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**For Practitioners, Policy Makers and Planners in Public Infrastructure**

## **CHOICE**

In one way or another every article in this issue is how we deal with a mass of information (data, fact, opinion, etc) in order to make our asset management choices.

On my first trip to the USA, the joke doing the rounds at the time was “Don’t ask the waitress what’s on the breakfast menu - or you won’t get out until lunchtime!” We probably feel the same way on the weekly shopping round to be faced with so many different types, brands, sizes of tissue boxes or soap that we go numb at the prospect of choosing. There was a (much simpler, past) time when we had little choice, and also little information on which to make the choice. Today, it is the reverse. We may have too much! Too much for us to be able to assess in the time available. How we deal with *this* problem is now the task - in asset management as in the supermarket.

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## **Editorial:** **Use Your Loaf!**

Herbert Simon, in his book “Making Management Decisions” observed that experts make decisions intuitively based on experience whereas a novice uses analysis to solve a problem. Hence more skilled persons take less time, fewer steps and do not require as many relevant facts to unravel a problem.

We all use intuition every day; we wouldn't get through the day without it! When faced with little information, it is how we make the most of what we have - and when faced with a whole mountain of data, it tells us where to start. Intuition is what supplies the hypotheses that we can use the data to test.

Engineers were once proud of their intuition, but with the coming of the high tech number crunching computers, it was elbowed aside in favour of extensive analysis. We started to distrust intuition, called it by derogative titles such as ‘flying by the seat of one's pants’. But why is it that you value your senior engineers and watch warily the predictions that within 10 years there are going to be precious few of them still around, if not for their experience and judgement - in other words, their intuition?

Danny Azavedo believes it is time we started valuing intuition more explicitly - and doing something about developing our intuitive reasoning. He has prepared a paper for presentation at the Melbourne ICOMS Asset Management Conference on “Intuitive Judgement” in which he shows how it is used within asset management and how it can be used to transform your asset management to the next level. He talks about how it is used in maintenance and how to improvise and adapt it in asset management. If you are serious about ‘future proofing’ your AM unit, do yourself a favour and, if you are attending the ICOMS, make sure you don't miss Danny's paper. Here, to whet your appetite is a small excerpt arguing its role in asset management and why you ignore it at your peril.

The title of this editorial is cockney rhyming slang for Use your head (“loaf of bread”). I once used this phrase in a class I was teaching and was met with puzzled faces all around. We need to use our head a lot more. Current management styles relying on documentation have led us to apply rules mindlessly. If you doubt the truth of this consider the fight the accounting profession put up to retain historic costs for valuation because they could be ‘verified’ by reference to a receipt, whereas current value estimates could not. The fact that after 50 years (5 if inflation is rapid) they are completely irrelevant was overlooked in the drive to conform to rules.

The task today is to marry intuitive judgement with the appropriate amount of relevant analysis - see “Intuitive Judgement” (pp. 3-4)

**Consider and Enjoy!**  
**Penny Burns**

*Intuition cannot develop by using our analytical ability, we need to learn how to remove blocks to allow intuition to flow freely. We may be aware that by forcing the answer, when trying to solve a complex business problem creatively, does not work. The best approach is to get a clear picture of the problem in our mind, and then put it aside. Suddenly when it is least expected, a solution will jump out in our thoughts.*



## **How to communicate your intuition**

It is difficult to communicate intuitive decisions. The communication problem exists while communicating with subordinates as well with superiors. If subordinates do not understand the reason behind the instructions they will be ill equipped to respond to unexpected difficulties. Even when instruction documentation looks comprehensive, implementing the instructions usually needs clarification. The *intentions* should be absolutely unambiguous, using examples to show what is required and what is not. One way to improve communication skills is to work and practice with the team, learn their terms, concepts and routines. This shared experience also helps to build the teams intuition about what is really meant.

## **Can harnessing gut reaction get us into trouble?**

Intuition is not perfect. Sometimes the first impulses may be related to what we want to happen, and not likely to happen. For important decisions start with your intuition and deliberately check to see if it makes sense. This is how good decision makers operate. They draw on their experience to size up a situation, recognise the right way to respond and then imagine how this response will play out. If they like what they see they go ahead. If they find a problem they try to improve their response. If they cannot improve it, they look for other responses that their intuition is suggesting.

