

BI Aaj Kal !

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Introduction

This article is named after a recent hit movie – “Love Aaj Kal”. The movie highlights one very important fact viz certain truths like love never change with time.

Management Information Systems (MIS, or BI as techies call it) is one thing about business which will never go away. It may change its form or delivery mechanism. But without MIS nothing will work. I liken MIS to lubricating oil. Oil is very low cost as compared to the investment in plant and machinery, but without this, the entire operations can come to a grinding halt.

Thousands of years ago, Egyptians reported how many slaves had come to work, how many were absent and how many were whipped. Today companies have full HR departments giving probably similar information. Jokes apart, MIS has been, is and will be always there... though it will evolve over time.

We are passing through a very exciting phase of MIS evolution. And this is what I wish to talk about in this article.

I can give you every report out of ERP

Recently a very senior consultant whom we know came to me and said that at one of his client companies the person in charge of the ERP system has declared that they don't need BI, and that he can give every report straight out of the ERP system.

This made me wonder - do people really know what BI is ? Is BI just another fancy reporting mechanism with a lot of visuals and bells and whistles ? I think not. I think modern BI is a quantum jump from traditional MIS. With aid of the new technology and proper application of design principles, modern BI has truly come of age as a decision support mechanism.

For theorists, there are a lot of definitions available on the web. But I would like to drive home the point by a couple of examples.

Traditional BI

Traditionally BI generally consisted of reports generated out of the ERP systems. The user would give a plethora of parameters, and then the system would churn out a report. For every different view, there would be a separate report.

This report would either be a text based report, or an Excel dump of a text based report. People loved the excel dump as they could then format it, make it look good and then send it to their management. Excel tools like text-to-columns, vlookups, excel links, groups etc would be used to generate such reports. Take an example of a large business group which has various companies and having different business lines, The group CFO has to present a Group Corporate Profitability report to its chairman. After a lot of effort, the following report will be made :

Financials (Compatibility Mode) - Microsoft Excel										
	A	B	C	D	E	F	G	H	I	J
1	Profit & Loss							June		
2	Rs in mio.									
3	Particulars	Current Month			Year To Date			For the Year		
4		Actuals	Budget	P Y	Actuals	Budget	P Y	Estimate	Budget	P Y
5	Inland Sales	1,069.97	963.04	841.35	3,172.53	2,736.12	2,256.31	13,334.21	13,334.21	10,106.11
6	Export Sales	84.54	103.20	93.16	243.21	285.90	279.79	1,789.85	1,789.85	1,056.57
7	Inter SBU Sales	129.73	100.43	41.11	322.03	273.32	107.26	1,617.95	1,617.95	631.51
8	Total Sales	1,284.2	1,166.7	975.6	3,737.8	3,298.3	2,643.4	16,742.0	16,742.0	11,794.2
9	Operating Income	26.9	30.3	35.6	92.6	77.3	99.2	374.3	374.3	396.4
10	TOTAL INCOME	1,311.2	1,197.0	1,011.2	3,830.4	3,375.6	2,742.6	17,116.3	17,116.3	12,190.5
11										
12	Discount & Commission	26.6	21.4	19.2	76.0	63.0	45.7	266.5	266.5	199.3
13	Material cost	1,199.3	1,080.3	902.9	3,537.3	3,045.2	2,447.5	15,462.4	15,462.4	10,784.4
14	% to Total Sales	93.4%	92.6%	92.5%	94.6%	92.3%	92.6%	92.5%	92.5%	91.4%
15	variable SGA expenses	54.2	56.4	41.6	156.1	147.3	126.8	724.7	724.7	561.8
16	Value added	31.2	39.0	47.5	60.9	120.2	122.5	622.7	622.7	625.0
17	% to Total Sales	2.4%	3.3%	4.9%	1.6%	3.6%	4.6%	3.7%	3.7%	5.3%
18	ERE	96.9	94.4	85.2	278.3	287.6	253.5	1,156.9	1,156.9	976.6
19	Other Mfg. Expenses	35.6	30.3	28.3	93.3	87.9	77.5	369.1	369.1	335.9
20	Depreciation	24.6	26.4	23.0	74.4	82.6	68.7	405.6	405.6	279.6
21	Cost of Sales	1,437.2	1,311.1	1,100.2	4,215.5	3,713.8	3,019.7	18,427.3	18,427.3	13,158.0
22										
23	G P	- 126.0	- 114.1	- 89.0	- 385.1	- 338.2	- 277.1	- 1,311.0	- 1,311.0	- 967.5
24	% to Total Income	-9.6%	-9.5%	-8.8%	-10.1%	-10.0%	-10.1%	-7.7%	-7.7%	-7.9%
25										
26	Fixed Selling General & Administration Exp	63.8	72.2	52.7	195.3	215.5	146.3	903.4	903.4	700.6
27	OPBIT	- 189.7	- 186.3	- 141.8	- 580.4	- 553.7	- 423.4	- 2,214.4	- 2,214.4	- 1,668.0
28	% to Total Income	-14.5%	-15.6%	-14.0%	-15.2%	-16.4%	-15.4%	-12.9%	-12.9%	-13.7%
29										
30										
31	Interest	5.0	8.5	4.6	22.1	26.1	14.2	157.1	157.1	57.7

