

To BI or not to BI ?

Part I

December 2008

Sanjay Shah

Introduction

A few years back when the ERP fever started, big cheques were written, and the top managements thought that all their worries are now over once and for all. ERP's did deliver process integration, best business practices, common code etc... But the decision makers did not get that they wanted... they did not get Management Information Systems (MIS) for Decision Making or BI (Business Intelligence) as it is called now.

Sitting on mountains of data, BI technologies will now deliver what management wants. But the question is, when should you start your BI journey ?

My answer is : If you have already implemented your ERP, the sooner the better. Even If you have not yet implemented ERP, or are in the process of doing the same, it is very important to start the BI initiative immediately, as explained below.

The Timing of BI

BI reports give management the information to run their business, to take decisions. Would it not be logical if the management thinks aloud on what is required by them to run their business? Shouldn't this be available to the implementing partners of the ERP so that they can ensure that the processes they setup will ultimately give the various dimensions required for BI? BI should not be an afterthought, else you are in for a big surprise.

Think clearly on what information you need to run your business. Put your expectations down in an Excel worksheet along with some sample data. Ask one of your analysts to generate simple excel pivot tables on legacy/ERP data data. Rerun this process till you are satisfied with the content of the report. Don't forget to **articulate, visualize** and **prototype** your information requirements. Don't assume that your ERP implementation partner will read your mind and automatically give you what you need. Nothing can be further from the truth. Creating BI is an engineering problem. It requires you to state clearly what you want and how you want it, and all the systems down the line have to be setup accordingly. And if you don't do it, you are in a mess..you get data and not information !

Timing the introduction of BI in your organization is a very tough decision to take. It's like getting married. A very handsome friend of mine was having trouble getting married...either he was busy studying, or he had just got a job, or he was not making enough money , or he was too busy with his career. However busy you are, you have to find time for what is important.

In my opinion beware of the following mistakes and potential delays in your organization :

- 1 I shall do BI once my data is perfect
- 2 I shall do BI once all my ERP modules are implemented
- 3 I shall do BI once we are out of recession / when I have more funds
- 4 I shall do BI once I am a little free
- 5 I have the world's best ERP, why do I need BI ?
- 6 I know everything, I don't need BI.
- 7 I don't need a third party BI, my ERP vendor gives me everything.

I shall explain all this in brief below.

(Here I am clarifying that my idea of BI is not just the big products like Hyperion, Cognos, Business Objects and such. But BI can be implemented very effectively even using simple tools like Excel Pivot Tables , simple and easy to use databases etc.. I am calling BI anything which enables a user to quickly generate (without much programming) a report which summarizes raw data and allows drill down, slice and dice and rotate, see data and compare data in a multi dimensional format and see various intelligent dimensions at just a click of a button.)

Mistake 1 : I shall do BI once my data is perfect

How does one ever know if the data is perfect ? Suppose yours is a company with 7 locations, 5 factories and you have an item master having about 50000 items. You have been tagging item groups to these basic items, for example all bearing items are being tagged as 'Bearings' etc.. To know your stocks you generate a report location wise, another report factory wise. You generate different reports summarised at group level, and another showing itemized details and so on. I have actually seen 25 different types of inventory reports having been written and printed out month after month. The stock variance report (which measures changes of stocks at two points in time) was being manually generated (in excel) and was available only at a summary level. The users spent days trying to identify which items were causing the variances.

When I asked the key users why they don't introduce simple BI reports, I was told that the data was not yet 'perfect'. I requested the IT manager to give me the detailed stock report (at an item level). I quickly converted this into a database table and made an Excel Pivot table of this. When I summarized this at a 'group' level, promptly excel showed me a group called '(blank)'. On clicking the detail button, I found that 55 items had not been grouped. In just one hour I was able to replicate the functionality of all the 25 ERP reports! With just a little more effort, I was able to give them a variance report comparing the total stock of the current month wrt to any previous month. The total variance was further analysed into quantity and rate variance. We added various other dimensions to this report to give a very rich user experience.

MOTS (Moral of the Story) : You can use simple tools to not only get great information, but also use it as a cleansing tool. And remember, that data will never be absolutely perfect. Creating and correcting data is a cycle which never ends.

Mistake 2 : I shall do BI once all my ERP modules are implemented

One of my client companies had a grand IT plan. A very popular ERP was chosen, a good implementation agency was chosen. In two years, the ERP would roll out throughout all the companies and plants of the group. It was decided to first complete the ERP implementation, and then work on BI. This would mean that BI would be done after 2 years or so. When I discussed this scenario to a friend of mine (who is a veteran in ERP implementation) , he said that there is no such thing as a 'completing an ERP implementation'. ERP vendors will keep coming up with new 'patches', new functionalities and new versions so that you are perennially in a state of implementation or reimplementation.

Zoom in to the Accounts Receivable department. The ERP went live there in about 4 months of the start date. Now that this department was on the ERP, the management was all over them demanding a huge amount of analysis and operating info. For practically two years, the departmental staff worked day in and day out to satisfy the demands of the management. The last time I counted, the line printers were printing about 15000 pages each month, being distributed physically to various branch offices and sales offices around the country. The reports were being printed customer wise, location wise, and responsibility wise. The reports were being printed in a summary format, a detailed format, and various such formats.

