



Analytics and My Story

28 March 2011

The future in rational, fact-based decision making has arrived....NOW. You can run from it and keep operating your mine based on 80's philosophies but you can't get away for long. Like many things the mining industry is being a little slow to react. The world is moving in analytics and you have the choice of embracing it now or playing catch-up.

In my last column I outlined my story over the last 20 years and how that has led me to believe we are on the cusp of a change for the ages. If you look you will see the explosion in analytics in mining starting to take hold. You can't miss it if you look. We now benchmark over 100 draglines, over 400 loaders and over 2000 trucks per year. A multinational mining company obtained industry performance data for 19 different makes and models as input into mine planning models for two new mines. Another one has obtained performance data for use in their due diligence for a large copper mine of what suppliers have told them their equipment will achieve.

Week in and week out I read of exciting developments in IT in the mining industry. In the areas which I am interested in I see software suppliers to the Mining Industry developing advanced data collection, collation and reporting tools. I have sat in the offices of one of our large miners and seen just about any piece of information from any of their sites pulled up. You would think this is a panacea for optimal management decision-making. But that is not the way it is playing out on the ground. Some management seems buried in a sea of issues for which they have little adequate response. The software is all very impressive but most have missed a key point. Most software tools are still in the data age; they have not moved up to the analytics age.

This industry has been good at embracing "smart" software. More than that they have been good at embracing colour. Now don't get me wrong, colour enhances one's understanding particularly of three dimensional graphics. But just because it is colourful doesn't mean it enhances your ability to make the right decision. Just because it is in colour doesn't mean it is right. I had a structural engineer demonstrate to me one day how simply changing scales produces a "hot spot" in a design which is probably in reality, barely worth a second glimpse.

But you see it proves to the client that the engineer has found something significant and they

Head Office
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 72 782 8546
Fax: +27 136 925 622



have “designed it out”. Colour should help the recipient make decisions but colour is being used to manipulate. If a data reporter puts scales on a dashboard which are simply evenly spaced and divides the scale into equal segments, does it really provide helpful decision support? Have a look at Figure 1. Notice the even scales on the meters. I would most emphatically say, “NO!!! this is not helpful decision support”. Unless you have valid industry performance data about what others achieve you can’t know what is possible.

It doesn’t matter what you are doing, the key question is, “How will it add value?” Presenting an attractive dashboard of numbers and graphs to a Mine Manager doesn’t guarantee better decisions. If my 996 loader is achieving 35,000 tonnes per shift is that good performance? Having a system showing that over the last week you have averaged 35,000 tonnes per shift tells you nothing unless it shows distributions, comparisons against previous performance, comparisons against outside performance, drill down on performance gaps, etc. etc. For your information 35,000 t/shift is in the 74th percentile for 996 loaders. Is that acceptable? If it shows your payloads are 10 tonnes below peer best practice – now there is something you can work with.

What you need is not a data system; you need a decision support system. What is happening with most tools is that they are sold on the ability to aid in good decision making but that is largely lip service to this critical issue. If my shift report shows my 996 loader is carrying 60 tonnes average payload then who knows what to do? Now if it also shows it is 10 tonnes down on payload compared with similar machines in the same country and the frequency histogram has a bimodal distribution, then you have real decision-support. You want to know what and why and your analytics must deliver that information.

The mushroom of rational and fact-based decision making is here despite most mining software suppliers’ offerings. Will you move now, or will you be dragged along later after losing money day in and day out due to underperformance? You need reference to valid industry statistics and you need smart analytics, incorporating drilldown, alerts, statistics, forecasting, predictive modelling and optimisation.

If you keep your eyes open, *real* business intelligence for the mining industry is appearing over the horizon and I for one am pretty excited.

Head Office

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 72 782 8546
Fax: +27 136 925 622