



When to spend
25 August 2009

I have introduced a number of broad-based productivity issues over the last few articles. We will get on to some more specific issues but in this piece I want to introduce another broad issue. What is the best time to invest in productivity enhancement?

The two key areas to productivity enhancement are during the R&D / equipment selection phase and during the post-commissioning phase. That is, get the right equipment and optimise its use.

To understand the interaction between mining and knowledge I will return to the presentation by Jari Kuusisto presented to the Smart Innovation Festival in Brisbane in May 2008. Kuusisto presented the curve of ROR vs Product Life Cycle. I have added the risk and cost benefit to this to provide the following plot.

The product life cycle can be described from the mine or the supplier's perspective. In the plot here it is viewed from the mine's perspective. The mine follows a process of Correct Selection – Order placement – Commissioning – Equipment Enhancement.

The rate of return on money invested is highest during the development / selection stage of the product and during the after-sales service / equipment enhancement phase. However, the risk on the investment is highest early in the process and reduces further after the product has been delivered. When these two plots are combined it can be easily seen that the cost-benefit (return / risk) is moderate at the start of the process (during R&D / selection) and highest after delivery/commissioning (during the process of "asset optimisation" or "capacity utilisation"). It is no coincidence that the application of knowledge is needed most during these two sections. It can therefore be deduced that the input of knowledge is related to cost benefit. It is also interesting to note that the highest cost benefit occurs when the knowledge is applied in the after-delivery phase of equipment optimisation which is largely process related.

If one looks at this from the perspective of a supplier the product life cycle becomes: R&D, Collect Orders – Commissioning – After Sales Service. Interestingly, the plot follows exactly the same form. For the equipment supplier their greatest return comes in after-sales service. This is a

Head Office
Brisbane Technology Park
Unit 2 / 53 Brandl St
Eight Mile Plains Q 4113
Australia
Ph: +61 7 3147 8300
Fax: +61 7 3147 8305
Email: gbi@gbimining.com
www.gbimining.com

South African Office
8 Corridor Crescent
Building B Ground Floor
Route N4 Business Park
Ben Fleur X11 Witbank
1035
South Africa
Ph: +27 13 6564114
Fax: +27 13 6564114
www.gbimining.com



really interesting observation because during the boom I had an almost impossible job getting suppliers to listen to anything to do with knowledge and after-sales support. Suppliers apparently were able to sell all their equipment and the concept of using after-sales service and knowledge as a means of helping mines use their equipment better and as a point of strategic advantage wasn't considered. This has clearly changed. I have had a number of companies approach us about using the data and knowledge as a key element in their marketing strategy. During the boom nobody seemed to care that there was one brand of truck which was 84% more efficient than the worst. Funny isn't it? During the boom if it had wheels and carried dirt it was good enough. Now a lot of mining people don't seem to want to take the risk that they will buy the worst truck and some suppliers seem motivated to use data to help them be as good as their equipment allows them to be on the mine sites.

It seems prudent for suppliers to understand the words of S. Downton on ecustomerworld.com,

Delivering high levels of customer satisfaction through a well-managed service operation can increase loyalty, and thereby sales, by as much as 8 times - greatly enhancing the value of the business. Successful manufactures increasingly focus on their customers' total lifecycle by investing in their service management business to maximise the value captured throughout the product lifecycle. This means that the product sale is only a small part of the overall value during the complete product lifecycle and is only the start of the customer relationship.

Support for my belief that the world of suppliers has changed came late last year when we found a bucket manual which I had written for a mine to optimise the performance of the bucket they had just purchased, had been blatantly plagiarised by the OEM and presented to other mines purchasing their product under their name and logo. This supplier has seen the value of knowledge (particularly linking the knowledge to the company) and has seen it as providing strategic advantage for them.

