



Western Cape
Government

Excel Masterclass to Digitise your Business

Pivot Tables and building a dashboard

Tim Parle
1 July 2020

Agenda

1. Brief overview of spreadsheets in the market
2. Theory:
 - Brief introduction to Microsoft Excel
 - PivotTables
 - Dashboards
3. Practical examples
 - Simple PivotTables
 - Advanced PivotTables
 - PivotCharts
 - Dashboard

Spreadsheet: The first 'killer app'?

How to turn a sea of data into data you can see

These are more people in more places doing more things with Apples than with any other personal computer in the world. Which is saying a lot. But we'd like to take the time to explain just one of the things that can make an Apple Personal Computer more meaningful to you, personally. It's called business graphics. An important business tool that demonstrates, quite graphically, how one picture is worth a few thousand numbers.

More ways to see what you're doing. That's the beauty of Apple Business Graphics. The software package that gives your Apple II or Apple III personal computer the power to convert rows and rows of numbers—

or pounds of printout—into one simple, colorful, comprehensible illustration. And that gives you the power, for example, to thoroughly understand relationships and comparisons in a complex market analysis. Without having to spend hours sifting through

Business Graphics can make presentations more presentable. Because whatever you've produced can be rapidly, easily and colorfully reproduced, on virtually any printer or plotter on the market. Moreover, sophisticated Apple features like exploded views,

Getting started in pictures. Start by seeing any of the over 1300 authorized Apple dealers. They'll show you Apple Business Graphics software can generate more types of pictures, in more colors, using more data

Horizontal bar graphs to compare product sales or sales by geographic region. Pie charts to compare the proportions of an overall total. Line graphs to plot trends over time. And more. All with unlimited overlays and floating titles allow your displays to be remarkably flexible.

By combining Apple Business Graphics with various slide-show packages, charts and graphs on your monitor can easily be converted into impressive slides and transparencies.

Helping you to get the big picture in a variety of ways. Line or area graphs, bar graphs, pie charts or scattergrams. Whichever configuration best suits your application. When you're through charting market shares you can do the same with forecasts, budgets, stock trends, business plans or consumer demographics.

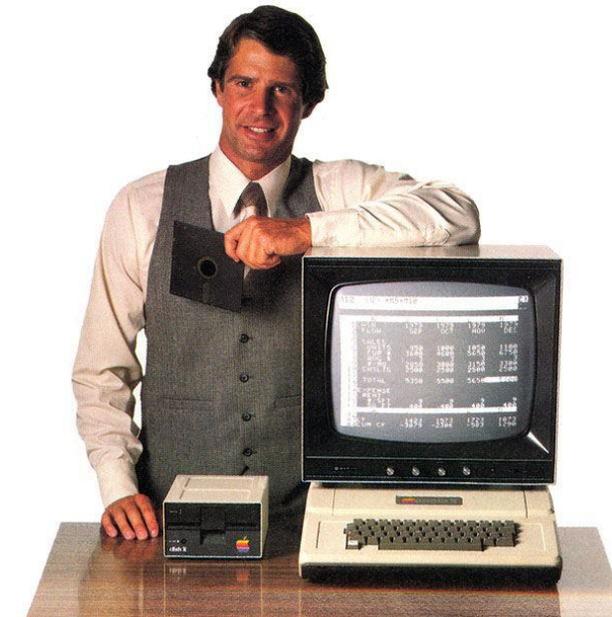
Show your stuff. In addition to helping

With up to an entire 200-graph database you can use to help you present sales data more effectively to the rest of the market.

More important, they'll show you what all that can mean to you, your accounting firm, your import business, or your chain of quick-on-a-bun family restaurants.

They'll even help you produce your first picture. But business graphics is just one of the things an Apple can help you do. One of thousands. Which is not terribly surprising when you consider there's more software available for Apples than for any other personal computer.

So consider a trip to your Apple dealer. And draw your own conclusions.



Web Outsourcing Gateway Inc.

