



The Key to Productivity
17 January 2011

When reviewing the questions posed on LinkedIn in various groups I am surprised at the trite nature of much of the discussion / site activity. Occasionally there is a gem hidden in it. At the end of 2010 I travelled around the world for four months and came to realise that this is also like our mines. Most are just happy dealing with the issues of the day; happy to meet budgets; happy not to stuff up; and really oblivious to the latent potential hiding within their operations. Then, you find the gem and everything you know is possible sits there looking at you. Two examples come to the fore which I will recount.

After giving a seminar to Vale people in Belo Horizonte, Brazil, I was asked to come to their office the following day to discuss a pressing issue. They use an industry standard truck and loader software to predict output for their mines across Brazil. In the previous year the result was inaccurate and they had established a team of people to determine why. They found that while the software had a place it was not suitable for their operating mines which ran a dispatch system due to the multiple haul routes taken during any particular period of time. They wanted to ask me what other mines were doing and what solutions were available. What I like about this is the approach they took to solve a problem relating to their predictive capability. Firstly, they didn't sweep it under the carpet. The problem was identified and totally irrespective of whether the mines met budget or not they went looking for answers. The fact that they had traditionally used a particular approach to predict truck and loader output did not mean they were tied to it. They decided that the established practice was no longer good enough so they sought to change. They spent money quantifying and understanding it. Finally, they are looking outside their area of familiarity for answers.

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



The second example comes from a mine I have wanted to visit for some years. The most asked question I field is “What do best practice mines do?” It was no different overseas. People want to know how and why other mines do (substantially?) better than them. Ever since I started analysing this mine’s data they have set the standard for output from their mining equipment. They achieve results that other mines don’t believe. (How about >50 million tonnes annually for P&H4100XPC shovels?) After convincing myself that the results were accurate I simply asked their business improvement people, “How do you do it?” The order and content of their answer is telling. Firstly, they have management support from the very top. That was clearly evident from the number of people they had working on “mining optimisation”. Secondly, they focus on the key (usually the biggest) equipment. They use knowledge on what other mines are doing. On overall output they are the best but they are not the best in every KPI and they just keep focussing on those KPI’s they think they can improve. In their own words, “We spend more time every day looking at and discussing performance data than what most mines look at in a month.” (I will return to this statement in the weeks ahead). At 8.30am every week day they have teams of people look at what each class of equipment achieved during the previous day. Each team identifies ten areas which could be addressed that day (or sometimes on a longer term basis) to reduce losses. (I personally think ten is too many each day. Five should be plenty but notice that it is done every day, Monday to Friday.) When I look at this mine (both what is happening in the field and from their data) I see the potential of equipment and I see real commitment for improvement.

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By way of comparison I visited a nearby mine and also spoke to their BI people. They had a few projects underway including saving money on light vehicle tyres and grader blades. They also had all their Six Sigma charts on the walls. Now there is nothing wrong with addressing problems. Obviously all these issues need to be addressed one way or another but keep it in perspective. It was the first mine's opinion that these issues were day-to-day mining department issues and the BI department should be genuinely improving the business which will almost always come from your largest equipment moving more material.

The problem comes for many mines that the benefits of real Business Improvement are hidden in higher output. There is normally no line item in a profit and loss statement identifying the real "value adding" activities. Conversely the cost of real Business Improvement activities is quantified and is seen as increased expenses. A failure to understand this at all levels of our mining companies is feeding the culture of under-performance.

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