

10 Excel Tips To Make Your Business More Productive

Welcome to **Filtered**. We are an online education provider of tailored training in Microsoft's main applications.

We teach the features of each discipline that we believe to be critical, stripping out the rest to produce a highly refined syllabus. That syllabus is further refined at the start of each course by a series of carefully-selected questions, which filter and adapt the course content for each individual.

Our interactive courses will give your staff 24/7 access to videos, tests, exercises and quizzes to support them every step of the way.

Staff at large and small businesses use our training, including EY, PwC, Grant Thornton, Regus, New Look, BP, Shell and members of the ICAEW and AAT.

This e-book will help your business become more productive in Excel; combined with a free trial of Filtered, you'll be able to see for yourself what our training platform has to offer.

1. Getting started with Excel: Three key principles

Before starting, satisfy yourself that a spreadsheet is the appropriate tool for the job. In businesses of all sizes, we are sometimes overzealous with spreadsheets. Sometimes they just aren't the best tool for the job. So spend time working out what the alternatives might be – e.g. an Access database, or a tightly defined spec to send to the IT team.

Include an 'About' or 'Welcome' sheet to document the spreadsheet. When a spreadsheet starts to get complicated, an About sheet helps remind you and others what its purpose and mechanics are. A good version of this might include a map of the data flow from sheet to sheet (especially when there are more than, say, three sheets).

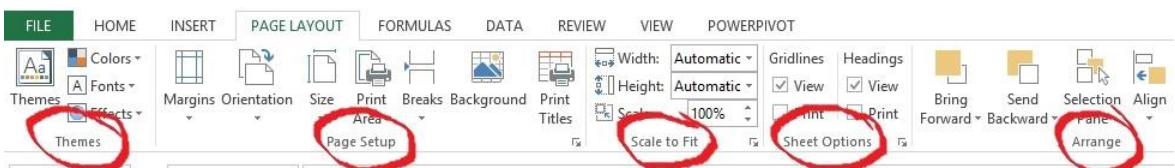
Work collaboratively, share ownership, peer review. Get colleagues involved and ask them what they do or do not like about it. Ensure their names are cited in the About sheet. Most spreadsheets you create in the course of your career may be used for a short while and only by you; by being more careful of what you and your team create and ensuring others can use it, your impact will be far greater.

2. Familiarise yourself with the Excel Ribbon

There are three main areas of the Excel screen. At the top is the **Excel Ribbon** containing the main tools and commands. At the bottom is the **Excel Status Bar** which includes the zoom tool and the view buttons. In the middle is the **Excel spreadsheet area** itself with the spreadsheet grid and the Formula Bar immediately above it.

The purpose of the Ribbon is to group together all the tools for a particular topic.

Clicking on the tabs at the top of the screen displays the tools for that topic. Below we have clicked on the 'Page Layout' tab. As you can see, the tools are arranged into different groups.



Hovering over each tool on the Ribbon brings up informative tips to tell us what each is designed to do – with most tools displaying a pictorial menu when clicked.

Note that it is possible to **hide the Ribbon** so that the tabs remain visible, but all the tools and commands only appear when you click a tab. It is also possible to **customise the Ribbon** by choosing which Ribbon tabs are displayed and which groups to show in those tabs.

3. Brush up on your shortcuts

It's worth spending some time getting familiar with the keyboard shortcuts for Excel commands, particularly those that let you navigate round a spreadsheet. These are even more helpful in offices where laptops with a touch-pad are taking over the mouse brigades.

Here's a good core of five shortcuts to get going:

- 1) Arrow keys to move from cell to cell.
- 2) Ctrl + arrow keys, to move to the edge of the block of data you're in.
- 3) PageUp / PageDown to scroll whole pages at a time.
- 4) Home to move to the beginning of the row you're on.
- 5) Ctrl + PageUp / PageDown to move between Worksheets within a Workbook.

