

COMPLETE GUIDE TO CUSTOM REPORTING



COUNTERSOFT

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Complete Guide to Custom Reporting

What we're going to cover

Gemini reporting is done through Excel for two simple reasons, there are very few organizations that do not have resources who have sufficient knowledge of Excel to build a report and Excel is the de facto standard for simple data analysis.

Gemini contains a number of standard Excel reports that can be used as-is or modified to suit specific needs. This guide will take you through the creation of an ad hoc report from scratch so you can build whatever custom reporting you require.

Project Templates – define what you can report

Project Templates, the reusable metadata structures from which all Projects are built, define the data fields that belong to a Project. When defining Screens you choose not only what fields are presented in online data capture but also the fields that can be exported. To export a field it must be included in the Viewing section of the Screens and the user executing the data export must have permissions to view the field.

Note: Remember that although Screens can be inherited across Types (e.g. Bug, Issue, Ticket, Story, Task etc.) each Type can have its own Screen and Gemini will use the settings of the Screens for each Type. A user with access to Tickets and Tasks may have permissions to see Resource on one Type but not the other. Gemini will respect this security and not export data for the Type to which the user does not have access.

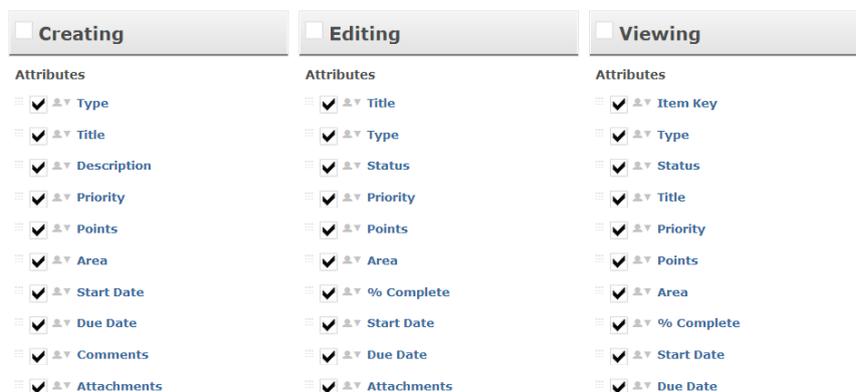


Fig 1.0 Fields selected under Viewing can be exported provided the user has field level access

Screens define Custom fields as if they came out of the box and therefore you can export any custom fields. As we will see when we look at the Excel definitions there is a naming convention you have to adhere to with Custom Fields.

Passing data to Excel

Gemini exports data to Excel from the Items Grid. To do this you need to open the right hand toolbar, within which is the Reports tab. The Reports tab gives you the option of exporting the currently filtered set of data in the Grid, or of running a pre-built report, which will run with the same filtered set of data. So, if you filtered the following rows:

ABC
XYZ

...whether you exported the data as a list to Excel, as a CSV (comma/pipe delimited values) or HTML, those two rows would be what Excel would get. If you ran any ad hoc report then those two rows are also *exactly* what the report would contain.

Note: The filtered view may contain more rows than the user-defined or default page size. The report will contain all rows in the filter, not just those that appear on the page. If the filter returns 1,000 rows but the page only displays 50, the report will contain 1,000 rows, not 50.

Matching Data Fields to Excel Columns

Whether you start from scratch or tailor an existing Excel report to meet your needs every Excel Workbook needs two tabs in order to receive data from Gemini:

- Definitions
- Data

Excel Definitions tab

Core Fields

The Definitions tab contains the names of the data fields that Excel needs to receive from Gemini. These are the field names, not necessarily the labels that they are given in Gemini. For example Gemini has a field that is labelled % Complete but its name if you wish to extract its data is PercentComplete and if you put %Complete in the Definitions tab you will get nothing. The full list of Gemini field names can be found [here](#) under the heading Core Fields.

Custom Fields

Custom Fields are named by users so the only thing to know about how they must appear in the Definitions tab is that they must be prefixed by "CF_", so to include a Custom field called Budget you would name it CS_Budget.

Advanced Fields

Gemini has some advanced fields, so called because cause a row to be created for each entry of the item, for example {TimeLogger} will be used to get hold of every Time Log entry for a specific user. In practice these fields are only used when extracting Time Logs or History records.