All this because BI was to be introduced only after the ERP was done. Now I fail to understand what the introduction of ERP in the Production Planning has anything to do with introduction of BI in the Accounts Receivable department.

Fortunately some sense prevailed. A single well designed BI report was able to meet all the above requirements. A simple email utility sent the BI Report by email to all the branches and regional offices (containing only their slice of data). Pro-active reminder letters got sent to all the customers. The

payback period of this small BI module was 1.5 (*hold your breath*) days ! And it is green technology. We saved printing of 15000 pages every month!

MOTS : Work on ERP and BI in a parallel mode and not in a serial mode for maximum effectiveness.

Mistake 3 : I shall do BI once we are out of recession / when I have more funds

In a recession, as we are all in now, the manufacturing activity reduces and sales reduce. But it rarely reduces the work of the information worker. Recession does not reduce the number of items in the inventory or the number of general ledger codes! He still has to report on 50000 items of inventory, and 1000 GL Codes. There is a huge pressure on funds. People lose jobs, and those who remain suffer a burn out. They burn the midnight oil for meeting reporting and statutory deadlines. The management introduces a **blanket ban** on all new investments. And with this, also halt the proposed investments in BI.

I feel that a recession is the best time to improve and strengthen the internal processes. BI investments are not huge. If they are done at the right time, they will yield great returns not only during the recession, but when the boom time comes you will be able to work much leaner. Remember that the cost of a BI initiative is **not** the cost you spend on the BI tools and technologies. Rather it is the opportunity cost which you pay because you did not implement BI.

Let me give you an example. A client of mine is in the Auto Component sector. The demand schedules given by their OEM customers keep changing. They did not have a mechanism by which these constantly changing schedules could be tracked in their popular ERP. As a result there was much more being produced and dispatched, leading to a lot of stock at the transporters warehouse located near the OEM's factory. As the finished stock, once dispatched and invoiced, was reduced from the stocks, there was no track of this pipeline stocks. The Account Receivables were piling up as the customer refused to pay for the stocks they had not inwards. Everyone was running in circles.

A simple tracking module with a lot of BI reporting on pipeline stocks, aging of such stocks etc. was instrumental in completely eliminating the pipeline stocks. The client was able to recover the investment in days, and it freed a huge amount of working capital. The client now calls the BI investment as salt in his food !

Remember that there are various flavors of BI tools available in the marketplace. It is not necessary that when you implement BI, it has to be an enterprise mode BI with all the bells and whistles. A simple, incrementally build-able solution is good enough to start with, as long as it delivers what the management wishes. Once that is successful you will have a greater buy-in and more funds to go in for a larger solution.

MOTS: BI can actually help you reduce you costs by unlocking your investments in inventory, account receivables and understanding your product and customer profitability.

Part 2 :

Mistake 4 : I shall do BI once I am a little free

"I have only 20 working days in a month. The first seven go in corporate reporting. Then a few days go in collaborators reporting. Then a few days go in answering all the queries on last month's performance, which I get from my bosses in India and abroad. They I have to answer the internal and the statutory auditors. I have to see that my excise and indirect returns are filed in time. I have no time or energy for any other initiative."

Such is the life of a typical corporate executive. They have no time to breathe and are perennially stressed out. They are so busy that that they don't have time to sharpen their proverbial axe. The result is that their energy and efficiency keep getting lower and lower.

Now let's analyse.

- **Why does it take 7 days in doing corporate reporting ?**
"Well it takes 6.75 days to make the reports, and 0.25 days to read the numbers. I have been employed to analyse the results, but I get no time to do so".
- **Why does it take so much time to answer the queries ?**
"I don't have the underlying figures readily. I have to refer to so many sheets and workbooks, that sometimes I lose track."
- **Why does it take so much time to answer the auditors ?**
"They keep asking me for comparison...with the previous month, with same month last year, YTD this month and YTD same month last year, balance to go, ratios etc. Each time I have to do this in order to satisfy them."
- **What if I give you all this in just 30 minutes, automatically and without manual handling of data?**
"You must be joking!"

Friends, this is a real life scenario of one of my client. It was impossible even to get 10 minutes of his time. The above discussion took place at a lunch appointment with him which I got after 6 months of follow-up. I convinced him that if he gave me his trial balance data, I would give him (without involving his IT team) all the reports, with all comparatives and ratios with full drill down to the gl-code level in exactly 30 minutes and that too in his favourite tool..Excel. He looked at me with great understanding, more like a psychiatrist looks at his patient. But when I bet my whole career on this, and told him that I would take the money only if it is successful, he agreed.

He is still a busy man. But he has risen up several ranks in his organization. And I am welcome for lunch with him any time!

MOTS : BI can free you to do what you are hired for.

Mistake 5 : I have the world's best ERP, why do I need BI ?

