Cumulative update 7 for Microsoft Dynamics® AX 2012 R2

Configuring budget plan templates

White Paper

This white paper describes how to create budget planning templates for Microsoft Office Add-ins. It is intended for end users who design budget plan worksheets and justification templates.

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Introduction

Budget planning web services have been added as part of the budget planning feature set for Microsoft Dynamics AX 2012 R2 to support the creation of budget plan templates. When you use the budget planning fields made available through the budget planning web service, you can create templates for Microsoft Excel worksheets and Microsoft Word justification documents by using Microsoft Office Add-ins.

Budget plan templates are created by template authors or the designers of the budget planning process, and then they are made available to end users. With budget plan templates, you can create Excel worksheets and Word justifications that are linked to the budget plan tables in AX 2012 R2.

With a budget plan justification, information can be exported from the budget plan to Word. The justification can be routed for feedback along with the budget plan, and Word features can be used to add text and comments, and to track changes.

With a budget plan worksheet, information can be imported from the budget plan to an Excel worksheet by using a budget plan template. For example, budget plan lines for multiple scenarios can be displayed in a columnar format. The data in the worksheet can be charted, analyzed, and modified in Excel, and then published back to the budget plan lines. The worksheet that was created from the template is automatically attached to the budget plan when it is submitted to workflow.

Purpose

This white paper describes how to configure budget plan templates. The topics covered include the following:

- Create a worksheet template
- Create a justification template (optional)
- Select budget plan templates and folders

Audience

This white paper is intended for end users who design budget plan worksheets and justification templates.

Terminology

The following table defines terms for AX 2012 R2.

Term	Definition
Budget plan	A document used to develop estimates of inflows and outflows for a responsibility center.
Budget plan scenario	A classification of budget plan line item estimates for budget planning that lets an organization track budget amounts or quantities.
Budget planning process	A practice to develop the financial estimates of income and expenses, and inputs and outputs, for a budget cycle.
Budget planning stages	A description of the tasks through which a budget plan transitions in a budget planning process and responsibility center.
Budget control	A practice of authorizing expenditure only when budget funds can be reserved to meet future payment commitments.
Budget plan line	An entry in a budget plan that contains information about a budget plan estimate for a monetary amount or a quantity.

Prerequisites

You should be familiar with the steps for configuring budget planning and setting up budget planning processes. For more information, see the white paper, Configuring Budget Planning for Microsoft Dynamics AX 2012 R2.

For information about setting up template folders and templates, and using worksheets and justifications in your budget plans, see the Select budget plan templates and folders section of this white paper.

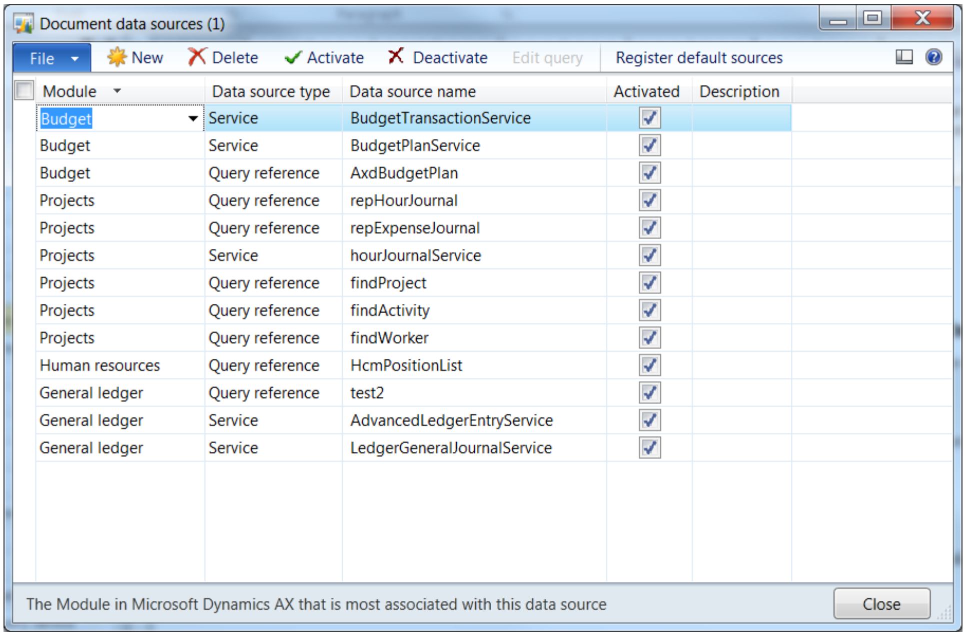
The following Help topics provide conceptual and procedural information about budget planning:

- About budget planning configuration and setup
- About budget plans
- Key tasks: Configure budget planning and set up budget planning processes
- Key tasks: Create and process budget plans

Tip: Before you can create budget plan templates in AX 2012 R2, Office Add-ins for Microsoft Dynamics AX must be installed.

Setting up data sources for budget plan templates

Before you can create budget plan templates for the first time, you must set up the data sources for the templates. To open the **Document data sources** form, on the **Organization administration** area page, click **Setup** > **Document management** > **Document data sources**. For Excel templates, select **Service** as the data source type. For Word templates, select **Query reference** as the data source type.



Data source	Template	Description
BudgetPlanService or BudgetPlanOfficeAddinService	Excel worksheet	**Service** data source type
AxdBudgetPlan or AxdBudgetPlanOfficeAddin	Word justification	**Query reference** data source type

When selecting the data source for the Excel templates, you have two options: **BudgetPlanService** and **BudgetPlanOfficeAddinService**.

If the budget plan lines created by the budget planning organization either *always* reference a budget plan line source or *never* reference a budget plan line source, either **BudgetPlanService** or **BudgetPlanOfficeAddinService** can be used.

Note: Budget plan line source references include the following budget plan line details: asset, proposed asset, project, proposed project, and forecast position fields, and indicators for recurring budget lines and new requests.

If the budget plan lines created by the budget planning organization include *both* budget plan lines that reference budget plan line sources *and* lines that do not reference budget plan line sources, **only BudgetPlanOfficeAddinService** can be used.

Create a worksheet template

Important recommendations: When you create a worksheet template, we strongly recommend the following:

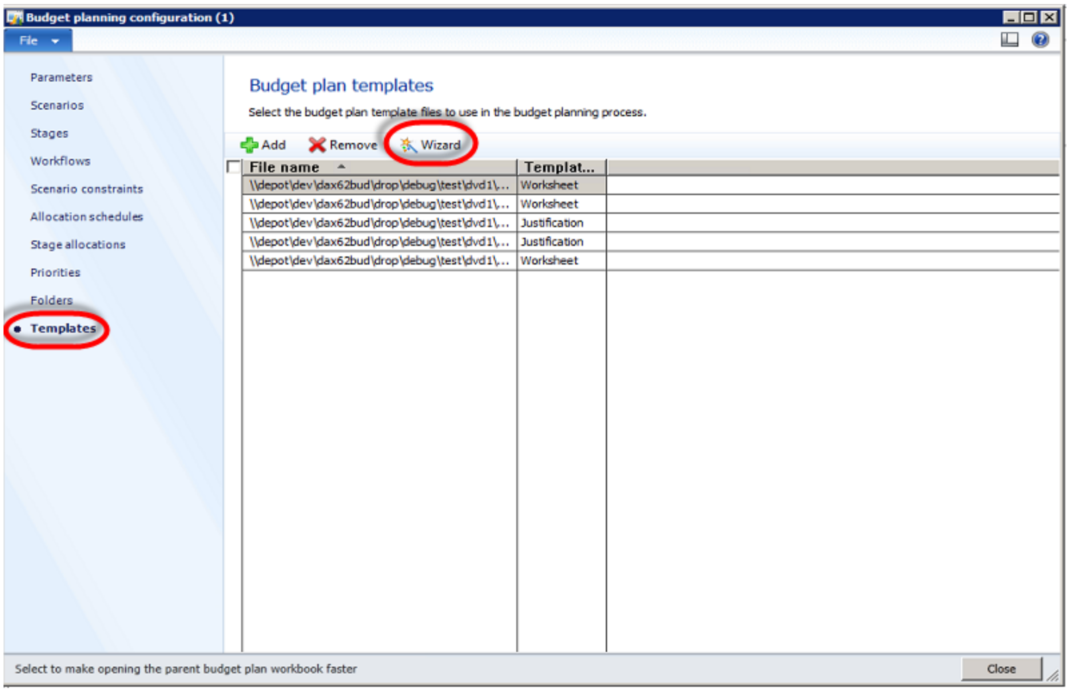
- The template designs should be outlined for each stage of the budget plan in the specific budget planning workflow before you begin the design in Excel.
- A test budget plan with budget plan lines and, optionally, budget plan line source references should be created to validate the templates. (This budget plan can later be removed.)
- A baseline worksheet template should be created, saved, and tested. Other worksheet templates can be designed by using the baseline and then saved under a different worksheet template name.
- Each worksheet must be developed independently by binding the desired fields to the sheet. Sheets cannot be copied and subsequently modified within a template.

