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AMQ
International's

STRATEGIC ASSET MANAGEMENT



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Strategic Asset Management: the Questions

Every now and then we need to refresh our understanding of what is particularly 'strategic' about strategic asset management. One way of doing this is to consider the questions we ask ourselves. If the answers to these questions can all be answered (at least potentially) by reference to our asset information data base or by getting or analysing more information about our assets, then I would say that the questions are not strategic, but operational. So what are the strategic questions? In this issue we reprise two articles from the Archives. Despite major developments in Asset Management since these articles were written, the issues raised are still relevant today.

Asset Management Strategy Made Simple (from Issue 61, May 4 2001) pp 2- 4

I have a program that can do that! (from Issue 183, Jan 23 2006) p.6.

We also consider a valuable source of questions in the "International Case Studies in Asset Management" ed by Chris Lloyd, ICE Publishing, 2012. (Institute of Civil Engineering, UK)

Using Questions pp 7-10

Do consider - and enjoy!

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EDITORIAL: On Strategy and Tactics.

The distinction between strategy, tactics and operations comes to us from the military, but we do not necessarily interpret them the same way that the military do.

Current military thought is that 'strategy' is the the first level, where planning determines the goals or longer run gains. The second level is 'operations' which covers the formation of military units (or, for industry, the way your resources are organised or structured) and 'tactics', the third level refers to immediate or short run gains.

In asset management the tendency is also to interpret strategy as the first level, as the planning that ensures that assets achieve the longer run goals of the organisation. However 'tactics' tends to be regarded as the second level and to be interpreted as the tools, techniques, modelling or processes to be adopted. 'Operations' for asset management is the foundational level at which the strategy is applied using the appropriate tools or 'tactics'.

As with the term 'asset management' itself, terminology is not necessarily consistent over all users, but this is the way it is interpreted here.

Operational asset management needs to be very detailed and specific to the asset being addressed taking into account the goals to be achieved. What used to be called 'operations and maintenance' often now goes by the name 'asset management' and it is this operational level that is being referred to. The best source of information for operational asset management is frequently the work of others in the same field.

Strategic asset management and tactics, however, are more general in approach and here much can be gained by learning from those in other fields. I like to concentrate on strategy and tactics (the tools, techniques, modelling, processes) where cross-fertilisation is possible.

In **Using Questions (pp 7-10)** I have indicated the themes and questions presented in the ICE Publication "International Case Studies in Asset Management". I leave it to you to determine which are the strategic, and which the tactical, questions. All are relevant and all are interesting.

How many could you answer?

How many do you think you should be able to answer?

ASSET MANAGEMENT STRATEGY MADE SIMPLE

ONE Principle

All strategic questions are portfolio questions.

TWO types of Question

1. **Direction Questions.** Those that help the agency see its current position and the direction it is moving in, and the direction it wishes to move in
2. **Decision Questions.** Those that evaluate a particular project proposal - but always in the light of the total portfolio

THREE types of Asset Measures

1. **Capacity** – answering the question “how much?”
2. **Condition** – answering the question “what state is it in?”
3. **Suitability** – answering the question “how fit for purpose?” or “how effective?”

OK! You can make things more complicated than this, but this is “strategic asset management’ *made simple!*”

THE PRINCIPLE

ALL STRATEGIC QUESTIONS ARE PORTFOLIO QUESTIONS

This principle refers to the need to consider all project proposals - at the strategic level - from the point of view of the entire portfolio. Failure to observe the portfolio principle in making asset decisions leads to asset ineffectiveness and may even completely negate the policy intent of the agency as shown in example 3 below:

Three examples of inefficiency and ineffectiveness by not observing the Portfolio Principle.

1. A road widening is argued for a highly trafficked road – it speeds up traffic flows over the widened road section but causes serious congestion where it joins a narrower road section

2. A new Catscan is bought for a hospital at a cost of over \$1 million. Because of its cost, the government insists that a maintenance contract cover it. However, no extra maintenance funding is provided and as a result maintenance is skimmed on other equipment leading to their early failure

3. The Federal Government announces new child care centres as part of its election campaign. A new centre is established that attracts custom from three surrounding child care centres. The centres that lose custom become non-viable and close. More child care places are lost than were created.

