User Manual

v 1.1

Excel Dashboard Templates

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User Manual

Ready to use dashboard templates

http://chandoo.org/dbt/help.html

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Version control

Date	Version
Monday, November 03, 2014	0.1
Friday, November 07, 2014	0.2
Wednesday, November 12, 2014	1.0
Friday, November 14, 2014	1.1

License & Warranty

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KPI Dashboard Template

How to get started with the dashboard?

Thank you so much for purchasing the templates. You are on your way to creating awesome, informative & beautiful dashboards in next few minutes. This quick start guide helps you use the template right away.

Step 1: Download & Install

Using the secure links provided to you at the time of purchase, download the workbooks (in a ZIP file) to a folder on your computer. Unzip the files (right click on the file and choose extract..) to a folder on your computer. Preferably save the files to your Documents or work folder.

Step 2: Open the workbook

Open the KPI Dashboard file (kpi-dashboard-template.xlsx) in Excel 2010 or 2013 or Excel Office 365.

If you are using Excel 2007, then open the kpi-dashboard-template-2007.xlsx in Excel 2007.

If you are using Excel 2011 for Mac, then open the kpi-dashboard-template-2007.xlsx in Mac Excel 2011.

Step 3: Enter data

Go to data tab (click on Data button in home tab) and enter the KPI Data.

Click here to set up names for KPIs

				Set up KPI Names						
			ow	Profit %	Customers	% New customers	% Returning customers	Avg. $ per customer	Productivity %	Raw-materi unit ($
Month	**KPI1**	**KPI2**	**KPI3**	**KPI4**	**KPI5**	**KPI6**	**KPI7**	**KPI8**	**KPI9**	**KPI10**
Jan-13	397093	251709	75312	0.366121	699	0.44	0.56	568.0873	0.961	
Feb-13	363300	256345	221444	0.294399	424	0.48	0.52	856.8396	0.791	
Mar-13	331423	200743	115043	0.3943	536	0.4	0.6	618.3265	0.869	
Apr-13	374605	183569	79506	0.509966	670	0.46	0.54	559.1119	0.832	
May-13	397117	307293	155589	0.22619	422	0.62	0.38	941.0355	0.918	
Jun-13	396940	271809	185711	0.315239	642	0.59	0.41	618.2866	0.823	
Jul-13	338993	192140	202150	0.433204	643	0.53	0.47	527.2053	0.773	
Aug-13	391110	314281	196177	0.196438	504	0.61	0.39	776.0119	0.833	

The template is setup to work with up to 20 KPIs for any number of months.

- There are 41 columns in this table.
- First column takes month value.
- Next 20 columns take actual values of KPIs.
- Next 20 columns take ***target*** values of KPIs.

Click on the **<u>Set up KPI Names</u>** link in the top area to set up names of the KPIs (more on this later).

You can use any number of KPIs (up to 20). For example, If you have only 16 KPIs, then simply leave the last 4 columns empty.

Step 4: Customize calculations of the dashboard

Once all the data is ready, you can customize how calculations are done. Just go to **Settings** tab (or use the Home tab > Settings button).

There are a total of 15 settings you can customize.

The setting tab provides handy links to all the settings on top. Use them to set up your dashboard.

Each of these settings are explained below:

Names of the KPIs

To set the names of the KPIs, click on "Names of KPIs" link in the settings index.

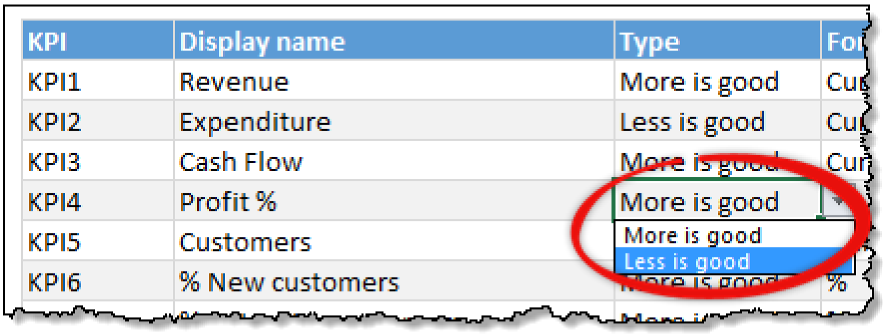
You can give plain English (or whatever language you use) names of the KPIs (metrics) here. Do not worry if the names are too long. Make sure they are unique (ie 2 KPIs can't have same name).

IMPORTANT: After changing the names, you must re-select top 5 KPI assignment. Else the dashboard shows blank boxes on top.

KPI Types

Use this to tell whether 'more of a KPI is good' or 'less of a KPI is good'. For example, a KPI like revenue per customer can be 'more is good', whereas for a KPI like 'employee absent rate' obviously 'less is good'.

To set this, click on "KPI Types" link in the settings index and use drop down box to select whether more is good or less is good.



KPI formatting

You can also tell how you want the KPI value to be formatted. We have set up 11 different formatting options for you. Just pick which one you want.

Format option	What it does?
Currency ($)	Formats the KPI in $s
Currency (£)	Formats the KPI in £s
Currency (€)	Formats the KPI in €s
Currency (¥)	Formats the KPI in ¥s
Currency (₹)	Formats the KPI in ₹s (Indian Rupee)
%	Formats the KPI in percentage
% with 2 decimals	Formats the KPI in % with 2 decimals
Number	Formats the KPI as number (with thousands separator as per your locale)
Number with 2 decimals	Formats the KPI as number with 2 decimal points (with thousands separator as per your locale)
Time - MM:SS	Formats the KPI as time (in minutes & seconds). KPI input value must be entered in seconds.
Time - Days	Formats the KPI in days. KPI input value must be entered in days.