Create a worksheet template by using the template wizard

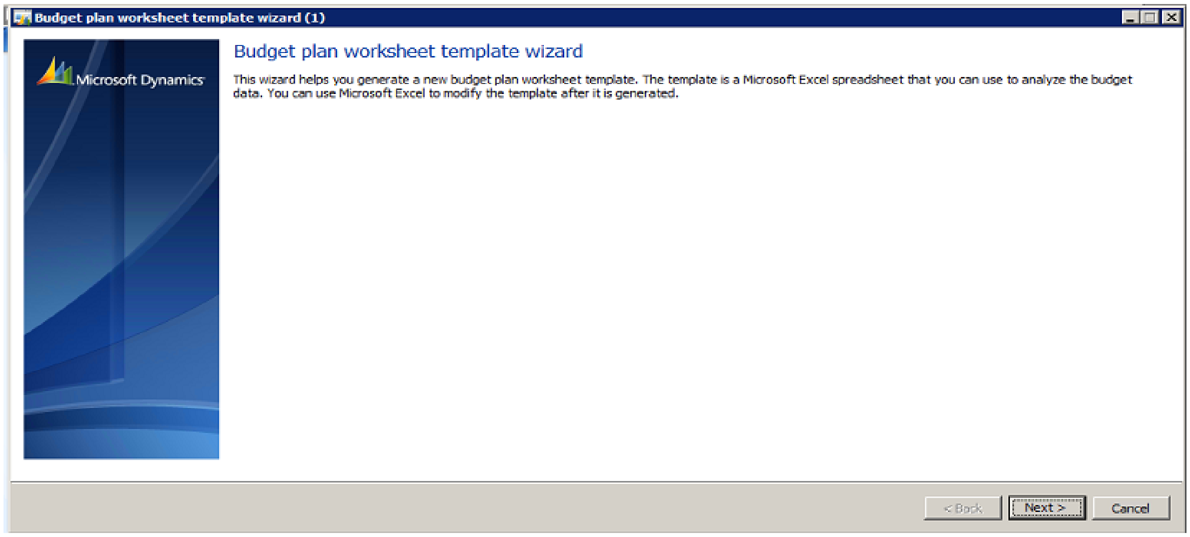
A new wizard is available in cumulative update 7 for Microsoft Dynamics AX 2012 R2 that you can use to create a new worksheet template.

Note: The Create a worksheet template in Excel section of this white paper is useful if you have to troubleshoot issues with an existing worksheet template.

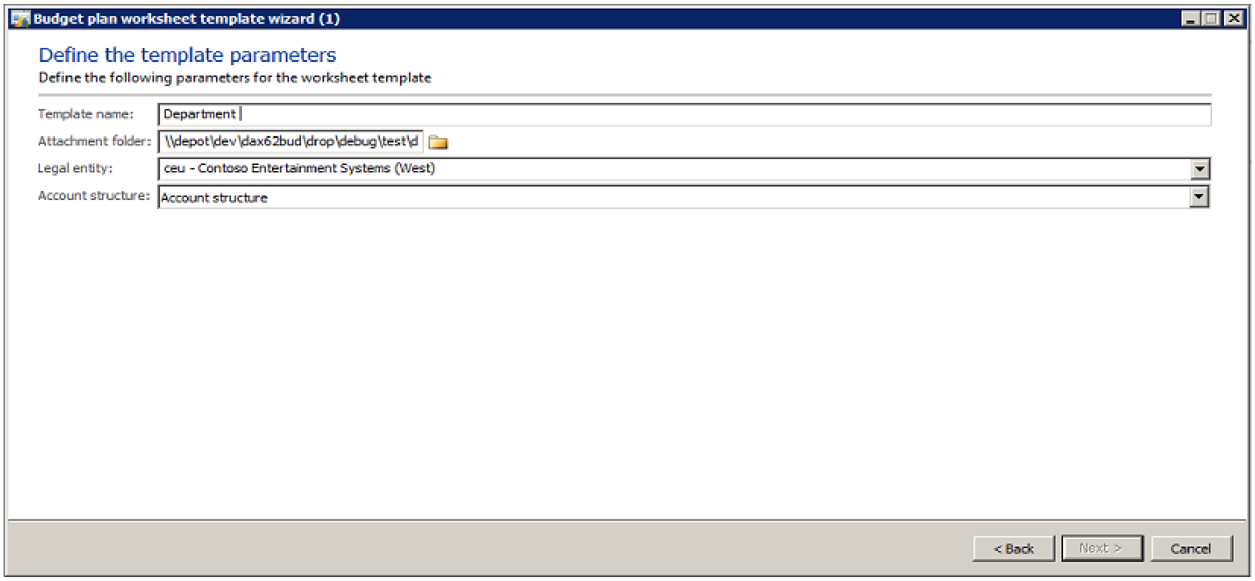
To open the template wizard, on the **Budgeting** area page, click **Setup** > **Budget planning** > **Budget planning configuration**. Click the **Templates** link, and then click **Wizard**.



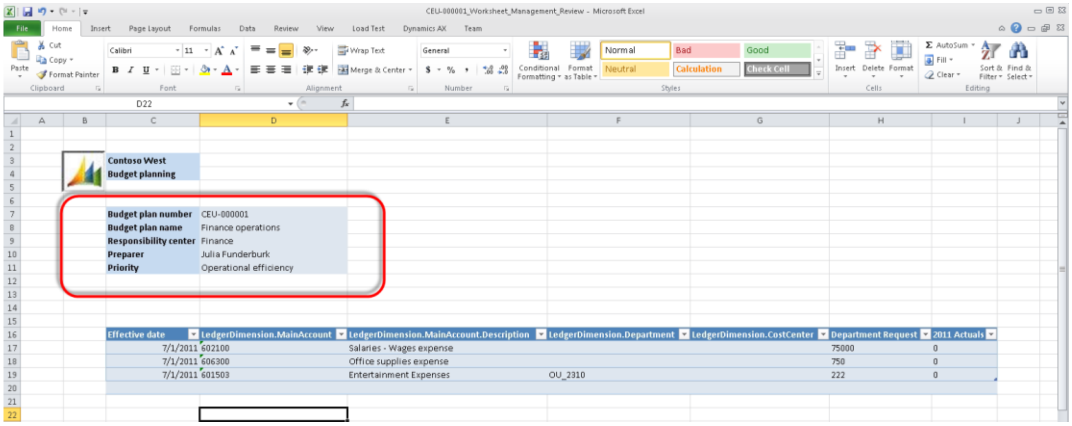
On the **Budget plan worksheet template wizard** page, click **Next**.



