



Surviving and Thriving in Tough Times

Dr. Mark Whitehorn, PenguinSoft Consulting Ltd.



Surviving and Thriving in Tough Times

BI (Business Intelligence) has, like most branches of computing, enjoyed a long and chequered history. As long ago as 1996* IDC was reporting that a quarter of those companies which built data warehouses saw a return on investment (ROI) of greater than 600%. However the same report also found that about a third of companies failed to achieve even 100% ROI. So even in its infancy it was clear that while BI had the potential to deliver huge returns, driving and managing a BI project was a significant challenge. Since then BI has come of age: the tools have improved immeasurably and it has become the lynch pin of many companies' information strategies.

Almost all of the twelve years since that report have also been relatively good in terms of economic stability. For by far the majority of that time the economy has been in growth, so in reality what we have learnt is that BI is eminently worthwhile when times are good. Sadly, it looks, for a while at least, as if the good times are over. Fuel and food prices are soaring worldwide and many countries, not just the US, are now in the middle of a credit crunch and the word 'recession' is being used ever more frequently.

So an important question is "Will BI serve us as well during the lean times?"

And if the answer is positive then an equally important question is "What type of BI is best suited to a rockier economic climate?"

The good news is that the answer to the first question is simple. No, BI won't serve us as well. All the evidence suggests that it will serve us much, much better.

Why? Well, the simplest (and often best) definition of BI is that it helps us to extract information from data. Data is simply a sea of numbers. Information is that sales of shoes to women over forty are falling in Des Moines, that iPod users are more (or less) likely to win the lottery and that battery X really does last longer than battery Y.

It is information and not data that is used to make business decisions. During good times there is often enough slack in the system to allow bad decisions (or missed opportunities) to be forgiven or even to pass unnoticed. But when times are tough a bad decision or missed opportunity can mean the end of your business. There is huge pressure to make better, more informed decisions and to drive your business in an innovative way to combat the changes in the market.



Some of those changes are all too easy to predict - rising unemployment, falling house prices: all of the bad aspects of a recession. However others are more difficult to predict. What will happen to the market for YOUR product, which customer segments will decrease, which will increase? This is a problem but it is also, of course, a potential opportunity.

History has shown that some of the world's greatest transfers of wealth and fastest industry restructurings have occurred during periods of economic downturn - like the one we are experiencing. Industries may change forever. New industries may emerge. Sure, your company is likely to be under increased pressure but you can also ask "What opportunities are out there?"

Sometimes they turn up in unexpected places. In the UK, as in the US, the building of new houses has showed a significant downturn. One insulation company noticed that sales of its products to builders were, as expected, dropping alarmingly. However one of the existing KPIs was set up to monitor changes in market segments. It flagged a small but significant increase in sales of insulation material to existing home owners.

As soon as the information was revealed, the explanation fell into place. Fewer new houses are being built but existing home owners have noticed the rocketing price of fuel, and are thinking ahead to the winter and increasing the insulation in their homes. So, for that company at least, the downturn wasn't a death knell. Instead of firing people it has rewritten its marketing campaign and is actually capitalizing on the situation.

More globally, the flight information company OAG (Official Airline Guide) recently revealed that US domestic flights have dipped 2% for July 2008 when compared with July 2007. So someone, somewhere is suffering. But there has actually been a 13% increase in frequency and capacity for the same period if you look at the low-cost aviation sector. And while the number of flights across the Atlantic has increased by only 1%, those to Dubai are up 11%.

This tells us that, even when times are hard, there are opportunities to be found; the trick is to find them and for this BI is the perfect tool.

So, does that mean the solution is to keep those existing BI systems running? If only it were that simple. In many ways the insulation company was lucky that an existing KPI flagged the new opportunity because not only do recessions highlight the need for BI, they also highlight the need for a highly adaptable breed of BI system.



In order to act fast, organizations need rapid and adaptable analytical capabilities. They need to be able to look at their data and businesses in new ways.

Canned reports from production reporting systems were built with assumptions in mind that may no longer hold because traditional business intelligence systems are often architected to report on the known – and not to anticipate the unknown. They are rarely built to allow the business – anyone and everyone throughout the enterprise - to interrogate their data. At worst they are built to command, control and standardize data.

