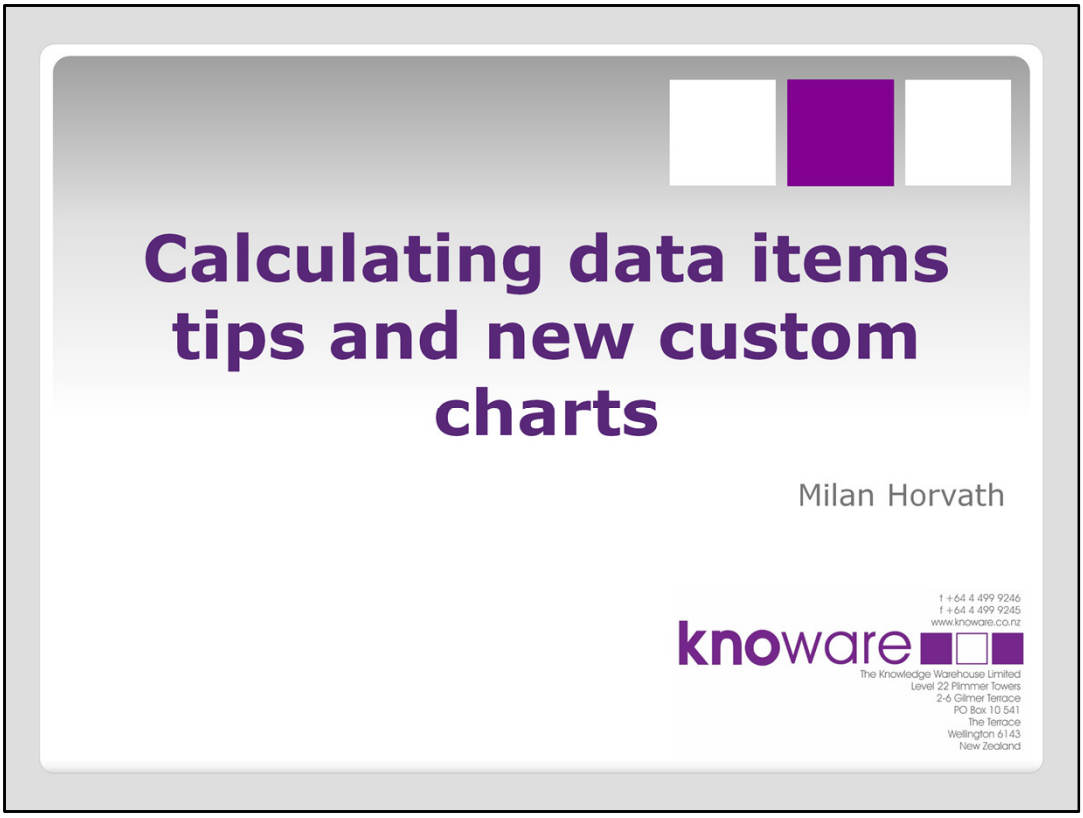
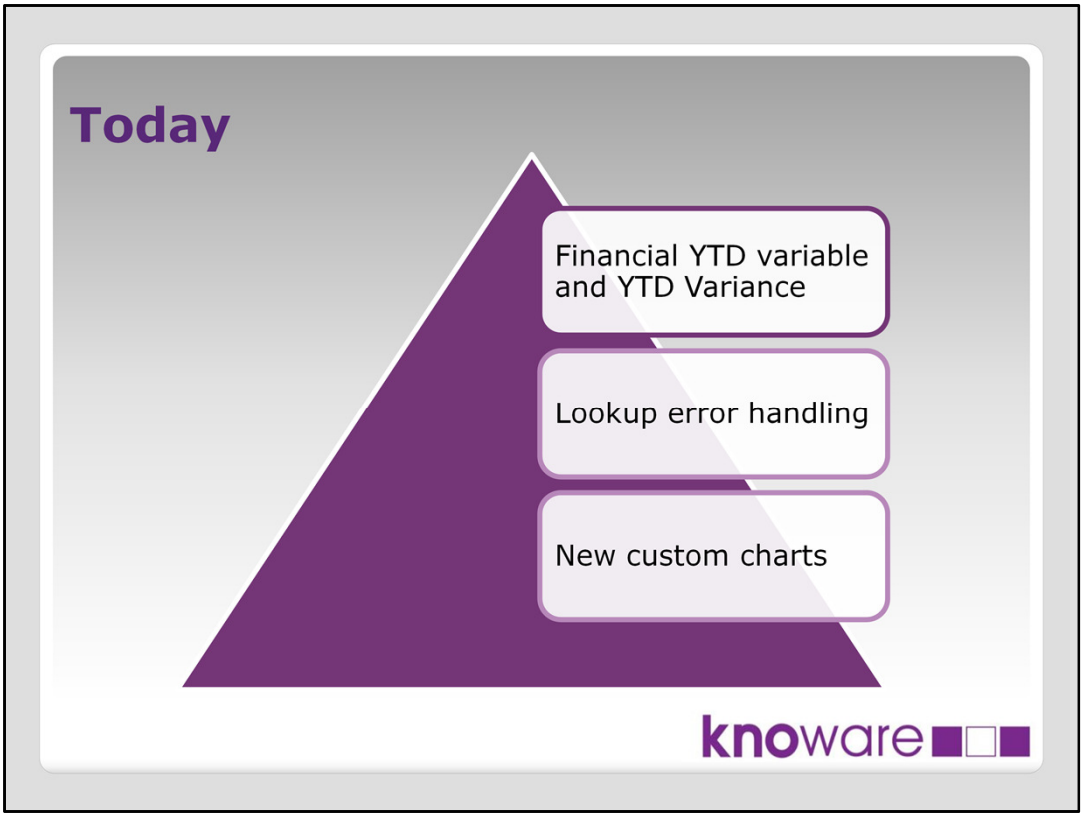