Figure 1

Each SBU of the group will send its financials in the pre defined format. One person at the corporate office will link all the sheets and made this cover page which gives the big picture of the entire group. If the chairman asks for the company wise breakup of the sales, there will be a scramble for the underlying sheets. If he wants to study trend over past 3 month, different workbooks will be opened. Finally he will get so frustrated with the speed of response, that he will stop asking info.

When I searched on Wikipedia for the definition of BI, I found this very startling piece of research of Gartner Group : (http://en.wikipedia.org/wiki/Business_intelligence)

A 2009 Gartner paper predicted these developments in business intelligence market .

- *Because of lack of information, processes, and tools, through 2012, more than 35 per cent of the top 5,000 global companies will regularly fail to make insightful decisions about significant changes in their business and markets.*

- ...

The traditional BI suffers from the following major drawbacks :

Time Consuming	<ul style="list-style-type: none"> • More time is spent in making the report manually, rather than validating/ analysing the same. • The reports are static and therefore limited & unsatisfactory response to Management's questions.
Non Interactive	<ul style="list-style-type: none"> • Automation based on Excel links or 'vlookups' etc. are not real automation, as information loses its interactivity and intuitiveness.
Person Dependent	<ul style="list-style-type: none"> • These MIS methods are person dependent and error prone. • Manual Intervention in taking data from base systems.
Not Timely	<ul style="list-style-type: none"> • Information may also not be received within the required time.
Insufficient Information	<ul style="list-style-type: none"> • There is too much data, but too little information out there. Many a times it is not possible to process the data manually.
Poor Security	<ul style="list-style-type: none"> • MIS and other sensitive data remain in vulnerable locations, making data access and security regulations impossible.

Modern BI

Modern BI does not necessarily mean new and fancy tools. Even with the existing tools you can do wonders. However the approach and design has to change. The above excel based report sent to the chairman, was later converted to a 'modern' report as shown below :