Pro tip: *You can also define your own formatting rules. See the 'Format codes to use' setting for this.*

KPI Comments

You can set up qualitative comments on each of the KPIs (to be displayed in various dashboards). To type the comments (free text), click on "KPI comments" link in settings index.

Number of KPIs to use in the report

The maximum number of KPIs you can use 20. But if you have less than 20 KPI data, you can tell the dashboard how many you want to use with this setting.

Just click on "Number of KPIs to use in the report" link settings index and enter the number (between 1 & 20).

Top 5 KPIs

For some of the dashboards, you can choose which 5 KPIs are considered as top 5 (and hence shown in the header area).

Please click on "Top 5 KPIs" link in the settings index and select the 5 KPIs you want.

Please note that if you make any errors in the top 5 selection, a warning icon (x) will be shown. Please fix all warnings before proceeding further.

Top 5 KPIs

Select any 5 KPIs:
Revenue
Expenditure
% New customers
Marketing per $1000
Avg. $ per customer

Avg. $ per customer
Productivity %
Raw-material per unit ($)
Attendance %
Mistakes per million
Customer satisfaction %
Refund %
Marketing per $1000

Truncate long KPI names in the output display

Often you have longish names for KPIs. Since the dashboard output is compact, it is advised to use abbreviated or truncated names for the KPIs. To set the truncation rules, just click on "Truncate settings for long KPI names" in the settings index.

You can choose whether to truncate long names or not.

If truncation is turned on, you can also specify number of characters to display.

Truncate Long Names?
Yes
Length (characters)
15

KPI Target Settings

You can customize thresholds (limits) for displaying Red, Amber & Green alert icons in the dashboard. You can also set up various types of targets for output displays.

To set alert icon thresholds, click on "KPI Alert icon settings" in the settings index.

KPI Target Alerts

Icon	Threshold	
Red		
Amber	30%	or greater
Green	70%	or greater

You can specify % values (just enter Amber & Green values alone).

To set target types, click on "What type of target to use" link in the settings index.

Target Settings
1. Use target data
% Improvement
10%

You can choose one of the 3 types of targets.

1. User target data: This uses target values you have entered in the last 20 columns of input data.
2. Month on Month target: This uses a custom % value (for example: 10%) as the target for improvement on monthly basis. Remember, this is improvement, so if a KPI is set to 'less is good', then next month's target will be set as 10% less.
3. Year on Year target: This uses a custom % value as target for improvement on yearly basis. So target for October 2014 will be x% improvement of October 2013 value.

Set Report Month

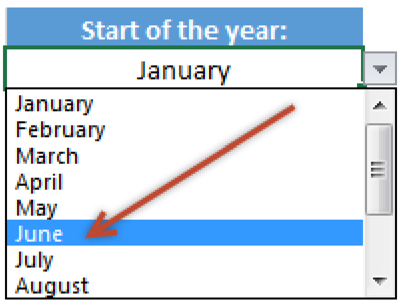
You can generate the report for latest month or any month. Just click on "Set report month" link in the settings index and specify the month for which you want the report.

Month names

You can specify the month names as per your locale. The template comes pre-loaded with English month names (January, February, March…). You do not need to change this setting for 90% of situations.

Financial Year Start

You can use this setting to tell which month to start the year with for YTD calculations. Just click on "Financial year start" link in settings index and select the month.



Format codes to use

The templates come pre-loaded with 11 common reporting formats. You can define your own by making changes to this list. To customize, click on "Format codes to use" and modify the Format options & Format code columns.

Some suggested formats:

Format Code	What it does?
`$#,##0, "k"`	Formats the KPI in 1000s of $s
`$#,##0,, "m"`	Formats the KPI in millions of $s
`_($* #,##0.00_);_($* (#,##0.00);_($* "-"??_);_(@_)`	Formats the KPI in accounting format (with 2 decimals)
`_($* #,##0_);_($* (#,##0);_($* "-"??_);_(@_)`	Formats the KPI in accounting format

For more on custom formatting codes, visit

http://chandoo.org/wp/tag/custom-number-format/

Default month format

In various parts of the dashboards, months are displayed. To set a consistent format for all months, you can use this setting.

Click on "Default month format" link in the settings index and specify the formatting you want. You can leave this setting as is for 90% of situations.

Header message style

All dashboards feature a header message on top. You can customize this message by selecting from a pre-defined list (or write your own headers).

Click on "header message style" and pick one from the list or type your own.

Calculation names (for custom calculations)

You can define your own calculations (by going to calculations sheet). For display purposes, you can also set names for these calculations by using the "calculation names" link in the settings index.