## **Can you really take gut feeling seriously?**

We are only conscious of one thing at a time; hence, consciousness is a bottleneck. Intuition is like peripheral vision without which we could not have orientation. Consciousness is vision that focuses on one thing. Some times a conscious analysis of a situation does not work as there is not enough information or too much of it, or there is no time to sort out the reliable information. In such cases we have to depend on our intuition based on previous experience. For example, when we recognise a person, we do it intuitively we do not compare his facial contour details analyse these and then conclude on the person's identity. Intuition helps us to walk, drive and stay on cognitive autopilot so we may be able to focus on what is most important at the moment. Intuition helps us to respond to cues we are barely aware of. It helps us to monitor several conversations at once shifting attention to the conversation that is most relevant. Intuition helps us to size up situations in a few moments. It provides early warning of dangers. It helps us to automatically handle low-level tasks. Intuition provides us with unexpected insights into people and problems.

## We now live in a faster world!

The old management paradigm was 'control – order – predict' supported by strategies that included division of labour, specialisation, organisational hierarchies and multiple levels of management. But today's **speed and complexity**; forces managers to deploy and develop intuitive skills and create an environment where intuition is appreciated and rewarded. Intuition is needed in:

Computerised decision support systems - Advanced computerised decision support systems and expert systems for problem solving have led to analysis paralysis. Intuition becomes essential while sorting relevant information from the volume of information produced by computers today.

Unpredictable variables - Previously decisions were made by analysing variables that were reasonably predictable. Now there are so many continuously changing factors, variables are not predictable within reasonable accuracy. Under such conditions one has to depend on gut feel (intuition).

Lack of precedents and ill structured problems - Conventional analytical decision-making relied on structured problems, precedent or identical situations. Now problems are so varied and ill structured that intuition has to be used in decision making.

Choosing between balanced alternatives - Frequently we are faced to make a choice between two alternatives that are equally balanced in such a situation one has to depend on one's intuition.



### The role of intuition in the Asset Management process

During the creativity process in Asset Creation we need (intuitive) divergent thinking rather than (convergent) analytical thinking. We now have to sort through huge volume of information available to get the right information. Then we have rapid changes that are taking place in the business environment, affecting processes, people, materials, methods etc. this makes decision making all the more difficult. In such an environment intuition will play a vital role in every day management. Intuition is required to scan large volume of data without a predetermined agenda and yet be able to identify pertinent data. When there is periodic alteration in the environment and mounting time pressures the classical analytical approach for decision-making is not as effective as an intuitive approach.

To understand a situation in AM, we may need to conduct investigation to get additional information and this leads to more complexities. The level of work increases due to the very work we do to simplify the answer. The modern manager is faced with the dilemma: to investigate a problem thoroughly and at the same time keep the project on schedule. Thus decision on how far to investigate a problem becomes a matter of intuitive judgement. To simplify the approach to a solution an intuitive person may minimise complexity by concentrating on a few intuitively judged critical items while an analytical person will be bogged down with massive details of all available variables.

*This is an excerpt from "Intuitive Judgement Component in Asset Management Decisions" a paper prepared for presentation to the ICOMS Asset Management Conference, Melbourne, May 22-24 2007*

# TAM Online

*Your TAM is online but is your staff using it?*



When computers were first introduced we used them to do faster what we were already doing, rather than using their capabilities to do things differently - and smarter.

When we first put our asset management manuals online we did the same. They were just an electronic version of the print copies. *For many of us they still are!*

For example, how many of the following basic computer features does your online manual contain?

- chapter access from the contents menu
- cross referencing throughout the text
- extra colour and illustration (free online)
- links to in-house electronically stored data or documentation referenced in the text
- real, current, examples of finished plans, proposals, analysis
- Power Point presentations with build-ups and voice over

## **Is your manual easy to use?**

Don't ask this question of the group that set it up, ask it of the people that you set it up *for!* This is often the root cause of the problem of non-use - we did not have a clear understanding of **who** would use it, and **for what**, when we wrote it or put it on line.