These examples illustrate very common mistakes and are drawn from my own experience, no doubt you can add to the list. The point is that they are all example of strategic asset failure – they failed to adequately factor in the impacts on the total portfolio.

TWO TYPES OF QUESTION: DIRECTION AND DECISION

1. Direction

At the strategic level the questions that need to be answered are ones that help the department to see the current position and the direction that the department is moving in, and wants to move in.

Examples of Direction Questions (illustrated by reference to a schools portfolio)

CONDITION

How does the overall condition of schools relate to the desired benchmark ?
Is the overall condition of schools improving, declining, staying the same?
What are the key exceptions, if any?
How is service affected by the answers to these questions?

CAPACITY

Is the overall capacity of schools deficient, in excess, or just right for the educational needs of the State?
What are the trends in school capacity?
What are the key exceptions, if any?
How is service affected?

SUITABILITY

Are school facilities suitable for the educational needs of the State?
What are the trends in suitability affecting the school portfolio?
What are the key exceptions, if any?
How is service affected?

FUNDING IS IMPORTANT TO DIRECTION

What will be the expected trends in condition, capacity and suitability if the current funding levels are maintained?

For a given *increase in funding* of \$x what improvements could be made?

In the general portfolio

In specific trouble spots

If funding were to *decrease by* \$x, what would be the likely impact on condition, capacity and suitability?

2. Decision

Decision questions relate to specific ways of addressing the issues raised by the direction questions. All individual project decisions should be able to show a clear link to the issues that the Direction questions raised. If the major problem identified in directions is the need to do A and B, individual project decisions focussing on C and D are rather missing the mark. (cf later SAM issues on the Investment Logic Map process)

THE WRONG QUESTION

The mistake that is often made is to ask ‘how will this new asset proposal provide service’. But that is the wrong question.

For example, a new, high-speed photocopier may be justified by the amount of use that it will get – but is this at the expense of other, perfectly adequate, copiers that are now under-utilised? How much will the *overall performance* increased – and does it justify the cost? (and c.f. the Childcare example on the previous page)

THE RIGHT QUESTION

Does this proposal enable the organisation to increase its service delivery, and is the increase worth the cost?

All individual asset decision questions must have regard to the agency’s goals and objectives and to its “policy settings”.

Examples of policy settings are:

No child should be more than 5 miles from a school

Footpaths to be installed on only one side of the road

Reliability of supply (of electricity, say, or water) to be no less than x

Having regard to policy settings means knowing whether there are other assets already available that will do the job – hence a portfolio issue.

3. THREE TYPES OF ASSET MEASURES CAPACITY, CONDITION, SUITABILITY

Capacity and Condition

Traditionally we have focussed attention on measuring capacity and condition for which there are reasonably well-developed measurement techniques. Life cycle costing, for example, is based on maintaining a given level of physical condition. Optimised replacement valuation focus on valuations that remove the element of surplus capacity (on paper, if not in reality).

Suitability

The really critical measure for the Asset Management Strategy is the third – measures of effective performance, or suitability. Increasingly forecasts of asset renewal are using estimates of economic life that are dominated not by condition decay but by obsolescence (changing technology and changing demands). Measures of valuation are moving away from measuring ‘cost’ of replacement to measuring ‘value’ of asset, which very much reflects the relevance of the asset in today’s world. (SAM Issue 58 presented the ST&M tools that address the performance question.)

**That’s it for the basics - one principle, two types of question, three measures.
Everything else is finesse.**

From SAM 183 Jan 23 2006

“I have a program that can do that”

How often do you hear an enthusiastic marker of computer software claim he has a program for strategic asset management? Is this possible?

Programs can help to illustrate the consequences of a given set of assumptions.—but THEY CANNOT GENERATE - OR TEST - OR CHOOSE BETWEEN THOSE ASSUMPTIONS.

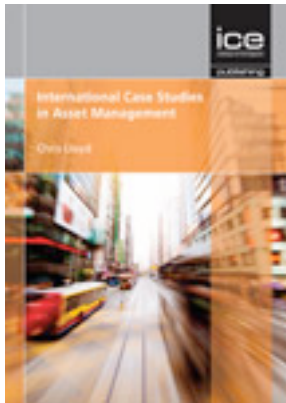
Programs do only what their programmers tell them to. If your programmer has not foreseen the (many possible) consequences for your particular assets in your particular configuration, in your location and future climate, with your current and future likely customers, customs, rules and regulations—and under a wide range of future possibilities for climate change, commodity prices, demand change, etc. - then you don’t “have a program”.