Welcome/Good afternoon everyone, my name is Milan Horvath from Knoware. I came here last year, and maybe you think I have a French accent, but actually it is Hungarian.
I am currently working on a project at (NZ) Police, building Data Warehouse, creating VA reports and supporting the report users.



Today I am going to talk about the following topics:

- 1. Financial Year to Date variable. How many of you have done FYTD calculation before in VA? I will show you how we do at Police, but I am pretty sure some of you have their own solutions.
- 2. Lookup error handling: We received an interesting report request recently, where the user wanted to represent if the ID they want to look up is in the data or not. If not than an error message is needed as feedback.
- New custom charts: I am sure you know VA has a lot of good charts and graphs available, however at Police we had a couple of things we needed to do that weren't available as standard charts. The good thing is that VA allows you to create new charts, and that is called new custom charts

Financial Year

Date	Calendar Year	Calendar Month	Fiscal Year	Fiscal Month
13Aug2015	2015	8	2015	2
15Mar2016	2016	3	2015	9

knoware

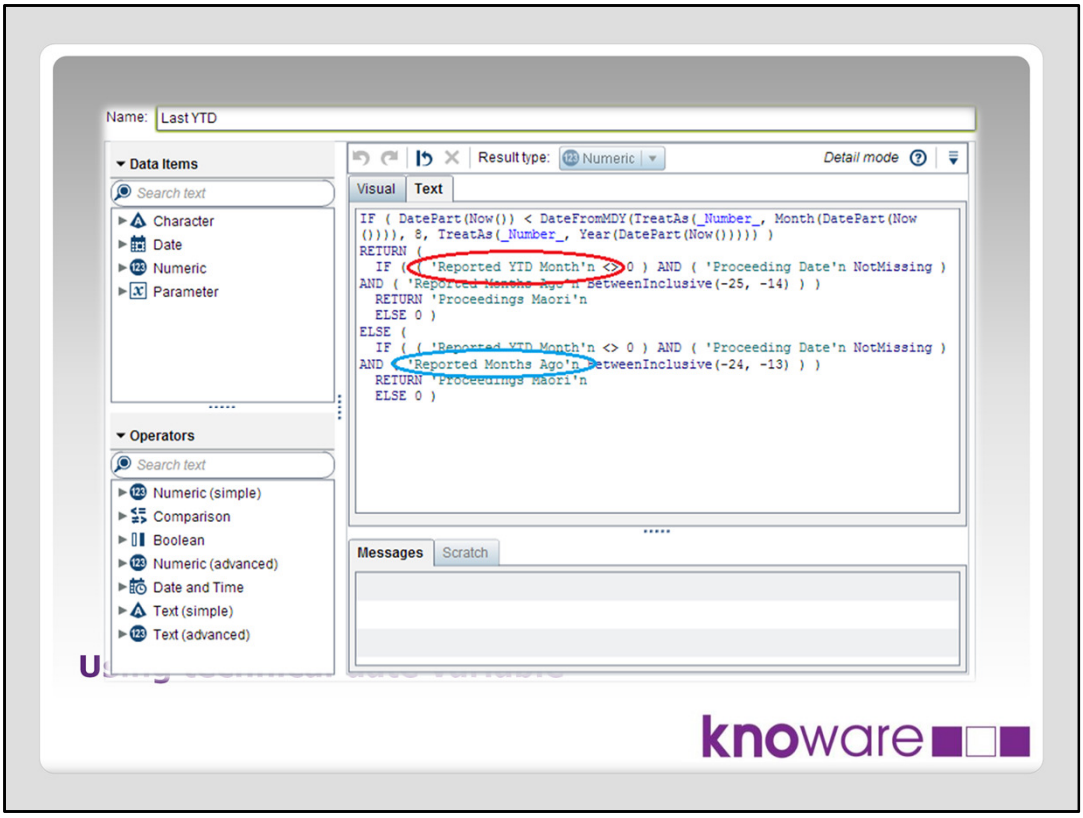
- VA has some very smart automatic calculations that it provides i.e. YTD and current period compare to last period, however for these two examples it only does it for calendar year
- Of course a lot of organisations don't work on calendar year, rather financial year (government end of June), so we have to do this calculation ourselves
- Frankly, I must say Financial Year to Date calculation in VA is a bit complicate calculation in itself already
- But we have been asked to build reports to the report designers as simple as we can
- Therefore we have created a Design Standard and collected all of our recommendations to help those people creating reports
- Among other things we have a number of tips for new calculated items. Financial Year to Date and % FYTD Variance measures are two of these
- The table with the 2 dates on the slide shows how FYTD works in theory, 2016 is the calendar year, but 2015 is the Fiscal Year in the second example

…And here how it works in VA…
What I am showing here is an expression in VA that is calculating FYTD.

At the beginning we are already facing a problem. How to calculate a complex measure that is understandable for users?
On the left you can see a brute force solution which was our first version. There are IF conditions everywhere with complex date calculations. Please, just imagine the users' faces when they saw this formula first time.. It did not go down very well.

