

Integrated BI

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(In this article I am continuing the dialogue of the MD of a large company with Mr. Basu who is the head of one of the large Business Units of the company. The MD is in a dilemma. He has been successful in driving the BI initiative of the company, and yet he is not fully satisfied with what the BI team has delivered. Their BI team is very smart and has done good work, but somewhere in the design something is missing. He calls Mr. Basu and another BI consultant for a freewheeling and thought provoking discussion to identify what has gone wrong and how it can be set right.)

Basu's company, ABC Corporation, has developed various BI modules in different areas of Sales, Purchase, Inventory, Financial Reporting etc.. The company has outsourced most of the developments. An in-house team monitors the development and ensures that the master data is maintained properly and that there is no duplication of efforts. This arrangement has worked well. The company did not have to employ high cost resources, and yet have been able to get reasonable success in this initiative.

MD's Secretary : Good afternoon Mr. Basu. MD is in a pensive but good mood today, thanks to an excellent lunch at the Taj with his consultant.

MD' secretary always mentions MD's mood to Mr. Basu, so that he can go in well prepared. This time Basu is relieved. Generally meetings with the MD are quite stressful. Recently Basu has been promoted from his post of an SBU head to the post of an Executive Assistant to the MD with specific responsibility for the BI initiative. MD's is very serious about BI, as he feels that if this is well developed it has the potential of becoming as important as the central nervous system of the human body.

Basu : Good Afternoon Sir.

MD : Good Afternoon Basu. Meet Mr. Waghmare, a BI Strategist and a good friend of mine.

Basu : Good Afternoon Mr. Waghmare, nice to meet you.

MD : Basu, as you are aware we have had a good BI reporting in ABC Corp. We have done BI for many areas of importance. But I still feel that we are missing something. I feel that things are not

very smooth as far as decision making information is concerned. There are too many islands of information.

Waghmare : Well said MD. Many years before integrated ERP systems came, we used to have the same problem. There would be independent systems of Billing, Inventory, Financial Accounting, Purchasing etc.. These were not integrated, and it was difficult to quickly see the entire picture of the enterprise. ERP systems changed that. Now all the processes are integrated, so that the trial balance at any point of time can be used to quickly generate a report to give a good picture of the financial transactions. Of course provided that the ERP has been well implemented.

MD : Yes, Waghmare. I get the same feeling. If I need some information, it cannot be easily accessed. It is there in different reports to which I have to separately navigate. It is that we are using some wrong tools.

Waghmare : No. I have talked to your BI consultants. You are using some of the best technologies. But you need to remember that it is not the tools ,but how you design your system which is more important.

Basu : Can you elaborate Mr. Waghmare ?

Waghmare : Just as an ERP system if not well implemented will not give you good results, similarly a BI system not well implemented will not give you good results. You need to design an 'Integrated' BI system.

MD : Yes, that is exactly the word I was grappling with. Our BI modules are not integrated or aligned to the decision making process.

Waghmare : The key to designing an Integrated Bi is to define Key Performance Indicators which are aligned to your business targets and developing a performance based variable pay so that the KPI's are seriously taken by all levels of management.

MD : Very true. Luckily of our total managerial pay we have a sizeable percentage of variable pay which is linked to people achieving certain targets. But all this is being manually done at present. It would be a good idea to put all this in a formal KPI (Key performance Indicator) based system so that everything is transparent and performance achievements can be seen by each person as well as the management on a regular basis.

Waghmare : This is good, but such a system should not degenerate into another payroll type of a system whose major purpose is to identify variable payouts. The purpose of such a system to be to identify where things have gone wrong, identify the root cause of the problem and enable corrective action.

MD : Very well said Waghmare, but are there tools available to build such a system ? As there are so many KPI's at different levels of management and I fear it would become very complex.

Waghmare : Yes there are tools available. Recently a prominent software company has also released tools which make it possible to implement Integrated BI. But as I told you before, more than the software tools, the design of the BI solution is of the greatest importance.

Basu : Which tools would normally be used for such a performance management system ?

Waghmare : Well having identified your KPI's, there is a tool to build these KPI's. It would take data of targets and actuals from your underlying cubes. The KPI's could then be organized into scorecards. For each KPI you could define a Trend Graph, or any other relevant graph. As you navigate through different KPI's the relevant graph would open up and you could see more details. When you are on the KPI or on a graph, a right click also opens up a graphical decomposition tree where by you can drill down into further details. You can also link more detailed reports to do a deeper dive into data. You organize all the major functions into 'tab' pages. For example the first page would be 'CEO Dashboard', the second could be organized SBU wise or function wise. For example second page could be 'AR Dashboard' where much greater details of Account receivables could be shown etc..

Basu : Sounds interesting.

MD's secretary knocks and then comes in with a tray of tea and an assortment of biscuits. She connects Waghmare's sleek laptop to the projector.

Waghmare : I have got you some screenshots of a such a system which I had designed for some of my other clients.

Waghmare starts a PowerPoint presentation and he quickly takes MD and Basu through a series of slides showing visuals of a performance management system.

MD : Waghmare this surely looks impressive. But could you give me one example of an Integrated BI ?

Waghmare : Sure. Let me tell you the 'Current Story'!

MD : 'Current Story'?