Indeed, if it were able to do all these things and show you the likely outcomes under a whole range of future possible outcomes—you would still need to choose between them and take appropriate action! **Be grateful! - The Strategic Asset Manager is not about to be replaced!**

USING QUESTIONS

There is nothing more valuable, nor as interesting, as a good question! Good questions make you stop and think, consider, then reconsider.

I would say that 50% of the asset manager's task is to develop the skill of asking insightful questions - and then to develop the information and tools to answer them. The other 50% is persuasively communicating the answers so that the right actions are taken.



Chris Lloyd's "International Case Studies in Asset Management" contains a wealth of really useful questions - 4 or 5 for each of the 17 case studies included - appended as discussion points. It is helpful to read the questions before reading the study because it will focus your attention. If you have not yet acquired a copy for your library, you should.

Run your eye over the following themes and questions.

Excellent for training purposes if you are studying asset management, or for self-education for the rest of us.

The volume is available as a print or electronic copy from.....

<http://www.icevirtuallibrary.com/content/book/102847>

Chapter 1. Wessex Water, England. A company wide approach

- 1.1 Why would periodic regulatory review result in an uneven cyclical pattern of investment?
- 1.2 What are the main risk to service associated with operational activity and external factors in your organisation?
- 1.3 In practice, how would a bottom-up as well as a top-down approach to strategy development be organised?
- 1.4 What do you think the right balance would be?

Chapter 2. Dublin Airport Authority, Ireland. Changing the mindset

- 2.1 For what reasons might the introduction of asset management be interpreted by people as a challenge to their professional standing?
- 2.2 What is wrong with deciding that assets need to be replaced because they have exceeded their design life and there is a risk that they will fail?
- 2.3 What are the potential benefits of aligning the CMMS, the asset register and the corporate management system?
- 2.4 What are the main obstacles to achieving this?

Chapter 3. Arts Victoria, Australia. Service oriented asset management

- 3.1 What are the main implications of service-oriented asset management for the allocation of capital spending?
- 3.2 What are the main benefits of all asset decisions being a function of the service strategy?
- 3.3 Are there any problems with this approach?

3.4 What impacts would you expect a service-oriented asset management approach to have on operational efficiency?

Chapter 4. South West Water, England. Risk based management, asset rehabilitation.

- 4.1 What does the average equivalent age of an asset signify?
- 4.2 Why are businesses that are responsible for ageing infrastructure under increasing pressure to demonstrate that they are effectively managing and rehabilitating them?
- 4.3 What are the main sources of pressure and how would you rank them?
- 4.4 What is more important to ensuring that cost-risk benefit decisions are robust, consistent and available - training, data accuracy or the decisions support tools available?

Chapter 5. City of Calgary, Canada. Service levels on public amenities

- 5.1 How would you assess the customer experience of a hospital?
- 5.2 How could the reliability of the results be improved?
- 5.3 How would you use the information to determine levels of service?
- 5.4 How could customer experience data be factored into long-term asset management planning?

Chapter 6. Scottish Water, Scotland. Structured decision making, medium, long-term

Consider the following value chain or equivalent for your organisation or industry: Organisational strategy - Asset management strategy - Asset lifecycle planning - Capital investment delivery - Asset operations.

- 6.1 What are the key decisions to be made at each level of the value chain?
- 6.2 What processes and techniques can be used to make those decisions and how robust do they really need to be?
- 6.3 What depth of data analysis is necessary at each level?
- 6.4 How can your organisation maximise savings at the top of the value chain preventing 're-invention of the wheel' further down, but still encourage feedback back up?
- 6.5 Do you have a clear view of the risk at each level, are you happy with the way those risks are managed and can you predict how they will change over time?

Chapter 7 Grand Port Maritime du Havre, France. Reducing Capital, Operating Expenditures

- 7.1 What are the main differences between maintenance and asset management?
- 7.2 What are the implications of reducing or deferring capex for maintenance?
- 7.3 What are the main business benefits of risk based maintenance?
- 7.4 What should GPMH do next?