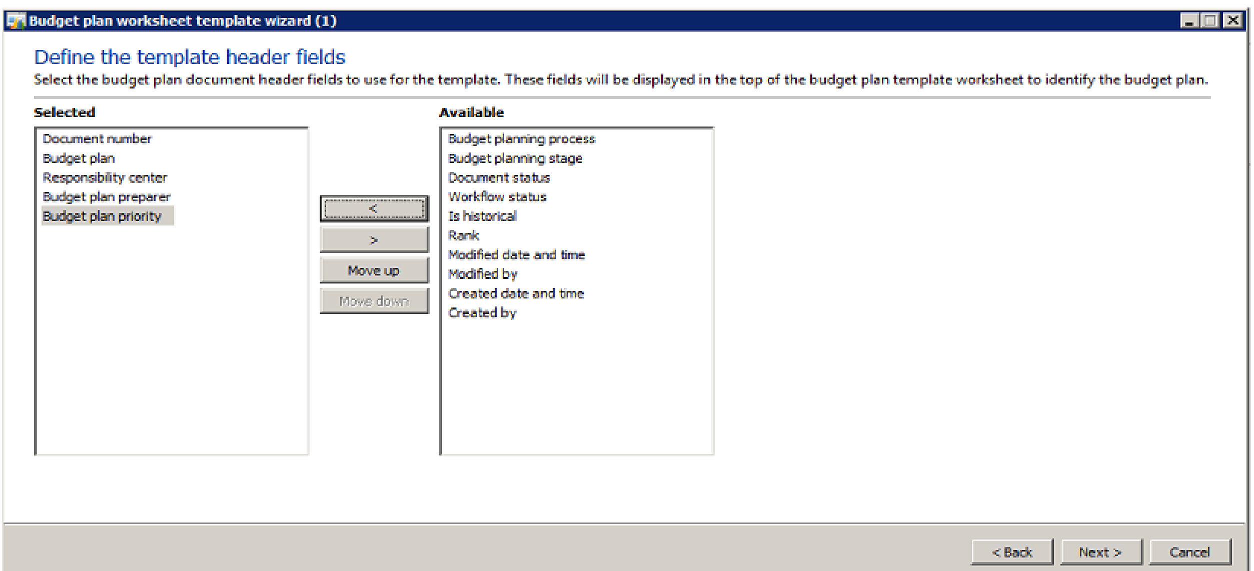
On the **Define the template parameters** page, enter a template name that will appear in the header of the worksheet template. Then enter the attachment folder where you want to store the worksheet instances, the legal entity that will use this template, and the default account structure that you want to use. Click **Next**.



You can then select the header fields to display on the worksheet template. In this example, the header fields to display are circled.

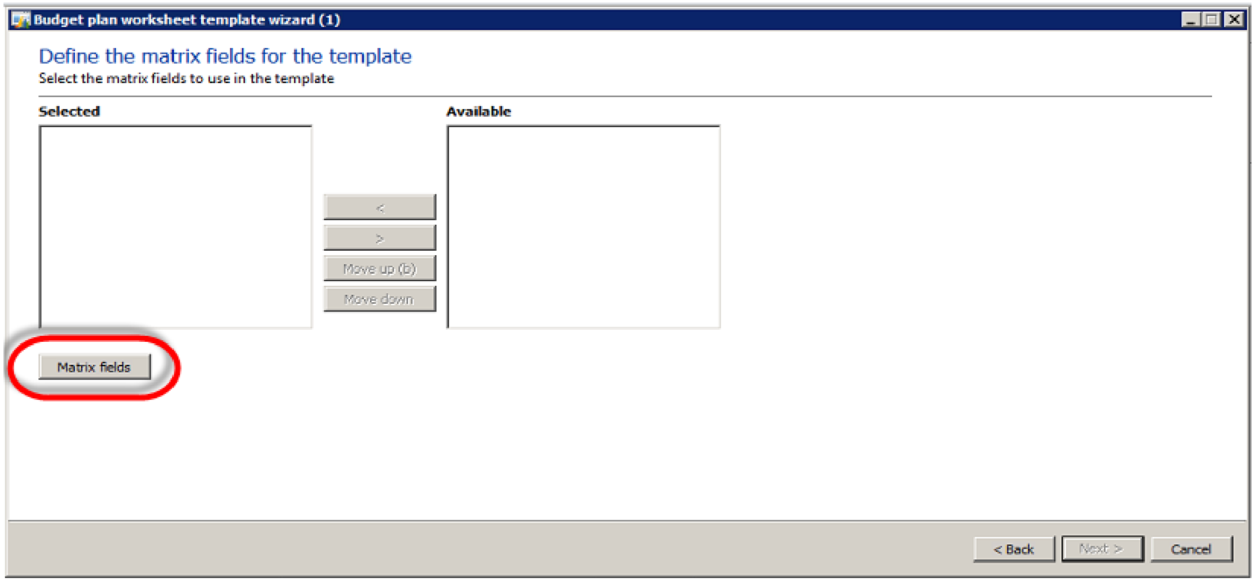


On the **Define the template header fields** page, move the budget plan document header fields that you want to use for the template from the **Available** list to the **Selected** list, and order them from top to bottom as shown. Click **Next**.



On the **Define the matrix fields for the template** page, select the columns that you want to appear in the worksheet template by defining matrix fields.

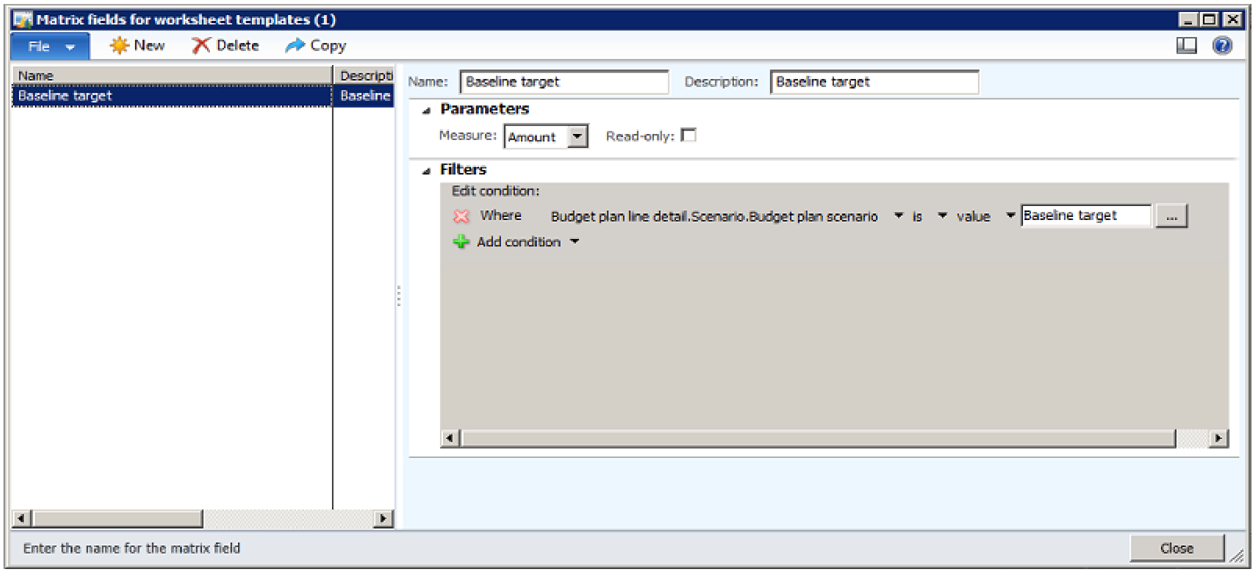
To create a new matrix field, click **Matrix fields**.



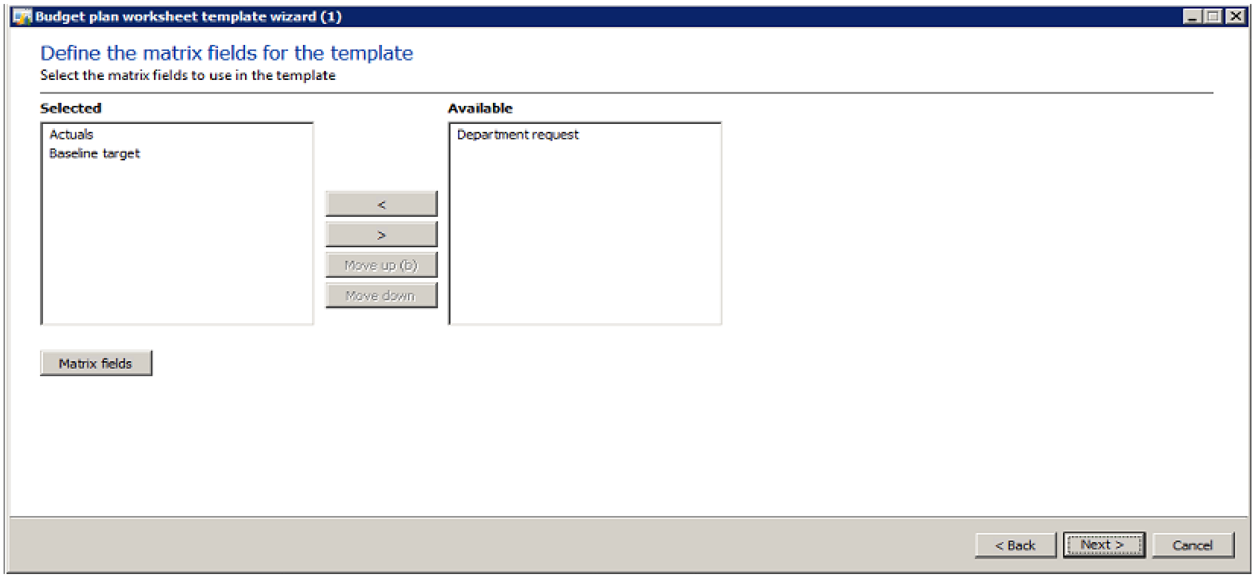
In the **Matrix fields for worksheet templates** form, click **New** to create a new matrix field.

