Microsoft Dynamics® AX 2012 R3

Configuring budget planning for Microsoft Dynamics AX 2012 R3

White Paper

This document describes configuration considerations for implementing budget planning.

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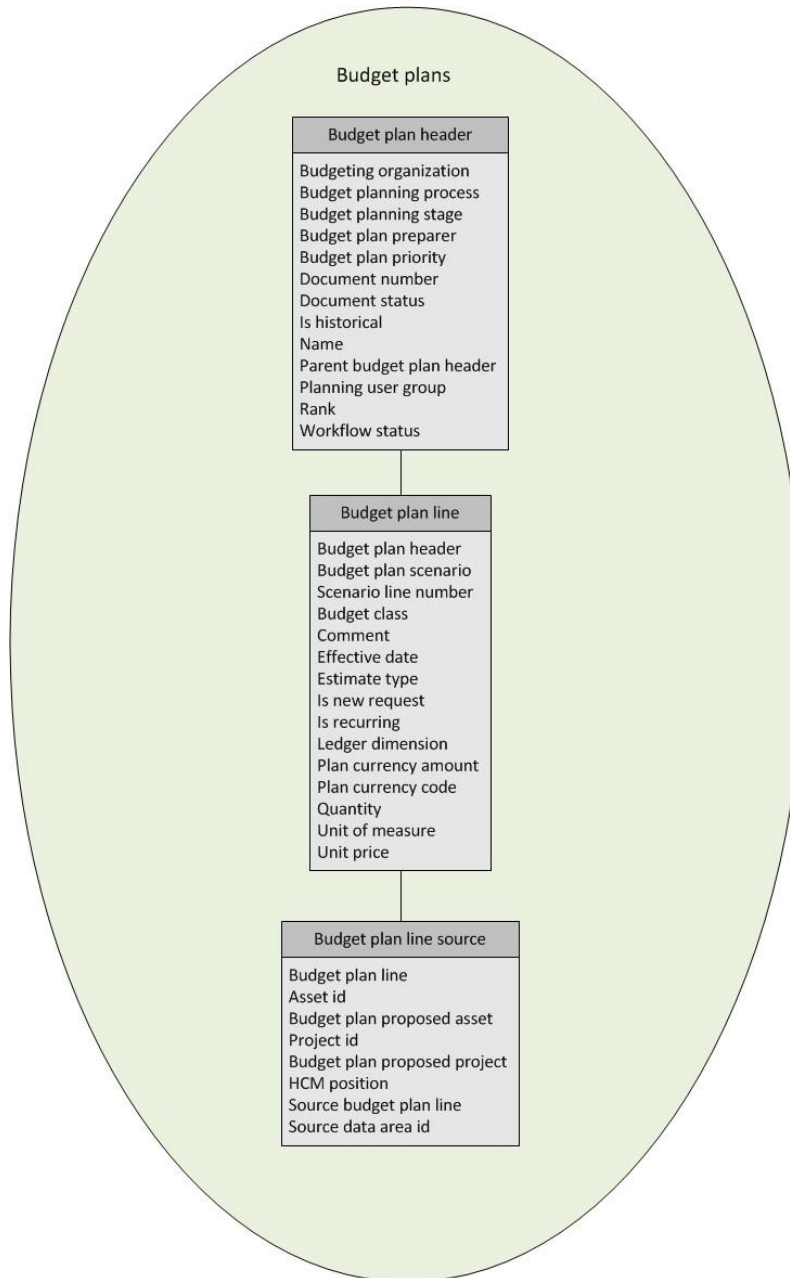**Microsoft Dynamics**®

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Introduction

Budget planning features were added to the **Budgeting** module in Microsoft Dynamics® AX 2012 R2. Budget planning is the process of preparing the budgets that are implemented by an organization. Private sector and public sector organizations can configure budget planning, and then set up budget planning processes to meet their organization's policies, procedures, and requirements for budget preparation.

You can use budget planning to perform the following tasks:

- Associate budget planning processes with budget cycles, ledgers, and organization hierarchies.

- Analyze and update budget plans by using multiple scenarios. You can automatically route the budget plans, together with worksheets, justifications, and attachments, for review and approval.

- Consolidate multiple budget plans from a lower level of the organization into a single parent budget plan at a higher level in the organization. You can also develop a single budget plan at a higher level of the organization and allocate the budget to lower levels of the organization.

To support this new functionality, budget planning was integrated with the ledger, the chart of accounts, fixed assets, human resources, organization hierarchies, workflow, and budget control.

A budget plan document consists of a budget plan header, budget plan lines, and budget plan details. An organization can create one or more budget plans for a specific budget planning cycle. The budget plan contains budget plan lines. Each budget plan line can optionally reference other sources, including existing assets and projects or proposed assets and projects, and also forecast positions.