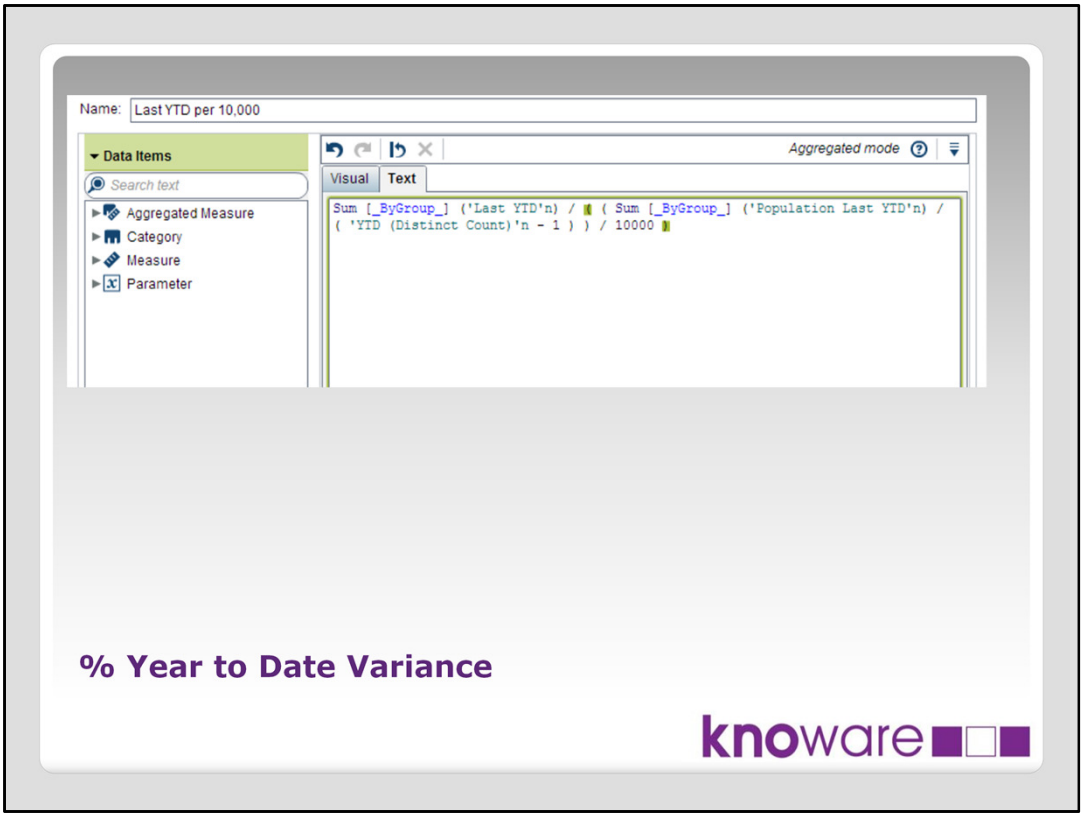
On the right we have introduced version 2 by creating 2 new technical date variables in the data source table to help the calculation in VA
So now it becomes more transparent, clear, user-friendly

Consequences:
Know your limits: what is to say know your VA, so make sure that the problem you are going to solve is doable in VA, or is there a better way to implement it i.e. in the data source table
So, Make a decision: Should you do a calculation in VA, or should you do a pre-calculation in the data?
