AMQ INTERNATIONAL
STRATEGIC ASSET MANAGEMENT

Tunnel Vision

Infrastructure Funding Under Threat, pt 2

Issue 258
January 26
2009

Tunnel Vision:

> *In medical terms this is the loss of peripheral vision reducing sight to a small field of vision; by extension to decision making, it is a form of selective attention that contributes to inadequate problem-formulation, partial solutions to complex problems and to the generation of even more intractable, additional problems.*

I suggested in the last issue that the greatest danger we face now for infrastructure funding is not in the *getting* of it, but rather in the *spending* of it.

But the spending of infrastructure funds is our business as Asset Managers. That means the ball is now squarely in our court! Governments are eager to spend money on infrastructure. Maybe too eager.

When the money comes are we confident that we can spend it wisely in the best balance of long term and short term needs of our organisations or communities?

What is this confidence based on? And how can we make it stronger?

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

EDITORIAL: The story so far

In the last issue we looked at the threats to infrastructure funding from wasting it on make work schemes and trivial benefits, and the risk of excessive costs and corruption from the lack of accountability and transparency with which a distressingly large number of infrastructure projects would now seem to be afflicted.

In this issue I want to take the story further and look at the problem of tunnel vision and the current state of excessive expectations.

And then, having laid out the threats, I want to look at what tools we have - and what tools we may yet need - in order to deal with these threats and still produce sound infrastructure decisions from inception through to completion.

I was pleased to see, on the IPWEA Asset Mates Discussion Forum this week (see www.ipwea.org.au) the positive response received by Brian Middleton to his call for greater due diligence on public infrastructure investment.

He also spoke of 'addressing the decades of underfunding in maintenance and embarking upon planned and managed maintenance strategies that governments can both reinvigorate the economy with new jobs and deliver much needed productivity boost'.

In fact, most of the discussion amongst practitioners has been about the boost to jobs and productivity.

These things are important but it is also important to realise that

1. In the current climate the productivity boost that we are used to in better times may well not come about, and
2. That given the long delays in serious infrastructure projects, if we are going to get them right, infrastructure may not be the best source of jobs within the next year or two.

(See p. 6 on the Problem of Excessive Expectations)

It may also be a painful fact that expenditure on the infrastructure asset of YOUR choice may not be the most important for the community at this time.

We all need to widen the scope of our thinking in these times and that is what I hope to start with this issue.

Please consider, enjoy - and respond!

Penny

Tunnel Vision

Where Experts Get It Wrong.

The classic example of experts getting it wrong is the "population crisis" of the 1960s and 1970s, when biologists like Paul Ehrlich were convinced humanity was about to suffer massive famines and devastating shortages of energy and other resources because the growing population would exceed the planet's "carrying capacity." Economist Julian Simon challenged this concept arguing that humans were remarkably adaptive. When his work was published in Science, the journal was widely criticised for publishing the work of an ignorant outsider. So Dr. Simon challenged the supposed experts to pick any resource that was going to become scarce, and offered to bet them it would instead be cheaper in the future. Dr. Ehrlich and two specialists in energy and natural-resource issues, John Harte and John Holdren, picked five metals and bet $1,000 in 1980. Ten years the supposed experts in natural resources had to pay up, because all five metals were cheaper, just as Dr. Simon had predicted.

You can read this on Jon Tierney's blog "Tierney Lab" He trained as a scientist and then went into journalism. He says he is guided by two founding principles:

1. Just because an idea appeals to a lot of people doesn't mean it is wrong.
2. But that's a good working theory.

And it is probably not bad for us, either. Because it causes us to widen our field of vision. The ecologists got it wrong because they had a narrow field of vision. This is not to say that economists will always get it right but in this instance they did. (**We could, for instance, challenge the notion that new infrastructure will automatically increase productivity. Indeed, we might ask, why at a time of unemployment we should want to!**)

We all shake our heads ruefully when ..

Heritage bodies refuse to allow modifications for fire exit and the health authorities maintain the building cannot be used without them - and so the heritage building they argued over does not get used and slowly crumbles.

Or where the fire authorities insist on fire extinguishers in school corridors - but the teacher's first requirement in case of fire is to see to the safety of the children (and not to put out fires) and so the extinguishers regularly get vandalised and are replaced at great expense - but to no effective purpose.

Environmental groups seek to protect a particular species in a particular location, but do not set their activities within a wider environmental management plan so that while one species is receiving the media attention (and reactive Government funding) other species suffer.

These are all examples of tunnel vision.

But asset managers are not immune from this affliction.....

Asset Managers and Tunnel Vision

(OK, this is where it gets painful!)

'The Future ain't what it used to be' - and neither is Life Cycle Analysis. It is time to re-cast our ideas, information and planning

Infrastructure decision making is much harder now than it was when I started looking at it over 25 years ago.

Then we could make the assumption that the future was going to be pretty much like the present - only better! This assumption actually underlies all our use of life cycle analysis when applied to infrastructure renewal.