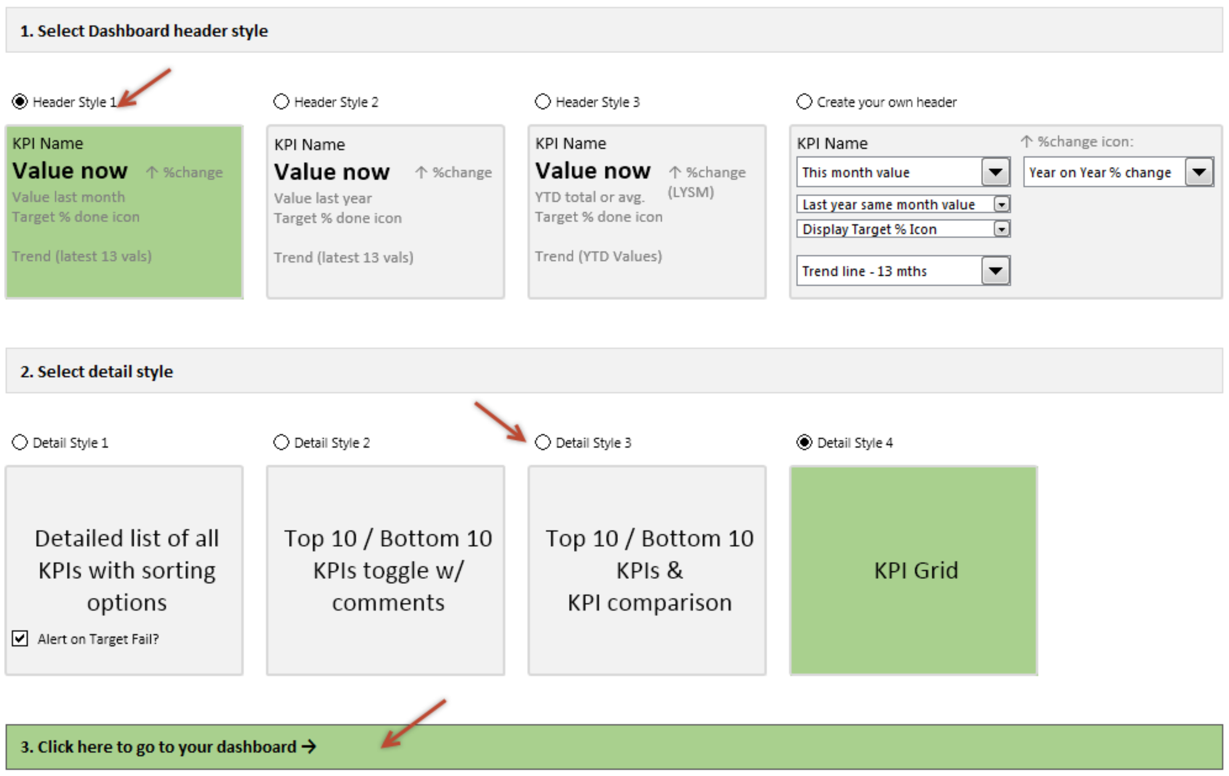
Step 5: Choose the display you want

The templates offer 16 different dashboards. You can use the "Display options" tab to select which dashboard you want.

The styles are self-explanatory. Just pick any one of 4 header styles

And any one of the 4 detail styles

And click on the green box at bottom to access your dashboard.



Understanding header styles

All headers are small tiles that start with KPI name.

Then they show up to 4 values and a sparkline with trend. All of these are customizable thru header styles section of display options.

The first 3 header styles are set for you.

The 4th style lets you define every aspect of the header.

You can select what to show for value 1, value 2, value 3 and value 4 by using the drop down boxes.

Play with them to understand how they work and what they mean.

Understanding detail styles

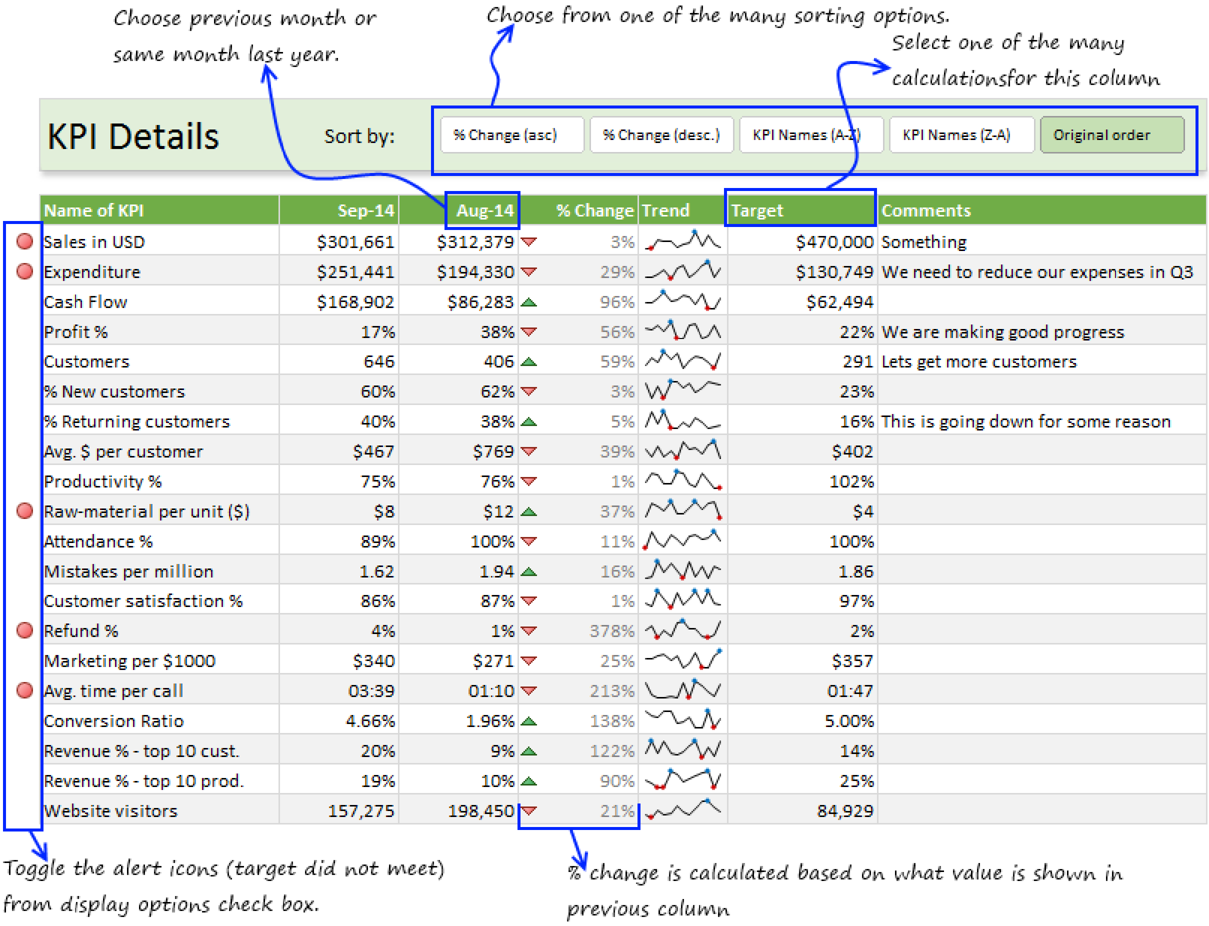
There are 4 types of detail styles defined in this template.