VA can support perfectly your decision, but you have to work out which is the best way to do it.



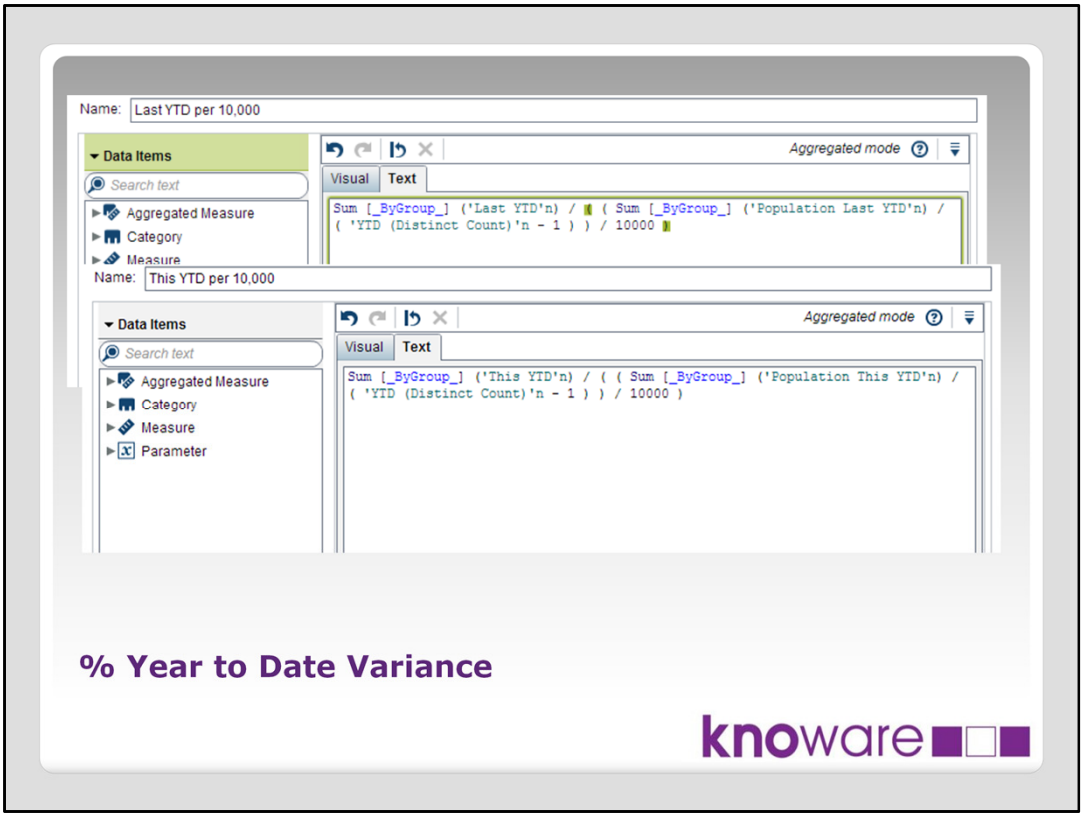
1. In this formula we are applying three if conditions using the two technical variables
    1. Reported YTD Month is increasing its values by one in each month from July (which is the first month of the fiscal year). It is calculating this number up to the current month, every other month afterwards will be
    set up as 0
    2. Reported Months Ago variable is decrementing its values by one in each months so that the current month has the value 0, the last month has -1, and so on.

