

### Mapping Asset Management: a game for multiple players

Definitions of asset management today are pretty broad and all encompassing. But WHO exactly is *doing* asset management? Is a project manager included within the field of asset management, for example, or a building supervisor. Are financial analysts, customer services liaison, or community stake-holders?

In this issue, and on the website, I have suggested a mapping game to help us think through this question - and, most particularly, to see the way that others think about it, because when we talk 'asset management' to others, particularly to other disciplines, are we really sure that we are all talking about the same thing?

There is no right answer to this game, only enlightenment! The rules (on page 2-3) are simple and the answers unlimited. I encourage you to try your hand.

#### Also in this issue:

**Leo Gohier** on 'Planned Maintenance'

**Phil Caffyn** 'Cap-Ex'

**Charles Johnson** 'I am not, nor have I ever been, an "Asset Manager" and more on the history project with our target for end May.

*As always, please consider - and enjoy!*

*Penny*

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## Mapping Asset Management: A game for multiple players.

Do you see asset management the way that others do? Will seeing your view help others to expand their understanding? Will seeing the views of others, help you? **Will seeing how others see the world of asset management help you in communicating with them?** The answer to this one should definitely be yes!

### Rules of the Game:

1. Draw 5 circles (*this mapping is most easily done on a computer but freehand on paper is fine, too*) - You can reduce or increase the number of circles later as you see fit.
2. Label each of your circles with the key functional groups that you see in Asset Management.
3. Now resize your circles to *roughly* represent the relative sizes in terms of participants in the groups that you have chosen.
4. Move your circles around to show where groups interact and intersect
5. Draw the external boundary line to delimit asset management
6. **Optional:** for advanced players only - Indicate with a dotted line if you can the divide between strategic and technical asset management. You can omit this if you wish.
7. **Optional:** if you wish you may add notation to explain your diagram. Or you can let the pictures speak for themselves.

**That's it!** Now submit your map, with or without notation, to [info@amqi.com](mailto:info@amqi.com)

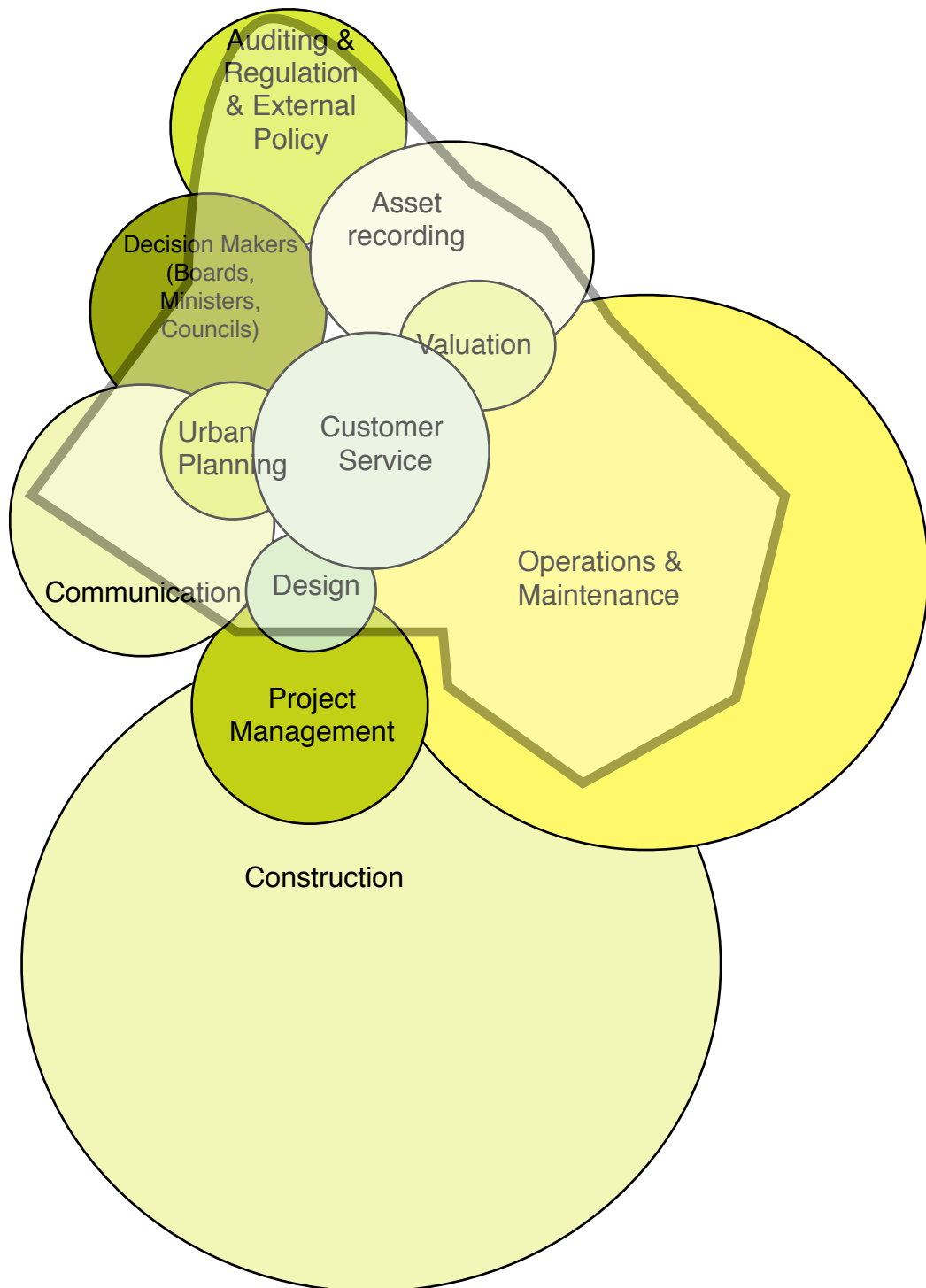
**The aim of the mapping exercise** is to help us think about who we are, to think about who is a 'player' in the asset management game. All maps will be displayed on the website and readers will be invited to vote for those that help them to see aspects of asset management that they hadn't seen before, or which help them to consolidate their existing ideas.