About these screenshots: *All the images are taken with Excel 2013 version of templates. The functionality is similar for other versions too. Some of the slicers are replaced by form controls.*

Detail style 1

This shows all the 20 (or how many ever you decide to use) KPIs in a detailed view. You can sort the list by various criteria. You can also choose what to show in certain columns.

See below illustration to understand the features of Detail style 1.



Name of KPI	Sep-14	Aug-14	% Change	Trend	Target	Comments
Sales in USD	$301,661	$312,379	3%		$470,000	Something
Expenditure	$251,441	$194,330	29%		$130,749	We need to reduce our expenses in Q3
Cash Flow	$168,902	$86,283	96%		$62,494	
Profit %	17%	38%	56%		22%	We are making good progress
Customers	646	406	59%		291	Lets get more customers
% New customers	60%	62%	3%		23%	
% Returning customers	40%	38%	5%		16%	This is going down for some reason
Avg. $ per customer	$467	$769	39%		$402	
Productivity %	75%	76%	1%		102%	
Raw-material per unit ($)	$8	$12	37%		$4	
Attendance %	89%	100%	11%		100%	
Mistakes per million	1.62	1.94	16%		1.86	
Customer satisfaction %	86%	87%	1%		97%	
Refund %	4%	1%	378%		2%	
Marketing per $1000	$340	$271	25%		$357	
Avg. time per call	03:39	01:10	213%		01:47	
Conversion Ratio	4.66%	1.96%	138%		5.00%	
Revenue % - top 10 cust.	20%	9%	122%		14%	
Revenue % - top 10 prod.	19%	10%	90%		25%	
Website visitors	157,275	198,450	21%		84,929	

Detail Style 2

This shows either top 10 or bottom 10 KPIs based on user defined criteria. You can select one of the 3 criteria (Month on Month changes, Year on Year changes, Target Performance) and see either top 10 or bottom 10 KPIs for that criteria.

You can also add free text comments & choose what to display in the last column of the table.

See below illustration to understand the features of Detail Style 2.

Customize what goes in to this column
Choose one of the several calculations
from drop down box.

Use one of the
3 criteria to filter
the KPIs

Details of KPIs

Name of KPI	Sep-14	Target	% change	Trend	YTD Total / Avg.
Cash Flow	$168,902	$62,494	270%		$1,304,343
% New customers	60%	23%	261%		60%
% Returning customers	40%	16%	250%		40%
Customers	646	291	222%		4,895
Website visitors	157,275	84,929	185%		1,729,521
Revenue % - top 10 cust.	20%	14%	143%		14%
Avg. $ per customer	$467	$402	116%		$5,581
Mistakes per million	1.62	1.86	115%		12.92
Marketing per $1000	$340	$357	105%		$1,918
Conversion Ratio	4.66%	5.00%	93%		4.01%

Criteria:

1. Month on Month Changes
2. Year on Year Changes
3. Target Performance

Show:

- Bottom 10
- Top 10

Comments

Type any free text comments here.
Make sure you update them as you
publish new version of the report
next month