Budget plans

Budget plan header

Budgeting organization
Budget planning process
Budget planning stage
Budget plan preparer
Budget plan priority
Document number
Document status
Is historical
Name
Parent budget plan header
Planning user group
Rank
Workflow status

Budget plan line

Budget plan header
Budget plan scenario
Scenario line number
Budget class
Comment
Effective date
Estimate type
Is new request
Is recurring
Ledger dimension
Plan currency amount
Plan currency code
Quantity
Unit of measure
Unit price

Budget plan line source

Budget plan line
Asset id
Budget plan proposed asset
Project id
Budget plan proposed project
HCM position
Source budget plan line
Source data area id

Purpose

This document discusses the new budget planning functionality and considerations for its implementation. The topics that are covered include the following:

- Prerequisites for budget planning

- Budget planning configuration

- Budgeting workflows

- Budget planning processes

Audience

This document is intended for anyone who is implementing Microsoft Dynamics AX 2012 R3 budget planning.

Terminology

Microsoft Dynamics AX 2012 R2 and AX 2012 R3 terms

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 steps a budget plan transitions through in a budget planning process and responsibility center. Examples of budget planning stages include Department Request, Budget Office Review, and Executive Review.
Budget control	The practice of authorizing expenditures 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.
Budgeting workflow	A sequence of activities, actions, and tasks that documents go through as part of an automated business process.
Budget planning workflow	A sequence of budget planning stages that budget plans go through during the budget planning process.

Budget planning terminology mind map

The budget planning terminology mind map is a graphical representation of the relationships among the terms and concepts used in budget planning.

CONFIGURING BUDGET PLANNING FOR MICROSOFT DYNAMICS AX 2012 R2
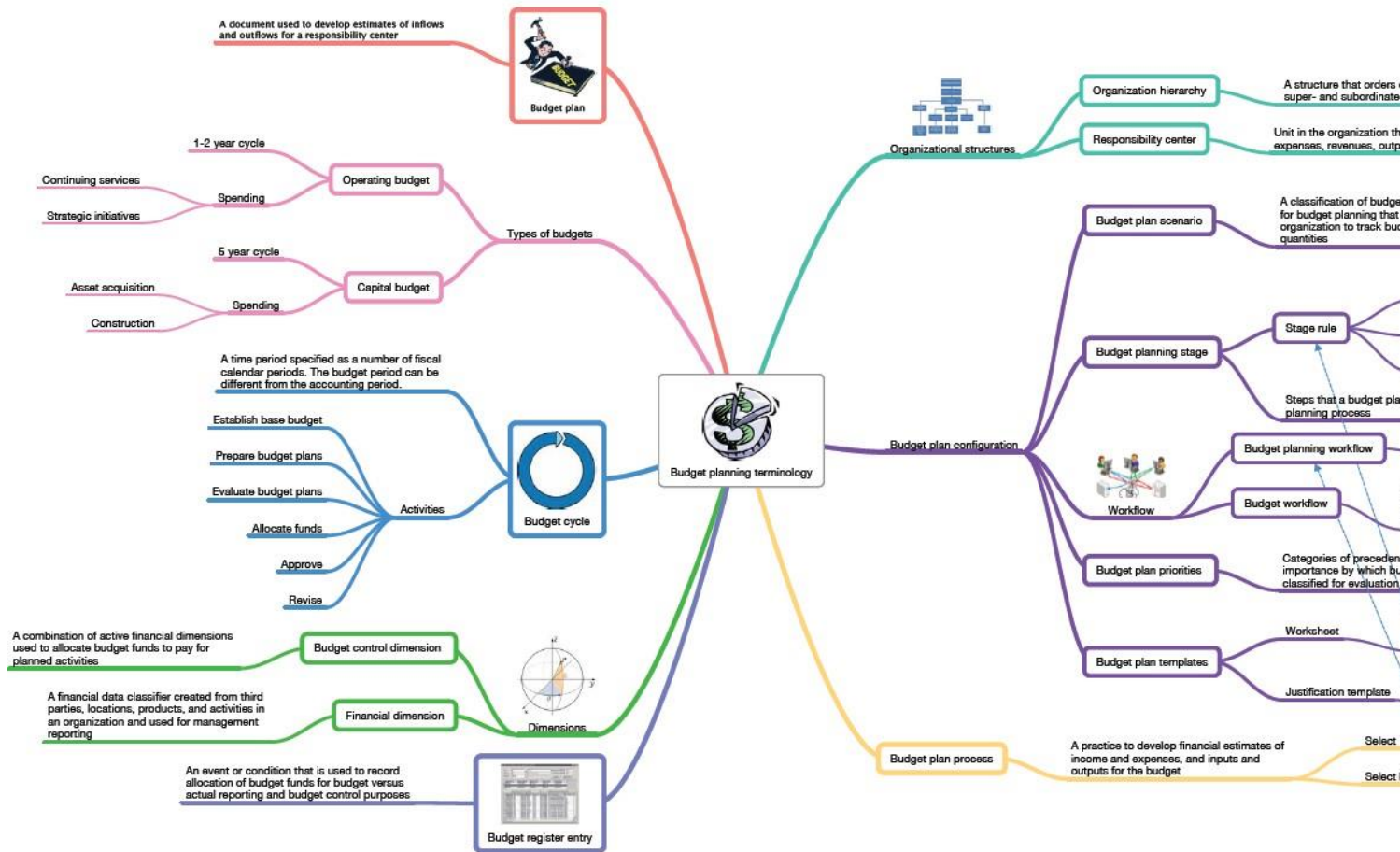
Prerequisites for budget planning

Before you configure budget planning, you need to do the following:

- Collect information for budget planning configuration.