Many managers are still under the impression that ERP and BI are competing environments. Whenever I show them a multidimensional BI report, they say that they have a foreign ERP, and all the reporting can come out of their ERP. They have probably never actually used their ERP hands on. ERP is a transaction processing system, which automates basic business processes like store keeping, billing, accounting, purchase, and other record keeping. There are a lot of operational reports which it generates, but it is not designed to do reporting like BI does. Making ERP do what BI does, would be like cutting a diamond with a hacksaw!

I once got into an argument with one senior manager to whom I was giving a presentation. I was showing him the capabilities of BI. But each time he mentioned that this can be done in his ERP and was willing to show me that. So I said that let see what is available. He called for his assistant with a laptop, connected to the network in the conference room . He asked his assistant to show him the various reports in Accounts Receivable which were designed.

There was a report which showed a summary of AR by branch, another by Region, another by Customer, another showing top 20, another showing top 20 for each branch, another at an invoice level and so on. For every different view of the same data, the system required you to go to a different menu option, give parameters and save the report to a text file. It would take approximately 20 minutes for each view. The same views could be generated from a single BI report, in a fraction of a second by just dragging and dropping, slicing and dicing. The solution would cost just one tenth of the cost of developing the 20 reports in ERP. But the manager stuck to his guns. We did not get the account. But then, can one catch all the fish in a pond ?

MOTS : BI, it's different ! In a single report you as a end user can intuitively see multiple views. Intelligent dimensions can be added so that you can quickly go to the problem area. You are no longer dependent on scarce IT resources each time you need a different view !

Mistake 6 : I know everything, I don't need BI.

I know of one person who kept saying that all this BI stuff is just a waste of money. If one knows excel and vlookup, then nothing more is required. I am always amazed at how all-pervasive MS-Excel is. I am also amazed at how little MS-Excel is really exploited. This person I knew was at a senior position in a

company and his charge was correct stock valuation. This is a very important task, as with the quantum of stocks the company was maintaining, even a 1 percent error in stock valuation could considerably change the profit of the company. The company carried a large number of items in stocks, and with multiple factories and warehouses, the number of lines in the report was far in excess of MS-Excel's (2003) limit of 65k rows .

At the beginning of each month his life would consist of downloading various inventory reports (of each warehouse, each factory etc) individually and dumping them in excel. He would then remove the headers and footers if any. Then would come the task of creating a vlookup on another workbook for getting the last month's rate in another column. Then he would compare the current and last month's rate to find if there is a difference. All this had to be done carefully. He would get the entire thing cross checked from another person. Four days was the minimum time taken by him for this exercise. The entire finance department would wait with bated breath for him to complete this and announce the stock numbers. The MD would be breathing down everyone's back. This gave him a tremendous sense of importance. Nothing can be done till he finishes his task. Because of this, he steadfastly refused any automation help. And then one day he fell ill at the beginning of the month.

We created a small database driven application in which multiple months data was stored in the same table. The user was able to select the current and the month to compare with. The application created buckets for the difference so that the higher differences could be easily spotted. In the parallel run in the next month, he again took 4 days to finish his task and find the cause of difference. The BI module took exactly 10 minutes to do the same task.

MOTS : BI gives us a more intelligent way of working, so that analysts can concentrate on analysis rather than doing the routine work. It also makes the routine task of making the report person independent.

Mistake 7 : I don't need a third party BI, my ERP vendor gives me everything

It would be very good to find a vendor who does everything..makes ERP, makes CRM, makes BI etc.. That way clients would have to deal with only one vendor. There would be no multiple vendors pointing fingers at each other etc..

That's how IBM, DEC, Sperry Univac, Wang etc worked in the 1980's. It is called the 'vertical' way of working in a book called 'Only the Paranoid Survive' by Andy Grove (Founder Chairman of Intel). Specialization hit the computer industry. Many of these dinosaurs did not survive the "10x force" (as Andy Grove calls it) of the "horizontal" computer industry. After all everyone cannot do everything perfectly. I strongly believe that a day will come when there will be super-specializations. There would be companies who are good in ERP and some in CRM and some in BI etc.. This would be true of developers as well as implementing partners. I feel all need different and specialized skills. All the systems would come with standard well defined interfaces so that they could work in an interoperable manner...much like the way the PC developed.

MOTS : It is not necessary that the vendor who has made or implemented the ERP would be the best source of BI as well. Look around and you would find examples of great and more cost effective BI products (which leverage your existing investments) and solutions done by vendors other than your ERP vendors.

(All the above examples are fictitious examples narrated only for the purposes of this article.)

Conclusion

A BI solution done at the right time can save hours of unnecessary and tedious efforts of the information worker, and can save millions for the company in terms of real business benefits like reduced inventory, improved receivables, better gross margins and a more productive shop floor.

Recession is like a time when an athlete prepares himself for the upcoming race. ***So go for BI... NOW!***

- end

About the Author:



Sanjay Shah (B.Com, CA) is the CEO of Prosys Infotech Private Limited, a Pune, India based company specializing in developing BI solutions on the Microsoft BI Platform. Prosys has developed BI solutions for various companies like Honeywell Automation India Ltd., Alfa Laval India Limited, Kirloskar Group Corporate Office, Kansai Nerolac Paints Limited etc. He can be contacted at sanjay@prosysinfotech.com.