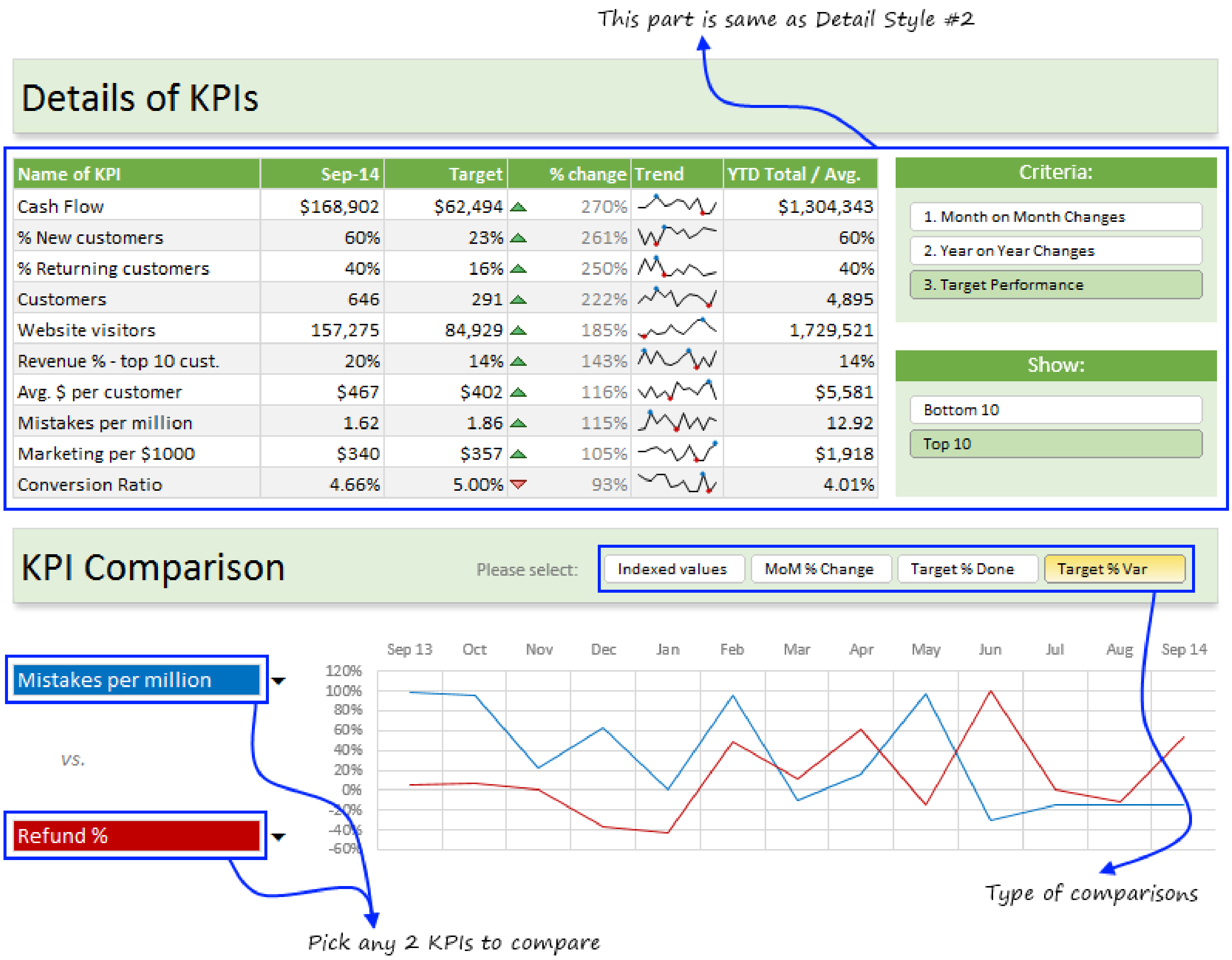
This column changes based on criteria

Use this to filter top 10 or bottom 10 KPIs

Detail Style 3

This will let you explore top 10 or bottom 10 KPIs by any criteria (same as detail style 2) along with ability to compare any 2 KPIs in 4 different ways (Indexed values of KPIs, MoM % change, Target % done, Target variance %)

See below illustration to understand how this works:

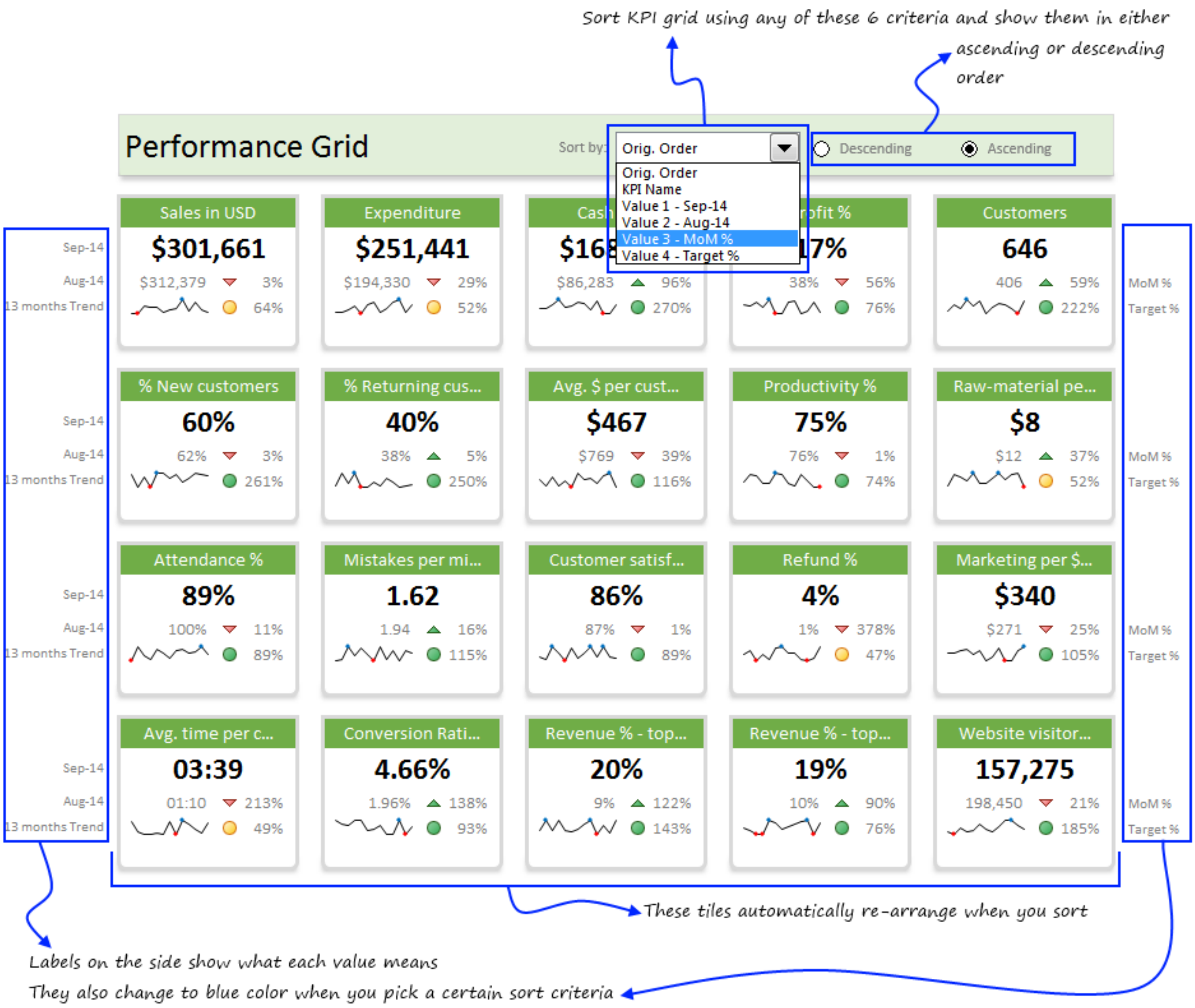


Name of KPI	Sep-14	Target	% change	Trend	YTD Total / Avg.
Cash Flow	$168,902	$62,494	270%		$1,304,343
% New customers	60%	23%	261%		60%
% Returning customers	40%	16%	250%		40%
Customers	646	291	222%		4,895
Website visitors	157,275	84,929	185%		1,729,521
Revenue % - top 10 cust.	20%	14%	143%		14%
Avg. $ per customer	$467	$402	116%		$5,581
Mistakes per million	1.62	1.86	115%		12.92
Marketing per $1000	$340	$357	105%		$1,918
Conversion Ratio	4.66%	5.00%	93%		4.01%

Detail Style 4

This shows all KPIs, one per box, laid out in 5x4 grid. You can arrange the KPI tiles in the grid in 12 different ways (6 types of sorting, 2 sort orders per type).

See below illustration to understand how this works.



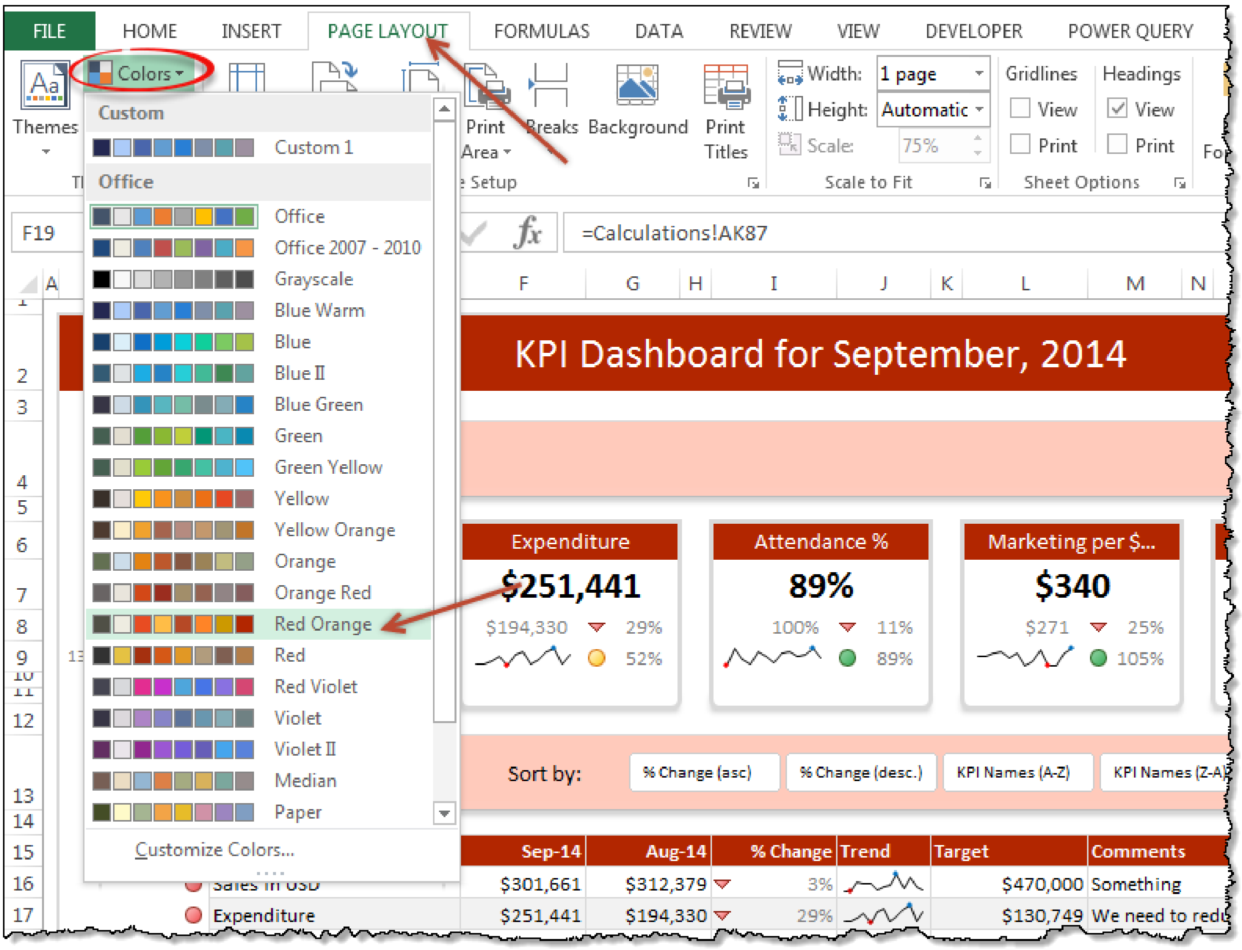
FAQs, known bugs, customization options

Here is a list of frequently asked questions, known bugs and customization options.

