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Identifying True Value: Unlocking value from your Prefeasibility Study

By Karl van Olden



Ready – Fire! – Aim is a cliché that is all too often apt when describing what went wrong when a mining project is over-budget, late and off target.

For owners of mineral assets, efficient and cost effective project development is critical for achieving value. Unfortunately, too many executive teams are taking short-cuts in their development projects to conserve money and time, thereby doing exactly the opposite and exposing their shareholders to lost opportunities.

Most project participants can tell you that the study process for a project moves from concept study to prefeasibility study (PFS) to definitive study with precision in the estimates improving from 40% to 25% to 10%. But, when the project proponent's focus is only on increasing precision in each step, it is often a surprise when the project turns out to be precisely wrong.

Successful project developers know that the process has more depth than this. It follows a course that develops a business case from concept stage to option selection to definitive design for final approval and implementation. The prefeasibility study (PFS) is where the development options are identified.



The PFS is the step where the study “craftsmen” are separated from those simply ticking boxes. It is tempting to take a development option identified in a concept study (developed on early-stage and incomplete information) and build it to a higher level of precision in a narrow-focused PFS and then invest in detailed engineering to define the same option for construction.

The difference between the two approaches can be illustrated in a familiar example of a shopping trip to a clothing store by a husband and wife.

The husband strides in, finds the first pair of jeans that are his size, pays the money and leaves with his prey under his arm. The wife by contrast, has a look at the range of jeans,

tries a few pairs on, bargains with the sales-person, asks a third party for advice on the look and leaves with a pair she knows fits well, are good quality and are the best value available. Possibly she leaves with a skirt instead. The process didn’t cost her any more time or money than that she could afford.

Why then is it that the boards of so many small to mid-tier mining companies (and a few majors at that) focus on relentless project milestone delivery too early in the project process, with so little time and effort applied to risk analysis and option development.

Unforeseen risks can cost any timeline or budget far more than the effort required to assess and mitigate these. Missed opportunities can represent orders of magnitude multipliers of project value that add no more cost to the project than the cost of seeking reliable and experienced advice from those who have done it before.

Is the under-representation of women in mining companies at decision making levels a fundamental weakness? Are male dominated boards in touch with their feminine side enough to shop around and ask directions at the right time?

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Here are some tips on how to make a PFS set your project for success:

- When a business concept has been identified, select a broad team to collectively identify the PFS scope, risks and opportunities. Be careful to guard against group-think and blind-spots. A professional independent facilitator is always valuable for this.
- Don't be afraid of brutal honesty (in fact encourage it) in facing project risks. It is a strength, not a weakness to question your assumptions.
- Be explicit on the objectives. As an example, the objectives for a mining project PFS could sound something like this – “Select a development option to reliably deliver value to shareholders, that is better than other options available” (like “do nothing”)
- Be clear on how opportunities are to be efficiently evaluated. Set time and budget limits. Beware of paralysis by analysis.
- A PFS should be about learning. With learning, you may change perspective. Install appropriate checks and feedback loops to make sure you keep focussed on your measures of success as you learn and you are decisive at the right times. (Get off at the next stop if you are on the wrong bus)
- Close off the PFS with a clear and inclusive decision on the option selected, the risk controls to be managed and the communication required inside the team and with stakeholders.

A final tip, don't be afraid to take a more feminine approach to the PFS stage of a project. What you learn could transform your project. There will be more than enough opportunity to release the hunter once everyone is confident that the correct prey has been identified and the hunt is on.



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Karl van Olden is a mining engineer with 25 years' experience in planning, development and operations of a diverse range of open pit and underground resources assets across Africa, Asia and Australia. Karl manages the mine engineering team based in our Perth office but maintains global visibility of all engineering-related projects. Karl can assemble teams internationally to provide timely and practical advice from scoping level through to full feasibility studies. The Mining services team work closely with our Resource group to ensure that good geology translates into effective mine planning and more efficient operations. The synergies created by this collaborative ethos enable our team to assist our clients to operate their mines at the optimum level.