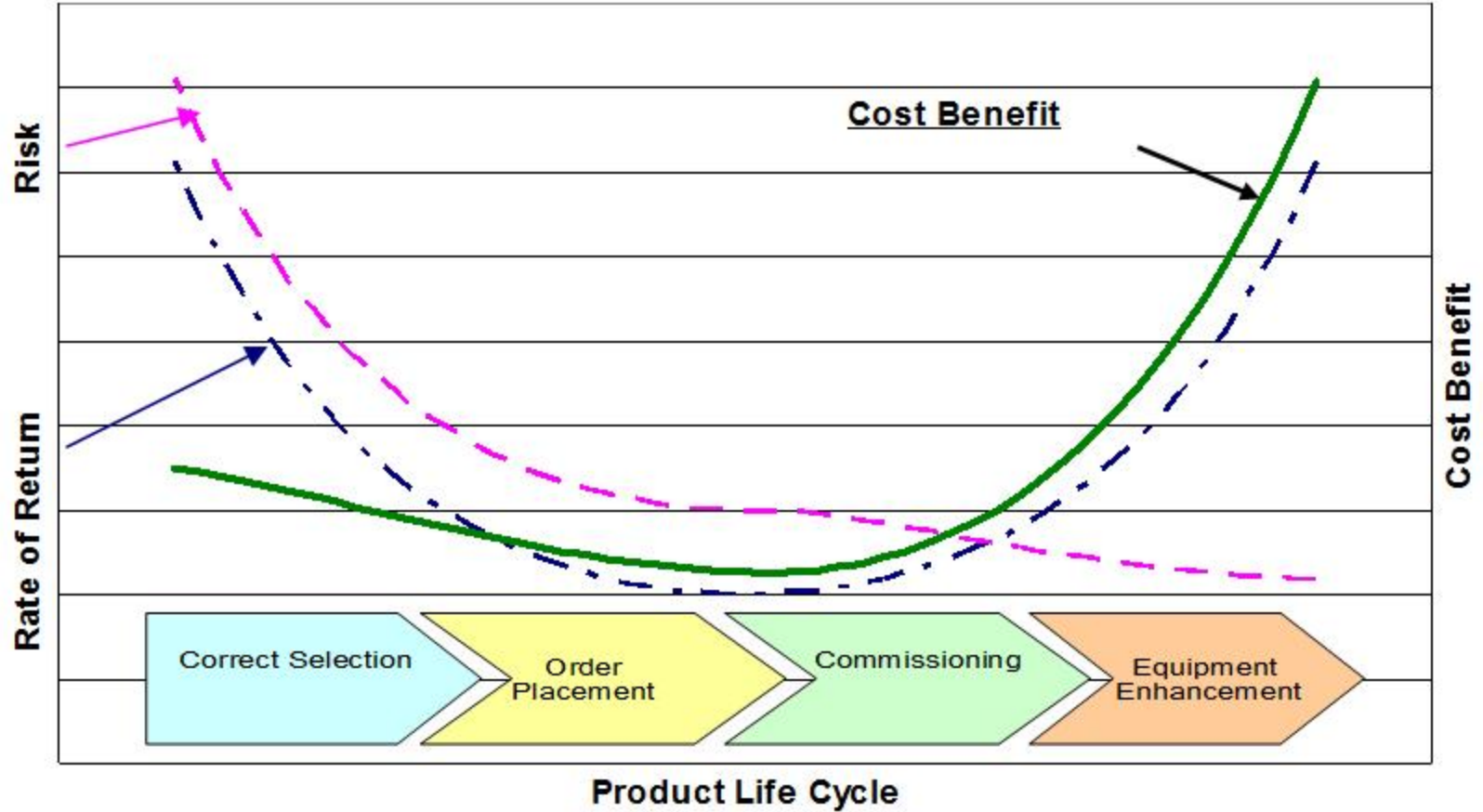
Head Office

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South African Office

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1035
South Africa
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Fax: +27 13 6564114
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--- Rate of Return - - - Risk



Correct Selection

Order Placement

Commissioning

Equipment Enhancement

Product Life Cycle

Cost Benefit

Risk

Rate of Return

Cost Benefit