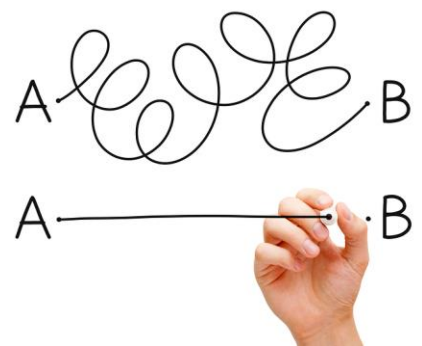
It's also worth remembering a **small core of shortcuts for very common operations:**

Ctrl c – Copy the selected cells

Ctrl v – Paste whatever has been copied to the Clipboard

Ctrl z – Undo the last action

Ctrl s – Save the Workbook



4. Learn to format your spreadsheet

Don't save good formatting ONLY for the results of your work. Instead, focus on your spreadsheet as a whole. **Deciding on a few rules for formatting will make your analysis more comprehensible to your team.**

For example, shade raw input data cells one colour, calculations another, parameters a third; use consistent formatting for headings, units and annotations. You can do this with **Excel's built-in themes**, but it's not necessary and arguably less transferable – more important that you get the rules straight in your head.

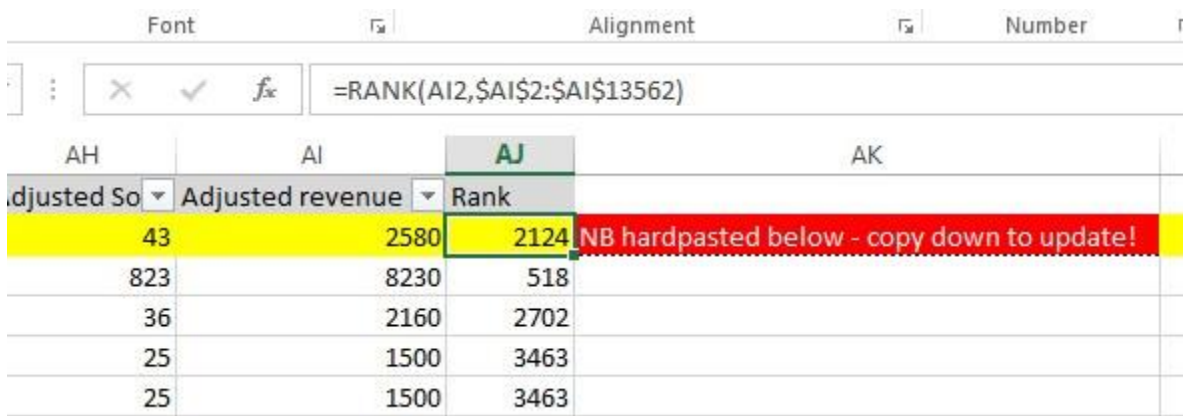
	2342	<i>Raw data</i>	
	845	<i>Calculation</i>	
	235	<i>Output</i>	
	3.2	<i>Parameter</i>	
	<i>Sales (\$)</i>	<i>Heading</i>	
	<i>Missing four stores</i>	<i>Comment</i>	

Understanding how Conditional Formatting works is key. Conditional Formatting changes the format of a cell dependent on the content of that cell, or a range of cells, in the workbook. It helps users to focus quickly on important aspects of a spreadsheet, highlight errors and identify important patterns in data.

You can find the Conditional Formatting options in the **Styles group of the HOME ribbon tab**. This dropdown includes two sets of basic rules (Highlight Cells Rules and Top/Bottom Rules), three graphical forms of conditional formatting (Data Bars, Colour Scales and Icon Sets) and, at the bottom, more detailed options (New Rule, Clear Rules and Manage Rules).

5. Save time on calculations

If your business regularly deals with massive databases, and asks Excel to perform many calculations, then you can **hard-paste formulae** once they're calculated. This will significantly speed-up a workbook that is slow to calculate.