Formula Columns

Restricted Columns & Mandatory Ranges

Column A is reserved for Gemini Labels so do not put anything in this column other than labels to describe the data in the cells in column B2-B4, which are also reserved for Gemini's use.

If you base your report on one of the delivered reports column A of the Definitions tab will contain the following labels: **Fields, URL, Date** and **Name**. Gemini does not *need* these labels but it does need the named ranges in the following cells.

Cell	Named Range	Description
B2	URL	The Gemini site URL
B3	Date	The report run date/time
B4	Name	The name of the user who executed the report

If you base your report on an existing report then these named ranges will already exist, if you build your report from scratch and do not include these named ranges in these precise cells in the Definitions tab then the result is unpredictable and Gemini may or may not produce your report.

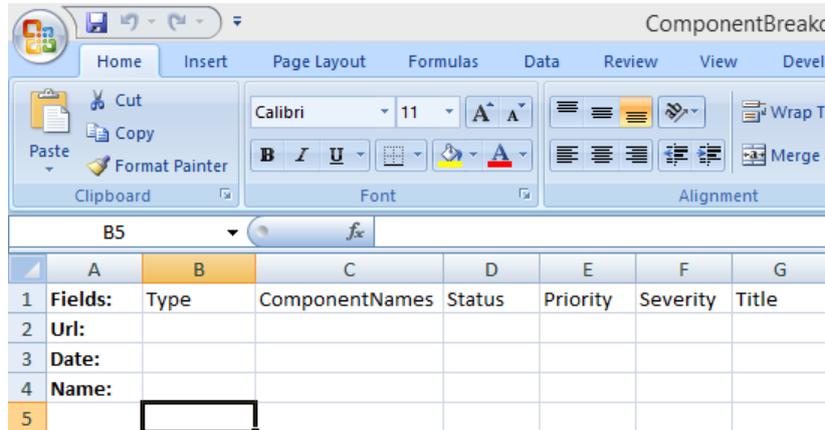


Fig 2.0 Definitions tab set out to receive data for Type, Component, Status, Priority... B2-B4 will be populated at runtime

Excel Data Tab

The Data tab is very similar to the Definitions tab but doesn't have the restricted columns or any mandatory named ranges. As a result, column headings should start in column A and be identical in relative position to the columns on the Definition tab. If the Definitions tab has fields in the order A,C,B then the Data tab must have the fields in the order A,C,B.

Field order must be maintained between the Definitions and Data tabs but column headings to not have to be. So you can have PercentComplete on Definitions but % Complete or any other column heading in the Data tab.

A	B	C	D	E	F
Type	Components	Status	Priority	Severity	Title

Fig 3.0 Data tab fields start in column A but maintain the relative positions to match the Definitions

Formula Fields

Gemini is going to place the data requested in the Definitions tab into the columns in the Data tab however there may be times when you need to create your own data values. For example, you may need to calculate a Utilization percentage on a timesheet, or a Billing Amount from a Rate Card that you've added to your Workbook and now need to multiply a time value by. Formula fields contain Excel formulae e.g. ((B6*Rate Card!C3)/D6) and you should always place your formulae at the end of all the data fields. Gemini will copy down the formulae to every row it exports.

P	Q	R	S
Description	Count()	Comments	My Formula

Fig 4.0 Excel Formula fields are always placed at the end.

Building smart reports

It is unlikely that you will go to the trouble of building an ad hoc Excel report with just the Data and Definitions tabs; that would just be a download list that could be obtained with no effort by clicking on the Excel link in the Reports tab. To produce really nice reports you either want to build formulae to pull data from the Data sheet or more likely you will want to pivot the data from the Data sheet using Pivot tables or Pivot Charts.

The problem with pivot tables is that while you can build them on named ranges, you have to specify the precise size of the range and if you specify a range too large then your report has blank values. The solution is to use the dynamic range from one of the sample Excel reports, which you will find is called "data". The data range can be found by using the Formula Name Manager and has the value:

```
=OFFSET(Data!$A$1,0,0,COUNTA(Data!$A:$A),15)
```

This formula counts the number of rows. In the example above, the number of columns is set to 15. You can make that a formula as well by counting the number of columns with a COUNTA but that seems to have some problems between Windows and Mac versions of Excel. In any case this is not a value that is likely to change.