### Prize

The best map/s submitted ('best' in the sense of provoking the most thought!) will win a copy of the recently published "Asset Management: Whole-life management of physical assets" edited by Chris Lloyd and published by Thomas Telford Publishing in the UK. February 2010. **Your can choose either a pristine copy or I will sign my chapter 5 for you!**

Anyone can enter! Enter as an **individual**, or put in a **group entry** from your asset management team. Student entries particularly encouraged. **Entries close May 31st.**

## Example



**Notation:** Everything within the thick grey borders is considered asset management. Partial inclusion of a group indicates EITHER that not all participants are in asset management OR that not all of the daily actions of the participants are considered to be asset management

## Leo Gohier on Planned/Preventative Maintenance:

*Everybody is hot on preventive maintenance, but do you really need it?*

*PM: truth or fiction?*

This is a very brief outline of a complex issue. The basics are explained in order to provoke thinking about the benefits of “smarter” maintenance that will result in more information on systems, cost-savings and improved reliability – a winning combination.

- there are a lot of fancy-dandy definitions out there for different types of maintenance, so these come from the practitioner’s viewpoint, and are for the practitioner, not from a design engineer’s perspective
- I believe that there are fundamentally only *three* types of maintenance, and that every other type is really a sub-type of these three:
  - **CM: corrective maintenance**
    - ♣ it's reactive
    - ♣ something breaks and you go out and fix it, i.e. you correct a problem
  - **PM: planned maintenance**
    - ♣ It's performed on a time basis (ex. weekly, monthly, and annually, etc.) or on a usage basis (ex. hours run, etc.)
    - ♣ it's done whether equipment needs it or not
    - ♣ some also refer to PM as Preventative or Preventive Maintenance, but I'm not sure what you are preventing because it's not failures (more on that later)
    - ♣ it's not the panacea that people think it is, and in fact can be a waste of money and human resources (except during the warranty period when you need to follow the manufacturer's recommendations for obvious reasons)
    - ♣ studies in the airline industry in the late 1970's have shown that nearly 90% of all failures are not age related and that nearly 80% of those failures are called infant mortality failures (i.e. early in a product's life as a result of material defects, design blunders, errors in assembly, etc.) – this explains why equipment can often fail shortly after you have taken it apart to do to preventive maintenance or corrective maintenance and then put it back together again
    - ♣ many failures often considered normal life failures are actually infant mortality failures
    - ♣ for example, changing the oil in your car or in a pump provides absolutely no information whatsoever in terms of the condition of the motor unless you follow up with tests on that oil
    - ♣ traditional PM is the equivalent of replacing everybody's hip or giving everybody a heart bypass (whether they need it or not) because they are 65 years old or because their heart has beat 100,000 times
    - ♣ If it's not logical for a human being, why is it logical for a pump or other piece of equipment?
    - ♣ this is where the third type of maintenance should be considered