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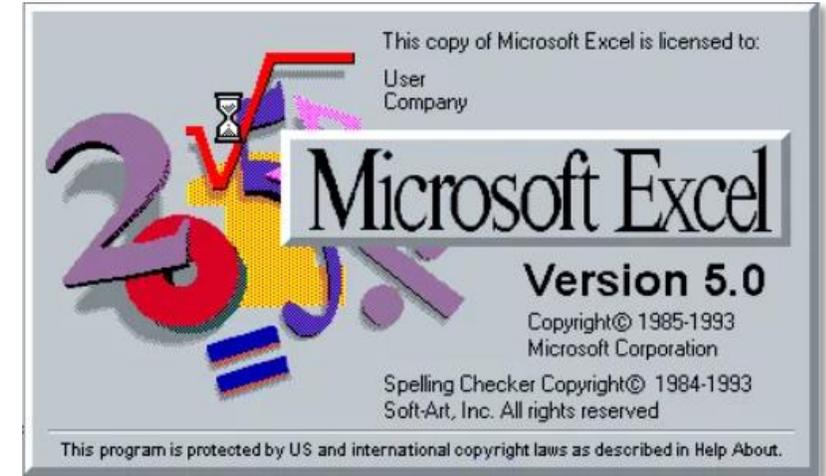
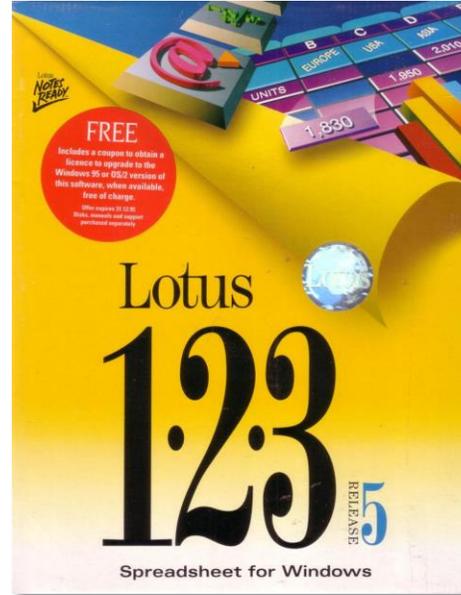
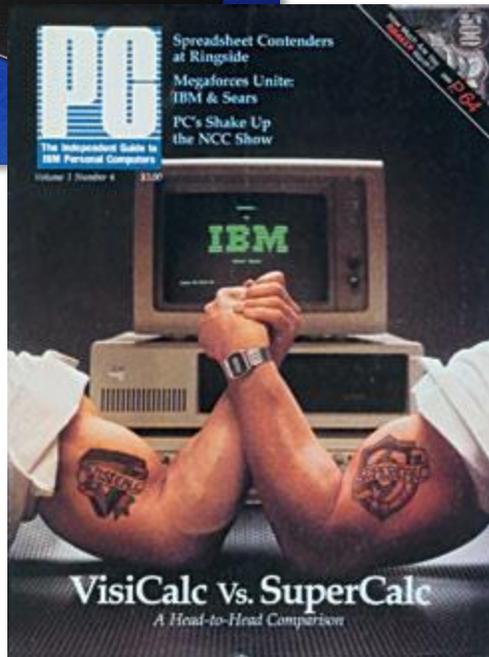
The business machine of a personal computer.

#ThrowbackThursday

Facebook Twitter YouTube

www.weboutsourcing-gateway.com

The other ground breakers.....

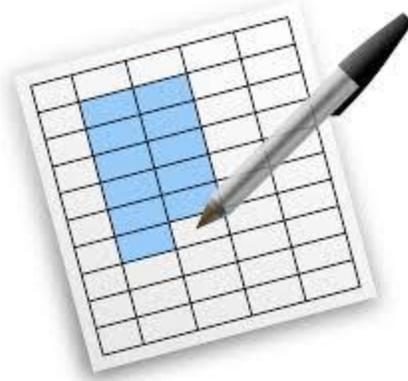


Spreadsheet programmes

Microsoft Excel



Calligra Sheets



Google Sheets



NeoOffice



OpenOffice.org Calc



LibreOffice Calc



Gnumeric



Kingssoft

Market shares: Excel versus Google Sheets

Revenues

Gartner for 2016



\$13.8B



\$1.3B



<http://grid.is/>

Users

GRID estimates 2018



800M



160-180M

Demographics

- **Young people:**
Google Sheets
- **Young companies:**
Google Sheets
- **Established organizations:**
Excel
- **Young people at established organizations:**
Excel
- **Serious spreadsheet users regardless of age and organization:**
Excel on Windows

Microsoft Excel: Introduction and overview

Microsoft Excel is a **spreadsheet** application that was first launched by Microsoft Corporation in 1985.

In order to perform mathematical functions on the data, the program organizes the data into **columns** and **rows**.

This can then be manipulated through **formulas** that allow users to input and analyze large sets of data.

The uses of Microsoft Excel are practically **limitless** - especially when you combine it with the accompanying Office Suite Programs.

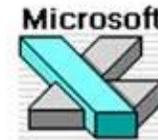
Logo Evolution



1985 - 2019



Excel 2.0



Excel 3.0



Excel 95, 97



Excel 2000,
2002



Excel 2003



Excel 2007



Excel 2010



Excel 2013
2016



Excel 2019

Credit : https://logos.fandom.com/wiki/Microsoft_Excel



Popular Features of Microsoft Excel

Top 10 features of Microsoft Excel to improve your ability to analyze data for your personal use or for your business:

1. Efficiently model and **analyze almost any data**
2. Zero in on the right data points **quickly**
3. Create data charts in a single cell
4. Access your spreadsheets from virtually anywhere
5. Connect, share, and **accomplish more** when working together
6. Take advantage of more interactive and dynamic **PivotCharts**
7. Add more **sophistication** to your data presentations
8. Do things easier and faster
9. Harness more power for building bigger, **more complex spreadsheets**
10. Publish and **share** through Excel Services

What is a pivot table?