*In my early days in corporate planning, I asked my boss who he intended as the audience for the corporate plan which he wished me to write. He replied "Everyone! The man in the street". I told him that if he wanted to produce a corporate plan for the water authority for the man in the street, he should do it in the form of cartoons. He thought I was not taking him seriously, (and I admit that I thought his target audience was not well chosen) nevertheless the answer was right.*

**You need to choose the form of communication to suit the audience and that means *knowing who your audience is.***

You also need to think about where they will be when a question arises that can be answered by the TAM manual online - it may not be at their desk!



*Your new, younger staff have grown up with a Gameboy in their hands, they are media savvy! What appeal will your TAM have for them?*

## **A new generation requires new tools**

What can we in Asset Management learn from latest developments in job training? Here is a short excerpt from IT Business, March 30.

“Chicago’s Northwestern Memorial Hospital has revamped its orientation three times in the last six years to keep up with the changing workforce... Recruits meet all the top executives on their first day of orientation. Rather than hearing speeches, they meet them during casual coffee breaks. ‘We brought that about because of the younger generation’s need to connect with people in the organisation ... they are loyal to the people not to the organisation’

‘We spend a significant amount of time explaining their technology tools, and when we say “This is your notebook” [a pocket size notepad with 8 blank pages] they all laugh and applaud.’ **Everything they need to know is online.**”

### **What are the essential messages for us?**

1. Regular updating of orientation processes
2. Loyalty of people to people rather than to organisations
3. Taking the time necessary to thoroughly explain the tools
4. Everything they need to know is online

If it is possible to do so for a hospital, surely it is possible in asset management. **And TAM as the online tool is the crucial element.** Is Your TAM up to scratch? In addition to the basics listed on the previous page, we need now also start to think about such things as

video demonstrations  
animated demonstrations  
interactive models to use for calculations in, say, discounting or cost analysis  
links to external information for, say, environmental scanning

**But above all, we need to look at TAM from the users viewpoint.** We can’t do that simply by asking staff what they want. It requires serious attention to the ongoing information needs of staff - not just ‘facts’, but ‘how to do its’.



## ***Taming the Overload Monster*** ***How Organisations and Communities can deal with the complexities of Infrastructure Decision Making*** ***- A framework and An invitation***

### **Learn by doing!**

In 2007 ACORN Inc. is conducting a series of inter-linked infrastructure decision making workshops in each state capital and you can learn the process by taking part in the organisation and, in the process, learn a valuable technique you can apply in our own organisation or community.

## **An Infrastructure Decision Making Framework**

The principles are simple:

- **Separate the aims from the means of achieving them** and discuss each separately to get them clear in everybody's head.
- **Allow information to be presented by all sides**, but in a neutral and controlled environment, in which views can be compared, contrasted, critiqued – and then discussed. (The discussion period is critical for allowing community and decision makers to consolidate their thoughts.)
- When all of the desired aims and options for achieving them have been laid out and discussed, then **explicitly consider the way we make our choices**. It is this final step so often neglected which is critical to community understanding and acceptance. Done well, it can avoid decisions being undermined and create better community harmony.

### **Water for Cities**

In 2007, ACORN Inc is applying these principles to the highly sensitive, emotional and political issue of how we achieve a reliable and affordable water supply for our cities. This important issue needs to be resolved by our communities and competing demands from the environment, agriculture, industry and mining cannot be ignored. How can we as a community tackle issues of this magnitude? (Bearing in mind that there are more to come with the nuclear debate yet to be had) You can find out more about the process itself on the AOCRN Inc website, [www.acorninc.org](http://www.acorninc.org). Just click on the Water for Cities icon to get a short presentation outlining the key elements.

**The next meetings** are Adelaide (March 26); Brisbane (April 2); Canberra (18 April); Hobart (April 3); Melbourne (April 17) Perth (April 11) and Sydney (March 28). All at 5.30-7.30pm.

**Ring me on 0402 319 611 to register your interest and get location details**



## More on Making Things Meaningful

when you have a lot of data  
and ideas to get across

How do you use graphics to illustrate capital value per service? Here is an example from the City of Barrie in Ontario, Canada, that Leo Gohier has sent me. You may wish to adapt it to show the annual cost (depreciation plus maintenance) to explain where ratepayers' money is going. And, if so, inclusion of parks and gardens and public buildings would be a useful addition.

# Asset Replacement Value = \$1B = \$27,000/Serviced Property