- In the **Name** field, enter the name for the matrix field. This will be used as a column name for the calculated amounts column. In the **Description** field, enter a description of the matrix field
- On the **Parameters** FastTab in the **Measure** field, select amount, quantity, or price to use for the calculation. Select the **Read-only** check box if you want to prevent the calculated amount from being edited in the Excel template.
- On the **Filters** FastTab, select the filters to apply to budget plan lines when the matrix field values are calculated, such as the budget plan scenario and date ranges.

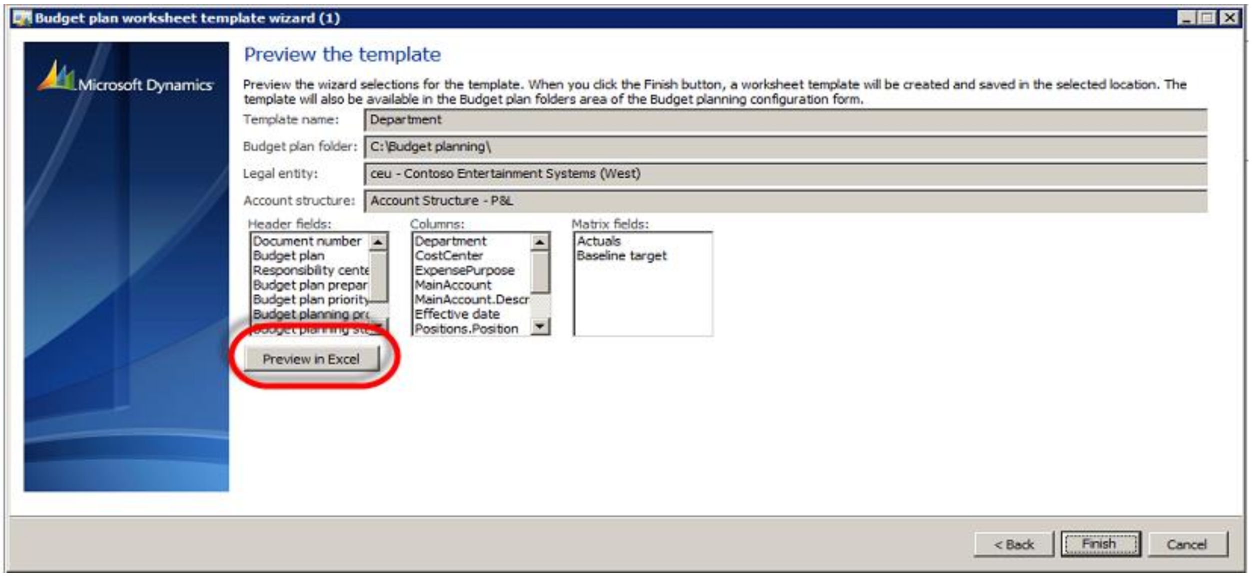
After you have defined the matrix fields, click **Close**.



On the **Define the matrix fields for the template** page, move the matrix fields from the **Available** list to the **Selected** list, order them from top to bottom, and then click **Next**.



On the **Preview the template** page, click **Preview in Excel**, or click **Finish** to generate the worksheet template.



Create a worksheet template in Excel

Worksheet pages

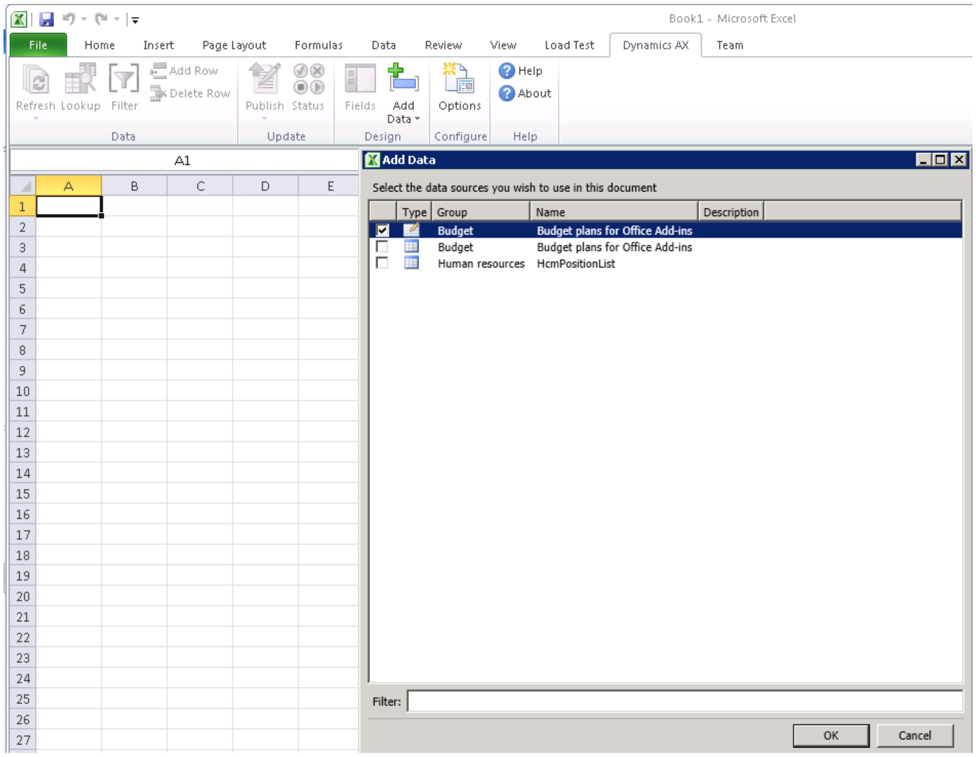
When you open Excel, the pages in the worksheet template are identified as numbered sheets, such as **Sheet1** and **Sheet2**. Each sheet or page in the worksheet template has a different purpose. The following table shows the purpose and description of each sheet in a typical worksheet template.

Sheet	Purpose	Description
Sheet1	**Entry** page	The page that the user sees and works with. This page should have the focus when you close the template file.
Sheet2	**Backing** page	A required page that must contain all the required fields, key fields, optional fields, and any fields that are used in the matrix fields, but that are not already included. This page is usually hidden.
Sheet3	**Microsoft Dynamics AX Status** page	The page that displays the publishing status and details when information is published back to the budget plan from the worksheet. The details on this page include any errors that occurred.

When you create a worksheet from the template, an additional hidden page, titled **BudgetPlanText**, is added to the worksheet to support the budget plan header fields. You can right-click a sheet tab to display the **BudgetPlanText** page.