- Understand the budget planning process.

- Define the budget planning organization hierarchy.

- Set up forecast positions (optional).

- Configure advanced budget planning rules (optional).

Collect information for budget planning configuration

The questions in the following table were designed to help you collect the information you will need when you define the budget planning prerequisites and configure budget planning. Your answers to these questions and how you configure budget planning determine how you set up the workflows, stages, and scenarios for your budget planning processes.

Configuration questions	Budget planning configuration
What organization and organization units are you budgeting for?	Organization hierarchy
What information is needed for budget planning?	Scenarios and budget planning advanced rules
What is the budget planning development and review process? Is the process top down, bottom up, or a combination?	Budget planning stages and workflows
Who needs access to what budget planning data, and when?	Security model Scenario constraints and budget planning process stage rules
Are budget plans grouped and evaluated by priority or objectives?	Budget plan priorities
Where will budget plan templates and attachments be stored?	Budget planning configuration folders
What are the budget plan templates for Microsoft Excel worksheets and Microsoft Word justification documents?	Budget planning configuration templates

Note: Information about budget plan templates can be found in a separate white paper about implementing Microsoft Office Add-ins for budget planning.

Understand the budget planning process – workflows, stages, and scenarios

The answers to the questions in the previous section will determine how you configure budget planning, and set up the workflows, stages, and scenarios for your budget planning process.

Note: The Microsoft Dynamics AX workflow framework is used to route budget plans for reviews and approvals. These business process workflows are created by using the Workflow editor (**Budgeting** > **Setup** > **Budgeting workflows**). When you create a budgeting workflow, you select the budget plan workflow type. The ID of the workflow you create with the Workflow editor is associated with a budget planning workflow, which is a sequence of stages for a budget planning process. This paper refers to workflows that you create with the Workflow editor as *budgeting workflows* and the workflows that you create during budget planning configuration as *budget planning workflows*.

The following diagram shows a budget planning process with two budget planning workflows, one for the budget office, and the other for one or more departments in the budget planning organization hierarchy. The Budget Office workflow has five stages that will be used to create, allocate, review, and adopt budget plans. The Department workflow has a stage to review budget plans from the budget office and another stage to submit the budget plans back to the budget office.

Each stage has budget plan scenarios, such as PY (Prior Year) Estimated, Baseline, and Team Request. In the diagram, the scenarios that are italic have scenario constraints and stages rules that limit their access to view only in some of the stages. Scenarios that appear in normal type can be modified during a stage.

Budget planning process – workflows, stages, and scenarios
Scenarios in italics are view only
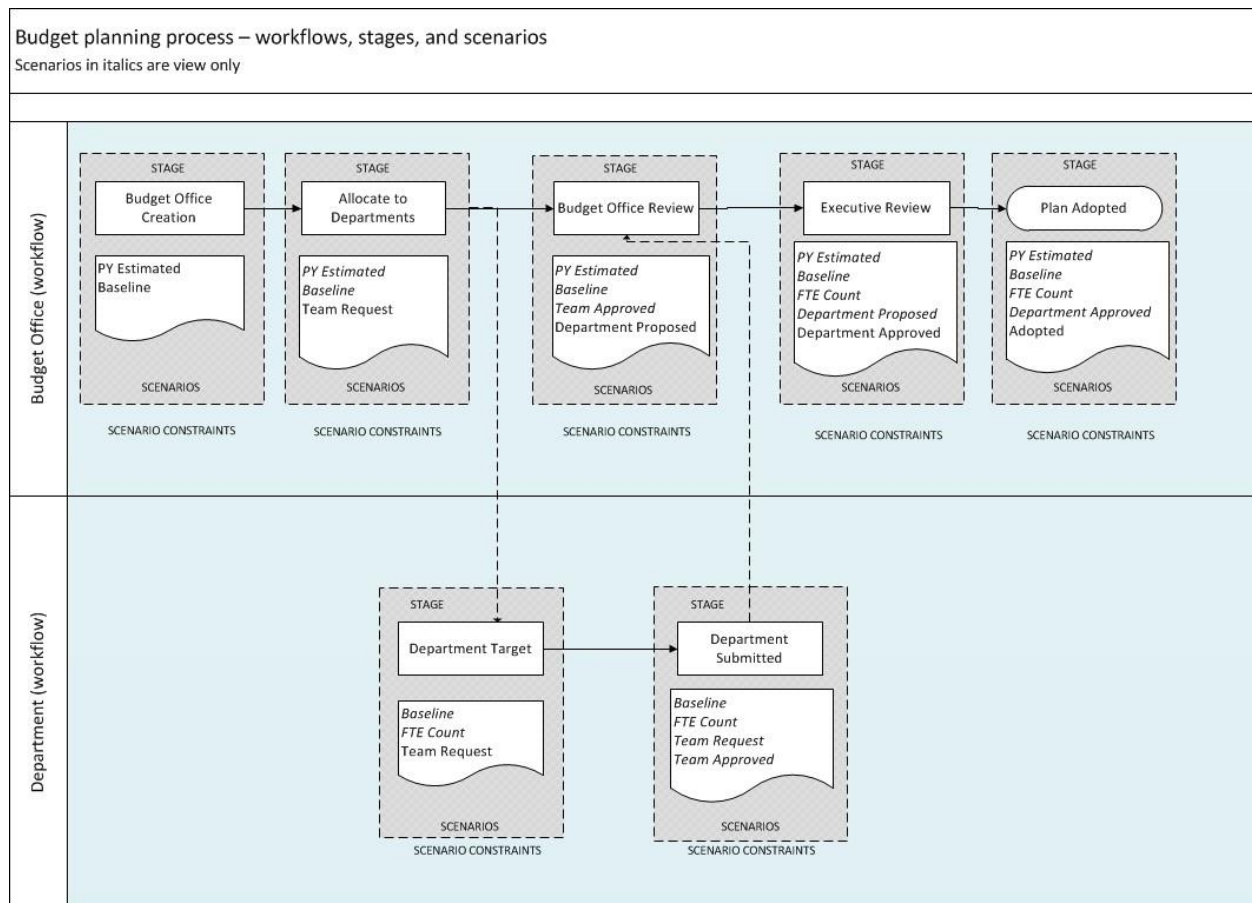
In the Budget Office Creation stage, which is the first stage of the Budget Office workflow, the PY Estimated and Baseline scenarios can be analyzed and modified. In the Allocate to Departments stage, which is the second stage, the PY Estimated and Baseline scenarios are view only.

