

Projecting Problems

The pace and scale of current developments in Australia's mineral resources sector are unprecedented. But delays and cost blow-outs in major projects threaten to leave a legacy that the industry will pay for, for many years to come.

By **David Noort**



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The issues of high-profile mining project budget overruns are well documented in the press and are being attributed to a sharply escalating cost environment associated with the increased number of projects in the development and construction pipeline, as well as a scarcity of competent, skilled resources to deliver these projects.

The cost escalation in major construction projects in Australia from 2001 to 2005 has been estimated at 50%, with employment in the Western Australian mining industry alone rising 30%.

There are indications that 2006 delivered escalating construction costs close to this magnitude in one year alone, with employment in the WA mining industry rising a further 10%.

The current operating environment is a contributing factor.

However, the issue of the failure of mining study projects to fully account for cost and time-related issues that eventuate is not an entirely new phenomenon that can be attributed to only the recent escalating cost environment and shortage of resources.

There is evidence to suggest that even

before the recent commodities boom, the performance of feasibility studies was no better than they were in the 1970s, despite the advent of spreadsheets and sophisticated financial modelling software.

A study of 60 mining projects covering the period from 1980 to 2001 showed average cost overruns of 22%.

So why is this?

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Regardless of what optimising, planning or financial software was used, mining is at best an inexact science. Mine feasibility studies rely very heavily on the experience of the people involved and, to a much lesser extent, on the technology used to generate the findings.

Studies can be manipulated to achieve a desired outcome.

Most mine feasibility studies show

that projects are most sensitive to "uncontrollable" factors such as commodity price, tax and inflation than "controllable" factors such as recoveries, capital and operating costs. In fact, it is usually possible to exceed any financial hurdle required without altering the technical details of the project, only changing the economic factors.

Politics can bias the findings. Technical projects frequently involve complex interrelationships between departmental "silos" within an organisation as well as with external consultants and stakeholders. At times these interrelationships may be politically charged and blur the objectivity of science with the subjectivity of attitude and behaviour.

Management may also get caught up in the euphoria of the share markets. Markets are now crediting companies on positive investment decisions, at times with little regard for risk. Too often, particularly for the junior and mid-tier miners, pressure to derive a favourable outcome from a project study comes from the highest levels of the organisation.

Projects typically undergo much iteration to come up with what is often only a single estimate of project value. The result may hide the fact that all too often, the projects are biased towards parameters that produce a favourable project result.

To ensure resource companies are not left with a legacy that can cause significant long-term financial problems, there is a need to understand that the solution is in processes that are designed to manage the people and the risks, not the science behind the numbers – where management celebrates "failure" as well as "success".

Momentum Partners is a Perth-based business consulting and advisory firm focused on servicing the mining sector. **RS**

The long haul. Budget overruns on mining projects are well documented and are a pressing issue for the resources sector.

