BI – Analytical Reports as Clean Up Tools

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Sanjay Shah

Introduction

When an ERP is finally selected for implementation, there is generally euphoria in the company. Management feels that now with the ERP cheque signed, all their problems would be over. Soon they will get information seamlessly from their ERP system, and all business benefits will accrue.

As the ERP implementation proceeds, picture becomes a little murkier. "This is difficult than what we thought". Expectations are reduced. Nearing the deadline, everyone is pulling their hair out. Now the expectations are 'let's just go live with basic masters and transactions to keep the business running'. Go live is achieved. Everyone's nerves are frayed. Management now gets less information that what they were previously getting. MS-Excel comes to everyone's rescue. People start downloading basic data from the ERP and somehow with great difficulty manage to give rudimentary information to the management.

In their hurry to meet the deadlines, many a times all the masters and various attributes are not set up properly. Due to this BI reporting, as and when it is attempted, gets a setback. Without the required dimensions, the analysis is not rich.

We will do BI after we do the cleanup

Many a times clients tell us that BI is on their priority list, but they wish to do the same after they clean up their data.

'Cleaning' up of the data can be a nightmarish and a herculean task. Cleanup in an ERP environment means checking the data transaction by transaction, or master by master. Each transaction / master would have several sub-screens and locating the desired row to be corrected itself can be very time consuming. Here analytical reports of BI can prove to be extremely useful. These reports can help you quickly pinpoint the transaction having errors making the correction process faster.

The following are some of the types of errors / inconsistencies that can occur :

- Missing Dimensions

- Incorrect Data

- Incorrect Master

As BI reports are able to show the big picture from which the user can selectively drill down, this technology helps them to quickly locate a problem area and rectify the same. Many of our clients have actually used the BI reports to quickly locate and clean up the data. I shall explain, with illustrations, each of the above topics.

Missing Dimensions

In most of the master and transaction data maintained in a good ERP there are several dimensions which are optional, but if properly filled in, they can give rich analysis. However since these are optional, many a times these are not filled in. One of our clients is an FMCG company. They keep a track of sales to their dealers as well as their end customers wherever the end customer has been identified. The end customers need to be classified in certain categories so that attention to the sales and receivables can be kept. See Figure 1 below.

Figure 1

In the analytical report on Accounts Receivable, we added a simple business rule wherein the all those customers whose groups were not given were tagged as "zzzz-Blank Groups". As there were tens of thousands of rows of AR, it was impossible to do this identification manually. When the report got generated, it showed the customer group dimensions as shown above. It was then an easy matter to drill down from the value of "zzzz-blank groups" down to the customer and the invoice level and make the necessary correction. Such blank details had come in several dimensions. The simple task of dragging and dropping such dimensions to the row area immediately revealed such missing values.

Incorrect Data

One of our customers is a large auto component company. When they went live on their ERP their purchase manager was concerned about the correctness of the purchase orders being placed on the vendors. "How do I know whether the buyers have selected the correct payment terms, correct taxation terms …? " he mentioned to me. When thousands of orders are being placed, it is indeed difficult to do such a search using traditional ERP based tools. We wrote an analytical report for him. The report had several analytical dimensions and it answered the following two questions :

-   How many products were a single vendor purchase or a multi vendor purchase ?

-   How many products were purchased with the same rate or were there rate variations ?

The report digested several thousand Purchase order lines and the purchase manager was quickly able to identify the exceptions which needed to be corrected. See Figure 2 below :

Figure 2

The above picture shows (see blue highlight) that a particular product was being purchased from the same vendor but with different rates. When the manager drilled down to the Purchase Order number he found a huge variation in rates. Having this information, the buyer was able to quickly locate the Purchase order and they found that the tax rates were incorrectly given. Within a few clicks they were able to locate the error, which otherwise would have taken many hours.

Incorrect Master

In some cases certain key attributes are attached to masters. For example payment terms could be attached to the debtor's master. If these are incorrectly attached, the report generated would not be actionable. See figure 3 below. The Payment Term 16 was actually an LC payment term. Normally invoices having LC payment term should not be outstanding for more than a few days. However it was found that several such invoices were pending for many days. On drilling down to the customer and invoice level it was found that the terms were incorrectly attached.

Figure 3

There are many such instances of data errors which can creep into an erp database. For example we are at present doing a project in which the actual material consumption for manufacturing a product is being compared with the consumption as defined in the Bill of Materials. This module will compare such consumption of all the FG items manufactured in a time period. Where there is a mismatched consumption, the user will be able to drill down right up to the item level. This project is being done there is a feeling that the bill of materials have not been accurately defined. Making a manual check for the large product portfolio would be extremely time-consuming, and therefore the management has thought of making such a BI module.

BI Design Principle:

When a BI report is being designed it is important to build such analytical dimensions which will immediately point out problems in data. While it is not practically possible to identify all the errors on day one, but the ability of the report to quickly identify inconsistencies in data will be highly appreciated by the user group. The BI designer should discuss such possible errors not just with the higher level managerial staff, but also with the operating staff. They may give you various hints as to where errors have occurred in the past. These will give you ideas of what dimensions to build into your analytical report.

In the above examples we have used very simple tools like SQL Server and Excel Pivot Tables. However note that it is not just the tools, but the way you utilize the tools which will make all the difference. As they say "it is the man behind the weapon that counts!".

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.

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