Video 35

In this section, we will look at sample business reports and dashboards to understand what is contained in reports and dashboards and how they are different from each other.

Business reports usually contain a lot of information and a lot of text. So examples of business reports include annual reports, strategy paper, business review reports, top management dashboards etc. Here are some sample business reports, for example, this is a business review report for the HR function. So this is in the form of a presentation, first slide, second slide, third slide, fourth slide and so on and then finally ending with a summary slide and next steps. Or you could have a business report that looks like this which is a mix of text and visualisation in a PDF format.

What is a dashboard and how is that different from a report? A dashboard is a business intelligence or data visualisation tool that displays current status of metrics and key performance indicators for an enterprise. Dashboards essentially consolidate and arrange numbers, metrics and sometimes performance scorecards on a single screen. They may be tailored for a specific role and display metrics targeted for a single point of view, so if you are presenting to the CEO, **or** (1.30) the CFO, you will have different dashboards because the metrics

that they are using that they will be interested in are different.

To understand dashboards, let's take a simple case study. Let's say that I have this data on sales performance by region along with profitability. I want to present the high level summary of performance to my CEO. Now, the way I could do that is if I want to look at profitability or performance, I could create multiple pivot tables, charts etc., and generate a report. But the problem with that approach could be that because the audience is somebody very very senior, the attention span tends to be limited. They will want to look at all your information in one place and they may want to make multiple comparisons and higher level summaries. How would you actually do that? It's very simple. You still create multiple reports, charts, tables based on what is appropriate but when you display that, you put them all in one simple, single page view.

Now when you are creating a dashboard in Excel or any other tool, remember the outcome or why you are creating the dashboard is very important, so make sure that you understand the problem in the required outcome. Then, we need to figure out which metrics or key performance indicators will be useful, given the desired outcome. Companies usually have standard metrics or KPIs that they follow. So, it may be a question of choosing the

right KPIs for the outcome that you are interested in or the function that you are looking at. But, sometimes you may have to create your open KPIs. Once you know which metrics or KPIs you are looking at, then you need to figure out what is the best way of representing those metrics and not all the time will the metrics be best represented in charts, sometimes it could be tables, pivots tables etc.

Finally, once you have all of these elements figured out, you create and design the dashboard with all of these elements. So when you create, you might say this element I am going to use a chart, somewhere else I am going to use a pivot, somewhere I am going to use a table, you create those individually, and then you put all of those elements together with appropriate sizing, and then you make sure you format it for consistency, readability and so on. So if you go back to our example, we want to present high level performance summary. So what kind of metrics or KPIs do you think a CEO would be interested in, that track performance. This could be things like performance by region in terms of revenue, profitability of a product, profitability by region, who are my top customers, who are my worst customers, what are my sales trends, what are my pricing comparisons. These are all examples of KPIs that a CEO would be interested in at a high level.

Now for all of these metrics, you might need to decide which of these metrics am I going to show and then how do I show these metrics. For example, does it make sense to show performance by region in a chart or in a pivot table. How do I show my top 5 customers, how do I show sales trends etc.

So here is an example of a dashboard created very simple, using that data. What it has is 4 different elements in it, 2 charts and 2 tables. The two charts are talking about profit and revenue by region and by product, so you have a regional view of profit and revenue and you have a product view of profit and revenue. Then we are also looking at margin by product and region and pricing by product and region in the bottom 2 tables. Notice also that while we have a lot of information, we are making it easy for people to get quick takeaways, for example, we are pointing out for example that the product DEF is unprofitable. The most important thing to look at in this chart is the fact that DEF is unprofitable. It has negative margin. In this chart, there is lower margin in the west region or for example, in these tables, when we look at margin, we are color coding the highest margin for the product region combination east and ABC and the lowest margin, which is East and XYZ. Similarly in the final table, we are looking at pricing and we are highlighting where the pricing is working well, high prices and where it is not working well, which is very very low prices.

Finally, a key takeaway from this dashboard. Wide variation in pricing and margins, potential opportunity to rationalize pricing and this is one sample dashboard, of course, different people could come up with different representations on the same information but the idea is the same. How do you consolidate all the information together on metrics that are important to the audience that is viewing them with key takeaways so that somebody can spend 3 or 4 minutes on this dashboard and quickly get important information from your analysis.

To reiterate, the idea of a dashboard is that it allows a reader to get lots of information about key performance metrics. Because there is a lot of information, readability and ease of instant understanding is very very very critical. Let's take a look at other dashboards.

This is an example of a extensive dashboard based on some sales data. So you can see there are multiple elements; product revenue, service revenues, revenue over time, key figures from sales, sales average dollars per sales person, average dollars per customer, top 5 sales people, top customers, top items etc. So you can see this is a dynamic dashboard, you can change, you can... there is also a simulation included which allows the person looking at this to change some of these and look at what happens to the sales forecast.