When the budget office submits its budget plan to workflow, the department budget plans are created with the allocated lines and move to the first stage of the Department workflow.

In the Department Target stage, the scenario constraints are defined to include the Baseline, FTE Count, and Team Request scenarios. The Team Request scenario is available for review and modification in the Department Target stage, but it is view only in the Department Submitted stage.

During the Budget Office Review stage, the budget estimates in the budget plans for each of the departments for the Team Approved scenario can be aggregated to the Department Proposed scenario. The PY Estimated scenario is added to the scenario constraints, so that it can be reviewed along with the other scenarios during the Executive Review stage. During the Executive Review stage, the budget estimates in the Department Approved scenario can be modified.

During the Plan Adopted stage, the Department Approved scenario is view only; however, its budget estimates can be allocated to the Adopted scenario, where final adjustments can be made.

Define the budget planning organization hierarchy

The Budget planning purpose was added to the organization hierarchy purposes in AX 2012 R2.
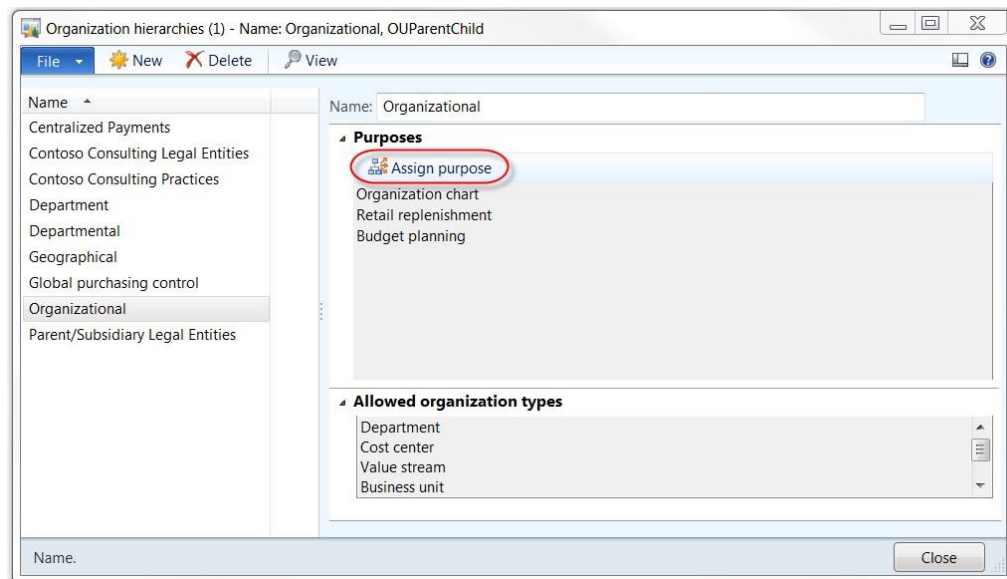
(**Organization administration** > **Common** > **Organizations** > **Organization hierarchies** > **Assign purpose**)

When the Budget planning purpose is assigned to an organization hierarchy, a hierarchical relationship can exist between parent and associated budget plans, and you can define different budgeting workflows by organizational unit in a budget planning process.

An existing organization hierarchy can be used for budget planning. Only one organization hierarchy can be assigned to a budget planning process. The organization hierarchy must reflect any hierarchical relationships as budget plans are created, summarized, allocated, and reviewed.

An appropriate worker should also be assigned as the manager for each organizational unit. This will support a budgeting workflow that uses the Budget organization participant type and the Budgeting organization manager participant.

Tip: You can aggregate and view the budget plans associated with parent budget plans only if the top level of the budget planning organization hierarchy is an organizational unit that is equal to a department.