Proof of this is in the number of BI users who run reports and then dump the data into Microsoft Excel. People do this because they need to move faster and with more agility; new questions need to be asked as they occur. Corporate reports and dashboards were configured to report against known and pre-defined KPIs. But as the fundamental business assumptions change some of these KPIs may not even make sense any more. Entire communities of users could be making bad business decisions based on incorrect assumptions that no longer hold true.

Imagine, for example, that you produce a product and use several shipping companies to move them around the country. At any one time, a week's production (about 2% of your annual production and 40% of your annual profit lost if it drops into a black hole) is sitting in the warehouses and trucks belonging to various distribution companies. Your current BI system monitors the cost of shipping each and every item and works out the most effective shipper. What your current BI system doesn't look at is the impact if one of those shippers goes bankrupt. Why not? Well, during the good times when most companies are doing well, it's a very remote possibility. And if it did you could ride out the storm. So the cost benefit analysis tells you it isn't worth monitoring. But in times of uncertainty, the beast is loose, the falcon cannot hear the falconer and the chances of a company going belly up is dramatically increased. And if one of them does and 2% of your stock is tied up indefinitely, that might just tip your company over the edge. So the cost benefit analysis has shifted and you need a different set of KPIs. And you need them now.

Should you actually be worried about your shippers going bust? Should you really be monitoring their stock market price as part of a new KPI? I have no idea. I don't know your business like you do. But the crucial point here is that during hard times all the original bets are off. We need BI systems that not only turn data into information, they must also be highly adaptable.



Of course, if you know anything about TIBCO Spotfire enterprise analytics, you'll have heard "Our product is adaptable, we can provide this flexibility and agility – we've always been able to do it."

And it's true. Spotfire software hasn't just suddenly decided that flexibility is important now that a recession is upon us, agility has been a central tenet of the company's product range since the product was first designed. And it's a feature that Spotfire customers have always appreciated.

New Leaf Venture Partners is a \$1.1 billion healthcare venture capital fund and a leader in life sciences technology investing. It recently adopted TIBCO Spotfire enterprise analytics and the users are delighted with the results. As Adam Kaye, one of the company's analysts, says, "Spotfire DXPTM software is a fantastic brainstorming tool for me to use with senior management in looking for new relationships. It acts as a visual and interactive screening tool that enables us to make better decisions faster, in terms of what we want to look for in potential public investments, and to take those ideas to the next level."

So this agility has always been part of the product. It has proved its worth in the good times and will prove invaluable in the future – no matter what the state of the economy.

**The foundations of Wisdom: A study of the financial Impact of Data Warehousing.*
International Data Corporation (IDC), 1996



About The Author

Dr. Mark Whitehorn specialises in the areas of data analysis, data modelling, data warehousing and business intelligence (BI). He works as a consultant for a number of national and international companies, designing databases and BI systems, and recent clients include Lloyds TSB, Norwich Union and Scottish Water. In addition to his consultancy practice, he is a well-recognised commentator on the computer world, publishing about 150,000 words a year, which appear in the form of articles, white papers and books. His database column in PCW has been running for 15 years, his BI column in Server Management magazine for five. He has written ten books on database and BI technology. The first one "Inside Relational Databases" has been selling well since it was published in 1997, is now in its third edition and has been translated into three additional languages. His most recent book about MDX (a language for manipulating multi-dimensional data structures) and was co-written with the original architect of the language – Mosha Pasumansky. Dr. Whitehorn is also a mentor with solid Quality Mentors and has acted as an expert witness for the police in cases of computer fraud.

The TIBCO Spotfire Experience

The Spotfire Division of TIBCO Software Inc. is a leading provider of enterprise analytics software for next generation business intelligence. The TIBCO Spotfire enterprise analytics platform offers a visual and interactive experience that helps business and technical users quickly discover new and actionable insights in information. Distinguished by its speed to insight and adaptability to specific business challenges, Spotfire software rapidly reveals unseen threats and new opportunities, creating significant economic value.



TIBCO Spotfire,
TIBCO Software Inc.
212 Elm Street
Somerville, MA 02144

Tel: +1 617 702 1600
Toll Free: +1 800 245 4211
Fax: +1 617 702 1700
<http://spotfire.tibco.com>