AH	AI	AJ	AK
Adjusted So	Adjusted revenue	Rank	
43	2580	2124	NB hardpasted below - copy down to update!
823	8230	518	
36	2160	2702	
25	1500	3463	
25	1500	3463	

Make sure you keep one row of the formula – so you can **copy down to update the calculation** when you add to or change your source data. And ensure you shade that row differently, and clearly label what you have done. It will help your colleagues understand how the spreadsheet works, saving everyone's time.



6. Use Macros to speed repetitive tasks (part 1)

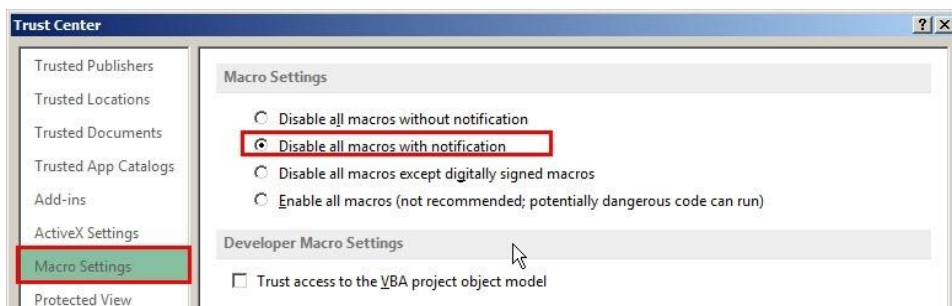
How much time does your business spend on repetitive tasks in Microsoft Excel? Do you ever suspect that there must be a better way? If this sounds familiar, then it's time to learn to use Macros.

An Excel Macro is, at its simplest, a set of several actions that can be combined into one command. Macros can automate almost anything you can do in Excel.

Macros can be created by 'recording' the required actions which Excel will 'translate' into Visual Basic for Applications (VBA) code. Although you can write the code directly, the great thing about Macros is that you don't have to be a developer or possess programming knowledge to use them. Once created, Macros can be attached to toolbar buttons, menus, form buttons or objects, and ultimately increase the quality of your spreadsheets and your company's productivity.

Before you start – Security settings

The Excel default security setting is to disable all Macros. This is because, as well as being useful, Macros can be used maliciously and such code can be triggered automatically when you open a workbook. If you want to check and change your Macro security settings, go to **FILE > Options > Trust Center** and click the **Trust Center Settings** button. This will take you to the Macro Settings section of the Trust Center screen:

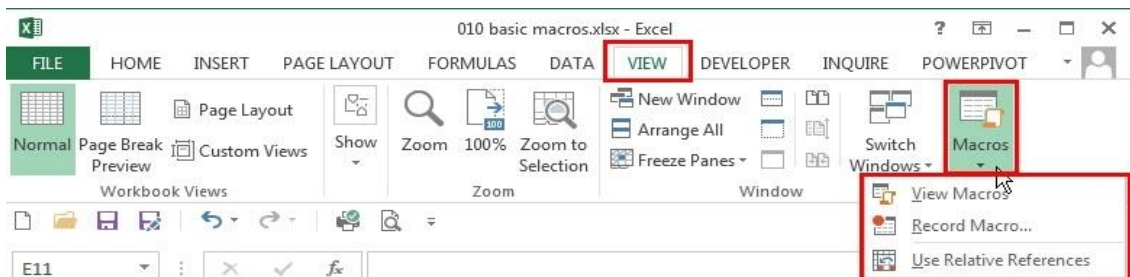


6. Use Macros to speed repetitive tasks (part 2)

Now choose an appropriate option such as 'Disable all macros with notification'. This will not allow Macros to run automatically, however will ask you whether you wish to allow the Macros in the workbook to run.