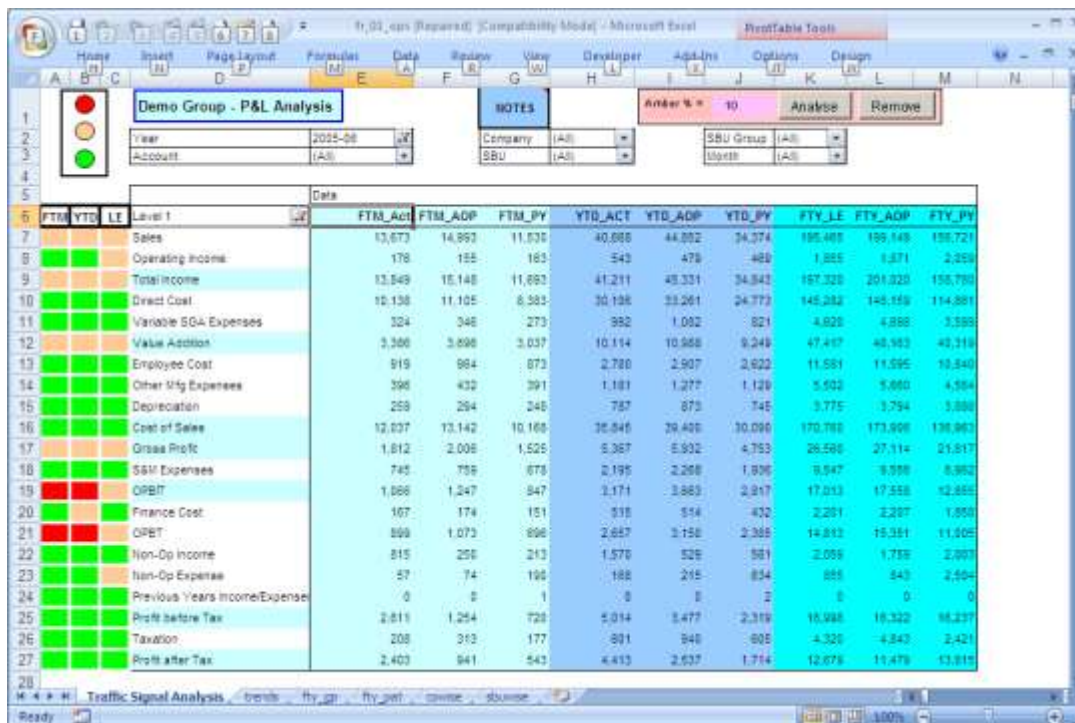


Figure 2

So, you may ask, apart from a nice color scheme, what is the difference ? Bill Gates in his book 'Business @Speed of Thought' has mentioned :

"What digital tools do that paper reports cannot is give everyone the ability to ask the next question. Because you never know what that question is. Because you never know what that question is going to be, you need tools that help you explore the answers on your own."

Since you don't know what your chairman is going to ask you, you need a tool like the above. Your chairman wanted to know company wise breakup of sales, just drag the Company dimension next to the sales, and you have company wise sales :

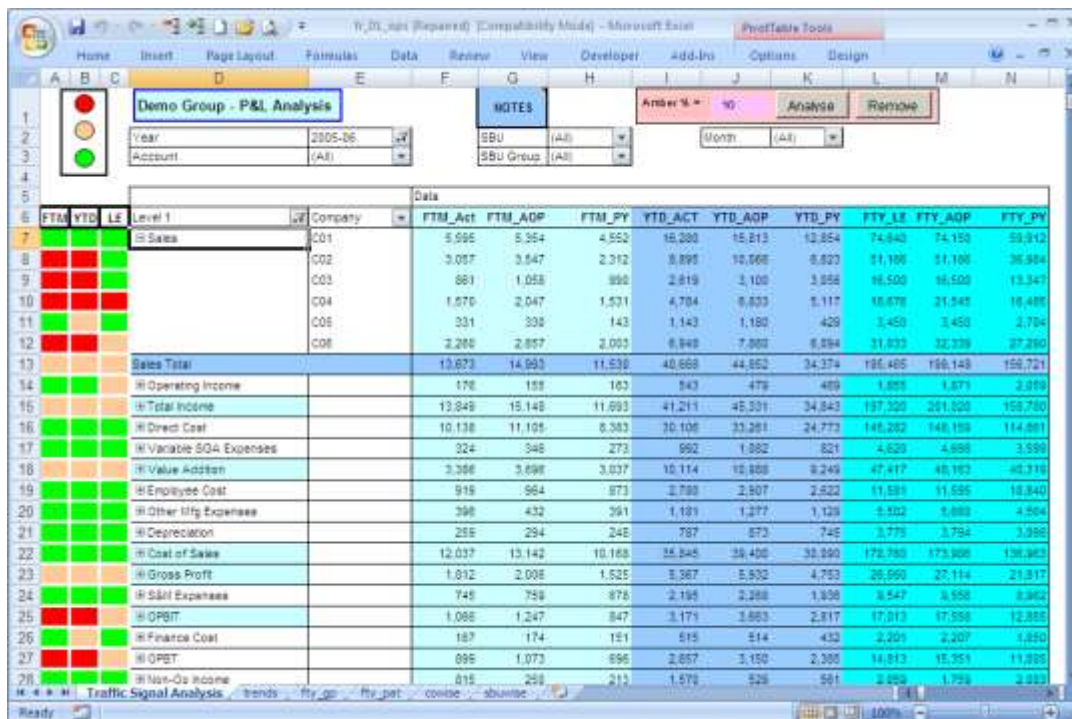


Figure 3

He also wanted to know the trend of the past few months. Again drag and drop and here it is :