This 2 variables are satisfactory to calculate the YTD variable easily
Highlighted variables



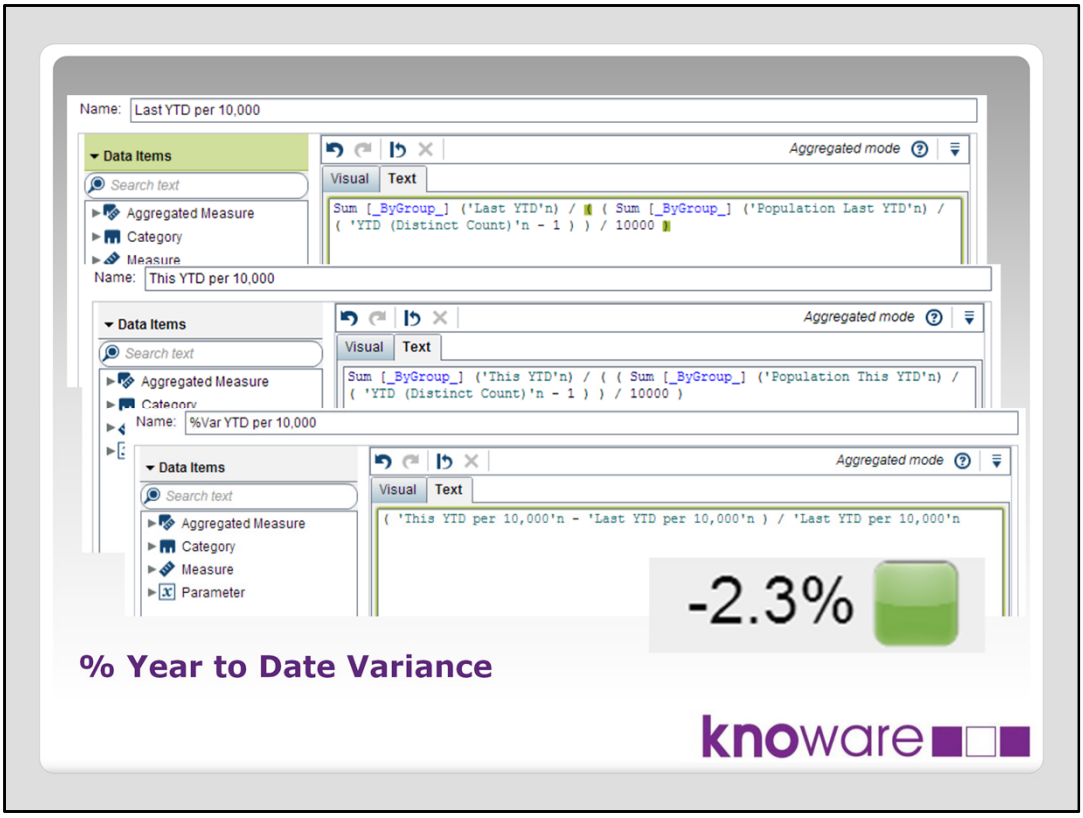
If you have a proper calculation for YTD, the following steps are really easy