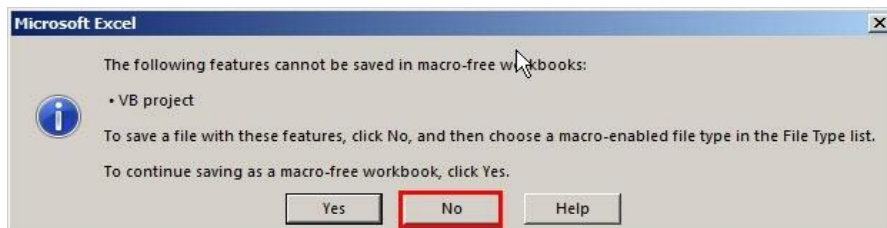
Recording and Viewing Macros

You can include a button on the Status Bar to show whether or not a Macro is in the process of being recorded and, if not, to start recording one. Alternatively, you can access the basic Macro options via the Macros group of the VIEW ribbon tab:



Saving a Workbook Containing a Macro

Excel also doesn't allow 'normal' Excel workbooks to contain VBA projects – which all Macros are. Accordingly, when you try and save a workbook to which you have added a Macro for the first time, you will see this notification:

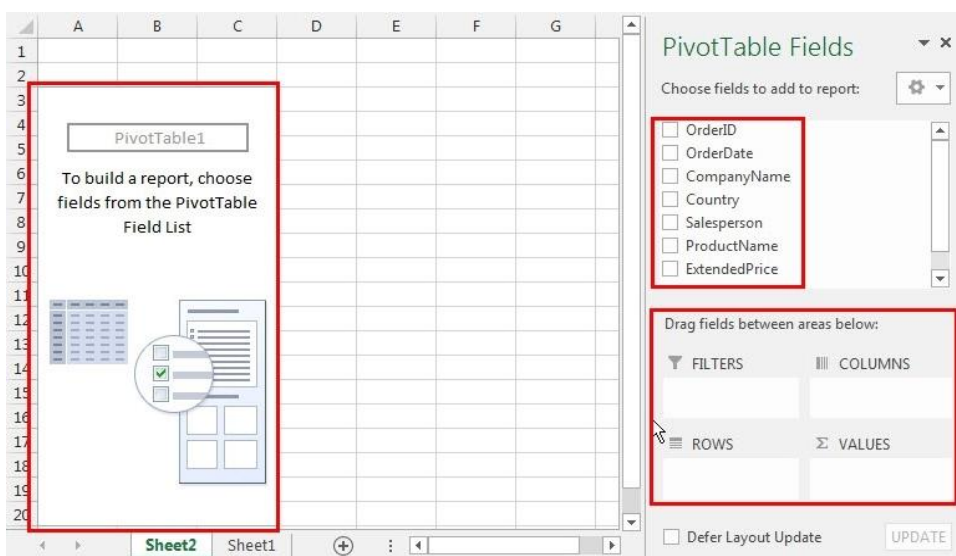


To preserve your Macro, click **No** which takes you to the **Save As** screen. Now click on the **Save as type:** drop down and select **Excel Macro-Enabled Workbook**. You will see that the file extension is changed from xlsx to xlsm to indicate it contains a Macro.

7. PivotTables are your best friends (part 1)

PivotTables take tables of data, usually with hundreds or thousands of rows, and **help you make sense of those tables of data** by summarising them by any of the column headings.

To create a Pivot Table (**INSERT > Tables > Recommended PivotTables**), make sure your data has column headings or table headers and that there are no blank rows. Click any cell in the range of cells or table. You will then work on the below:



For a PivotTable to work correctly, the data, whether it is an Excel table or from an external source, needs to be set up in a particular way. **Each column must contain the same type of data and the data must be as 'raw' and unprocessed as possible** – for instance, one column holding a date rather than separate columns for the monthly totals.

7. PivotTables are your best friends (part 2)

An example of the sort of task a PivotTable can help with would be taking a large table of a business invoices and working out which products are selling best or which salespeople are making the most sales, or which customers have the fastest growing sales figures.