Define Budget planning security

Access to the budget plans in the budgeting organization can be limited using one of 2 security models:

1. **Based on worker positions** – All budget plan preparers who are associated with workers whose positions report to an organization unit in the budget planning organization hierarchy can access the budget plans.
2. **Based on security organizations** – All users who are granted access to an organization in the security roles can access the budget plans for that organization. To enable this security model, the organization hierarchy used must have both Security and Budget planning purposes assigned.

In addition to the security above, user can be granted access to the budget plan based on the user group. On **Budget planning configuration form**, **Parameters** page, in the **Security** field group, select the **Allow access to budget plans by user group** check box if you want to enable this capability. Budget user group field will be displayed in budget plan document header. All the users assigned to that user group will be able to access the budget plan

A new security model was added to Budget planning in AX 2012 R3 CU8. The security for budget plans is determined by the security model you select for each legal entity in your organization (**Budgeting** > **Budget planning** > **Budget planning configuration**).

To be a budget plan preparer, you must be in a budget planning user group, a worker in a responsibility center in a budget organization hierarchy, or a user associated with an organization in the budget plan organization hierarchy that has the **Security** purpose assigned.

The following options are available on the **Parameters** page, in the **Security** field group, in the **Security model** field:

- **Based on worker positions** – All budget plan preparers who are associated with workers whose positions report to an organization unit in the budget planning organization hierarchy can access the budget plans.

- **Based on security organizations** – All users who are granted access to an organization in the security roles can access the budget plans for that organization. To enable this security model, the organization hierarchy used must have both Security and Budget planning purposes assigned. For more information, see How to use organization hierarchy purposes, Configure Budget planning security, and Configuring Budget Planning for Microsoft Dynamics AX 2012 R2.

On the **Parameters** page, in the **Security** field group, select the **Allow access to budget plans by user group** check box if you want to control access to specific budget plans by user group. If you don't select this option, all users who have access to the **Budget plan** form can access the budget plans.

Note: If a budget plan preparer isn't defined as a Human resource worker and isn't assigned to positions in the budget planning organization hierarchy, they must be assigned to a user group with access to the budget plan.

Set up forecast positions

The forecast positions functionality in Human resources (**Human resources** > **Periodic** > **Budget planning** > **Forecast positions**) is integrated with budget planning. Before you can use this functionality, both filled and unfilled positions must be assigned to the organizational units in the budgeting organization hierarchy.

The forecast positions in following graphic have been assigned to departments in the budget planning organization hierarchy.

Position	Description	Job	Title	Department
0140-ceu	Manager	01004	Manager	Main sales group
0210-ceu	Generalist	01021		Human Resources
0230-ceu	Operator	01025		Production
AD-DA-SS	Security Supervisor	Security Supervisor	Security Supervisor	Administration (Denmark)
AD-IT-SS	Security Supervisor	Security Supervisor	Security Supervisor	Administration (Italy)
AD-US-BA-2	Business Administrator	Business Administrator	Business Administrator	Administration (USA)
AD-US-SS	Security Supervisor	Security Supervisor	Security Supervisor	Administration (USA)
EX-IT-BM	Business Manager	Business Manager	Business Manager	Executive
FI-DA-A-1	Accountant	01005	Accountant	Finance (Denmark)

## Configure advanced budget planning rules

In AX 2012, the chart of accounts was enhanced, so that rules can be created to allow for the entry of additional financial dimensions that are not included in the account structure as part of the ledger account combination. The **Type** attribute was added to the Dimension Rule table to identify budget planning rules and advanced ledger rules. In AX 2012 R2 and AX 2012 R3, budget planning uses the ledger advanced rules but also supports the capability to define budget planning advanced rules. Budget planning may include additional financial dimensions that do not need to be tracked on the ledger, or in budgeting and budget control, but that provide more details that are needed in the development and review of budget plans.

Advanced rules are defined at **General ledger** > **Setup** > **Chart of accounts** > **Advanced rules structures**. These rules can be applied to budget planning at **General ledger** > **Setup** > **Configure account structures** > **Set up** > **Budget planning rules**.