1. Create Last YTD and This YTD variables.
2. Create an aggregated measure as the difference between the two values of the calculated YTD variables divided by the Last YTD value
3. (You do not have to multiply the results by 100 as using the appropriate percent format will give you the right outcome)
4. And the final calculation is showing here, with an indicator (it's green so it is a good result)



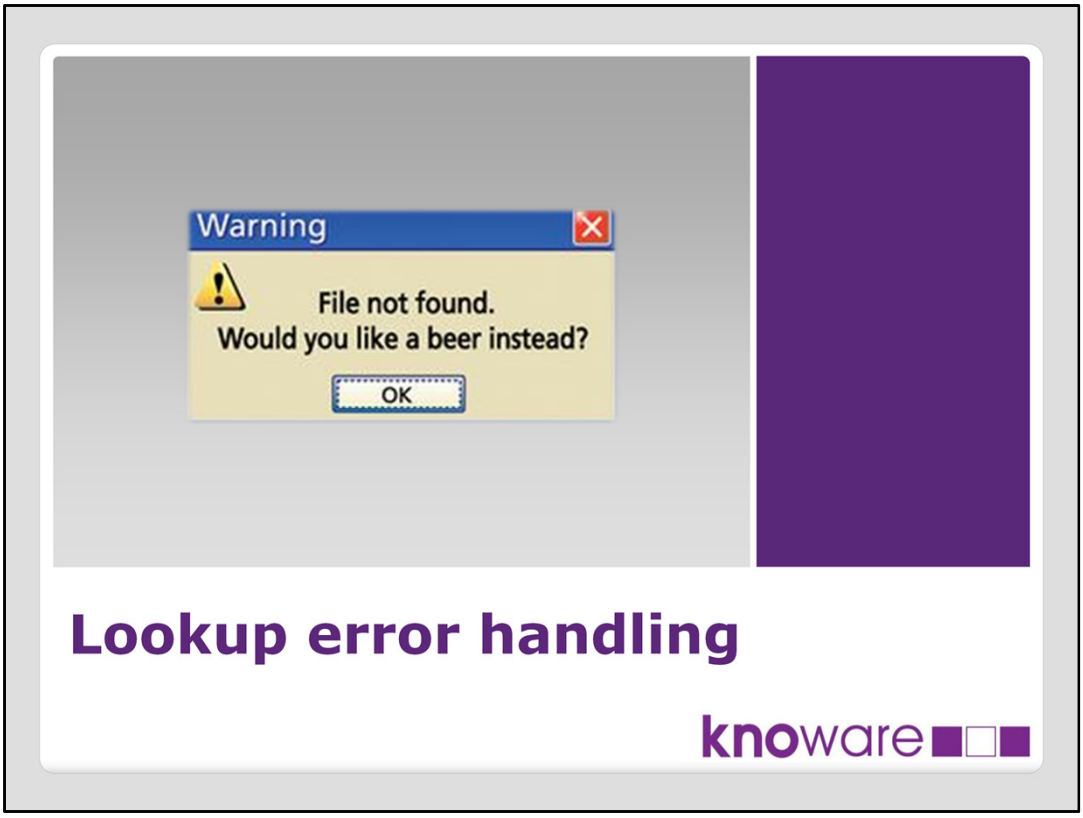
If you have a proper calculation for YTD, the following steps are really easy

1. Create Last YTD and This YTD variables.
2. Create an aggregated measure as the difference between the two values of the calculated YTD variables divided by the Last YTD value
3. (You do not have to multiply the results by 100 as using the appropriate percent format will give you the right outcome)
4. And the final calculation is showing here, with an indicator (it's green so it is a good result)