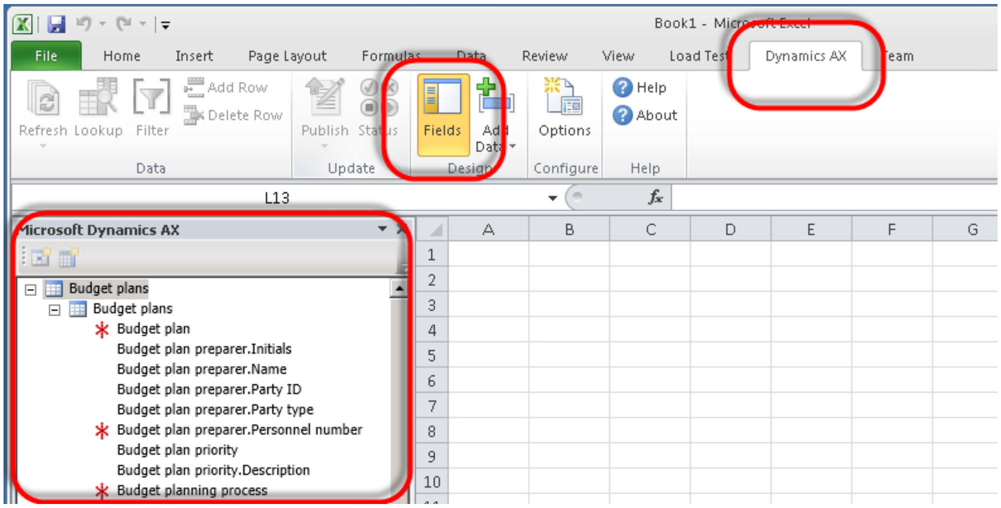
Create fields

In Excel, click the **Dynamics AX** tab, and then click **Add Data** to identify the data source to use.



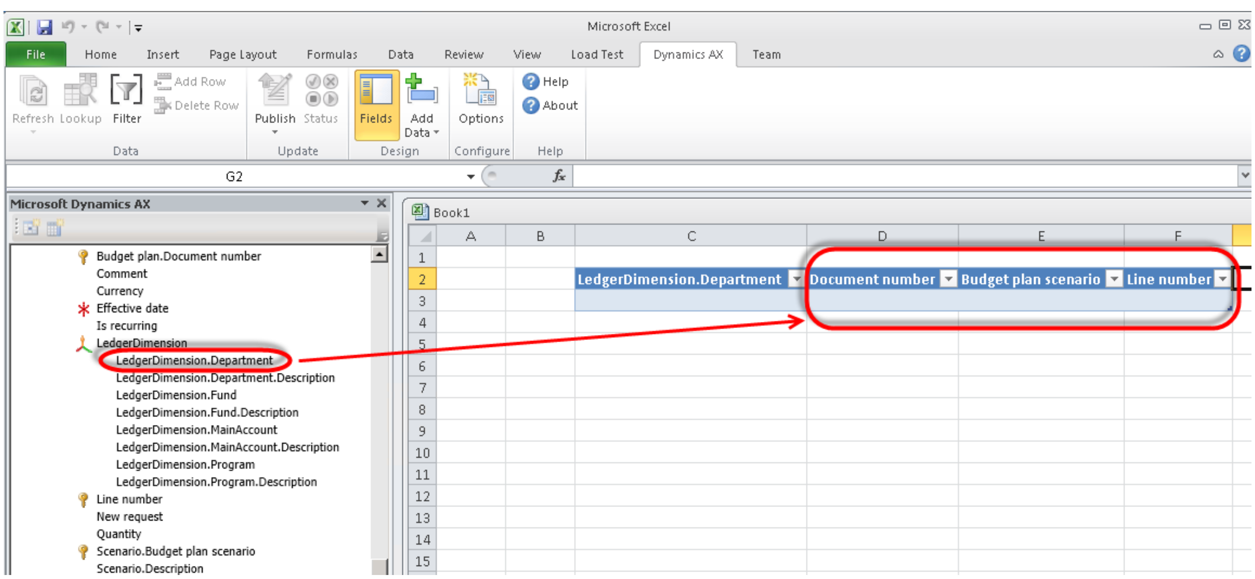
After you select the data source and click **OK**, the Microsoft Dynamics AX Field chooser appears. You can add a matrix field or individual fields. Matrix fields are most commonly used to compare budget plan scenario fields.

Note: If you use matrix fields, they should be defined first. For more information, see the [Create a matrix field (optional)] section of this white paper.



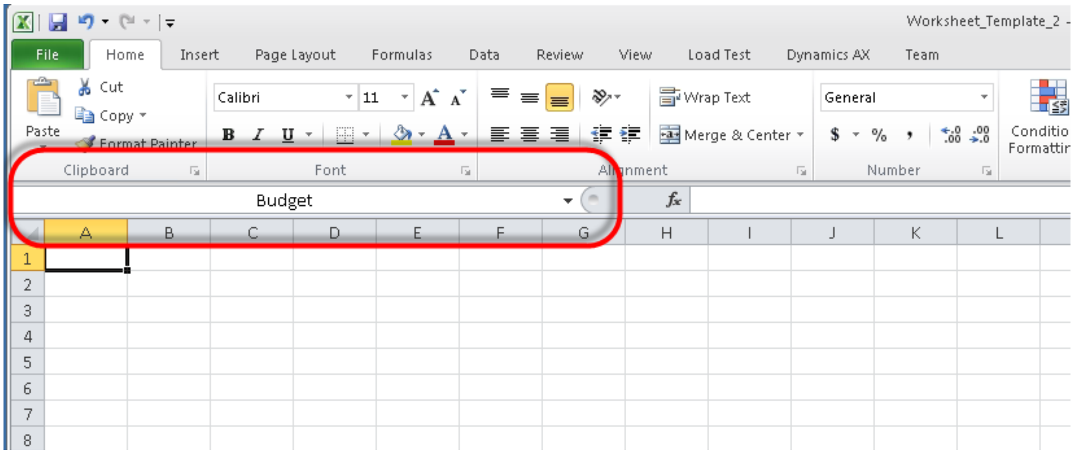
To add fields to the worksheet, place the cursor in the cell where you want to put the field, and double-click the field in the Field chooser. You can also drag the field from the Field chooser to the cell where you want to put it.

When you build an entry page, it is a good practice to select a dimension field before you select a matrix field. For example, when you select the **LedgerDimension** field, the **Document number**, **Budget plan scenario**, and **Line** fields are also automatically brought to the entry page. If you do use a matrix field, the **Document number**, **Budget plan scenario**, and **Line** fields shown in the following example can be deleted. To delete each field, right-click the field, and then click **Delete**. Note that an instance of these fields must be included on the **Backing** page.

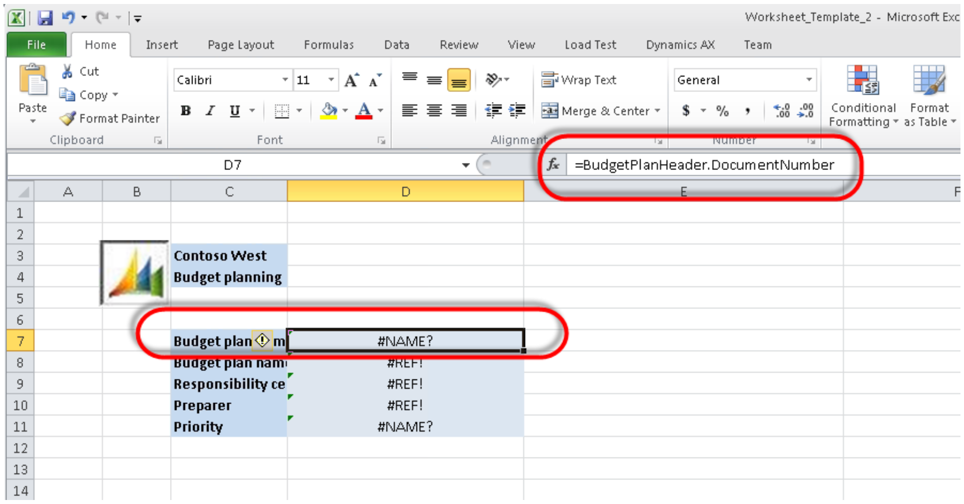


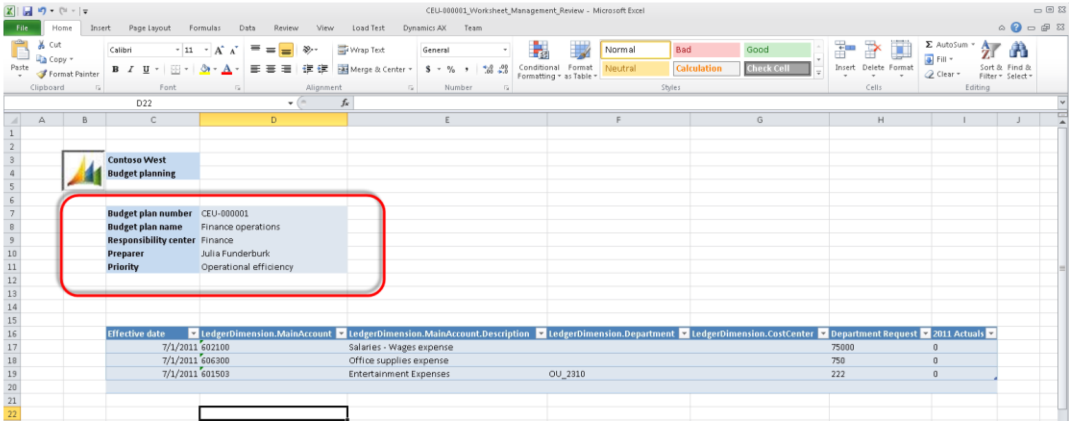
Create header fields (optional)

Create header fields on the **Entry** page. A named field is required on the **Entry** page to support the header fields. Select the first cell, and rename it from **A1** to any other name. In the following example, this field was named **Budget**.