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Configuring budget planning

When you configure budget planning, you create budget plan scenarios, budget planning stages, and budget planning workflows. You also define scenario constraints, and the locations for attachments and templates.
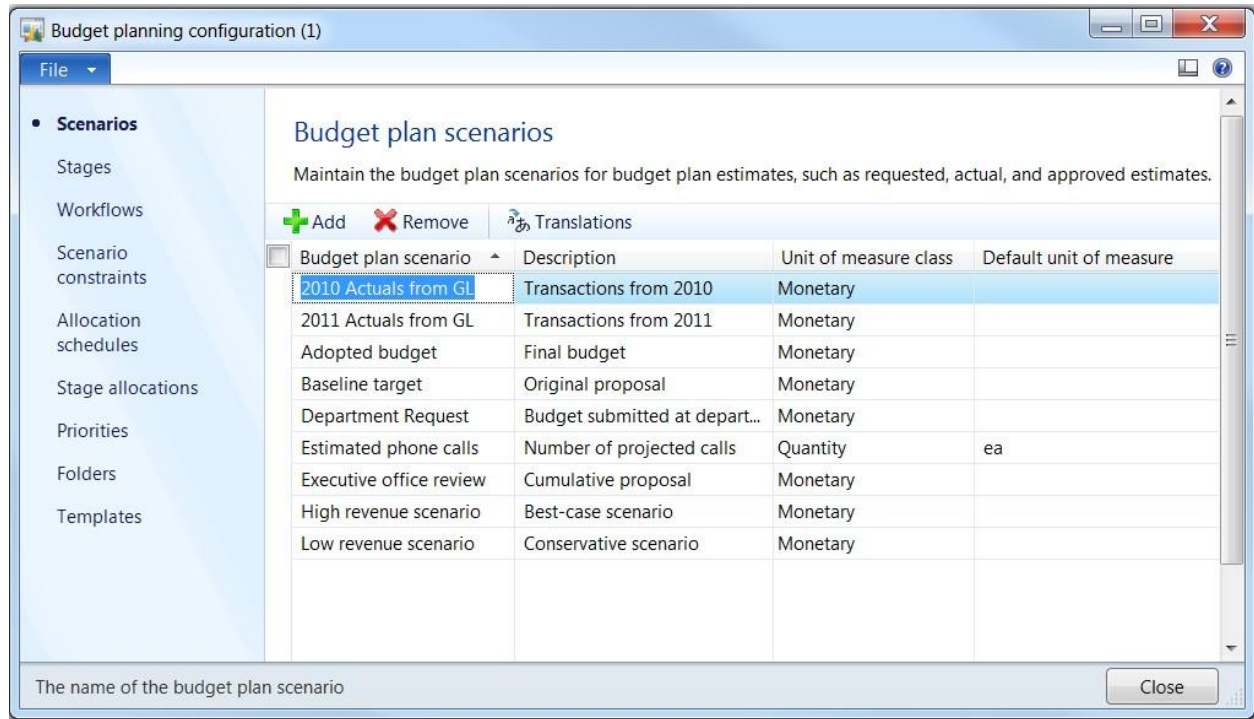
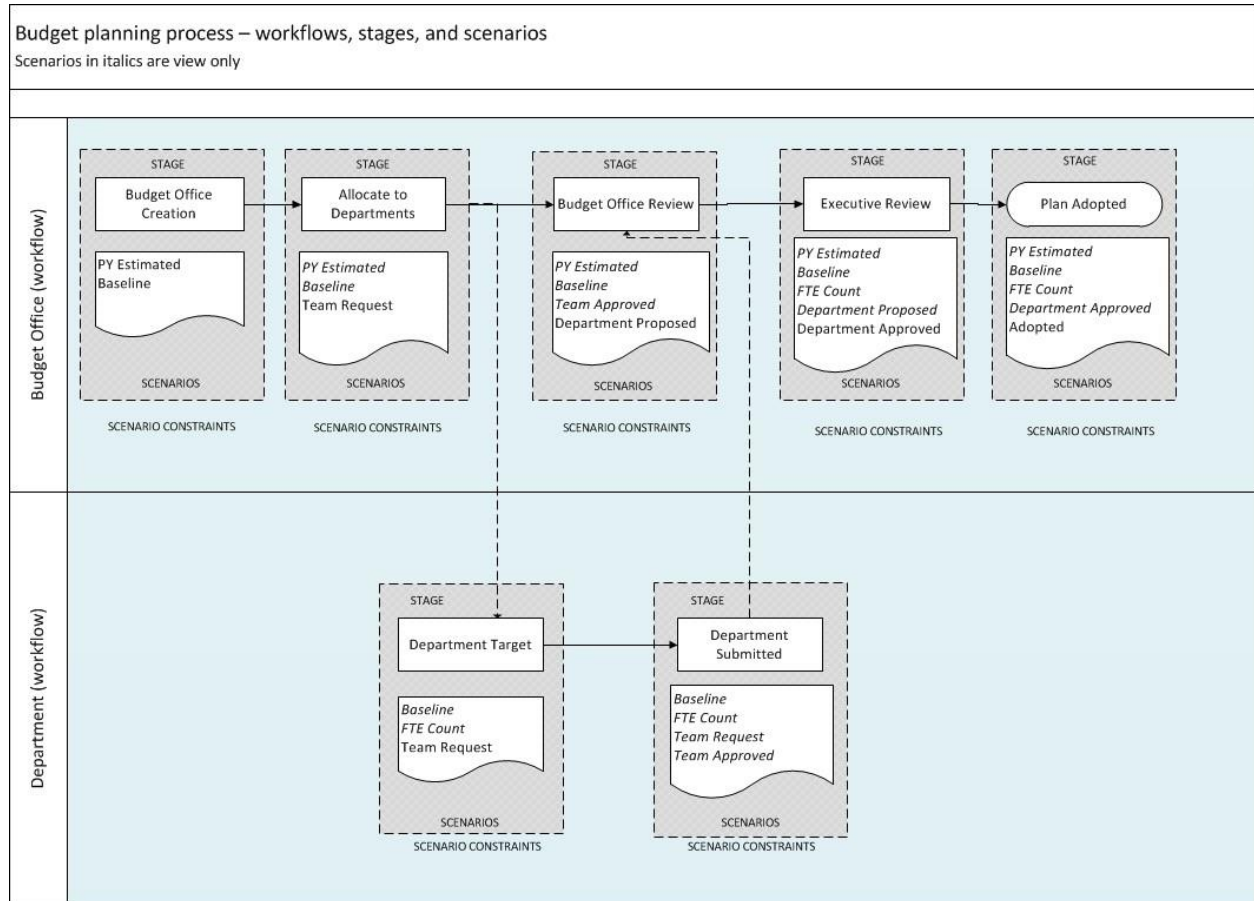(**Budgeting** > **Setup** > **Budget planning** > **Budget planning configuration**)