If you have a proper calculation for YTD, the following steps are really easy

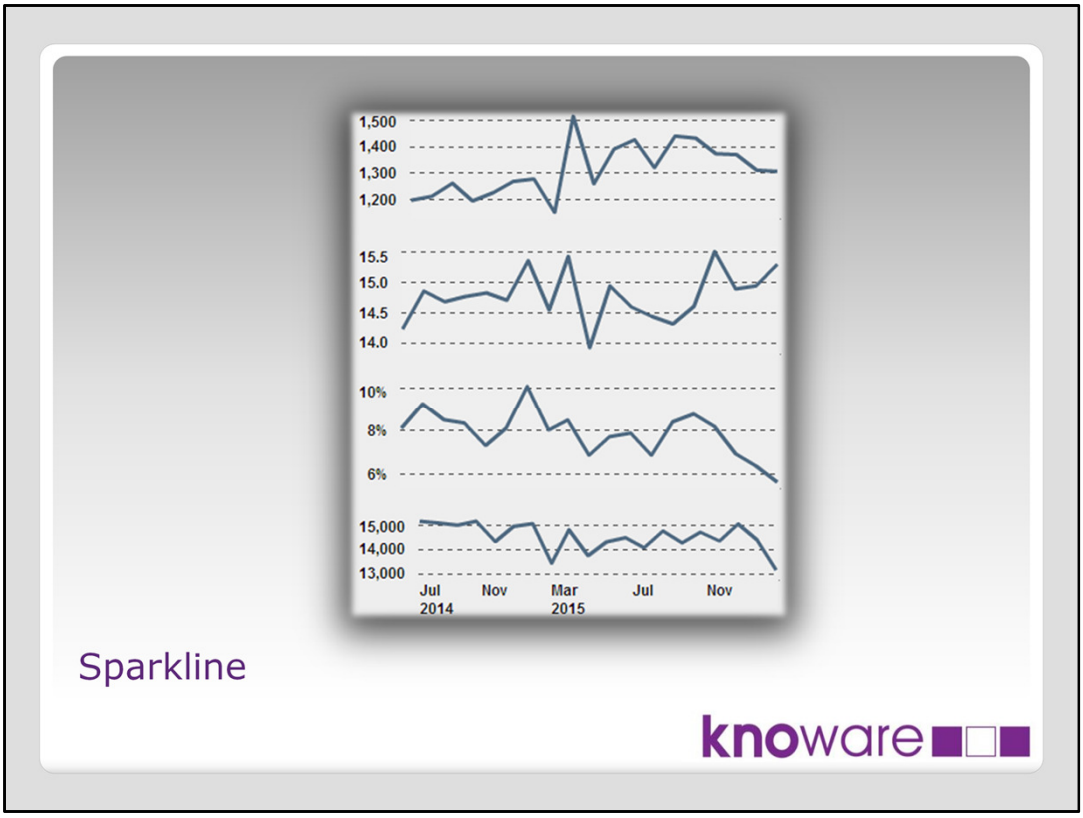
1. Create Last YTD and This YTD variables.
2. Create an aggregated measure as the difference between the two values of the calculated YTD variables divided by the Last YTD value
3. (You do not have to multiply the results by 100 as using the appropriate percent format will give you the right outcome)
4. And the final calculation is showing here, with an indicator (it's green so it is a good result)