A pivot table is a **table of statistics** that **summarizes** the data of a more extensive table (such as from a database, spreadsheet, or business intelligence program). This summary might include sums, averages, or other statistics, which the pivot table groups together in a **meaningful way**.

Pivot tables are a technique in **data processing**. They arrange and rearrange (or "pivot") statistics in order to draw attention to **useful information**.

Although pivot table is a generic term, Microsoft trademarked PivotTable in the United States in 1994 (cancelled in 2020).

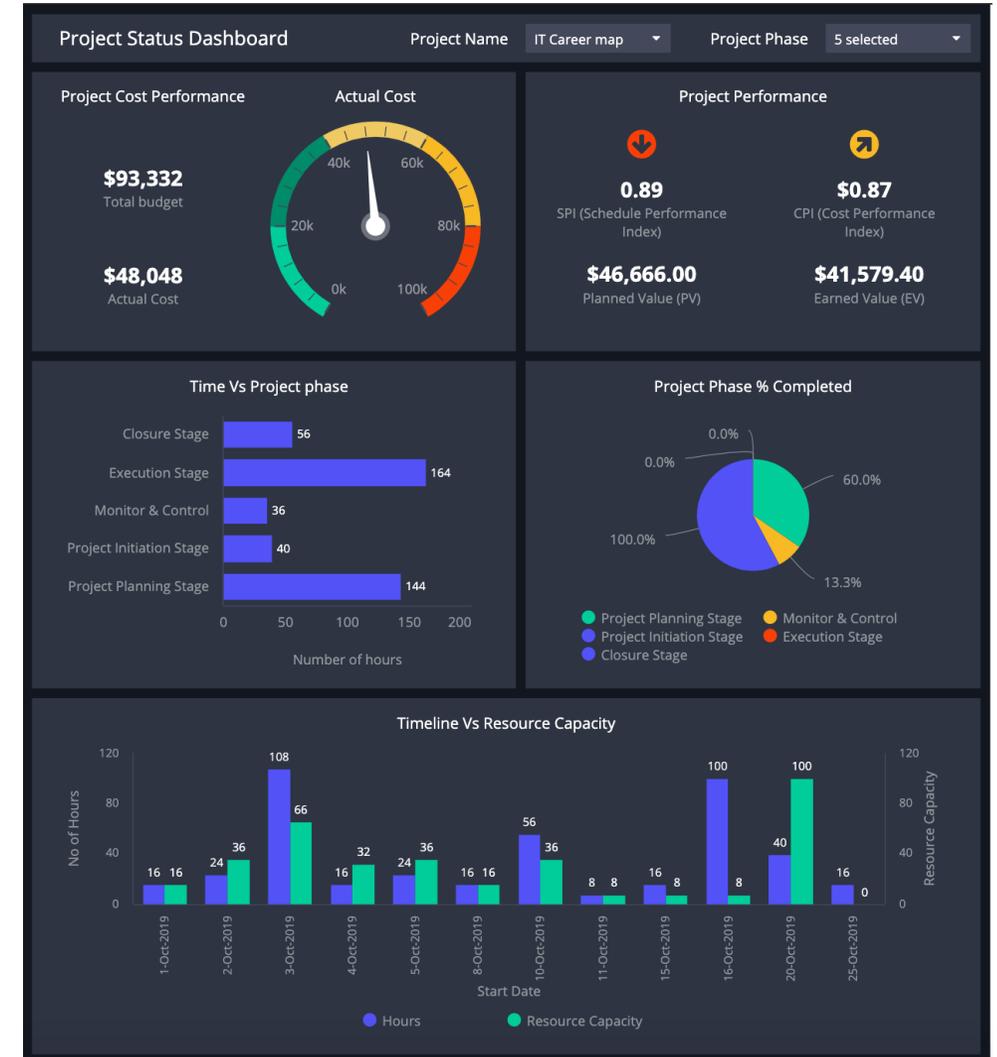


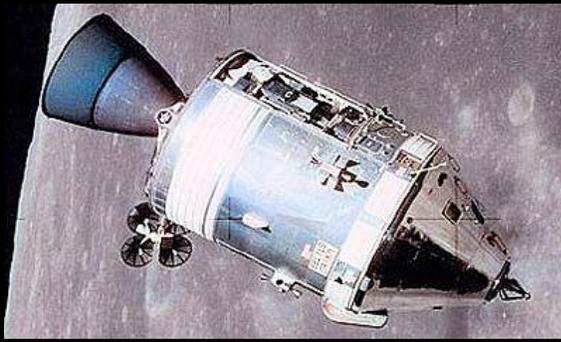
What is a dashboard?

