



WHITTLE CONSULTING

INTEGRATED STRATEGIC PLANNING FOR THE MINING INDUSTRY

PRESS RELEASE

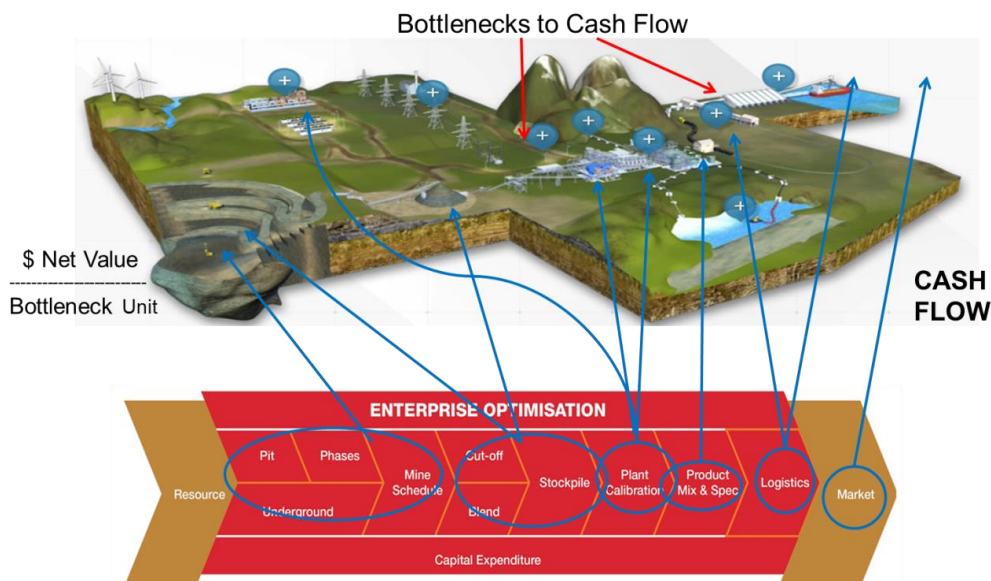
WHITTLE CONSULTING BROADENS ITS "INTEGRATED STRATEGIC PLANNING" SERVICE OFFERING

29th November 2016

Whittle Consulting broadens its "[Integrated Strategic Planning](#)" service offering – education, advice, services, software, implementation support.

Whether you are trying to raise finance, reduce costs, increase productivity, reduce debt, evaluate technology options, consider acquisitions, prepare for or deal with distressed situations, or evaluate strategic options in general – Whittle's [Integrated Strategic Planning](#) process will give you information, insight and confidence in your decision-making in an increasingly volatile and competitive mining industry.

After 17 years of perfecting its core service of **Enterprise Optimisation** modelling, the Whittle Consulting team is making the benefits of its well-developed [Integrated Strategic Planning](#) process broadly accessible. CEO Gerald Whittle explains what has been their core business: "We have now completed 140 successful Enterprise Optimisation models worldwide, large and small, in almost every commodity.



The process involves applying Activity Based Costing (ABC) and the understanding of geo-metallurgy, to develop a "Net-Value" i.e. cash margin, view of the ore body. The complete

system, from mineral resource to financial model, is modelled with particular attention to the constraints and flexibilities. Sophisticated proprietary optimisation software (Prober E) is then applied to generate long-term business plans with outstanding economic and sustainability outcomes. The resulting strategies accelerate the flow of cash through the primary bottleneck in the system, typically increasing the cash flow of the overall system by 5% - 35% or more. The model can be readily adjusted so a range of possible futures can be evaluated quickly and consistently. Furthermore, the process facilitates cross-functional collaboration, critical thinking, and reveals deeper insights into the strategic drivers and constraints on business performance.

For an example of the outcome of Whittle Consulting's Enterprise Optimisation, see [Condor Gold press release](#) which led to a substantial re-rating of their stock when released in January 2016.

To make the benefits of [Integrated Strategic Planning](#) more widely accessible, Whittle Consulting has expanded the following activities:

- 2-day [Money Mining Seminars](#) are run up to 20 times per year, and have had over 2,300 participants so far - refining, clarifying and aligning the way managers think about their business.
- Whittle Consulting is now regularly conducting a short **"Strategic Assessment"** to assess the operational potential, data availability and where applicable the organisational readiness for Integrated Strategic Planning. For a project with a Pre-Feasibility Study (PFS) or Feasibility Study (FS) document, this can be a desktop exercise. For an existing operation, this generally involves a trip to site and is best combined into a 1-week visit involving an in-house Money Mining Seminar, design of the Activity Based Costing and Theory of Constraints model, as well as the assessment.
- **"Whittle Advanced SIMO"** software has been released in collaboration with Dassault Systemes/Geovia. This takes the industry standard Whittle strategic mine planning software package to the next logical level – now multi-mine, integrated scheduling/cut-off/stockpiling, and also expanding into processing calibration.
- Whittle Consulting is now offering **"Implementation Assistance"**. [Integrated Strategic Planning](#) inevitably requires some changes in technical and management practices. Some of these changes are simple and some more complicated – careful consideration must be given to priorities and pace of change for a mining organisation, an incremental approach is often the best. Technical implementation can be supported by a growing range of mining and processing organisations who have signed up as Whittle Consulting alliance partners – fully in sync with the philosophy, knowledgeable in the methods involved, with extensive experience in the practical realities in your region.
- **Global Footprint:** With its technical base in Melbourne Australia, Whittle Consulting now has representatives in USA, Canada, Chile, Peru, Sth Africa,

Indonesia, and the UK. In the last year or two we have delivered [Integrated Strategic Planning](#) services in locations including: Russia, Saudi Arabia, South Africa, Namibia, New Guinea, Australia, Indonesia, Suriname, Columbia, Peru, Brazil, USA, and Canada.

- **Ongoing Research and Development:** Whittle Consulting allocates a major portion of its research to R&D. Recent activities have involved the use of [Integrated Strategic Planning](#) and Enterprise Optimisation techniques to evaluate and illustrate the merits of various technologies. Examples are collaboration with [CRC ORE on Grade Engineering®](#) and [Edge Protection](#), with cases in progress for Driverless Trucks, Intensive Blasting and Shovel Based Sensors.

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“Integrated Strategic Planning”

..for mining and mineral processing businesses is a concept of long-term planning which involves:

- Consideration of **all parts of the value chain** – from the mineral resource to the market;
- **Cross-functional cooperation** of all parts of the organisation (geology, mining, processing, logistics, marketing/commercial, finance and HR) normally run as silos;
- Consideration of **all periods simultaneously**, the decision of what to mine and process in one period affects the options for the other periods;
- **All stakeholders** – shareholders are interested in cash flow and capital growth, but we need to consider employees, local community, the government and the environment if we want to earn an enduring licence to operate.

Every mining company should have an Integrated Planning Process. “You should not change one part of the system without understanding the effect on the whole system”. The Engineering approach to difficult problems is to break it down into components – what we need is **a framework to put it all back together to achieve an integrated, holistic and complete view of the way we run our mining and mineral processing business.**