

# How to transition from Column & Row Tabular reports to Visualisations

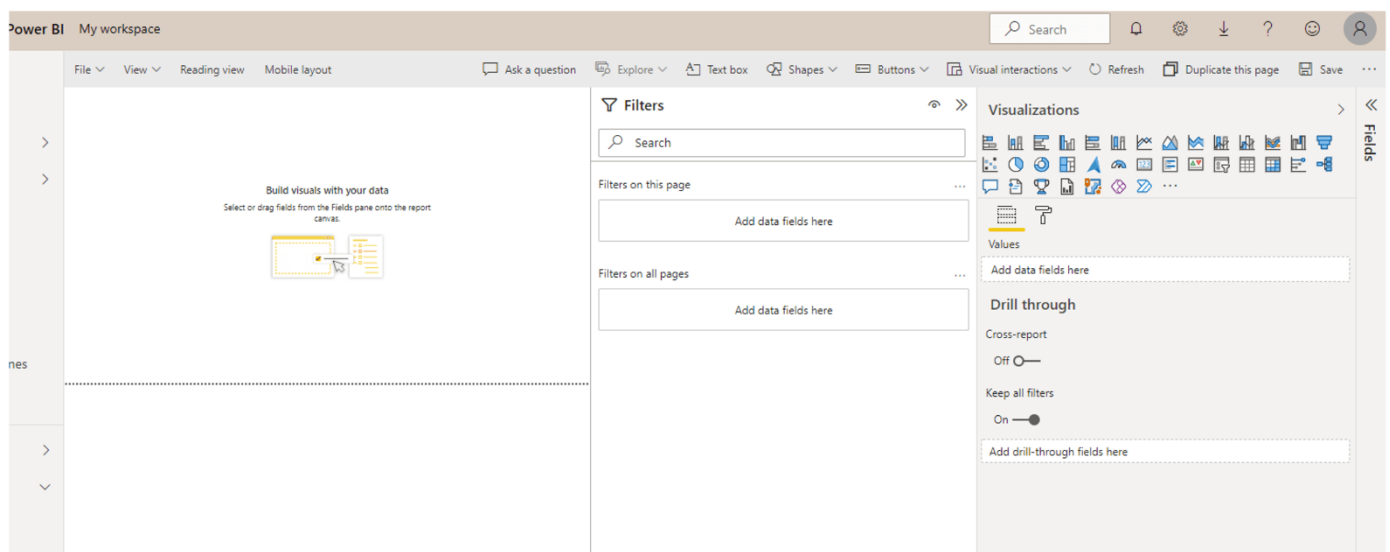
I often get asked to recreate column and row excel reports in PowerBI. Ultimately, businesses are making this request because they are comfortable with analysing data in columns and rows and believe there is only one way to quickly assess whether the organisation is functioning in an acceptable manner.

When I hear the business asking why these excel recreations are slow, my explanation is this:

- PowerBI was specifically built to "visualise" data.
- Excel is built to display data in columns and rows and can generate charts and graphs with a little work.

I want to focus on this fact, one of PowerBI's strengths is Visualisation.

The following image is the Power BI Desktop interface:



PowerBI named that far right pane "Visualisations" because that is one of its greatest strengths. With over 35 different types of visualisations right at install, PowerBI professionals resist the request to build a simple table of columns and rows.

Let's look at the adage: a picture speaks a thousand words.

You need only look at world records to understand that the human brain processes and recalls "pictures" faster than reading words or numerals, or even calculating them.

### World Records\*:

- Jeonghee Lee (South Korea) 30th Sep 2018 solved 10 – 10-digit number by 5-digit number division equations in 53.2 seconds.
- Mark Jornet Sanz (Spain) 23rd Jan 2019 solved 10 – two 8-digit number multiplication equations in 2:42.3 minutes.

In contrast,

- David Farrow (Canada) 2007 recalled the correct order of 3,068 playing cards (59 decks) after viewing each card only once.

Further to the point that a picture is easier to interpret than a page full of numbers: Psychologists have long believed, via case studies, an estimate of around 60 bits per second is the maximum processing speed of the human brain.

More recent studies by [MIT Neuroscientists](#) found the brain can identify images seen for as little as 13 milliseconds.

Turning our attention back to Power BI it is important to understand:

- PowerBI has a strength of calculating figures quickly, not holding the values statically.
- Excel is built to both calculate the values and also hold the values statically and opens slowly and often errors when data amounts are very large.

In PowerBI if you have 10 columns and 5 rows and 100 stores, you are calculating 5000 fields plus each field of subtotals and totals.

It's all held in memory -- it is not static. And it performs quickly!