A dashboard is a **tool** used for information management and **business intelligence**.

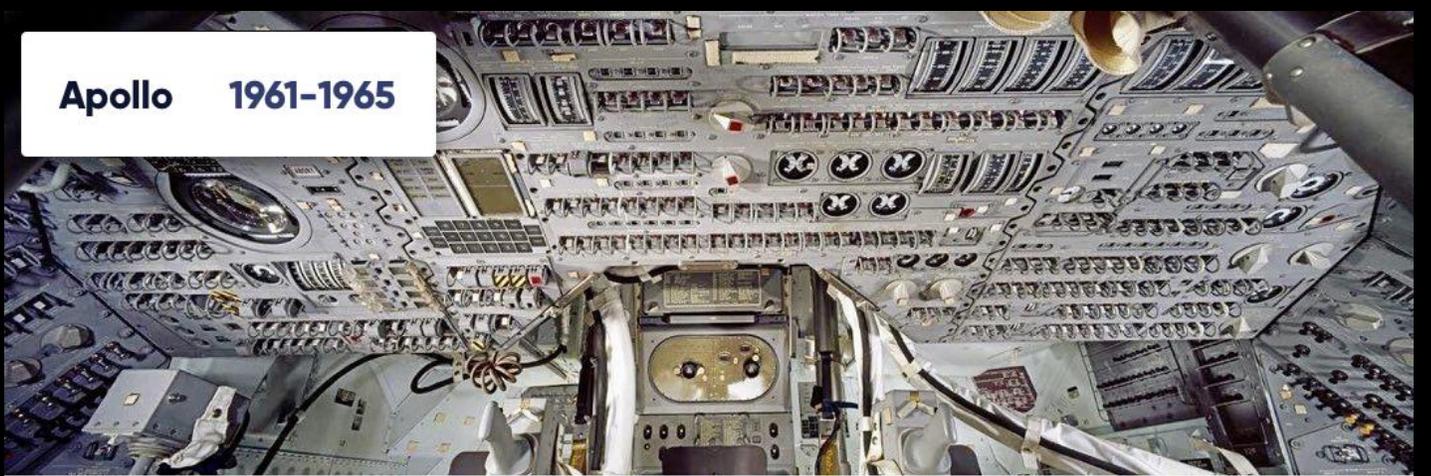
Much like the dashboard of a car, data dashboards **organize**, store, and display important information from multiple data sources into one, easy-to-access place.

Dashboards often provide **at-a-glance** views of key performance indicators (KPIs) relevant to a particular objective or business process.

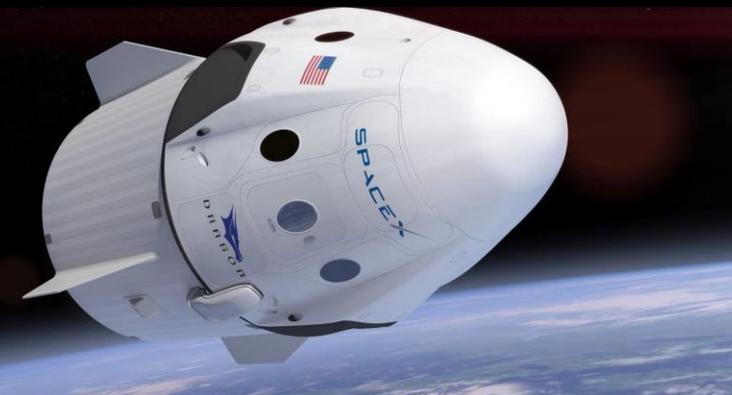
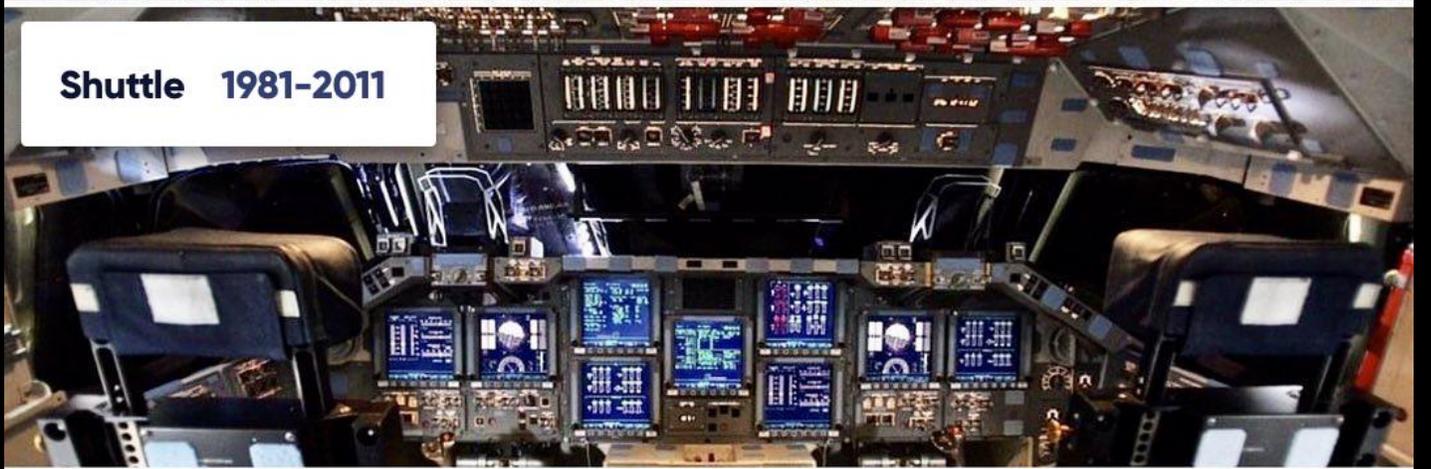