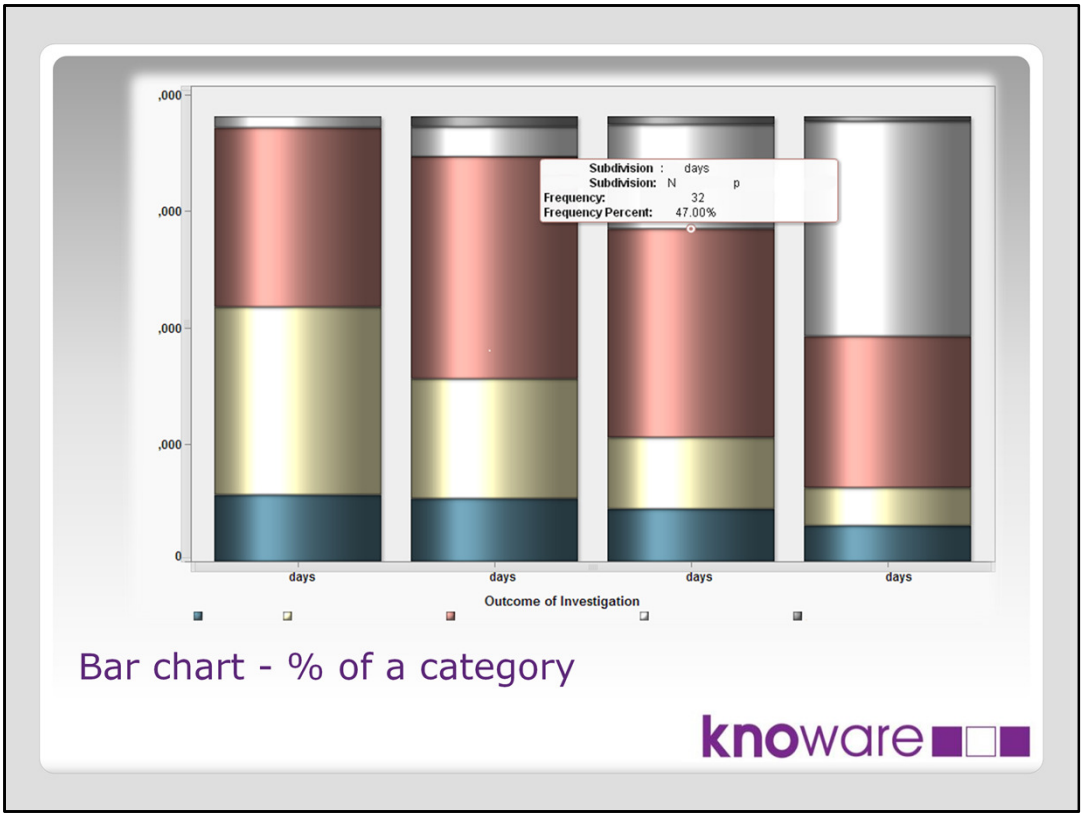
Lookup error handling. This is my favorite at the moment.
We have created a report that user can use like they were getting information from a database using queries, or using a search engine
The query will give you a calculated score number and the person's details as well
They also had another request if the query returns with no result, put a message on the screen like 'ID has not found'

If you are familiar with VA, you probably know this request is not so straightforward
It is implementable though
How does it work?
We enter a value in the textbox at the top right corner and look up the person
You will get back all of its details, including a score number that is calculated by VA
If you enter invalid ID, or the ID does not exist, you will get back an error message
We do this by using parameters
In this example a parameter is used to allow you to enter the ID
You may not be aware of parameters, as these are new feature in 7.1.
If you are familiar in SAS coding it is like a macro variable that you can use in an expression

Another useful tool in VA is that you can create new the custom chart.
There have been only a few cases when we could not use the in-built charts and had to create new ones.



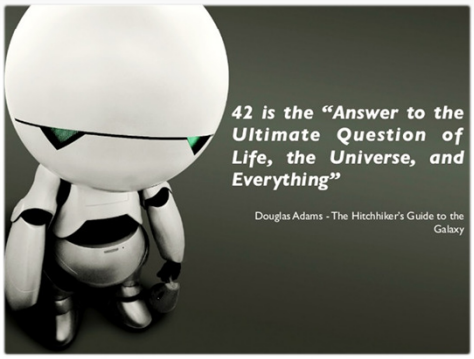
One of these cases is the sparkline. The list table has this feature, so you can add sparkline to you cell, but you cannot hover the mouse on the chart and it will not show the current values.
Creating new custom sparkline you are able to hide or present only those labels, values that are required for you.



Users wanted to see frequency percentage as datatip for all of the grouped categories. In this case I could not just drag and drop frequency percentage onto the single bar chart, because that percentage would show the ratio against the entire population. With a custom graph, when you create new variables, you are able to represent ratio against just the category total.

Thank you

Questions?



That was all I wanted to share with you today. Thank you for your attention and if you have any question, just let me know, the answer will be 42.


knoware
www.knoware.co.nz