Business reporting for many corporations still come in the form of rows and columns of numbers. To many professionals, this is “comfortable” and “how we have always done it”. Mention of the studies and feats of mastery above were not as a complete correlation, but as a demonstration to show our brain can process visual images to observe data and make decisions much faster, saving time in busy schedules. Yet, as a reporting professional I still get requests for reports with hundreds of rows and columns of data.

Take the following worksheet, for example:

Applied filters: Running Year is 1		% Unit Market Share YOY			% Units Market Share and % Units Market Share R12M by Month			Total Category Volume by Segment		Total Units by Month and isVanArmsdel		
Total Category Volume	% Units Market Share	Rolling	% Unit	Region	Month	% Unit	% Unit	Segment	Total C	Month	isVanA	Total U
49,832	32.86%	P-11	-1.30%	Central	Jan-14	34.76%	32.47%	Convenience	9,262	Jan-13	No	2,764
		P-11	-1.30%	East	Feb-14	34.27%	32.74%	Moderatic	14,680	Jan-13	Yes	1,438
		P-11	2.87%	West	Mar-14	38.60%	32.96%			Feb-13	No	2,766
		P-10	1.94%	Central	Apr-14	34.87%	33.04%			Feb-13	Yes	1,268
		P-10	2.09%	East	May-14	33.04%	33.14%			Mar-13	No	2,176
		P-10	5.58%	West	Jun-14	20.41%	33.21%			Mar-13	Yes	1,229
		P-09	0.30%	Central	Jul-14	34.74%	33.16%			Apr-13	No	1,901
		P-09	4.77%	East	Aug-14	35.42%	33.17%			Apr-13	Yes	967
		P-09	0.27%	West	Sep-14	33.62%	33.44%			May-13	No	1,635
		P-08	3.48%	Central	Oct-14	30.96%	33.39%			May-13	Yes	737
		P-08	0.08%	East	Nov-14	32.66%	33.44%			Jun-13	No	2,833
		P-08	0.75%	West	Dec-14	31.32%	32.86%			Jun-13	Yes	731
		P-07	3.51%	Central						Jul-13	No	1,386
		P-07	0.72%	East						Jul-13	Yes	777
		P-07	2.42%	West						Aug-13	No	1,861
		P-06	1.21%	Central						Aug-13	Yes	1,013
		P-06	-0.47%	East						Sep-13	No	3,382
		P-06	0.78%	West						Sep-13	Yes	1,533
		P-05	-1.51%	Central						Oct-13	No	3,826
		P-05	-1.21%	East						Oct-13	Yes	1,734
		P-05	1.08%	West						Nov-13	No	4,051
		P-04	-0.00%	Central						Nov-13	Yes	1,930
		P-04	0.74%	East						Dec-13	No	3,360
		P-04	-0.10%	West						Dec-13	Yes	1,952
		P-03	0.69%	Central						Jan-14	No	3,102
		P-03	2.21%	East						Jan-14	Yes	1,653
		P-03	4.48%	West						Feb-14	No	3,109
		P-02	-1.72%	Central						Feb-14	Yes	1,621
		P-02	-2.35%	East						Mar-14	No	2,349
		P-02	5.65%	West						Mar-14	Yes	1,477
		P-01	2.00%	Central						Apr-14	No	2,107

Image: Data from PowerBI “Sales and Marketing” Sample

Consumers of reports are used to looking at data in columns and rows and are attempting to complete the following or more:

- Looking for a trend or an outlier.
- Looking to make a decision based on past performance (change in discounts, price increase or cost reduction).
- Looking for an opportunity to expand a product line.

No one enjoys staring at a page of numbers hoping to find answers. But what if you instead were looking at this:

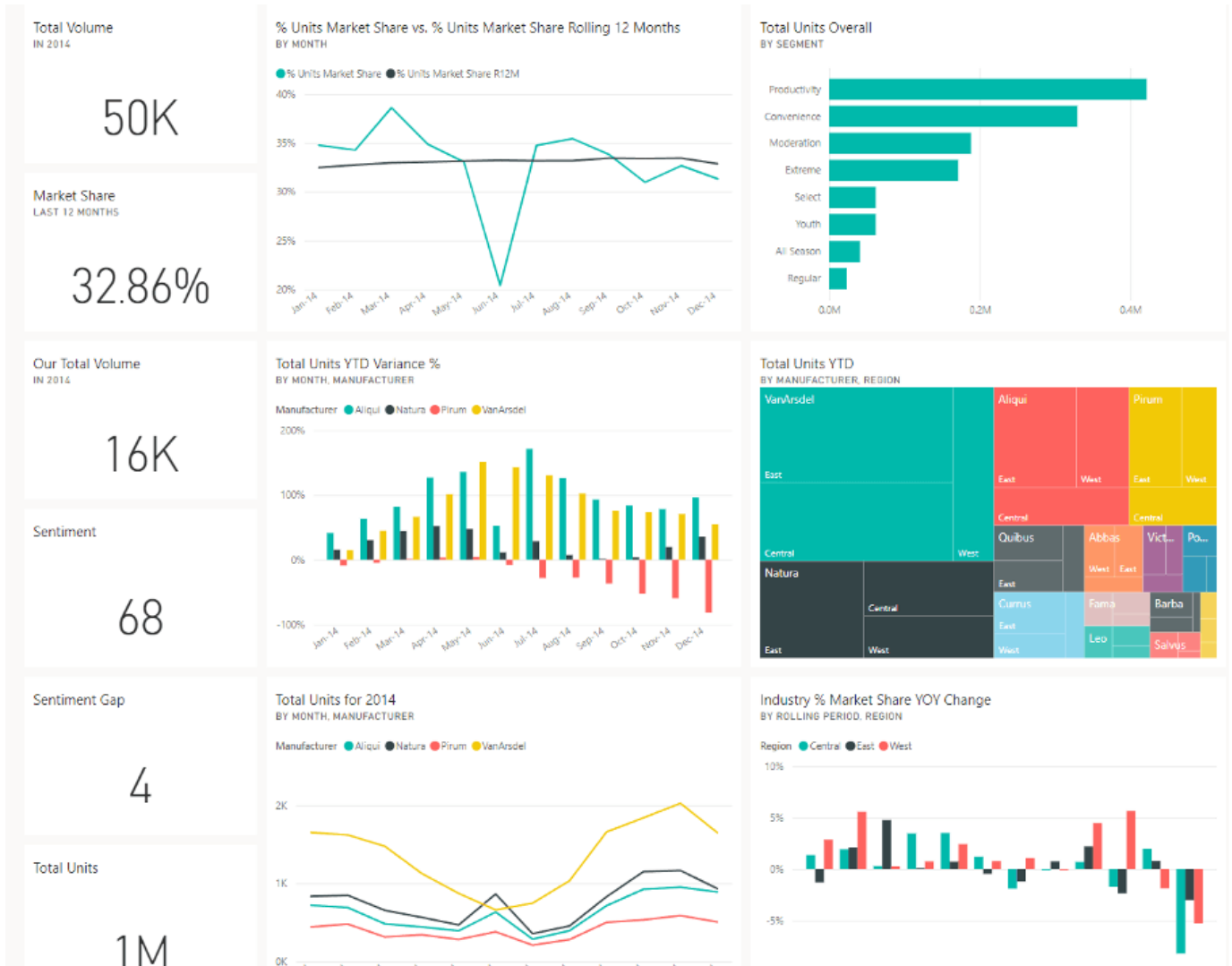


Image: PowerBI Samples, Sales and Marketing Sample Dashboard

So how do we leverage Power BI and still get the data we need? The simple answer is to stop thinking in terms of columns and rows and a wall of numbers. Embrace the ability to use colour and a myriad of visual presentations and charts that give you exactly what you are looking for without excess.

Embrace the ability to look at a graphic and immediately tell which product is not performing, which channels are cornering their market share, and whether status quo is going to meet future goals.

## Tips for transitioning your business from column and row reports to Power BI Visualisations:

When you look at your legacy column & row, tabular reports, ask yourself:

- where is your eye looking?
- what columns or rows are you comparing to each other?
- do you care about each and every figure? Or are you only looking at subtotals and totals?
- are you looking for a trend?
- are you looking for an outlier?
- do you simply want to know whether current performance is better or worse than past performance?
- are you looking at groups of data rather than the whole sheet? Could those groups be split out for a quicker analysis with your eye?
- do you want to know, if the current performance continues, if your margin or profits will increase or decrease?

It's so easy to want to request a "one stop shop" on a wall of data so you can sit and study the whole thing to make one or all of the decisions above. PowerBI does not take that away, instead, it does the heavy lifting for you and gives to you, in a "picture", what a thousand figures could do and with lower maintenance costs, ability to adapt more quickly to business rule changes and allows you to make your decision more quickly so you can get on with the things that genuinely require your time.

If your business needs help with their Power BI visualisations, please contact a Fujitsu Data & AI specialist now.

\* [www.recordholders.org](http://www.recordholders.org), "Memory and Mental Calculation World Records"

### Contact

Fujitsu Data & AI  
+61 3 9924 3000

© Fujitsu 2022. All rights reserved. Fujitsu and Fujitsu logo are trademarks of Fujitsu Limited registered in many jurisdictions worldwide. Other product, service and company names mentioned herein may be trademarks of Fujitsu or other companies. This document is current as of the initial date of publication and subject to be changed by Fujitsu without notice. This material is provided for information purposes only and Fujitsu assumes no liability related to its use.