

# BI – Proactive Information

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## Introduction

Human beings have a perfect hindsight ? We go the extra mile to analyse what has gone wrong. While this is important, it is also very important to foresee and prevent mistakes. Would it not be better if a parent helps his child with his studies, rather than just scold him on the basis of his report card ?

The adage “History repeats itself” exhorts us to study what has gone wrong and change ourselves so that we don’t make the same mistakes. And at the same time the adage “Don’t cry over split milk” tells us to forget the past and act on the future. Both these perspectives are very important from BI report design.

In this article, I will explain how BI designers should give pro-active information, so that the users can get actionable information leading to decisions and thereby preventing undesirable results.

Let me coin a phrase.. ‘Proactive Vision’. I would define it as a way of seeing data which will pro-actively enable the user to take a future action. Using this principle of proactive vision while designing BI reports will make your reports very actionable.

## Proactive Information : Accounts Receivable

Most Account Receivable (AR) reports have information about aging of dues, and such aging is classified into age-buckets. So we get information like dues between 0-30 days, 31-60 days, 61-90 days etc.. This tells the user how old each invoices is past its due date. This report, or some variant of this report is available in most ERP systems as a standard report.

The following screenshot (figure 1) shows an accounts receivable report with the traditional aging buckets. Unlike the text based ERP reports, this report is interactive. The user is able to see a big picture of receivables by all the major divisions, then drill down to the customer and the invoice level. A single report can substitute various text based ERP reports.

External / Group	Cust Name	Inv No	a: CurrentDue	b: <= 30	c: 31-60	d: 61-90	e: 91-120	f: 121-150	g: 1-30	h: 31-60	i: 61-90	j: 91-120	k: 121-150
External	Customer-100												245,036
	Customer-101		549,038										
	Customer-102		28,090				14,021	60,512					26,302
	Customer-103				3,061	5,607					92,166		2,632
	Customer-104		92,818		145,593								
	Customer-105				59,005								4,587
	Customer-106		2,492,260		659,657	584,444	200,335	115,995					385,566
	Customer-107										43,332		
	Customer-108		79,782		46,725								
	Customer-109												
	Customer-110		3,286,324		67,100	83,885	66,293	95,262					92,525
	Customer-111												
	Customer-112		32,400		280,574	29,250							
	Customer-113		2,105,169								8,624,068		

Figure 1

This report was developed by us for one of our clients. As BI designers, we must realize that the user's work begins where our work ends. We should never become complacent with our work. We must continuously strive to make the BI reports more and more actionable.

Having released this report, we discussed with the senior users as to how they actually used this report. The user mentioned that on getting the report they first sort out the invoices by due dates. Then they send reminders to the customers of invoices which are overdue and very near to due dates. On interacting with the users we realized that the user still does a lot of work to identify invoices which are near due dates and send emails etc.

Taking this hint, we created a business rule called 'potential past due' and 'potential critical due'. Potential overdue rule identified all the invoices which would move into the overdue category by the end of the month, and potential critical due would identify all invoices moving into critical category if they are not collected. While this seems very simplistic, in a large company with high volume of invoices and large number of customers, making a shortlist of what needs to be collected itself is a daunting and time consuming task. If the system can do this routine task, it can help the user considerably. See the next screen shot (figure 2)