Advantages to using PivotTables

- **Simplicity** – PivotTables use a graphical approach to create summaries. You just drag a column heading to the area of a PivotTable where you want to see it, rather than having to construct complicated summary formulae. It's that easy to display data graphically, that a PivotChart can be created from a PivotTable with a single click.
- **Multiple dimensions** – You can summarise data utilizing both row and column headings, including using multiple fields in each area. You can also use a series of criteria fields that filter all the data in the table. Excel 2010 introduced 'Slicers': interactive criteria controls that are linked to each other and can be linked to multiple PivotTables.
- **Speed** – PivotTables are quick to produce, it only takes a few clicks of the mouse.
- **Interactive analysis** – Once you've arranged your data in the PivotTable, if you think of other useful information the data could provide, you can rearrange the data simply by dragging fields to different areas.
- **Automation** – Although even the very simplest PivotTable can be very useful in its own right, PivotTables can also be used as the 'data engine' behind a set of management reports or an interactive business intelligence dashboard. In particular, when linked directly to external data, PivotTables can be automatically refreshed to include new and amended data.

8. Must know Formulas to be productive (part 1)

There are over 300 built in functions in Excel. Of course you're not going to site there and memorize them all, so we have picked a few that will increase your efficiency in Excel.

1. COUNT

Formula: =COUNT(A1:A10)

The count formula counts the number of cells in a range that have numbers in them. The formula is extremely useful, however it only works with numbers.

	A	B	C	D
1	1		Formula Result	9
2	2		Formula	=COUNT(A1:A10)
3	3			
4	4			
5	5			
6	6			
7	7			
8	8			
9	doesn't work with text			
10	10			

2. IF Statements

Formula: =IF(logical_statement, return this if logical statement is true, return this if logical statement is false)

When you're analysing data in Excel there are a lot of scenarios you might want to discover, and the data should react differently based on different situations. In the example below, the formula tells us whether our salesmen have met their targets or not.

	A	B	C	D	E
1	Master List				
2	Sales Person ID	Sales Person Name	Sales Person Revenue	Quota	Met Quota?
3	1	John	\$ 232,103.00	\$ 500,000.00	Did Not Meet Quota
4	2	Joe	\$ 835,477.00	\$ 500,000.00	Met Quota
5	3	Jen	\$ 116,371.00	\$ 500,000.00	Did Not Meet Quota
6	4	Frank	\$ 393,841.00	\$ 500,000.00	Did Not Meet Quota
7	5	Mark	\$ 989,303.00	\$ 500,000.00	Met Quota
8	6	Amanda	\$ 641,883.00	\$ 500,000.00	Met Quota
9	7	Erik	\$ 525,894.00	\$ 500,000.00	Met Quota
10	8	Mike	\$ 732,195.00	\$ 500,000.00	Met Quota
11	9	Matt	\$ 513,372.00	\$ 500,000.00	Met Quota
12	10	Josh	\$ 961,561.00	\$ 500,000.00	Met Quota
13	11	Shea	\$ 235,652.00	\$ 500,000.00	Did Not Meet Quota
14					
15			Formula		
16			=IF(C3>D3, "Met Quota", "Did Not Meet Quota")		

8. Must know Formulas to be productive (part 2)

3. VLOOKUP

Formula: =VLOOKUP(lookup_value, table_array, col_index_num, range_lookup)

When using a VLOOKUP, you define a value (the lookup_value) and the formula looks for it in the leftmost column of a table (the table_array). Why is it useful? A VLOOKUP allows you to find a specific value within a large range of data and, once the value has been found, pick some additional information associated with such value and display it somewhere else.

4. SUMIF, COUNTIF, AVERAGEIF

Formulas: =SUMIF(range, criteria, sum_range), =COUNTIF(range, criteria), =AVERAGEIF(range, criteria, average_range)

SUM, COUNT and AVERAGE are relatively basic formulas, but if you want to use them with any criteria that is of particular interest to your business, then familiarize yourself with SUMIF, COUNTIF and AVERAGEIF.