Budget plan scenarios

Budget plan scenarios represent a classification of budget plan lines that contain the data that is needed to formulate a responsibility center's budget plan. Examples include historical budget and actual data, current year-to-date data, requested amounts, revised amounts, approved amounts, position counts, and what-if results. Furthermore, identifying who needs access to what data, and when or at what stage during the budget planning process, will help to define the scenarios, scenario constraints, stages, and worksheet template designs for each stage.

Budget plan scenarios can be defined as monetary, such as actual expenditures and department requests, or non-monetary, such as number of miles paved and full-time equivalent (FTE) counts. Currently, only monetary scenario amounts can be transferred to a budget register entry for budget control.

Excel worksheets

When the tasks in a budgeting workflow are used to distribute and aggregate budget plan lines, we recommend that different scenarios be used to represent each organization level. This is important when you develop the Excel worksheet templates. For example, the worksheet examples in this section show the budget estimates for the scenarios shown in the following diagram.

Note: This diagram also appears in the Understand the budget planning process – Workflows, stages, and scenarios section of this paper.

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Department workflow – Department Target stage

At the department level, the budget estimates for the PY Estimated, Baseline, FTE Count, and Team Request scenarios can be included in the worksheet template for the Department Target stage. For the sample workflow described, the scenarios would be populated with budget plan lines representing PY estimates, the baseline (three percent less than the prior year's budget), the FTE count, and the team request amount, just as in the baseline scenario. The budget plan preparer modifies the amount in the Team Request scenario and submits the plan for department review.

Department workflow – Department Submitted stage

In the Department Submitted stage for the department plan, the reviewer will see scenarios for PY Estimated, Baseline, FTE Count, Team Request, and Team Approved amounts. The budget plan reviewer modifies the amount in the Team Approved scenario and approves the plan.

Budget Office workflow – Budget Office Review stage

The approved amounts are then aggregated to the Budget Office plan. In the Budget Office plan for the Budget Office Review stage, the budget plan preparer will see scenarios for PY Estimated, Baseline, Team Approved, and Department Proposed amounts. The budget plan preparer modifies the amount in the Department Proposed scenario and completes the task to submit the plan to the reviewer.

Budget Office workflow – Executive Review stage

In the Executive Review stage for the Budget Office plan, the reviewer will see scenarios for PY Estimated, Baseline, FTE Count, Team Approved, Department Proposed, and Department Approved amounts. The budget plan reviewer modifies the amount in the Department Approved scenario and approves the plan.

Budget planning stages

Budget planning stages identify the steps a budget plan goes through from inception to final approval. The stages are grouped and ordered into budget planning workflows. The scenario constraints and budget planning stage rules for the budget planning process determine what budget plan scenarios can be viewed and modified. Budget planning stages can be used in more than one budget planning workflow and budget planning process.

Tip: We recommend that you always create a new stage rather than edit an existing stage when a change is required for a new budget cycle, because existing stages are used in workflows that are associated with prior budget planning processes.

Budget planning scenario constraints

In a budget planning process, there is a need to control which budget plan scenarios can be viewed and updated for a specific budget planning stage. Budget planning scenario constraints define the scenarios that are available for a budget planning stage in a specific budget planning workflow, and whether the scenarios are view only or can be edited. The budget planning scenario constraints are used with the budget planning process stage rules to determine whether budget plan lines can be added or modified in a stage, and for what stage budget plan scenarios can be viewed and updated.