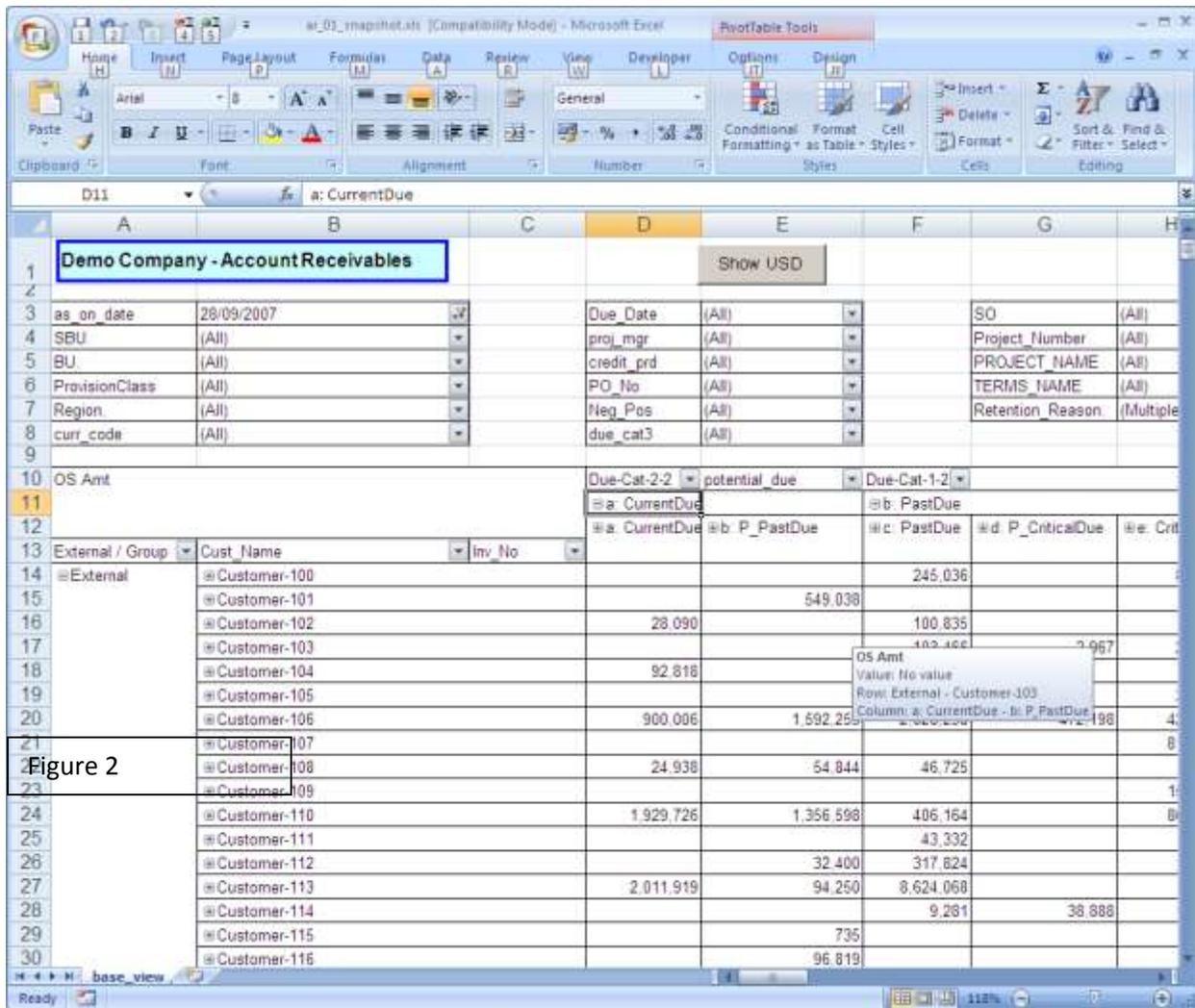


Figure 2

Now the user does not have to do any data manipulations. The report itself identifies what is potential past due and potential critical due ... see column e and column g of the report. A simple business rule adds a huge value to the user. The user can set a filter to see only the potential past dues or the potential critical dues. So from a large volume of invoices, he can immediately filter out those on which they need to focus. The users can now concentrate on doing their job, i.e. collections, rather than wasting time in figuring out what is to be collected.

Another hint we took from the discussions with the user was the fact that they sent emails to customers about overdue and potential overdue invoices. It was a fairly simple matter to automatically send an email to the customers based on the above data. The email does not send all the invoices, because many of the invoices are not due, and therefore there is no need to remind the customer about that. The email is not a 'balance confirmation', but a reminder of only those invoices for which the customer needs to be reminded. An add-on module was designed by us which (within minutes) sent pro-active emails to all the customers reminding them of the dues !

## Proactive Information : Delayed Customer Orders

For one of our customers we designed a KPI (Key Performance Indicator) report in the domain of customer delivery. The report measured the on time deliveries which were made to the customer as compared to the total deliveries made in a period. The report could be juggled by several dimensions like factories, product lines, customers, etc. The report could analyse to the minutest level where and who had got a bad mark. You can see in Figure 3 below a dashboard of the KPI.