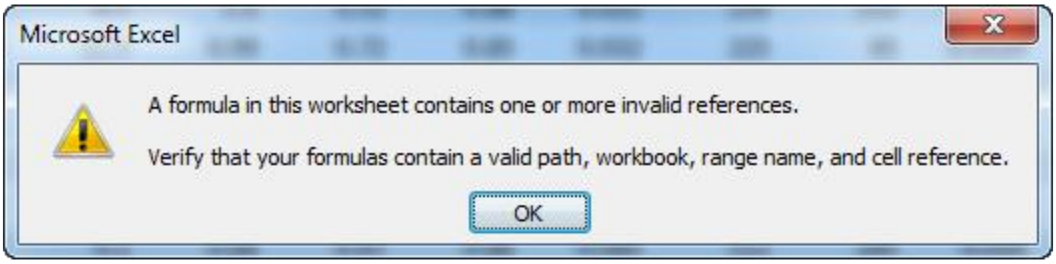
How do I change the colors? I don't like green.

Changing colors is simple. Follow below steps:

1. Go to home tab
2. *If necessary:* Right click on the tab name & choose unprotect.
3. **There is no password. Click ok if prompted for one.**
4. Now go to any dashboard.
5. Navigate to Page Layout ribbon in Excel
6. Locate the colors button and click on it.
7. Choose any of the built-in color schemes.
8. If you want, you can even define your own colors.



I see an error when adding new data, something like "formula contains invalid references…"



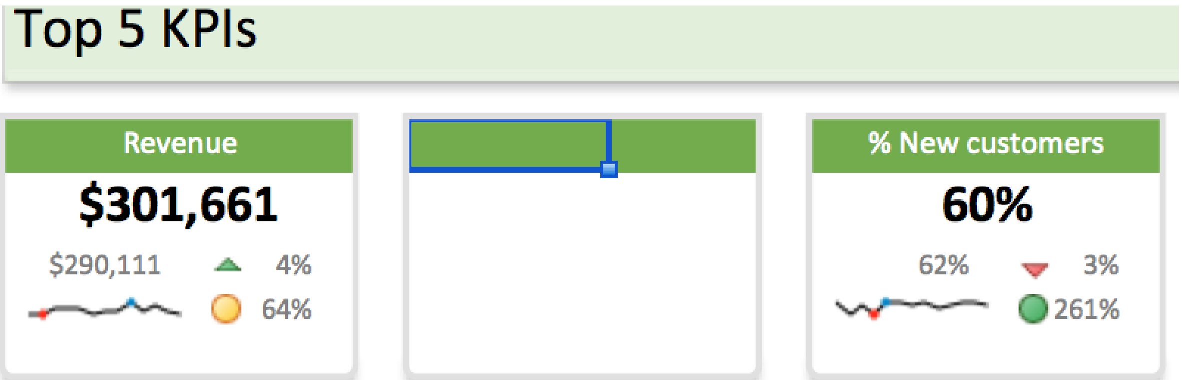
There is a bug in Excel that causes this behavior. But it is very rare & harmless. Just click ok and you are good to go. You might see this bug when adding data or saving workbook.

Some dashboard cells are showing #### instead of calculation

This can happen due to one of the 2 reasons:

1. Most likely reason: the number is too big and the cell is too small
    - Fix: Adjust the width of dashboard worksheet column
2. Least likely reason: there is an error in the cell
    - Fix: See if the calculation corresponding to the cell is throwing an error. We have used IFERROR to suppress all errors on display level. So if there is an error, it must have been due to enhancements you made to the template or something that we did not anticipate.

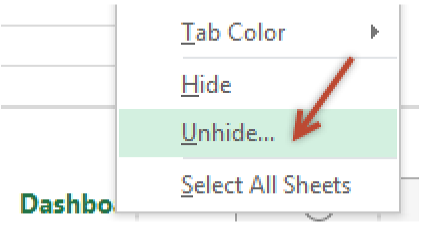
I see blank boxes on top 5 section after changing KPI names



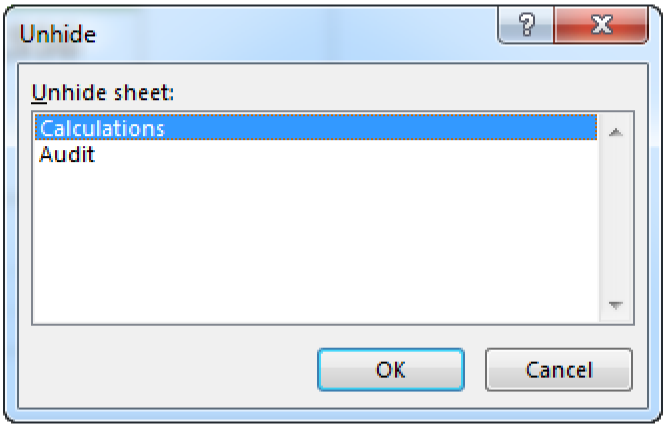
Don't panic. The top 5 KPIs are picked from "Top 5 KPIs" section in the settings tab. So when you change a name of KPI, you need to re-select the top 5 KPIs and assign them to correct KPI names. Just go to settings tab and click on Top 5 KPIs link.

Where are the calculations?

The calculations & audit worksheets are hidden by default. You can unhide them any time by right clicking on a sheet tab and choosing unhide.



And



How do I add custom calculations?

Note: this is for advanced Excel users only. Do not attempt if you are not sure what you are doing.

As a first step, unhide calculations worksheet.