25 years ago, life cycle analysis as a technique was only used to compare and decide between future new investment proposals. Then the South Australian Parliamentary Public Accounts Committee applied the technique to the renewal of existing infrastructure by looking at the likely residual life of renewable infrastructure components. In a study that examined all of that State's major infrastructure, projections were made of the likely cost and timing of infrastructure renewal - and a new industry of renewal forecasting was born!

But that industry, as with the studies that launched it, is based largely on the notion of 'like for like' asset renewal and a default assumption that if it exists it will be replaced. When we are talking about major dams, this is a reasonable assumption. With dams, there are not many options. Even if the population being served moves away, the dam still needs to be maintained pretty much as is, if only for safety reasons. But for other infrastructure this assumption is becoming less and less true. Every year not only are new methods of renewal developed and older ones dropped, but new and changed demands are placed on the infrastructure system which make 'like for like' renewal increasingly a sub-optimal solution and start to challenge the presumption of renewal itself.

Even the use of 'modern asset equivalents' and adjustments for excess capacity only go part of the way to correct our projections. It doesn't even start to address changing demographics, changing use patterns, changing demand, and changes even within the portfolio itself (introduce a superhighway and you reduce the demand on other major roads.)

This demand side volatility is increasing and it is changing the way we need to use life cycle analysis.

Instead of using it to project 'cost and timing' as did the early studies - which was a quarter of a century ago! - LCA is now best used only for indicating the *timing* of intervention. If a component is coming to the end of its life, LCA can tell us that *some form of intervention will be needed.* But exactly what needs to be done will depend not only on the physical condition of the asset but also - and critically - on the nature of future service requirements. It may be that the asset should not be renewed at all, or that the opportunity should be taken to modify it.

But this decision goes beyond the information that the asset register can provide. It thus goes beyond what LCA can provide. Life Cycle Analysis is still critical - it just isn't enough. And decisions based purely on LCA and asset data will, in these changing times, almost certainly be wrong.

Excessive Expectations

are a form of tunnel vision

:Or, cease the handsprings! This is serious.

My colleague, Professor Gordon Sparks, University of Saskatchewan, Canada, drew this article in the International Herald Tribune to my attention. It is entitled "Maybe it can't". It's message is important for all of us. We need to consider it carefully and moderate our excessive expectations.

"As the recession deepens, President-elect Barack Obama is gearing up to spend hundreds of billions of dollars on public investment projects, counting on them to lift the economy, as they have in the past.

But this time that may not happen. Public spending, American style, has worked best in good times, when people have jobs and executives are eager to invest. A new public highway is soon lined — in good times — with stores and malls filled with consumers. A dollar spent by government generates three or four from the private sector.

That symbiosis makes a humming economy hum more, as it did in the 1950s and '60s. But it may not work that way when the American economy is in full retreat, as it was in the 1930s and seems to be today.

As a measure of the current disaster, the Federal Reserve last week lowered interest rates to an unheard-of near-zero percent and offered in effect to give away money if a fearful nation would only spend it. But panicked by investment losses or fearful for their jobs, people tend to hold back. In such circumstances, a new road could be lined not by shopping malls, but by empty, overgrown land.
...
"If that spending can't get the private sector going, then it is just a make-work maintenance operation," said Stanley Moses, an economist at Hunter College in New York. [referring to the 700 billion economy bail out]
...
In the opening months of the worst bust since the Great Depression, Obama is expected to seek sustained outlays over at least two years to repair roads, bridges and waterways; to build and repair public schools; to expand the broadband network; to digitize medical information; to advance green technology. An economic adviser says his goal is "to encourage private investment, particularly in areas where we have too little investment today, for example, solar systems and wind power."

But Obama is bucking a deep private-sector funk, a bit like what Roosevelt described in his first Inaugural Address as "fear itself — nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance." Borrowers and lenders have pulled back. Business investment has plummeted. So has consumer spending. "A psychology of bad times is becoming the mindset of the public," says Andrew Kohut, director of the Pew Research Center, a survey operation.

Like Roosevelt's dams, Obama's expenditures will no doubt generate jobs and wages in the construction phase. But in 1937, Roosevelt, thinking that the private sector could sustain itself, pulled back on public spending. Some historians say this was a big reason the economy sank again.

Obama faces a similar danger. Green-technology spending might spawn a far more efficient solar panel, but investors still might shrink at manufacturing it. What if consumers — having lost equity in their homes and scrimping on cars, vacations, even college tuition — were reluctant to buy and

install the panels? "There are so many problems today and no good news, and that is enough to stop the impact of what Mr. Obama does," said Moses of Hunter College.

The president-elect and his advisers recognize this danger. But they — and many others, including some Republicans — see no other choice. ... Whatever the obstacles, Obama's plan would mean giving up the view — widely held since the 1970s by economists, policy makers and business executives — that the private sector, by itself, is the key source of prosperity and full employment, and government spending is inefficient.