To display budget plan header information on the template, create a text field with a field name, such as **Budget plan number**. Then, in the cell where the value will be displayed, enter **=BudgetPlanHeader.field name**. For example, to display the budget plan number, enter **=BudgetPlanHeader.DocumentNumber**.



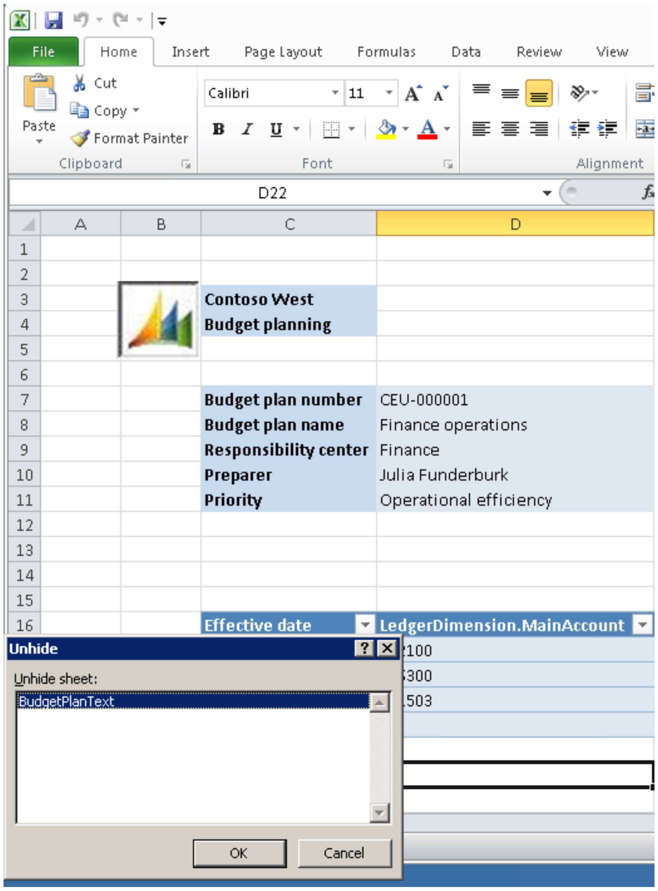


The following budget plan header field names are supported:

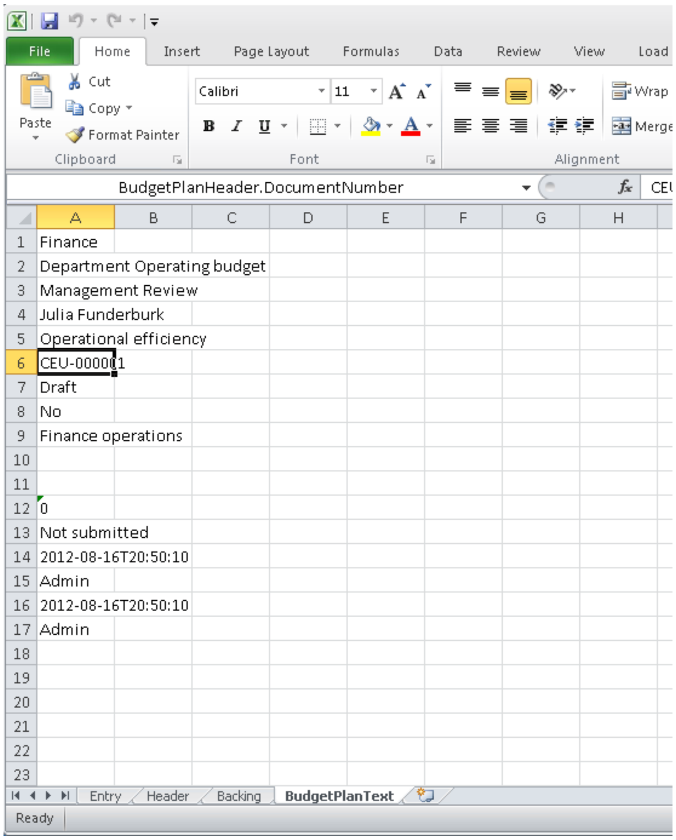
- BudgetPlanHeader.BudgetingOrganization
- BudgetPlanHeader.BudgetPlanningProcess
- BudgetPlanHeader.BudgetPlanningStage
- BudgetPlanHeader.BudgetPlanPreparer
- BudgetPlanHeader.DocumentNumber
- BudgetPlanHeader.DocumentStatus
- BudgetPlanHeader.BudgetPlanPriority
- BudgetPlanHeader.IsHistorical
- BudgetPlanHeader.Name
- BudgetPlanHeader.Rank
- BudgetPlanHeader.WorkflowStatus
- BudgetPlanHeader.modifiedDateTime
- BudgetPlanHeader.modifiedBy
- BudgetPlanHeader.createDateTime
- BudgetPlanHeader.createBy

Unhide the BudgetPlanText page

When you open a worksheet, you can select the first sheet and right-click to unhide the **BudgetPlanText** page.



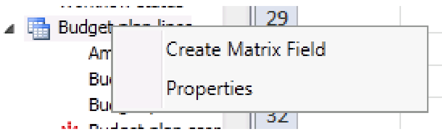
The following example shows the **BudgetPlanText** page.



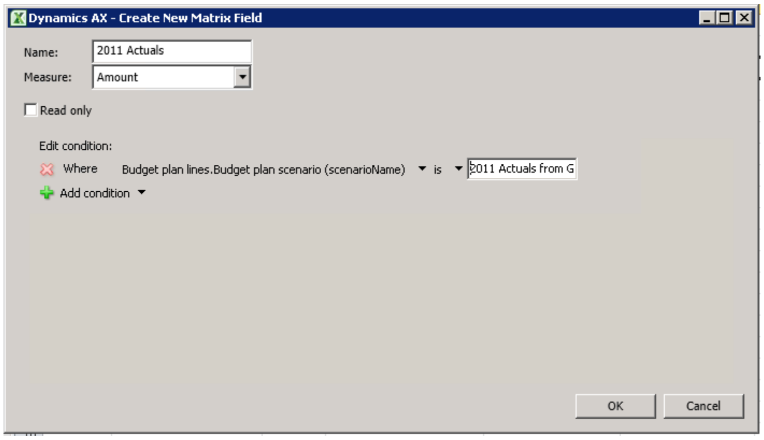
Note: You can create a test budget plan worksheet to validate the template. After the template has been validated, you can hide the **BudgetPlanText** page.

Create a matrix field (optional)

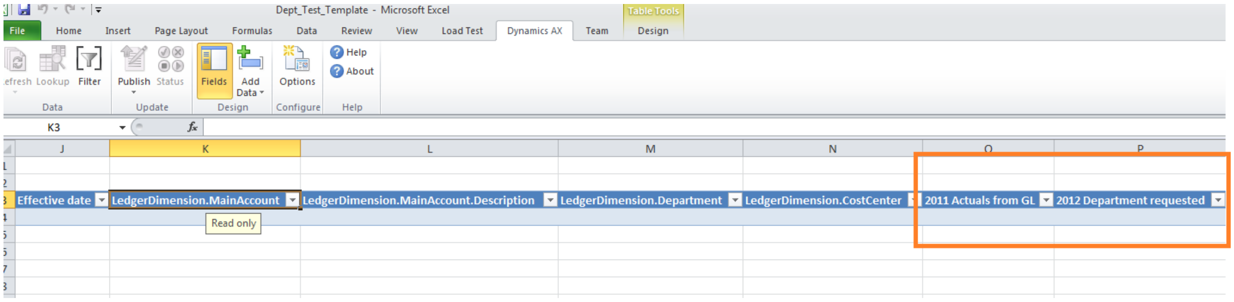
Matrix fields are most commonly used to display budget plan scenarios side by side. In the Field chooser, select a field in the **Budget plan lines** table, right-click, and then click **Create Matrix Field**.