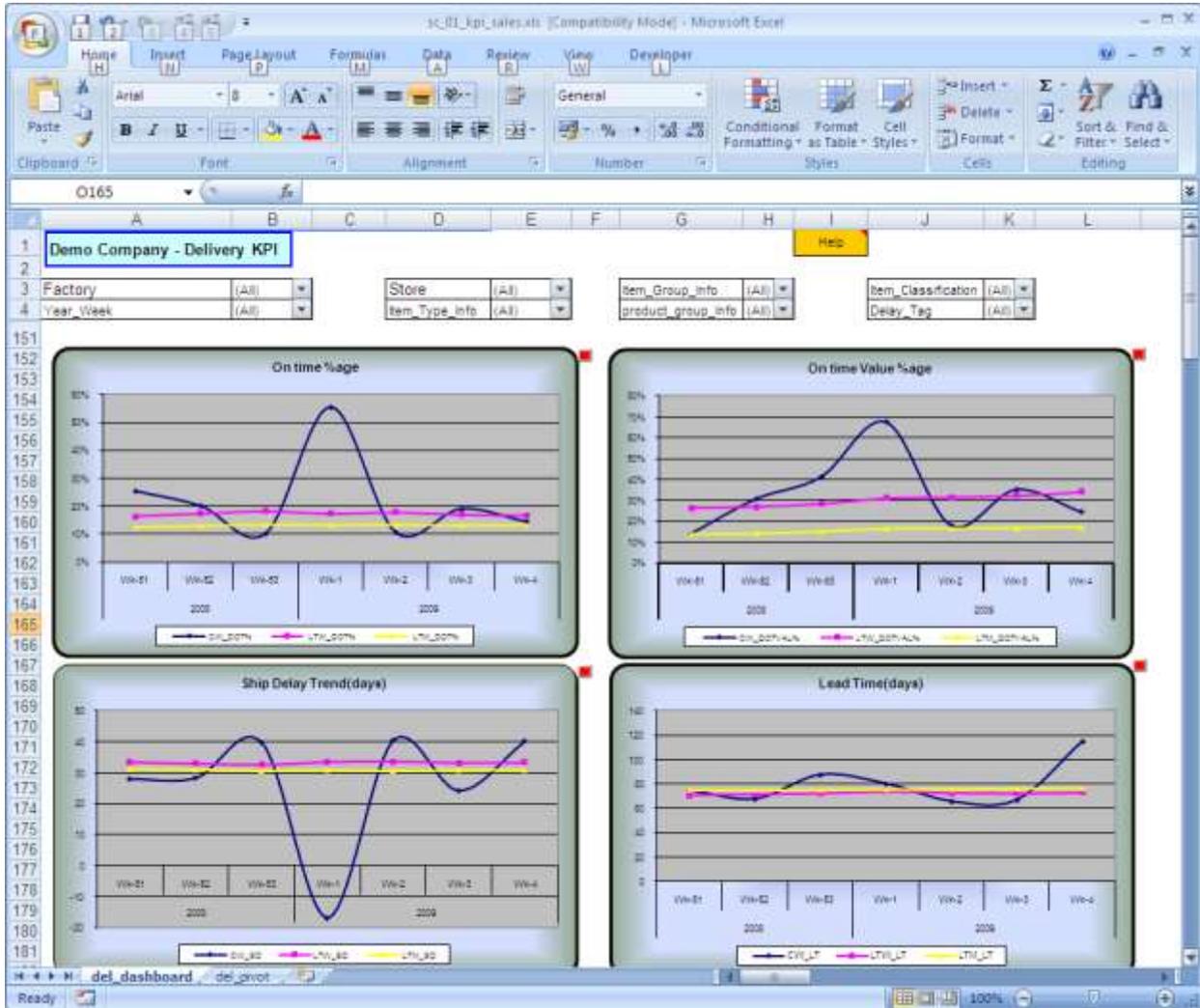


Figure 3

The users do use this report actively and learn from their past mistakes. However all this analysis is still essentially a post-mortem. Along with the above a report to analyse the current orders were also

developed. This enabled the users to drill down again and identify those orders which had not yet been delivered and which were getting delayed and concentrate on the same.

