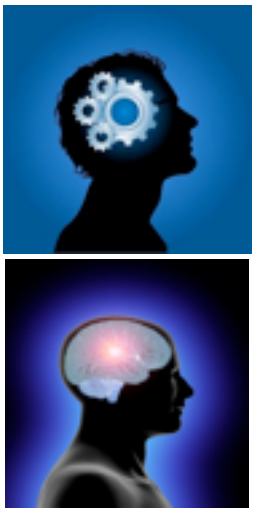
358 AMQ International's STRATEGIC ASSET MANAGEMENT



January 21, 2013

MODELS, MINDSETS & RESPONSIBILITIES

Last week I suggested that there were three things we should do - and the New Year was as good a time as any to do them - take stock, learn and contribute.

This week I want to look a little closer at 'taking stock' by looking at the models that we all need to have available to us, on call, to be a good asset management analyst and decision maker no matter what our role: mathematical models, economic models, engineering models and more. **(The models in our head, pp 3-5**)

Models are different from mind-sets; models are tools that enable us to frame the data and observations available to us and make sense of them; mind-sets are the way we look at the world, the values that drive us, the goals it is important to us that we achieve. Scientists and Academics have different mind-sets from Managers. You don't have to adopt the mind-set of another but it is useful for communication to know what is driving them. It is also very useful to be clear about what is driving you! (**Mindsets, and the conflict between science and management, pp 6-7**)

Our practical tool this week is a 'responsibility templates, drawn up by Jan Korek when he was Asset Manager for the City of Stirling. See **"Who is Responsible?" (pp 8-10)**

Do consider - and enjoy!
Penny

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EDITORIAL

What does it take to be the “Steve Jobs” of Asset Management?

My take on this is that you need to be INSPIRATIONAL, INNOVATIVE and DEDICATED.

And I am pleased to say that a number of you have already indicated an interest in moving in this direction.

So far I have had requests from three asset managers

(1) An asset manager who wants to write something powerful, direction-setting, and uplifting - this asset manager wants to improve his ability to be useful to his organisation and the industry.

(2) An asset manager from a council that wants to fine tune the very good work that it is already doing - this asset manager wants to improve his council’s performance and, at the same time, set an example for the rest of the industry.

(3) A council that is looking to develop a common method to prioritise work across all services - this asset manager and his team have been working on a new model that has promise for their own organisation and the industry, although a lot of work still remains to be done.

To each of them, I have repeated the statement I made in the last issue - **If you are serious, then so am I!**

Are you serious?

Do consider.

Penny

THE MODELS IN OUR HEADS

Good asset managers have a variety of models in their heads, models that they know so well that they can instantly call them into play when the situation arises. These models are drawn from a wide range of disciplines. Here are some of the basics, no matter what your role -as engineer, economist, planner, administrator, strategist. *These are, of course, only the basics, and your particular role will require more.* Moreover, the role you play - and the training that you received in order to be able to play it well - will condition the way you view each issue and problem, and will determine the criteria by which you will judge whether you have successfully dealt with it. These determinants of the way you think and what you regard as important - your values - are what I call mindsets, and in the next article I look at some very interesting work by Peter Cullen that helps to explain why engineers, managers, scientists and planners, etc have such a hard time communicating.

Why not gauge your reactions as you read them?

Never heard of it

Heard of it but not sure what it is, what it does or what it's for.

Know what it is but I would need to look it up if I had to use it.

Understand it and know the problems that it would apply to

Use it all the time

You might like to try this again at the end of the year and see if there has been any change.

Arithmetic and Probability

This is basic high school stuff - compound interest, the elementary maths of permutations and combinations, decision trees, simple algebra and, the most important of all for asset managers - probability. It is also important to be able to readily distinguish between general and conditional probability. I suspect that many of us use probability in a very unscientific way - we guess! In evidence based AM decision making, we need to be able to justify the probabilities you assign.