Enter the title of the matrix field, and select the fields and values to use to filter the budget plan lines. Then click **OK**.



Repeat this step for every matrix field that you add. The following example shows how field matrixes can be used to display scenario amounts in a columnar format.



Note: When you use dates in matrix fields, be aware of how effective dates are used. For example, when budget plan lines are generated from the general ledger, be aware of how the data is generated on new lines, and what effective dates are used.

Continue to add budget plan line fields and matrix fields to the worksheet.

You can modify the field title displayed in the matrix field after you have added it to the worksheet. For example, **LedgerDimension.MainAccount.Description** can be shortened to **Description**.

Click the **Fields** button to close the Field chooser.

Note: When the worksheet template is opened from the budget plan, the sheet that had the focus when the worksheet was saved will appear. Therefore, before you close the template file, set the focus on the primary sheet, and place the cursor in the field where the user will likely perform updates. The sheet with the focus will appear when the user opens a worksheet from the template.

Note: Additional features that can be added to the template include calculated columns for differences between columns and the conditional display of those fields, and also macros for the calculation of amounts. Be sure that the Field chooser is open when these calculated columns or fields are defined.

Save the template to the site that will be used to store templates for budget planning.

Create the Backing page

Select another page in the Excel template.

Add the following required budget plan line fields to the worksheet as columns:

- (Budget plan) Document number
- Parent.document number
- Scenario.Budget plan scenario*
- Ledger dimensions selected on the display page
- Effective date
- Amount*
- Quantity*

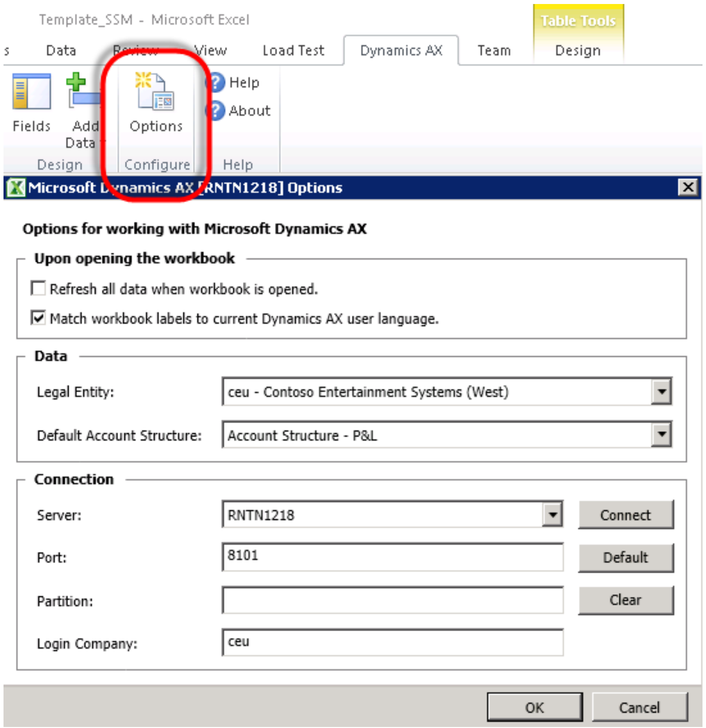
Note: Other fields displayed on the **Entry** page of the worksheet **must** be included on the **Backing** page of the worksheet. For example, if the user wants to display the comments related to a specific scenario, such as Department Request, the field must be included on the **Backing** page.

Note: Do not include matrix fields on the **Backing** page. Instead, include the **Budget plan scenario**, **Amount**, and **Quantity** fields.

When a field is selected, and related key fields are also included, you can either leave them on the **Backing** page, or remove them if they represent another instance of the same field but named with a numeric, such as **Document1**.

Validate the options

In Excel, on the **Dynamics AX** tab, click **Options**.



In the **Data** field group, select the legal entity and default account structure, and then click **OK**.

Move the focus back to the **Entry** page, and close the Field chooser.

Save the template to the site that will be used to store templates for budget planning.

Note: The baseline worksheet template can be used to develop other template iterations when matrix fields need to be added or changed, and then tested.

Tip: To validate that a field in the template is bound correctly to the field in the budget plan table, click the field in the template, and verify that the correct field is highlighted in the Field chooser.

When all the fields (including required fields) have been selected, close the Field chooser, and save the worksheet template.

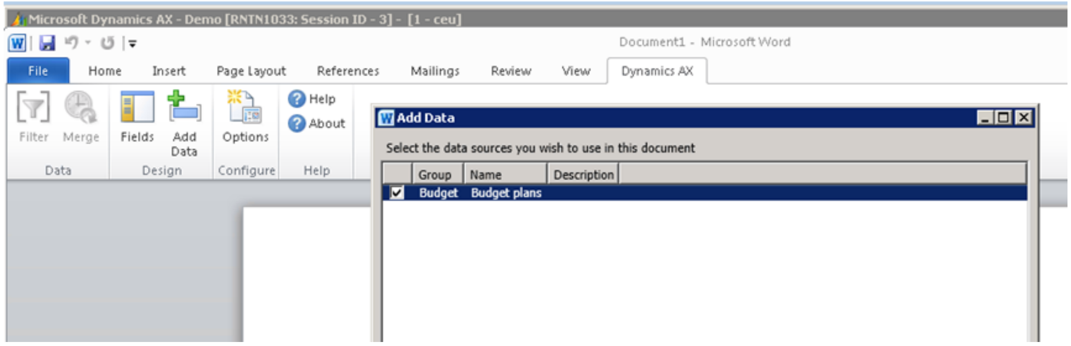
Click **Refresh All** to load data to test the worksheet template.

Note: For more information about how to create budget plan worksheet templates by using a wizard, see Create budget plan worksheet templates by using the wizard.

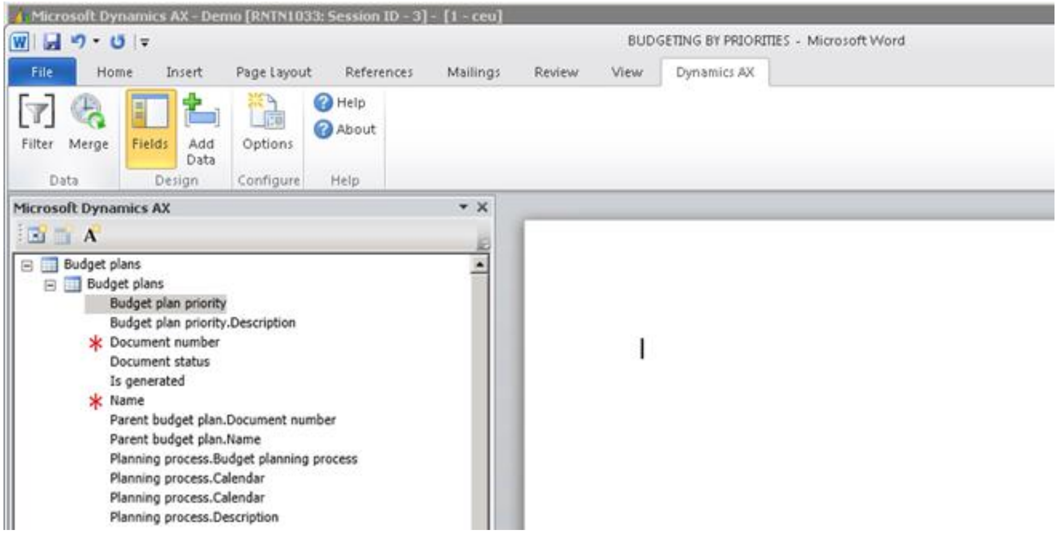
Create a justification template (optional)

Use justification documents to develop a narrative to support the budget plan when it is routed for review and approval. The justification template can be developed so that input information from a budget plan header and lines can be used in the justification.