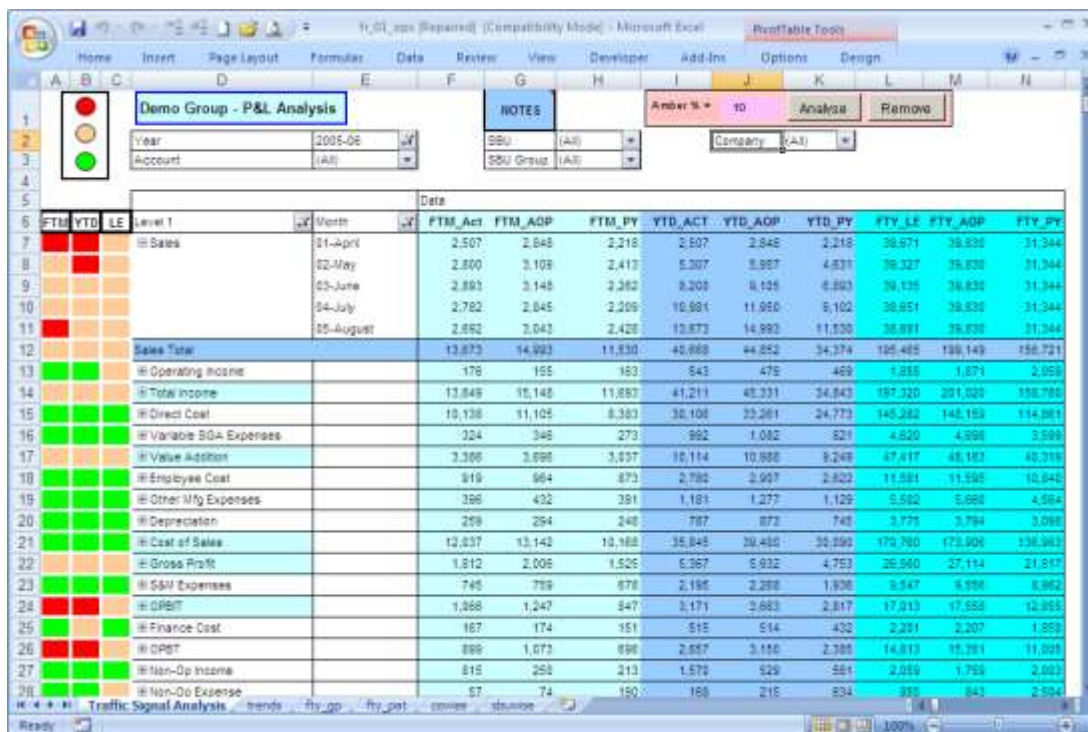


Figure 4

Not only this, but any permutation and combination of the dimensions given in rows 2 and 3 can be done to generate an infinite amount of views. Soon the Chairman will be answering his own questions ! (Phew , what a relief !)

As you would have noticed, the report is still in Excel ! However the underlying methods have changed.

Such MIS models can be generated for all domain areas, and they can quickly answer questions of your management, and help them in taking decisions based on facts, since facts are now at their fingertips.

The following are the major advantages of the new and modern BI :

Automatic	Automatic data acquisition from ERP/Non-ERP Sources
Database	Storage of raw & processed data in a database server .
Additional Dimensions	Additional data, dimensions and application of business rules to create dimensions not existing in the ERP
Fast & Accurate & Automatic	Fast, Accurate and Automatic Report Generation & Distribution
Interactive	Interactive Reporting – slice, dice, tabulate, graph, filter
Controlled Access	Access control of MIS Data , and easily accessible
Secure	Security of MIS data as it is server based and can be backed up centrally.

BI Design Principle:

When a BI report is being designed it is important to study what the company has been currently doing. Don't try to reinvent the wheel. Go through all the reports which are currently being used. Ask sharp questions, and don't take 'No' for an answer. If in one corner of a report you see a particular number, ask what it means. For all you know it may be a performance measure of the department. As BI designers, we must give the users what they are already getting, and then more. Also remember that just buying a BI tool will not alleviate your problems...it is the design which will make all the difference.

About the Author:



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