Accounting

We really need to be able to read a balance sheet, certainly our own organisation's balance sheet. In all likelihood we contribute to this balance sheet by way of estimating asset value, asset condition, asset life, age and remaining life. We need to ask - do the summary figures as they appear in our balance sheets square with our gut feel about the condition of our asset portfolios? If not, why not? Do we understand the limitations of the balance sheet? Does our accounting system distinguish the three types of capital expenditure - new (extension of existing services to a wider population); upgrading (improvement or enhancement of services) and renewal? (Each of these has very different implications for future maintenance, renewal and AM planning.)

Communication/ Journalism

1) **the 5 W's.** For good communication we should ensure that in all our memos we have covered the 5 W's - who, what, where and why. This is fundamental - but often ignored!

2) **Start at the end.** Every good journalist writes his most important point first, then the next most important point and so on - because he never knows at what point in his article the editor will decide to cut him off in order to fit the article into the space available. At university you probably put the conclusion last and worked your way up to it. That was what I did, too, until I had to write press releases. Then I learnt the economy and the value of starting with the conclusion and working backwards when it was necessary to grab the attention of the reader. We never know when the reader is going to be interrupted or lose interest.

Economics

Two of the ideas from economics that affect us all

1) **Cost/benefit analysi**s is basic to every decision we make in life, although the costs and, indeed, the benefits need not be cash. If the benefits are to be deferred and the costs incurred now we need to take into account the time value of money i.e. the discount rate. Changing the discount rate can make radical differences to the outcomes; what do we know about choosing the discount rate?

2) **Economies of scale** - for a long time economies of scale drove the 'bigger is better' mantra. it was obvious that when building a spherical tank, the amount of steel used to construct the surface goes up with the square and the volume goes up with the cube. For a long time electricity generating plants increased in size and economies of scale - until they didn't! Until the risks of losing everything in one breakdown exceeded the economies made elsewhere.

Engineering

From engineering come a number of ideas of relevance to decision makers whether engineers or not. For example **Back up systems** - for machines, processes or people. Do we have back up systems for our work - and for us (in the event of illness, for example)?

Organisational Behaviour

Two important ideas from the field of organisational behaviour are **Flow Charts** and **Process Maps**. We need to know how to use them and, ideally, to construct them.

Statistics

Every intelligent person, no matter what our job, needs to understand a certain amount of mathematics, but the asset manager needs to know more. Fundamental to everything we do is the notion of probability - and conditional probability.

For an asset manager, the concept of 'economic or useful life' is bound up with probability. We might *say* that the life of a particular asset is ten years, but what we are really talking about is that the asset life is distributed according to a normal distribution of which the mean point is ten years.

All risk analysis is a matter of probabilities. In your risk analysis do you 'guess' at the probability of future events (as distinct from deriving the probabilities from data and evidence). If you do, be aware that information from the field of Psychology tells us that we systematically under or over-estimate certain risks. Do you know which ones?

Statistics are so important for asset managers that we will deal with this at greater length in future issues.

But our mental models can sometimes lead us astray!

Take, for example, the notion of economies of scale which has guided advertising for many years and has now been challenged by the niche marketing made possible by newer technologies.

How many of our mental models are now out of date? How many need refreshing to be 'on call' for us?

If you are a manager, read this to understand why YOU do what YOU do

MINDSETS and the Conflict between Science and Management

In 1990, Peter Cullen, freshwater ecologist wrote a great article “The turbulent boundary between water science and water management”. He was described as ‘provocative, constructive, brave and always grounded in good science’. Peter was an Adelaide ‘Thinker in Residence’. Sadly he died in 2008. His ideas, however, live on and you can read the full article from which the following is taken, online

Here he looks at the reasons for conflict between scientists and managers. He argues that there are three major reasons why it is difficult for scientists and managers to ‘get on’

1. Friction between scientists and managers is often the result of misunderstandings about the culture within which each works.
2. Many of the question that both are trying to solve are value questions not scientific ones or management ones.
3. Managers often misunderstand science and expect it to deliver a truth that is non-arguable. They fail to understand the very process of science demands no such truths, so that assumptions, methods and conclusions can always be challenged.