Case Study: Network Rail, England. Best practice reviews

8.1 How are maturity assessments useful to organisations seeking to improve their asset management capabilities?

8.2 What are the main difficulties in justifying that these short-term decisions are sustainable in the longer term?

8.3 How can an organisation increase the likelihood that its asset management strategy will survive changes in the boardroom and in its structure?

8.4 What are the main implications for business leaders of centralised and decentralised approaches to asset management?

Chapter 9 ScottishPower Generation, Scotland. Integrating Process Safety and AM

9.1 In what ways can asset management systems improve health and safety and environmental performance?

9.2 What is the relationship between safety, reliability and asset management?

9.3 Why does successful process safety require good asset management at all stages in the asset life cycle?

9.4 In your organisation, is health and safety more likely to gain people's interest and commitment than asset management? If so, why?

Chapter 10 City of Cambridge, Canada. Information and Knowledge Management

10.1 Does asset management need to be established as a separate department or function?

10.2 What are the implications of doing this? And what are the alternatives?

10.3 Other than the provision of knowledge-based decision support processes. What other actions can help an organisation organise the serviceable life of its assets?

Chapter 11 London Underground, England. Embedding AM thinking

11.1 Are public-private-partnership contracts incompatible with good asset management?

11.2 Can asset management be contracted out? If so, how, and what are the main implications?

11.3 'No one owns it. everyone does it' - what does this mean in practice?

11.4 Why would PAS 55 of ISO 55001 no longer be relevant if an organisation reached a certain level of asset management capability maturity?

Chapter 12 RailCorp, NSW, Australia. Leadership through organisational change

12.1 What are the principal differences between maintenance optimisation and asset management?

12.2 Is good asset management possible where corporate strategy and objectives are subject to regular changes?

12.3 What tensions might there be between asset management and individual experts, and how can these be overcome?

12.4 What are the main characteristics of good asset management leadership?

Chapter 13 SP AusNet, Australia. Continuous Improvement and organisational change.

13.1 In what ways are total quality management and asset management similar?

- 13.2 What are the potential advantages and disadvantages of bringing more than one organisation into a single asset management system?
- 13.3 Why is a consistent approach to risk assessment considered so important to asset management?
- 13.4 What are the main differences between asset management policy, strategy and plans?

Chapter 14 City of Hamilton, Canada. Intergenerational Fairness

- 14.1 Is inter-generational fairness possible to achieve? Is it even a desirable objective?
- 14.2 What unique benchmarks or service standards apply to community infrastructure?
- 14.3 How can community profiling be used to ensure that public infrastructure-based services meet capacity and service level demands?
- 14.4 How might forecasted population growth rates influence the characteristics of public-infrastructure-based services? What are the asset management implications?

Chapter 15 Rio Tinto, Australia. Global Competence and Learning

- 15.1 How would you set about defining core competencies in asset management for your organisation?
- 15.2 What are the main advantages and disadvantages of bringing together people from different parts and functions of an organisation to learn about asset management?
- 15.3 Which individual projects would be most relevant for people to undertake as part of an asset management learning programme?
- 15.4 What success criteria would your organisation use to measure the effectiveness of an asset management learning programme?
- 15.5 Who would be the main stakeholders in an asset management learning programme in your organisation?

Chapter 16 Euroports, Luxembourg. Transparency and Performance Improvement

- 16.1 Why are investors so interested in EBITDA and CAFD?
- 16.2 What are the implications of making financial information like EBITDA targets more widely available within a business?
- 16.3 In what ways could asset management assist in the integration of newly acquired businesses?
- 16.4 What would be the SMART asset management objectives for the chief executive in your organisation?

Chapter 17 KPMG, Belgium. Financial and Technical Data Alignment

- 17.1 What are the main benefits of aligning technical and financial information - for shareholders, directors, staff, suppliers, government?
- 17.2 How would you set about harnessing this information in your organisation?
- 17.3 What are the main obstacles to achieving this and how would you overcome them?
- 17.4 What are the main implications of differences between technical and financial data for asset management decision making?

Buy and Read the Book!

Also, If you would like to see any of these questions discussed in SAM, email me - penny@amqi.com and we will find the right experts to lead off the discussion