Now, navigate to the **custom.calc** named range (you can type it in name box or use Go to dialog box).

This will be a range of Light yellow colored cells

In the first row of this range, you can build you custom calculations. The template allows adding up to 4 custom calculations (1 per column).

How to write a custom calculation formula?

You will use plain old Excel formulas to build custom calculations. I am going to show few example custom calculations so that you get an idea.

Things to keep in mind:

- Current month & previous 12 month values of KPI 1 are in the range - $F$14:$R$14
- Current month & previous 12 month targets of KPI 1 are in the range - $U$14:$AG$14
- KPI 2 values are in row 15, KPI 3 values are in row 16…

Example custom calculation - % of highest value in last 1 year

Let's say you want to calculate what is the % of this month KPI 1 value against highest value in last 12 months. So for example, if KPI 1 is 200 this month, and last 12 month maximum is 340, then the % would be 200/340 = 58.8%

The formula that goes in first row of custom calculation is

=R14/MAX(F14:Q14)

How this works?

R14 contains this month value of KPI 1.

F14:Q14 contains previous 12 values.

So we divide R14 with maximum of F14:Q14

Once you write this formula in row 1, column 1 of the custom calculation range, just drag it down so that we can calculate the % for rest of the KPIs.

Remember: to use relative references in your formulas so that you don't have to write separate formulas for each KPI.

Example custom calculation - Number of times target is met in last 1 year

Let's say you want to calculate how many times KPI 1 met (or exceeded) the target in last 1 year.

The formula for this this would be:

=SUMPRODUCT(--(G14:R14>=V14:AG14))

How this works?

Range G14:R14 contains latest 12 values of KPI 1

Range V14:AG14 contains latest 12 targets of KPI 1

Explaining how SUMPRODUCT works is beyond the scope of this documentation. So I encourage you to visit below links for more information.

- http://chandoo.org/wp/2009/11/10/excel-sumproduct-formula/
- http://chandoo.org/wp/2011/05/26/advanced-sumproduct-queries/

Now wait, shouldn't we take in to consideration the type of KPI for this…

You are right. For certain KPIs, we consider target is met when the actual value is **less than** target value. A good example is KPI like expenditure.

In that case, we can use below improved formula.

=IF(AL14=1,SUMPRODUCT(--(G14:R14>=V14:AG14)), SUMPRODUCT(--(G14:R14<=V14:AG14)))

This will check AL14 which contains +1 for KPIs of type 'more is good' and -1 for KPIs of type 'less is good'.

After adding the custom calculations,

Please follow below check list to ensure safety & integrity of your reports.

- Check that the calculations are filled down to all yellow cells
- Add any comments to first cell to remind you what the calculation is supposed to do
- Verify the numbers both in calculations tab & on dashboard reports.
- Hide the calculations sheet.
- Save your work.

Can I delete any dashboards that I don’t need?

No. You can't. If you don't want to see a certain dashboard, you can hide it. But do not remove any of the worksheet tabs that are part of the original file.

Can I rename my dashboard tabs?

Yes, you can. Just change the names. All links, calculations & displays work just fine.

How do I import my data? I don't want to type them.

Since this dashboard is quite complex, I do not recommend directly plugging the data table to a database (or some other source) connections. Here is the recommended procedure.

1. Add a new worksheet to the dashboard. Call it "Raw data" or anything else that you fancy.
2. Import all your data here.
3. Make sure you are importing only the month, KPIs & target columns.
4. If your data is in a different structure, use formulas, pivot tables or power query to alter the structure.
5. Once the data is in the shape the template needs, copy it.
6. Make sure you copied only values (no headers).
7. Go to Data tab and paste the values as numbers.
8. Check everything.
9. Refresh connection whenever you have new data & repeat steps 4 to 8.

Oh, but it is so lame. Can't we automate it?

Of course we can automate this process. Once you are comfortable with the above process, you can use VBA to automate them. Again, my recommendation is to use manual or copy/paste updates. Since this is a once a month activity that requires only few minutes, I encourage you to do it manually.

I want to add some more charts / items / text / tables to the dashboard

The dashboards are meant to be customized. Here is the process for adding stuff to it.

1. First save a backup of the file.
2. Now go to the dashboard tab (dashboard 1, 2, 3 or grid) that you want to change.
3. Insert rows or columns to make space for things you want. If you want to add items at the bottom, just add rows before footer message.
4. Add whatever you want. You can insert charts, drawing shapes, logos, text boxes, calculated values etc.
5. Once done, make sure the dashboard looks compact & together (check alignment, fonts, colors and ensure consistency)
6. You are done.

Simple KPI Dashboard

The purpose of simple KPI dashboard is to provide you with a quick dashboard that is simple, easy to ready & print.

Use below guidelines to set up the dashboard

Step 1: Enter the data

Go to data tab on simple KPI dashboard and enter your data. The data should be entered in 7 columns

1. Group (grouping of the KPI)
2. Name of the KPI
3. Type of KPI (whether more is good or less is good)
4. Formatting of the KPI (choose from any of the pre-defined formatting options)
5. Value prior
6. Value now
7. Target %: Specify what % of target is achieved in current period for the KPI

NOTE: after entering all the data, make sure you sort the table by Group column. Only then the dashboard outputs make sense.

Step 2: Customize settings

Go to Data sheet and on the right side you can find several settings. You can customize formatting options, KPI Target thresholds, user name, email & date.

The customization process is similar to that of KPI dashboard template.

Step 3: See the dashboard

There are 2 variations of the simple KPI dashboard

- 2 columns
- 3 columns

Click on appropriate buttons on the data tab (or navigate to corresponding sheet tabs) to see your dashboard.