He believes that the answer to this problem is to develop a ‘broking role’ - for people who understand both the scientific and management approach to provide a translation.

His argument about managers expecting science to provide a *‘truth that is non-arguable’* is an important one - and those who are currently disputing the ‘truth’ of global warming would be well advised to read and think about this short but powerful article.

However, I want to draw attention to what he has to say about cultures.

Understanding the cultures

> “It is necessary to appreciate that the cultures pervading science are quite different from the cultures that pervade management. Without appreciating these cultural differences we will continue to be frustrated at the inadequate communication in both directions. Within professional ranks there are various mind sets inculcated during training and professional socialization. They can be parodied.
>
> *Engineers* don't care why it works as long as they think it does.
> *Scientists* don't care if it works or not as long as they understand why.
> *Economists* don't care either way if the internal rate of return is OK.
> *Managers* don't know unless someone bothers to tell them.
> *Planners* know how it should have turned out.”

The dominant cultures of science include:

sharing and openness through publication, conference presentations, travel; honesty - limitations of data/evidence; emphasis on peer review; organized scepticism; peer rewards from quality of insights, experiments, analysis; peer rewards for ability to select appropriate problems that have intellectual difficulty rather than immediate usefulness; low status of data collection unless it is to test some hypothesis; higher status for explanatory theories over empirical models; some independence about what problems scientists will work upon.

The culture of management

Managers have as their goal the delivery of benefits to some group. These might be abstract or generalized (policy) or specific (service delivery). Managers make decisions in order to reduce risks and they make pragmatic decisions to try to achieve this. Decisions are normally made with imperfect information and there is little pressure to review subsequently the assumptions in the light of effectiveness. There is often pride in the ability of managers to make decisions with little knowledge, and a culture which does not encourage quantitative evaluation and accountability. Technical skills are not directly valued in organizational hierarchies, and professionals have to become managers if they seek advancement to higher levels.

Science is valued as a weapon in the ongoing conflict with other interest groups or agencies for power, influence and resources. Scientific outcomes, and the kudos of success, may be less important than staking out the turf to keep other players at bay. Public sector management appears to be undergoing a paradigm shift at the moment, and so there are two conflicting models.

(a) **The bureaucratic model.** The bureaucratic model has rules that are made to be followed. Following procedure is more important than particular outcomes. These systems are characterized by due process and formal procedures, rule books, secrecy and avoidance of performance review. The system rewards rule conformity, error avoidance and attention to detail.

(b) **The managerial model.** The managerial model is characterized by quantifiable outcomes that are more important than following set processes. Services are seen as products to be delivered to customers. There are devolved responsibilities within an externally set cost framework, and managers are assessed through cost-effectiveness reviews. Hence economic rationality replaces the legal and procedural framework of the bureaucratic model. The organization is seen as a tool in the hands of the executive manager or Minister, and is responsive to short-term political agendas. Rewards are for achieving output targets and nonachievement may be punished. Creates an environment where there must at least be a facade of progress, so if a problem is intractable there will be attempts to abandon it so at least the impression of progress can be created by moving on to new and relevant problems" .

This is worth thinking about - then read the full article - it is only ten pages, and well worth your time.

Whose Responsibility is it?

When your job specification requires you to 'liaise' with another, do you know why and who is responsible for the outputs or outcomes? A lack of clarity on this matter is a recipe for internal conflict. Here Jan Korek gathers together all the many documents that provide guidance and direction, groups them in terms of three essential questions - Where does the city want to be? Where is it now? and What does the city need to do? and looks at the functions and processes, and *who is responsible for what*.