Similarly, you can change this from month to quarter etc. to see different views.

Here is another example of a sales dashboard, again a lot of information you can see sales person names, sales trends etc., product region, customer type mix and in fact, using the same data, here is another dashboard, which is... looks very different, so both of these dashboards are built on the same data but you can see that the information presented is different and differently presented.

Here is an example of a financial dashboard where the information, there is information on financial metrics, cost of goods sold, expense, profit summaries etc. Here is another example of a financial dashboard where we will be looking at balance sheet metrics, revenue and profits, profit availability in market performance, what is the performance of your stock price etc.

So what are some rules to building good dashboards?
One, first we should make sure that we are using the appropriate form of a dashboard, are we using a report or are we using a dashboard.
2, what are audience goals.
3, how do you design the dashboard effectively to make sure information is contained.. is conveyed easily and four, consistency and readability. Finally summarising information on the dashboard. As long

as you are paying attention to all these elements, you will be able to design a good dashboard.

So let's talk about reports versus dashboards and when is it appropriate to use reports or dashboards.

Reports tend to be more detailed, more story oriented and need more time for deep dive analysis. Usually they will be across multiple pages. Dashboards on the other hand, are much more narrowly focussed on the important information, used to identify critical action areas and are typically single page views. So this is an example of a report, this is an example of a dashboard. Once you decide whether you need to create a report or a dashboard, you need to think about the audience. As we said audience need is very critical to understand and audience needs will drive goal and layout of the dashboards. Make sure you are identifying critical areas of audience interest, include analysis of problem areas or summary of deep dive analysis. Depending on the audience, you will focus on different metrics and different indicators .

The third step is to design your dashboard efficiently and what are these design principles. When you are designing dashboards, grouping is very important. Since dashboards contain multiple charts, group similar items together and use business logic to decide grouping. Summarizing

information efficiently – if you have 20 product categories and 15 of them contribute to less than 5% of the sales, it's not necessary to show all 20 separately; all those 15could possible be combined, so you can focus on your top 5 categories that contribute to 95% of sales. Use colors carefully – one of the most common mistakes that people make is to use lots of colors but that just tends to be very distractive. You need to make sure that you are using colors for highlighting and make sure that color use is consistent meaning if a certain metric is of a certain color or a certain year data is of a certain color in one chart, the same year's data has to be in the same color in the second chart and the third chart.

Don't overcomplicate charts – Label appropriately, but don't add too much information because there is already a lot of information on a dashboard. Most important, Keep it simple – Focus on what is important, not on how much information you can cram into the dashboard, readability therefore, is the key and we keep coming back to this. The effectiveness of a dashboard is dependent a lot on how readable or understandable it is. Dashboards tend to have a lot of information. So make sure, you are giving people/ readers a logical flow. Most people tend to read from left to right and then top to bottom and therefore your hierarchy of information has to follow the same information. It is okay to use text and tables sometimes instead of

visualisations because they may be more appropriate. Make sure when you are designing a dashboard that critical points that need to be highlighted, there is space for that and because you are trying to put in so much information on a single page view, it will take multiple iterations, so in your planning process, make sure that you allow for multiple iteration time.

Finally, you need to make sure that there are summarisation and conclusions in a dashboard, atleast one or more lines summarising key findings that should be easily deducible from the dashboard. And remember that some dashboards could have dynamic, interactive elements, so you may want to look at your summarisation based on whether you have static elements in your dashboard or dynamic elements in your dashboard.

Just to drive home all these points, let's look at some examples of dashboards that can be improved and dashboards that do a fabulous job.

Here is an example of a dashboard that is very hard to read; there is just too much information, very very disconnected, too much color, and in general, people tend to get put off when they see something as complex as this.

Here is another example, the background color is inappropriate, there is just lot of strong color which makes it hard to read.

Here is a much better dashboard. You can see less clutter, good information and easy to understand. Here is another example of a website dashboard, again easy to read, has critical points highlighted and easy to understand.

Here is another one which is a lot more visual, again easy to understand, lot of information but easy to understand.

Remember finally that everything we have learnt about creating visualisations, charts in excel etc., are eventually tools that allow us to analyse a data better and present our results effectively. The successful outcome of a project eventually depends on how successfully you are able to present results. Most people get lost in the details of the analysis and don't budget enough time or pain of attention to how the results are presented. But in some ways, it is the most critical part of a project. Your analysis will be well received if it is supported by a great report or a dashboard. So it's important to invest time in learning about how to create visualisations, how to create reports and dashboards, how to format them to make sure that they are readable and how to present business analysis results in an effective manner.