Apollo 1961-1965



Shuttle 1981-2011



Dragon2 2019 →



File Home Insert Page Layout Formulas Data Review View Developer Help ACROBAT Power Pivot Search

Clipboard: Paste, Cut, Copy, Format Painter

Font: Calibri, 11, Bold, Italic, Underline, Color, Background Color

Alignment: Left, Center, Right, Indent, Merge & Center

Number: General, Percentage, Decimals

Styles: Normal, Bad, Good, Neutral, Calculation, Check Cell, Explanatory, Linked Cell, Note

Cells: Insert, Delete, Format

Editing: AutoSum, Fill, Clear, Sort & Filter, Find & Select, Ideas

Ribbon

Ribbon tabs

Row

Column

Worksheet

Cell

Workbook

Sheet tabs

A1

Name Box: A1

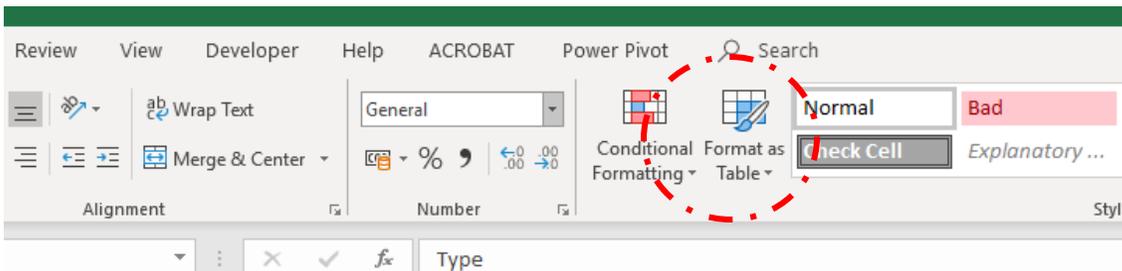
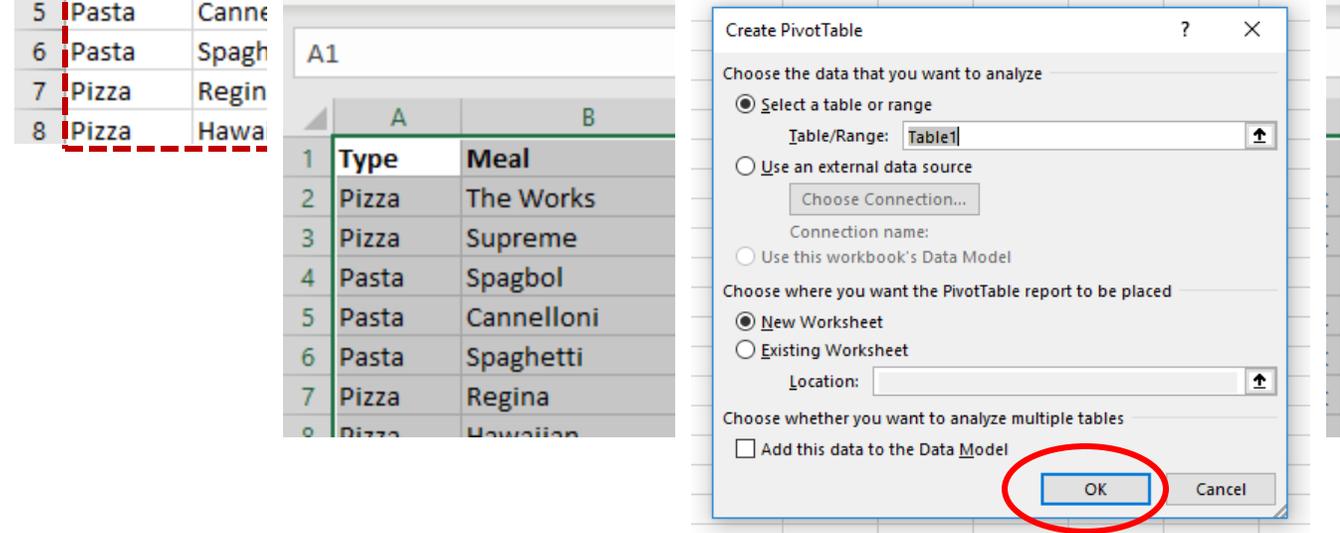
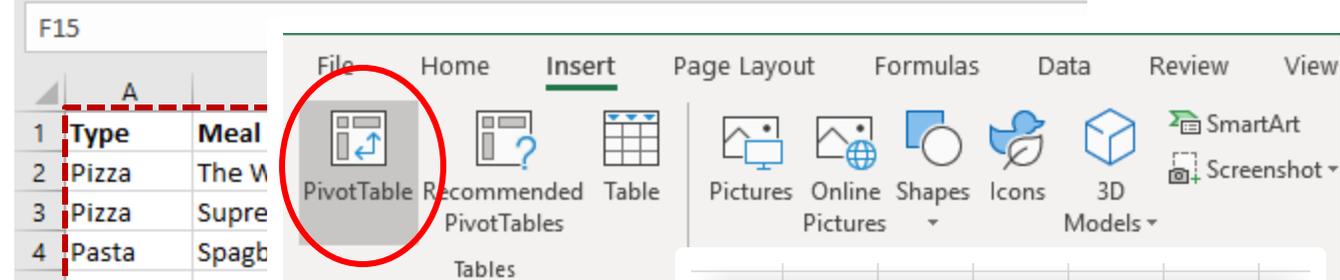
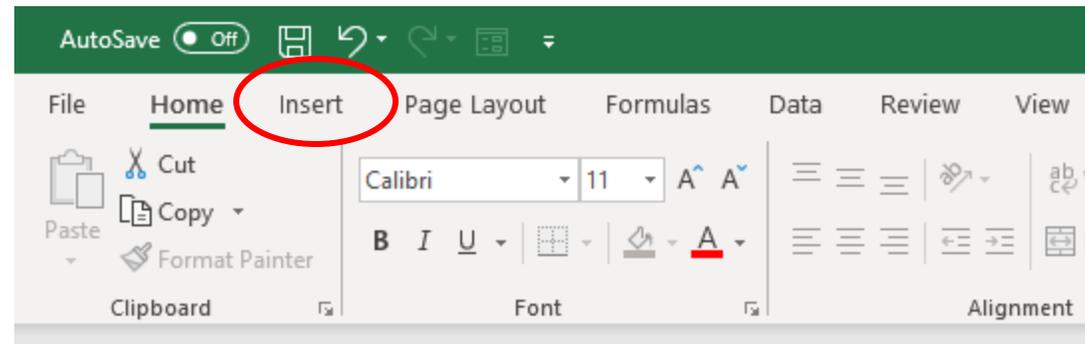
Grid columns: A, B, C, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC

Grid rows: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38

Sheet tabs: Sheet1, Sheet2, Sheet3

Creating a pivot table

1. Select a range of data.
2. Format range as a Table (optional) and select a style.
3. Rename the Table (optional)
4. Click on the *Insert* ribbon tab and select *PivotTable*.
5. Confirm the table or range and location for the PivotTable.
6. Press OK.
7. Alternative: choose one of the *Recommended PivotTables*



Create PivotTable pop-up

Determine location:

New or specified location on the spreadsheet

Data Model:

Work with multiple tables in a relational database (HG)

Create PivotTable

Choose the data that you want to analyze

Select a table or range

Table/Range: Table1

Use an external data source

Choose Connection...

Connection name:

Use this workbook's Data Model

Choose where you want the PivotTable report to be placed

New Worksheet

Existing Worksheet

Location:

Choose whether you want to analyze multiple tables

Add this data to the Data Model

OK Cancel

Select table or range:

Confirm or amend the data source

External data source:

TBC (HG)

PivotTable: The Field List

Filters area:

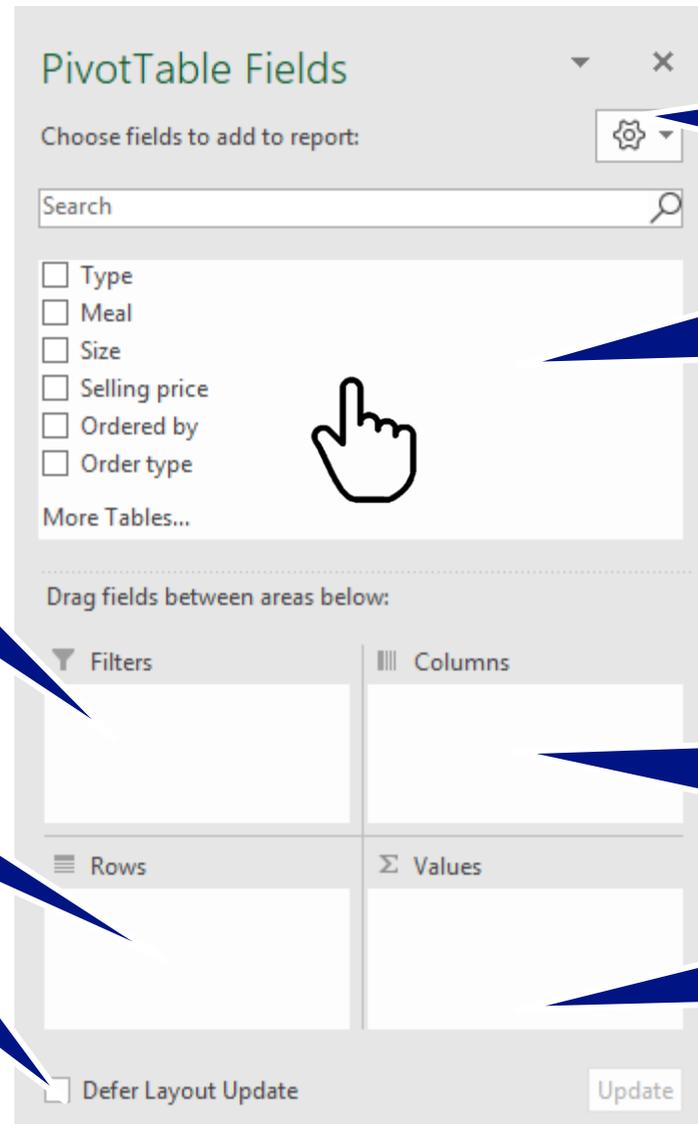
Choose global filter(s)

Rows area:

Choose what appears in rows (1 or more)

Defer Layout Update:

Toggle off when dealing with big tables, press *Update* to recalculate



Options:

Choose layout and other factors

Field selection area:

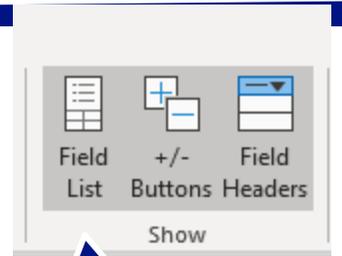
Can drag from here. Also toggle on/off

Columns area:

Choose what appears in columns (1 or more)

Values area:

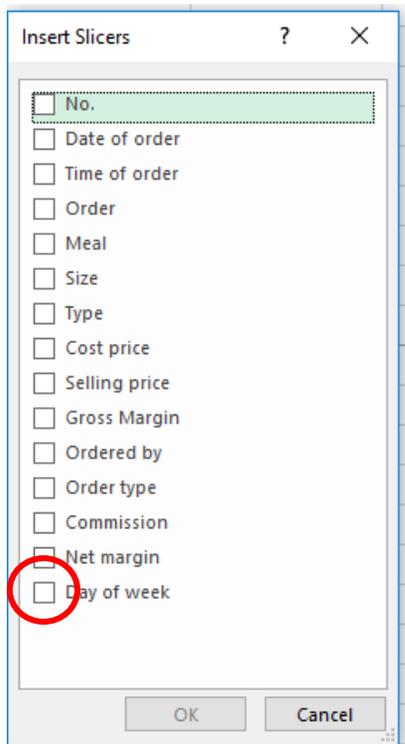
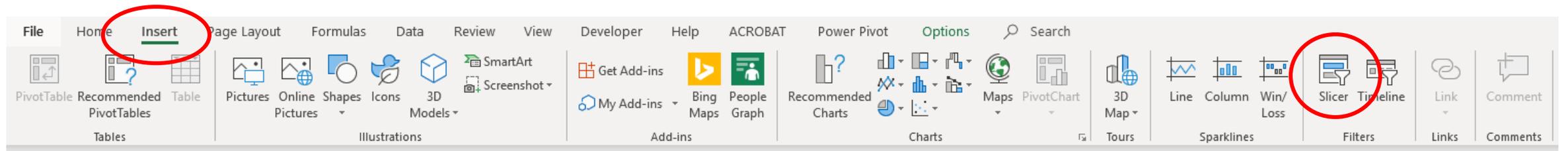
Select count, sum, average, min, max



Field list button:

Hide or expose the Field list

Slicers



Multiselect:
Toggle between select only one item or several

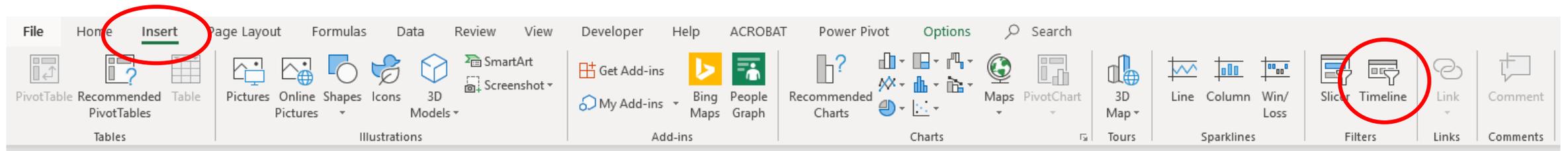
Clear filter:
Resets the filter (selects all)



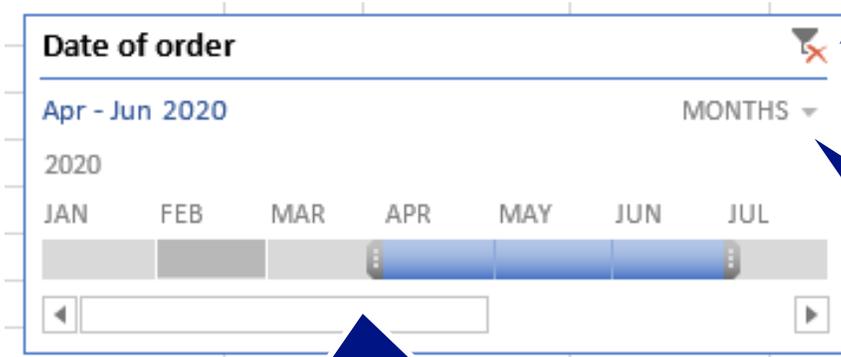
Tip:
Slicers only work on a Table.

Note: The features of Slicers vary per version / release of Excel.

Timelines



Tip:
Timelines only work on a PivotTable and needs a suitable date field.



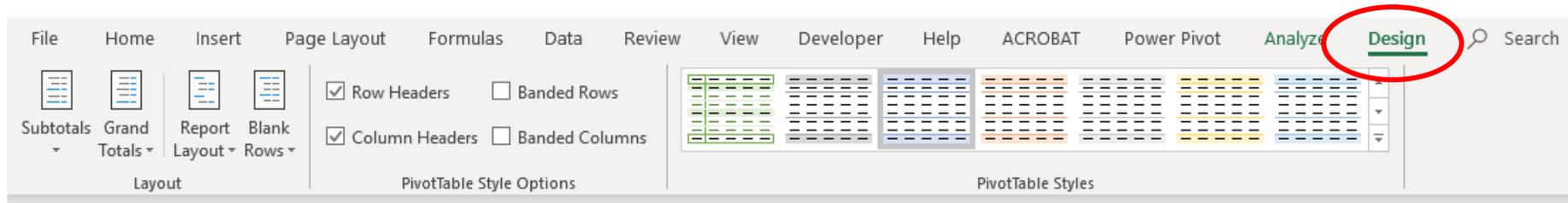
Clear filter:
Resets the filter (selects all)

Period:
Choose Years, Quarters Months or Days.

Timeline bar:
Drag to choose relevant years, quarters months

Note: The Timelines feature is not available in all versions of Excel.

Design



Options for totals:
Use these to turn totals on/off

Tip:
Click on any cell in a pivot table and open the Design tab

Note: The Design feature is not available in all versions of Excel.

Practical creation of PivotTables

PIZZA PAZZA



PIZZA PAZZA



PIZZA

FOCCACIA

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LARGE R59.99
SUPREMO R79.99

REGINA

REGULAR R59.99
LARGE R79.99
SUPREMO R99.99

VEGETARIAN

REGULAR R59.99
LARGE R79.99
SUPREMO R99.99

VEGETARIAN WONDER

REGULAR R79.99
LARGE R89.99
SUPREMO R109.99

PEPPERONI

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LARGE R89.99
SUPREMO R109.99

MEAT

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LARGE R89.99
SUPREMO R109.99

MARGHERITA

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SUPREMO R109.99

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LARGE R89.99





Explore in Excel

1. Basic PivotTable
2. Advanced PivotTable
 - a) Slicers
 - b) Timeline
3. PivotCharts
4. Dashboard
5. Conditional formatting

Summary and conclusion

Summary and conclusion (the last slice)

1. PivotTables can be easily created from any tabular data
2. PivotTables provide alternative views of the data
3. PivotTables are complemented with PivotCharts
4. PivotTables and PivotCharts can be used to create meaningful dashboards for the presentation of your data
5. The best way to learn is to experiment with a data set - experiment and have fun
6. This is just a first taste!



Thank you