Accountable - the buck stops here!
Responsible - the person or group delegated by the Accountable person to get the job done
Consulted - must be consulted when decisions are made
Informed - must be kept informed

This work was done when Jan was Asset Manager at the City of Stirling in WA. Jan Korek is now Senior Consultant at AMSTRAT, Perth, WA and may be contacted at jan@amstrat.net

CONTEXT	SOURCE/GUIDING DOCUMENTS	FUNCTION/PROCESS	COUNCIL	EXECUTIVE TEAM
WHERE DOES THE CITY WANT TO BE?	CORPORATE STRATEGIC PLAN AM POLICY AM POLICY AM STRATEGIC PLAN AM STRATEGIC PLAN	Development Communication Development Communication	Accountable Accountable NA NA NA	Responsible Responsible Informed Accountable Consulted
WHERE IS THE CITY NOW?	ASSETIC SAM (This is the corporate asset management data system)	Asset Data Collection and Recording Condition Assessment Recording Life Cycle Assessments Service Level Assessments Risk Evaluation	NA NA NA Informed NA Informed	Accountable NA NA Informed Informed Accountable
WHAT DOES THE CITY NEED TO DO?	ASSET GROUP AM PLANS ASSET ACTIVITY PLANS	Capital Projects Planned Maintenance Reactive Maintenance Project Evaluation Reporting	Informed Informed Accountable Informed NA Informed Informed	Informed Informed Responsible Responsible Informed Accountable Informed

On this and the next page is how Stirling City Council decided to allocate the roles and responsibilities

SOURCE/GUIDING DOCUMENTS	FUNCTION/PROCESS	STRATEGIC ASSET MANAGEMENT SECTION	ASSET MANAGEMENT WORKING GROUP	CORPORATE INFORMATION SERVICES BUSINESS UNIT
WHERE DOES THE CITY WANT TO BE?				
CORPORATE STRATEGIC PLAN AM POLICY AM POLICY AM STRATEGIC PLAN AM STRATEGIC PLAN	Development Communication Development Communication	Informed Responsible Accountable Responsible Accountable	Informed Informed Responsible Informed Informed	NA NA NA NA NA
WHERE IS THE CITY NOW?				
ASSETIC SAM (This is the corporate asset management data system)	Asset Data Collection and Recording Condition Assessment Recording Life Cycle Assessments Service Level Assessments Risk Evaluation	Responsible NA NA Consulted Informed Informed	Consulted Informed NA Consulted Consulted Consulted	Responsible NA NA NA NA NA
WHAT DOES THE CITY NEED TO DO?				
ASSET GROUP AM PLANS ASSET ACTIVITY PLANS	Capital Projects Planned Maintenance Reactive Maintenance Project Evaluation Reporting	Informed Informed Informed Informed NA Informed Accountable	Consulted Consulted Informed Informed NA Informed Responsible	NA NA NA NA NA NA Consulted

With clear distinctions between roles - and sign off from all involved - a lot of the conflict that often bedevils organisations, not only asset management units, might hopefully be avoided.

SOURCE/GUIDING DOCUMENTS	FUNCTION/PROCESS	BUSINESS UNIT DIRECTOR	BUSINESS UNIT MANAGER	BUSINESS UNIT
WHERE DOES THE CITY WANT TO BE?				
CORPORATE STRATEGIC PLAN AM POLICY AM POLICY AM STRATEGIC PLAN AM STRATEGIC PLAN	Development Communication Development Communication	Consulted Informed Informed Informed Consulted	Consulted Informed Informed Informed Consulted	Consulted Informed Informed Informed
WHERE IS THE CITY NOW?				
ASSETIC SAM (This is the corporate asset management data system)	Asset Data Collection and Recording Condition Assessment Recording Life Cycle Assessments Service Level	Informed Accountable Informed Informed Accountable Accountable	Consulted Responsible Accountable Responsible Responsible Responsible	Consulted Responsible Responsible Consulted Responsible Responsible
WHAT DOES THE CITY NEED TO DO?				
ASSET GROUP AM PLANS ASSET ACTIVITY PLANS	Capital Projects Planned Maintenance Reactive Maintenance Project Evaluation Reporting	Accountable Accountable Responsible Responsible Informed Accountable Informed	Responsible Responsible Responsible Responsible Responsible Responsible Informed	Responsible Responsible Consulted Consulted Consulted Consulted Informed