact, as somebody who has spent decades analyzing asset performance and preparing renewals programs, I have found that when starting an analysis the information is generally 70% knowledge. That is, information stored inside people's heads, and 30% data, or information stored digitally / electronically in a form that can be drawn on for decision making.



(And if we are brutally honest, 30% is being very generous.)

Paralysis or Overkill

When faced with a lack of data companies take one of two paths. They are either paralyzed into inaction, volunteering millions to implement data capture technologies, or they dive into the deep end with statistical techniques, before realising they also do not have the asset data to support these methods.

In both events the end result is a barely justifiable guess. There is no improvement in the situation, meaning the next time it comes up they will need to face the same issue again, meanwhile they continue to face challenges with serviceability in the short term.

Solving the problem

If we are ever going to have the data available for analysis as we wish to, then we need to take two parallel routes to get it.

- First, we need to convert the knowledge within the organisation into useable data. Data in the form of asset strategy frequencies, functional inspection tasks, consequence models and so forth.

- Second, we need to develop a rigourous data and tactics framework that allows us to capture asset failure data through proactive action. That is, without experiencing the consequences that make critical failures so unacceptable.

The approach is to develop a proactive whole of life model. One that recognises that there is presently a lack of data and sets up the asset tactics, and the data capture frameworks, to resolve the issue.

More?

For a more detailed version of how to develop proactive whole of life models please visit the website at

http://www.reliabilitysuccess.com/RCM/captured-by-data

Daryl Mather is the founder of Reliability Success Pty Ltd. He has worked in Asset Management in the UK, the Middle East and Australia, contributing to the Asset Plan Assessment Framework for UKWIR, providing PAS 55 audit services for the London Underground, and implementing whole of life asset management.

Problem diagnosis needs good data. Much of this data is collected by field staff.
If it is to be reliable, they need to understand what we are doing and why we are doing it. Janaka Seneviratne has a suggestion.

EXPLAINING ASSET MANAGEMENT

by Janaka Seneviratne

How good are we at explaining ourselves?

One day, explaining my role to a newly appointed Asset Inspection Officer, I said

> "I handle Building Asset Management Planning and Implementation process and it requires collecting macro & micro level data & information, talking to stakeholders, doing needs analysis, deciding asset ranking & service levels, studying options, analysing asset life cycles, developing condition assessment criteria, inspection schedules & defect registers, managing statutory compliance, planning maintenance activities, improving business processes etc."

His blank gaze told me that I had failed to communicate!

Perhaps, I should have told him following story.

Your home

Think of asset management in terms of buying and maintaining a home. The first question that comes to your mind is "why do I need a house anyway?" and a requirement to protect your whole family from heat, cold, rain and wind, wouldn't be a bad reply.

What are your options? Staying in a hotel or renting a house would be possibilities. Buying or building a house would others. Your decision will be based on financial affordability and the life style you and your family value. A built house comes with certain features made to someone else's needs. It is rare to be able to get the best house at the best location with a limited budget.

Choosing the house

Let's say you have decided to build a house. What do you need to think of next? Location, number of rooms, external appearance, internal space arrangement and built-in features are some of the decisions you will need to make. You will need input from all the members of your family for they have to live in this house. You also need to consider family including pets' needs and what they like and dislike. Otherwise you invite problems for the rest of your life.

Paying for the house

Final decision comes with a certain price in terms of down payment, ongoing expenditure and future exposure to risks & liabilities. Assume that you built the house with the financial support from a bank. You now have a house.

Making the house a home

What do you need to do now? You need to list your essential items. You need expert advice on selecting the brand, quality, features and quantity of items that fit within your budget. Wrong decisions will result waste of money, having idle items, frequent failures, costly repairs, safety issues and disruption to peaceful life. You have just undergone all the pain to convert house to a home.

Looking after your home

Now, it is not a bad idea to write down full details of what you have, including construction details of the house. Life changes and before long your needs will surpass your available resources. It forces you to prioritise actions. However, you have some non-negotiable commitments such as council rates, home loan, utility bills, registration fees etc. After honouring these, you will end up with limited resources requiring you to balance priorities.

Decisions, decisions

Shall we do this and that? Questions pop up and are thrown at you and your family, and you have to make decisions. Your kids demand the impossible. Disasters can happen without fore-warning. You can transfer some risks to an insurance company if you can afford to do so but life is about making the best use of the available opportunities. The best asset managers manage opportunities to get best short and long term outcomes.

The End of the Story?

The story may end here, but how this relates to basic Asset Management is worth mentioning.

Managing Assets in General is like Managing a Home

Information collection and management helps you to understand what you have at home and what you need to know.

Stakeholders are your family and friends.

Option analysis is the deliberation on having a house.

The consideration of your needs is called **needs analysis**.

Your contemplation of important assets is termed as **Asset ranking.**

Life cycle analysis is understanding what to do to your assets, and when.

Inspection and maintenance planning is knowing when to check your home & garden and what to do to maintain the condition.

Honouring commitments is your **compliance management**.

The action you all take to improve quality of life by doing things differently is **business process improvement.**

Defect register is a list of defects you have at home.

A consistent condition assessment criterion is the collective family decision on the intervention levels to keep up the overall quality of home.

I think it would not be wrong to say that whole world is full of asset managers and that asset management is a way of life. Our problem is not the quantity but the **quality** of asset managers.

Janaka Seneviratne

is an engineer with over 23 years experience in construction, planning and maintenance. He holds Master degrees in Local Government Engineering and in Engineering Management. He is the Maintenance Coordinator-Buildings in Bankstown City Council, New South Wales, Australia, responsible for the development and implementation of Buildings Asset Management Plans.