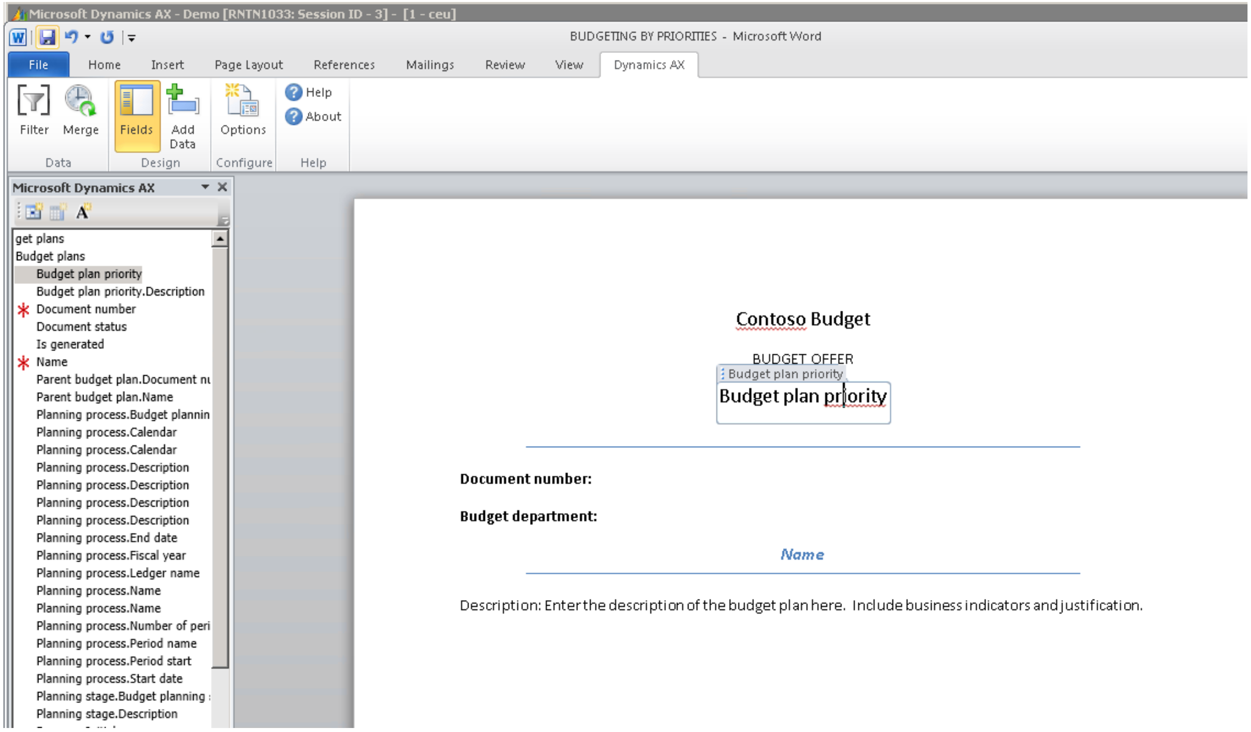
In Word, click the **Dynamics AX** tab, and then click **Add Data** to identify the data source to use.



After you select the data source and click **OK**, the Microsoft Dynamics AX Field chooser appears.



Place the cursor in the Word document, select a field from the budget plan header and budget plan lines in the Field chooser, and then drag the field to the document.



When all the fields (including required fields) have been selected, close the Field chooser.

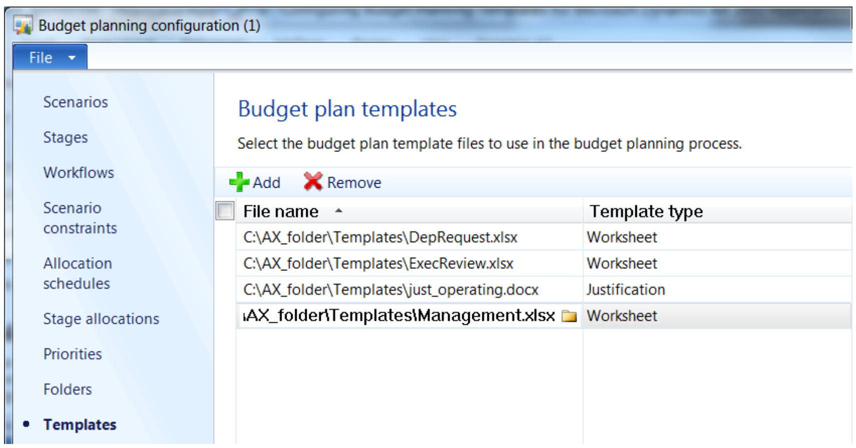
Save the document to the location where budget plan templates are saved.

Click **Merge** to load data and test the template.

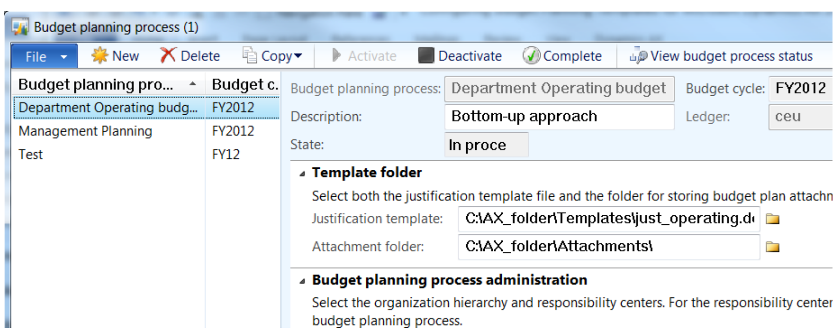
Select budget plan templates and folders

During budget planning configuration, you can define the folders that are used to store the budget planning worksheets and justification templates, and also the folders used to store the budget plan attachments. We recommend that the templates be stored separately from the budget planning attachments, and that these be segregated by budget planning process. These locations can be on a shared server or a Microsoft SharePoint site to which the budget planning users have secured access.

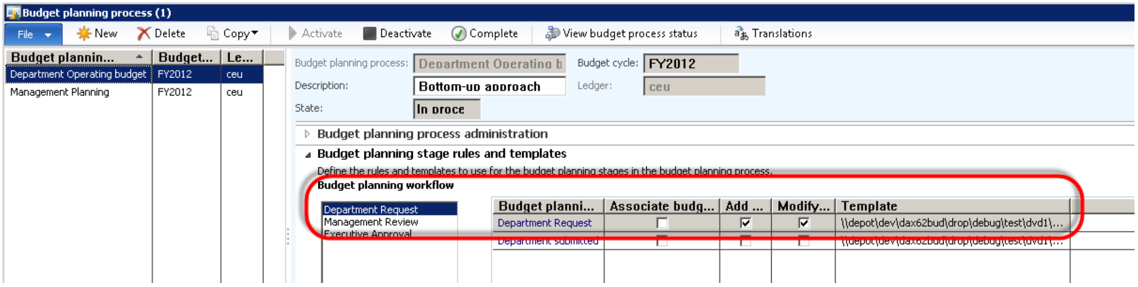
When you configure budget planning, you select the templates to use. To define the folders used to store the templates, click **Budgeting** > **Setup** > **Budget planning** > **Budget planning configuration**. In the **Budget planning configuration** form, click the **Templates** link.



When you set up a budget planning process, you select the templates to use for that budget planning process. You can select one justification template for each budget planning process. To open the **Budget planning process** form and select the templates, on the **Budgeting** area page click **Setup** > **Budget planning** > **Budget planning process**, and then click the **Template folder** FastTab.



You can select a worksheet template for each budget planning stage. To open the **Budget planning process** form, on the **Budgeting** area page, click **Setup** > **Budget planning** > **Budget planning process**, and then click the **Budget planning stage rules and templates** FastTab.



Changes to the worksheet templates associated with the stages can be made during an active budget planning process. However, if any budget plans have worksheets, they open the instance of the worksheet that uses the template defined when the worksheet was created for that stage. Therefore, the instance of the worksheet attachment needs to be removed from the attachment directory, and a new one needs to be created by using the latest template for the stage. It is not possible to create a new worksheet attachment for prior stages that the budget plan has transitioned through. We recommend that a complete test of the configuration and setup occur before you start the budget planning process with users.

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