Waghmare : (laughs) From the KPI right up to the point where you have identified the root cause is actually a series of integrated reports and graphs. It's like going on a treasure hunt. At the KPI level you come to know that there is a discrepancy between the actual performance level and the desired performance level. Then you wish to find out what actually caused this discrepancy so you have to dig deeper and deeper till you find the cause of the problem...there you have the treasure.

MD : Well said. Such identification of problems and their solution can surely save a lot of money, which would be similar to finding a treasure.

Waghmare : So let me tell you the 'Current Story'...which is the story of the Current Ratio, which as you know is the ratio of current assets to current liabilities. Typically the current ratio should

be 2, which indicates a good confidence of the company to meet its current liabilities in a timely manner.

So now if you look at the KPI's on the left hand side of the screen you can see that the CR (current ratio) under the actuals column is showing 2.72 and the target column is showing 2.0 and the status icon is showing red. This means that the actual current ratio is unfavorable even though it is higher than the desired ratio of 2.

MD : Yes, I can see that. The Red status icon immediately draws attention to an unfavorable item. But why is the ratio unfavorable. In fact if the current assets are higher than current liabilities, should it not mean a good performance?

Waghmare : Under normal circumstances it would be a better performance. But the reason I have programmed it to show a red icon is that it could mean a lot of overdue debtors which is inflating the current assets. This draws the attention of the management and tells them that this scenario needs checking.

MD : Yes, I understand. So how do we go about this checking?

Waghmare : Now when I click on the KPI the Current ratios of the different SBU's can be seen. We can see that some of the SBU's have a good current ratio (green indicator) while some have a red indicator.

MD : Hey, that's great. Now we know the underperforming SBU's for this KPI.

Waghmare : Yes, and as you can see on the right, there is a trend graph of current assets and below that there is a trend graph of current liabilities. Now when I click on the SBU having a red icon, the system is showing the trend graphs of this sbu. You can see that in the last few months the current assets and liabilities have been in line with expectations, but in this month, the current assets have suddenly shot up. Now when I right click on the current assets bar, and select 'Inventory', I can see the Inventory behavior trend, which seems more or less ok. Then I select the 'Account Receivables', and I can immediately see the culprit. The Account Receivables have shot up.

MD : Yes, nothing can be clearer than this.

Basu : I have observed that the sudden spike in AR is generally due to increase in overdue, or an early billing by the SBU's especially at quarter end in order to achieve the sales targets.

MD : But this is very serious. Waghmare can you drill down further ?

Waghmare : The KPI driven dashboard which I showed you has been programmed to drill down up to the level which I showed you. The main purpose of this is to identify the problem area. As you can see, with the help of a few clicks we have identified the problem area. Now to go down further, we need an analytical report which an 'analyst' uses to get at the root cause of the problem. Fortunately this technology provides a way by which I can 'link' an analytical report to the dashboard.

(Clicking a link) Here, I have now opened up an Account Receivable report which is comparing current AR balances with that of the previous quarter end. There is a variance column and I have sorted the report in the descending order of the variance.

MD : Wow...I can immediately see that the top 5 customers having the largest variance. And their overdue have increased substantially! So this has been the major cause of the problem in the current ratio. SBU 5 has a lot of uncollected debtors.

Waghmare : Yes. So now you can see the power of this solution. From a top level view you are able to drill down smoothly into a problem area and find out the actual action points and the people responsible for taking these actions.

MD : Very true Waghmare. In fact on my PC I have already started writing an email to the SBU 5 head asking him for an explanation of the 5 customers. I am sure we will be able to get these answers soon!

Basu : This is very interesting. But Sir, instead of having this tool only for the senior management, I think we should enable all our managers with this tool so that they are able to work effectively. At present they have to do a lot of work in order to arrive at such conclusions.

MD : Basu, I fully agree with you. I want you to work on this further along with Mr. Waghmare and give me a blueprint of what we can achieve using such a solution.

Waghmare : It would give me great pleasure to work with you.

Basu : Thank you Sir, I shall start working on this ASAP.

The secretary is surprised to see the MD coming out of his cabin to see off Waghmare and Basu. Basu, for once, seems relaxed. In fact he is whistling softly. The meeting seems to have been productive she thinks.

Observations:

A large company which I had recently contacted had started its BI journey recently. Their CIO mentioned that they are first building a 'Dashboard' for the senior management. In fact he gave me a glimpse of the dashboard. Later when I met some of their operating personnel, I found them quite harried. They mentioned that using the Dashboard the senior management asks several questions. But there are no methods by which they can quickly answer these questions. A huge time goes in creating reports from the ERP data. By the time they are ready with the answers, the question itself has become irrelevant.

Design Principles:

- 1 A dashboard must have a detailed analytical report as a supporting. The dashboard brings a summary view. The dashboard should not be designed to show too much detail, otherwise it will lose its user friendliness. Once a problem has been identified in the dashboard, the user should be able to work on the supporting analytical report to drill down to much lower levels of detail.
- 2 A dashboard should be designed keeping in mind the person who is going to view the same. As a golden rule there should not be more than 7 KPI's in a scorecard. More than this number tends to overburden the user. The rest of the dashboard also should be clear and uncluttered and the full dashboard should be visible and should have sufficient magnification so that it is easily readable.

About the Author:



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