See the following screenshot (Figure 4) of the delays in pending orders :

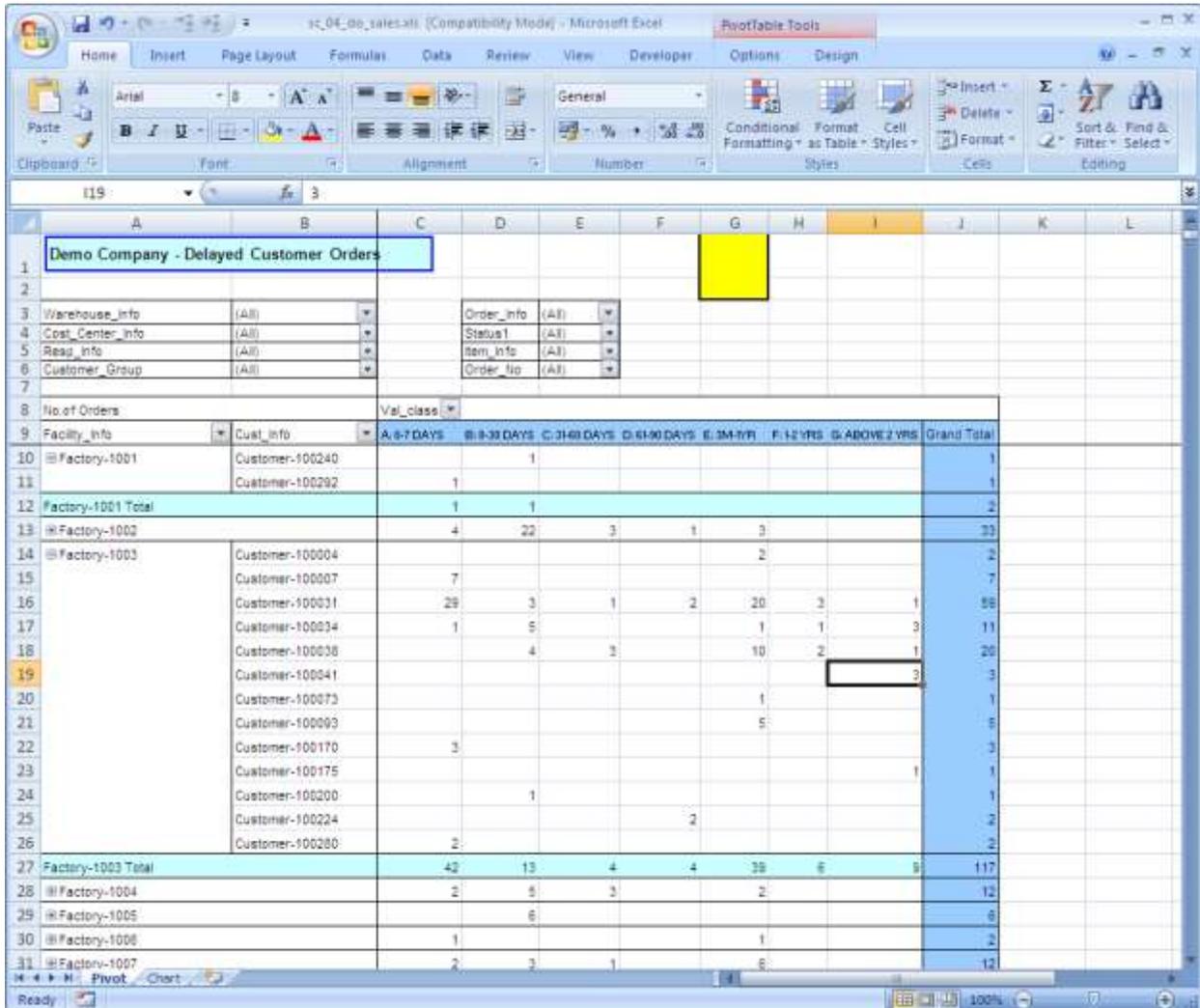


Figure 4

The user is now able to see in which factory there are delays and they are pertaining to which customers. The user can even drill down to the order and the item if required. At the senior level, a big picture of all the factories can be seen, and at the operating level the user can drill down to the lowest level.

This gave the entire management team a tremendous visibility in terms of delivery to the customers.

### **BI Design Principle:**

When a BI report is being designed it is important to keep asking ourselves one question : how can I make the user's job even simpler and yet more effective. Analysing domain areas and uncovering undesirable situations are important. But even more important is to apply the principle of proactive vision to build dimensions which will enable users to act so that undesirable situations are avoided.

Another important point to remember is that the identifying of such pro-active dimensions is not a onetime exercise. It is an ongoing journey. You must keep revisiting the area, discuss with the users, identify the way they work and use your imagination to create dimensions which will make the report more intelligent. Use the data which you collect for BI to do the routine work which a user does like sending email etc. If you help the user in not only analysing data, but also automating his routine work, you will be a winner !

- 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](mailto:sanjay@prosysinfotech.com).