5. CONCATENATE

As the word suggests (“to link together”), this function joins up to 255 text strings into one text string. The joined items can be text, numbers, cell references, or a combination of those items. For example, if your worksheet contains a person's first name in cell A1 and the person's last name in cell B1, you can combine the two values in another cell by using: =CONCATENATE(A1," ",B1). It's particularly useful to clean large databases quickly by avoiding repetitive manual work.

	A	B
1	Steve	Quatrani
2		
3	Formula Result	Steve Quatrani
4	Formula Used	=A1&" "&B1
5		
6	Formula Result	Steve Quatrani
7	Formula Used	=CONCATENATE(A1," ", B1)

9. Create powerful presentations in Excel

There are three simple steps in Microsoft Excel which, if followed regularly, can hugely impact your presentation style.

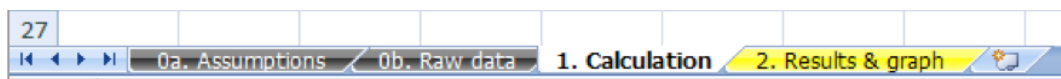
1. BE CONSISTENT

Make spreadsheets more understandable by applying a simple set of rules consistently to formatting. For example:

- Use just one font.
- Headings for groupings of data / formulae should be bold.
- Comment on your analysis in italics.
- Shade cells with a colour key – e.g. raw data shaded grey, results yellow.

2. BE SMART

Use the order of Worksheets, and the layout of data and calculations on each Worksheet, to **suggest a natural and logical flow** through the spreadsheet (left to right, top to bottom). For instance, you can achieve a Worksheets flow from inputs (assumptions and raw data) through calculation to the results.



3. BE RELEVANT

Make important data and results **stand out**:

- Soften the non-data elements of graphs and tables. For example, make axes and gridlines the same colour but paler than the data points.
- Set the 'Print Area' so that the important areas (and only the important areas) of a spreadsheet are printed. Make sure page boundaries are set sensibly so each page of printing makes sense in itself.

10. How to eliminate errors in Excel

Ultimately, try to eliminate errors in Excel. A way of achieving this is to **build in formula-driven checks**, so that your spreadsheet automatically reports when figures don't tally with known totals.

When working on spreadsheets it's possible that added rows, edited formulas, different users and so on have undesirable effects on what's going on. In this example we have a set of sales figures followed by a sum/total. At first glance to most users this will look fine. **But in fact the sum is wrong.**

The check `=E9=SUM(E4:E8)` returns the value **TRUE** if the total sales figure at the bottom is the same as the sum of the constituent five sales items, and **FALSE** otherwise. (There's also some conditional formatting so that the cell E11 is red if and only it contains the value **FALSE**, so the user is adequately alerted to the discrepancy.)

	A	B	C	D	E
1					
2					
3				SKU	Sales
4				234152	662
5				234235	912
6				993252	91
7				235952	0
8				434643	255
9				Total	1989
10					
11				Check	FALSE
12					

Auditing someone else's work

- In a complicated spreadsheet, **find its beginning and its end**. That is, use Excel's 'Trace Precedents/Dependents' functionality to find which cells are inputs (that is not calculated from other cells), and which cells affect no others (its ultimate results).
- Then work through methodically for one thread of cells from beginning to end.
- Add your own colour scheme to keep track of inputs/calculations/outputs etc.
- Define important cells as 'Named Ranges' to give them meaningful names.
- Finally, don't be surprised if you discover a few mistakes... they are quite common!

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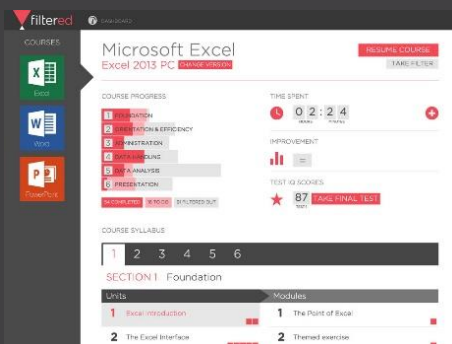


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