- **PdM: predictive maintenance**

- ♣ you monitor the health of your equipment by doing investigative work, gathering information and proceeding with repairs only when required
- ♣ even similar pumps don't deteriorate in the same manner and at the same time, so you need to track the differences
- ♣ PdM is the equivalent of your annual check-up at the doctor with blood work and other associated tests
- ♣ PdM usually consists of three basic activities:
- ♣ Oil analysis
- ♣ Vibration analysis
- ♣ Infra-red (or heat) analysis of your electrical components

These activities require specialized equipment and some staff training, but these are not onerous.

- **Conclusion:** these activities provide you with the information necessary to do better, improved and smarter maintenance – they improve reliability by reducing unplanned failures that require CM (corrective maintenance). They should be done on a regular basis in order to develop the necessary databases for trend analysis, and finally they should be done after most interventions on equipment in order to prevent infant mortality failures. Get to know how your equipment is performing and deteriorating rather than blindly doing maintenance.

- **Other comments:**

- ♣ Data for the sake of data is useless, is nothing
- ♣ Information goes beyond data – it is precious, it is knowledge – no real data is gathered when doing CM and PM, hence the need for PdM
- ♣ Run to failure is a good and cost-effective option:
- ♣ If it's not a critical system
- ♣ If you have backup
- ♣ If you can respond quickly, i.e. you have critical spares on hand
- ♣ Keeping assets forever (or for a very long time) is generally not cost-effective and often represents the highest life-cycle cost for a piece of equipment, although it appears on the short-term to be the cheapest option.

### **Is there another perspective?**

Leo, as always, is practical, sensible and to the point. Yet there are many who do not follow his precepts to (1) determine maintenance based on need and (2) to use maintenance to learn more about their assets. **In particular I am thinking of managers of large building portfolios (Housing, Health, Education, Corrections) who manage their (largely outsourced) maintenance contracts on the basis of planned maintenance. What are the arguments in favour of this approach?**