Perhaps with that in mind, Obama evoked as an illustration of his plan's breadth not the desperate 1930s, but the prosperous 1950s and '60s. That was when President Dwight Eisenhower and Congress set out to build the Interstate System of highways — a gift to an expanding auto industry and to trucking that also linked the country, encouraging all sorts of other investments.

Read the full article at http://www.iht.com/articles/2008/12/21/news/21uchitelle.php?page=1

This sober reflection, however, is not to be seen in the financial blogs or the enthusiastic conference offerings.

The following excerpts are also courtesy of Gordon Sparks.

From an Infrastructure Conference Blurb

TAKE AWAY these EIGHT solutions that will impact your municipality IMMEDIATELY:

(1) BOOST the Economy
(2) MAXIMIZE the impact of your investment dollars
(3) BUILD economic strength
(4) CAPITALIZE on new opportunities and technologies
(5) IMPROVE integrated municipal operations
(6) ADAPT alongside change for success
(7) PROMOTE local prosperity
(8) CLOSE the infrastructure gap!

And from the blog of a financial advisor

When there's virtually nothing left that you can count on,
Grab Your Share of The World's Richest Depression-Proof Profit Opportunities!

Sure there's going to be wasteful decisions, he continues cheerfully, but there are 'huge profits' to be made.

In all of this excitement I would hope that as Asset Managers, we can be the sweet voice of reason; and offer calm, lucid, analysis.

How might we do this?

Coping with New Challenges:

Tools of our Trade

The first thing is to recognise that *the game has changed!*

It is no longer a matter of trying to convince governments to spend money on your assets - *although that may still* seem *to be the game.*

The more important issue is to develop the tools and the processes we need to make sure that what we are given to spend is spent wisely. This means that we now have the opportunity to move from being funding petitioners to being decision-makers and advisers - a much higher role if only we are prepared to take it.

The tools we have:

Asset registers that can record asset history and condition

Life Cycle Analysis that can use the asset history and condition to make predictions of when intervention is needed to extend the life of the asset (although, as noted on the previous page, it is not sufficient to argue that the life of the asset *should* be extended!)

Techniques for assessing asset value and condition

Asset Management Manuals, Guidelines, Frameworks

The tools we need:

Accountability, Transparency: Standard, well accepted, formats for presenting a justified case for infrastructure expenditure that are made publicly available and used for purposes of audit. (*Investment Logic Maps* are a possibility, see SAM 246. And the ASCE Principles (SAM 257) are a good statement of what needs to be included)

Asset Management Governance Principles: A recognised statement of the principles that we should live by - and be accountable to - on a daily basis. For own and audit use.

And what else?

A way in which we can bring together the views and experience of experts from different disciplines and interests to contribute to the **dialogue** (see next page) that should proceed major infrastructure investment decisions.

New ways in which we can learn from each other. At the moment we have two major ways - we can attend a conference or we can read a paper. With the development of new tools of communication, surely we can now do better than this?

Avoiding Tunnel Vision

A bland prescription to 'think holistically' is pretty useless! We have few polymaths today like Michelangelo and DaVinci who could excel in multiple fields of endeavour; today's world is far too complicated and complex. Even if we try, we could only get our heads around a small amount of this complexity. It is clear that **we can no longer 'go it alone'**

The days of big decisions being made by one person - even if that person be an engineer - are over. And the sooner we recognise it and learn methods of working effectively in groups the better. So many times I hear from asset management colleagues that the aim of the game is 'to get *them* to see it *our* way'. It isn't. Let me return to the questions I asked on page one:

> Are you confident you are doing the right thing?
> What is this confidence based on?
> How can we make it stronger?

DIALOGUE! (important, read carefully, there is very little of this being done)

One way is to take a genuine sounding from an intelligent group with different interests, skills, abilities, knowledge and experience.

And we need more genuine discussion, too - and debate. We tend to use these words today as if they were interchangeable - which is an indication of how little real dialogue we have!

Peter Senge (1990, The Fifth Discipline, p.237) described dialogue and its relationship with discussion, making the following points.

- Dialogue and discussion are two different conversation processes in teams.
- To be effective, the two processes should not occur at the same time. One should follow the other, with clear signalling that a change in process is going to occur.
- Complex issues are exploited creatively with dialogue. Listening is intense, focussed on understand other people's views. Own views are expressed to show one's own understanding with other members of the team: to put them on display; not to try to convince others that one's own views are right.
- Discussion searches for the best answers to decisions that have to be made. This is the time to make a case, explore strengths and weaknesses in competing cases, find a shared basis for decision making, and identify the best answer currently available.

So there you have it! LISTEN, UNDERSTAND, then seek to be understood. An old precept but we need to find ways to make it work for us, today.

I have some ideas that I would like to share and develop with you this year.
And I would very much like to *listen and understand* your ideas.
Penny. 61 (0) 8 8359 0559.