Component Breakdown Report

Sat-Jan-1900

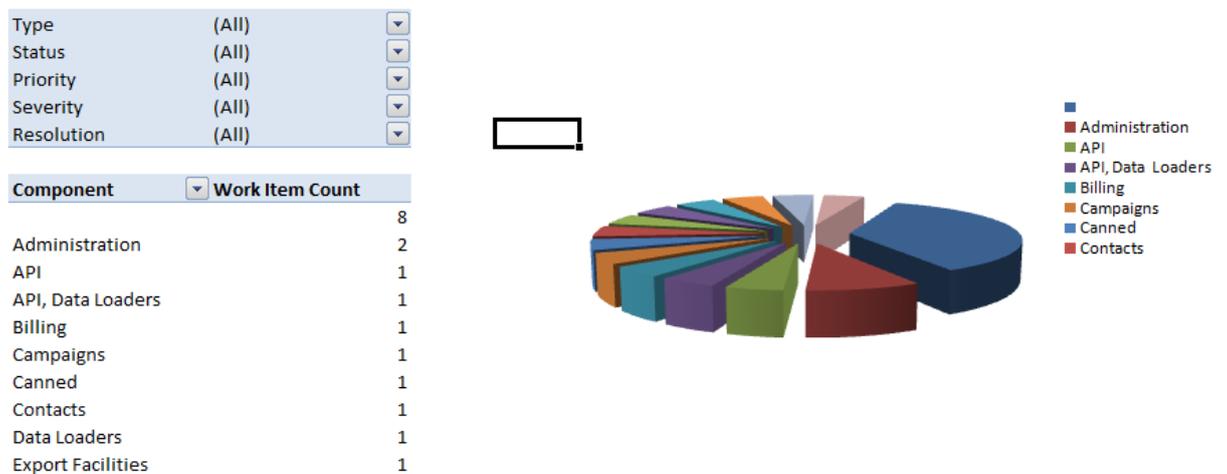


Fig 5.0 A typical Excel Pivot Table and Pivot Chart based on data exported from Gemini

Deploying Reports

Once your report is built you'll want to test and ultimately deploy it. If you have the Gemini Administrator privilege then in the Reports tab (right hand toolbar) you will see the Upload link. This will allow you to browse for your Excel Workbook and will copy it to the appropriate location in Gemini.

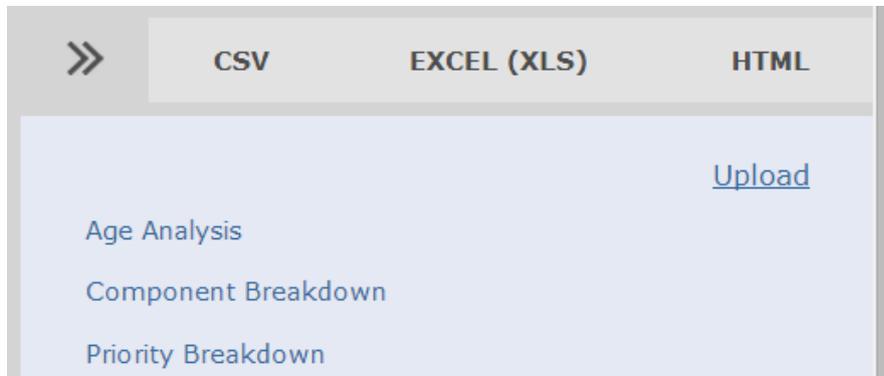


Fig 6.0 The Upload link in the toolbar, on the Reports tab, lets you upload your report to Gemini

Deployed reports are available to all users. Gemini takes care of ensuring that people who execute reports can only see the data to which their permissions grant access.

Note: If you schedule a report to run for a Workspace and subscribe other users to that report then the permissions of the user executing the report, the Workspace 'owner' determines the data that the report will contain, separate reports will not be sent to users based on their permissions.

Watch an ad hoc report get built

However detailed a written description is sometimes it's just easier to understand new things by watching them get done. If you're one of those for whom seeing beats just about anything else then you should watch the video [here](#) of an ad hoc Gemini Excel report being built from scratch.