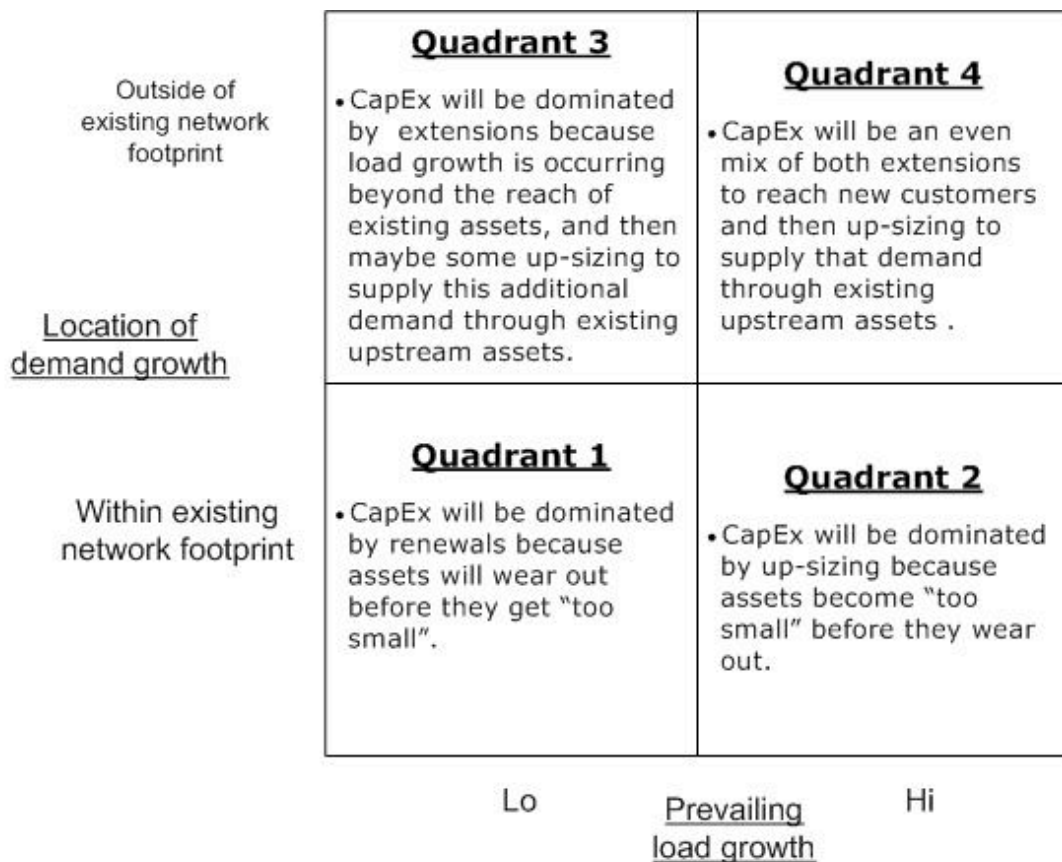
## CAP-EX

Time was when *amqi.com* was the ONLY website dedicated to asset management. Today there are many that either have asset management as part of their remit or which focus on a particular aspect. Here is a new one that I think may be very useful for many of you, a website focussing on different aspects of Cap-Ex decision making.

It is produced by **Phil Caffyn**, Editor “Pipes & Wires” to promote best practice Capital Expenditure policies, processes and planning in the infrastructure sectors.

In it, he adopts the three divisions of capital expenditure first advocated in “The Renewal Challenge”, the Victorian local government infrastructure report, 1998, namely renewals, upgrading and extension. The reason for differentiation is that each of these capital expenditure types has decidedly different maintenance and operations consequences.

He introduces the following simple quadrant approach as a thinking tool. And there is much more of interest at <http://www.utilityconsultants.co.nz/capex1.htm>



*You may wish to think on this when designing your map (pp2-3)*

## **I am not, nor have I ever been, an asset manager.**

**by Dr Charles Johnson,**

Technical Director Competence Assurance Solutions Ltd (CAS)

I am not, nor have I ever been, an asset manager. So, how did I get started in asset management? The answer, of course, is chance. About 16 years ago I was doing some consultancy work on competence management with the Human Resources Director of a chemical company. This company is responsible for manufacturing and transporting some seriously dangerous chemicals around Europe. The HR director asked one day if we could put together some training for their senior managers in crisis management. They had plenty of experienced staff who could deal with emergency planning and emergency incident handling but no-one at the top of the organisation had had any training in corporate response or business continuity planning. So, after some discussion, we agreed to build a computer simulation which could be used for training the senior team in media response and business crisis management.

At this point I will gloss over the problems of creating an interactive simulator that would work on old, 8-bit IBM PCs with only 64 KB of RAM or the extremely clever software that my fellow director wrote to make it possible. For me, the key thing was having to find out how their operation worked in sufficient detail to identify how a major accident might be caused, what the damage might be and the implications of the damage for other parts of the business, what would have to be done to recover from the accident, how much of their existing contracts they could still fulfil and how long it would take to get back to full functioning. Indeed, one of the scenarios the management had to contemplate was that they might never recover.

So, we had to discover or work out what design flaws might exist, where in the maintenance regime errors might arise, how production and transportation systems might be disrupted, the possibilities for moving production elsewhere or using alternative transport, the costs of repairing or replacing damaged plant, and so on. Then we had the pleasure of, virtually, blowing up a railway tunnel in the UK or, on another occasion, partially destroying a chemical plant in Germany, and watching how the management team coped.

In the next few years we developed similar systems for other chemical companies, a pharmaceutical company, the IT division of one of the UK high street banks and the military. So, I suddenly found myself as an occupational psychologist knowing more than, in some cases, I really wanted to about the management of all sorts of physical

assets and about how processes and procedures should be designed and staff trained and developed to optimiser the use of those assets.

## **THE HISTORY PROJECT**

How I got started!

The first 21 profiles are already on the website.

Some more are in the processing pipeline and will be added shortly.

**Our target for end May is 100 profiles  
and we can't do it without you!**

**Please submit your story of how you got started in asset management. It's not difficult and it is always fun to look back and reflect on life.**

So tell me **WHEN** you first got interested.

**WHAT** your role was at that time

**WHAT** it was that initially interested you - an event, a person, a paper, an idea?

**WHAT** you then did once your interest was whetted.

**That's it!** Not your whole life in asset management. Just how you got started.

In the form of an interesting story of between 350-400 words.

(See the examples already uploaded on the website)

Every one contributing will be invited to take part - if they wish - in later analysis and discussion and hey, you may even get to be cited in the resulting book!

**Please take part!**

**Email your story to [info@amqi.com](mailto:info@amqi.com)**