For example, in the stage where the department prepares its request, the **Add line** and **Modify line** check boxes create stage rules to determine whether scenarios can be modified during that stage. The **Template** field determines which worksheet template is used for each stage.
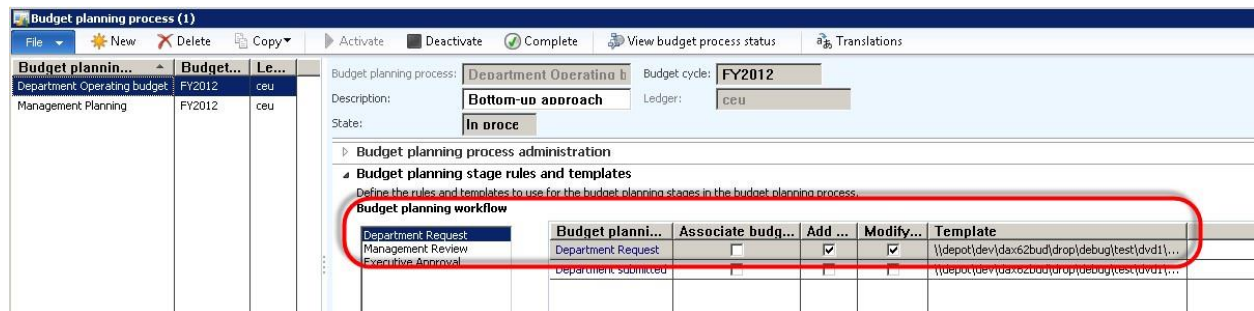
The scenario constraints for the related workflow and budget planning stage further define the available scenarios, and whether they can be viewed or modified.
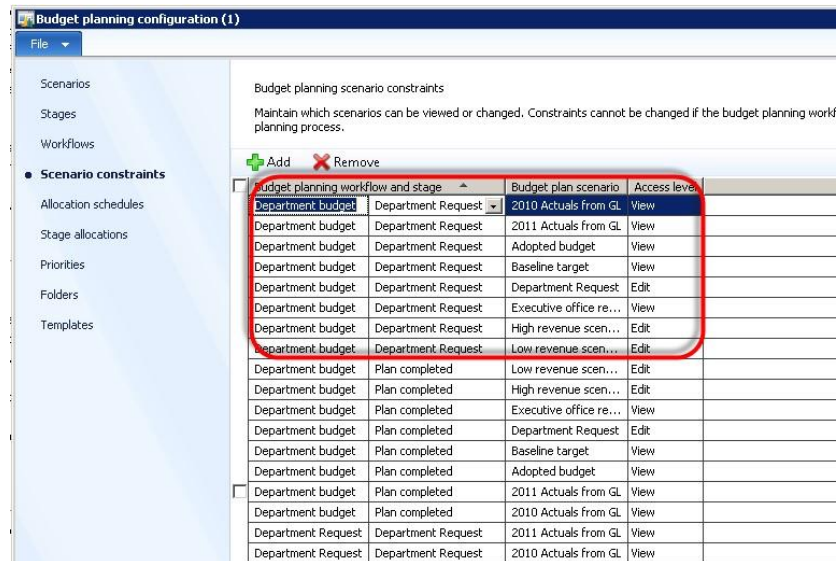
For a budget plan associated with the budget planning process and responsibility center, using the Department budget workflow in the Department Request stage, the available scenarios can be selected; only those that can edited are enabled for update.

Budget planning folders and templates

In the **Budget planning configuration** form, you can define the folders that store the Office Add-in Word and Excel templates for budget planning, and also the folders used to store the budget planning 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 SharePoint site to which the budget planning users have secured access.

Budgeting workflows

In AX 2012 R2, the workflow framework was implemented for budget plans to orchestrate their review and approval as they transition through the user-defined and ordered stages.

Budgeting workflow elements

The following task and approval elements were added to enable the review and approval of budget plans.

Name/Element	Type	Description
Approve budget plan/ BudgetPlanApprove	Approval element	Use only as the last approval task in each workflow.
Review budget plan/ BudgetReviewBudgetPlan	Task element	Use for all reviews in a workflow, except the final approval.
Review associated budget plans that are completed/ BudgetCompleteBudgetPlanChild	Task element	Evaluates whether all associated budget plans for a parent budget plan are completed. If the workflow status for all associated plans is approved or rejected, the parent budget plan can move to the next stage in the workflow.
Stage transition budget plan/ BudgetTransitionBudgetPlan	Automated task element	Transitions a budget plan from one stage to the next. When approvals or tasks are completed, this task will transition the budget plan to the next stage in its budget planning workflow, unless the user performs a reject or recall action.
Activate associated budget plan/ BudgetActivateBudgetPlanChild	Automated task element	Creates associated budget plans. For example, the parent budget plan can contain budget plan lines that are allocated to associated budget plans that are created by using this task. This task is most often used when a top-down budget planning process is used.

Budget planning stage allocation/ BudgetAllocateBudgetPlan	Automated task element	Automatically allocates budget plan lines from one budget plan scenario to another in preparation for the next stage. For example, to minimize the effort in a review stage, as the budget plan is submitted for review from department request to budget review, the department request budget plan lines can be allocated at 100 percent to the budget review budget plan scenario. This eliminates the need for the budget analyst to manually enter (copy) lines and focus on the adjustments to the requested amounts in the budget review scenario.

Organization and approval considerations for workflows

Care should be taken when developing the workflows used for the organization. By defining the decision points and changes in who needs to review and approve the budget plan, you will determine the number of stages needed and also the workflow tasks needed. Before a budget planning workflow is created, the following information should be defined:

- The budget planning stages and the order of the stages in each budget planning workflow.

- The responsibility centers that the budget plans will be routed through in the budget organization hierarchy.

- The users who will develop, review, and approve budget plans. Budget planning workflows can be defined to route the budget plans through the organization based on the worker's assignment to a position in an organization in the budget planning organization hierarchy.

- The scope of the budget planning workflows. Will the budget planning workflow be used across the organization or across a level in the organization hierarchy, or will it only relate to the specific responsibility center? The answer to this question will identify how many budget planning workflows need to be defined for the budget planning hierarchy.

- The scenarios needed for each stage of the budget planning workflow, and whether the estimated, requested, and approved budget amounts will be allocated from one scenario to another, or whether they will be aggregated or distributed between parent budget plans and their associated budget plans by using an automated workflow task.

Workflow examples

The following diagram shows the budget planning process at Contoso. The budget planning process involves multiple departments within the organization that have varying responsibilities, depending on the stage of the process.
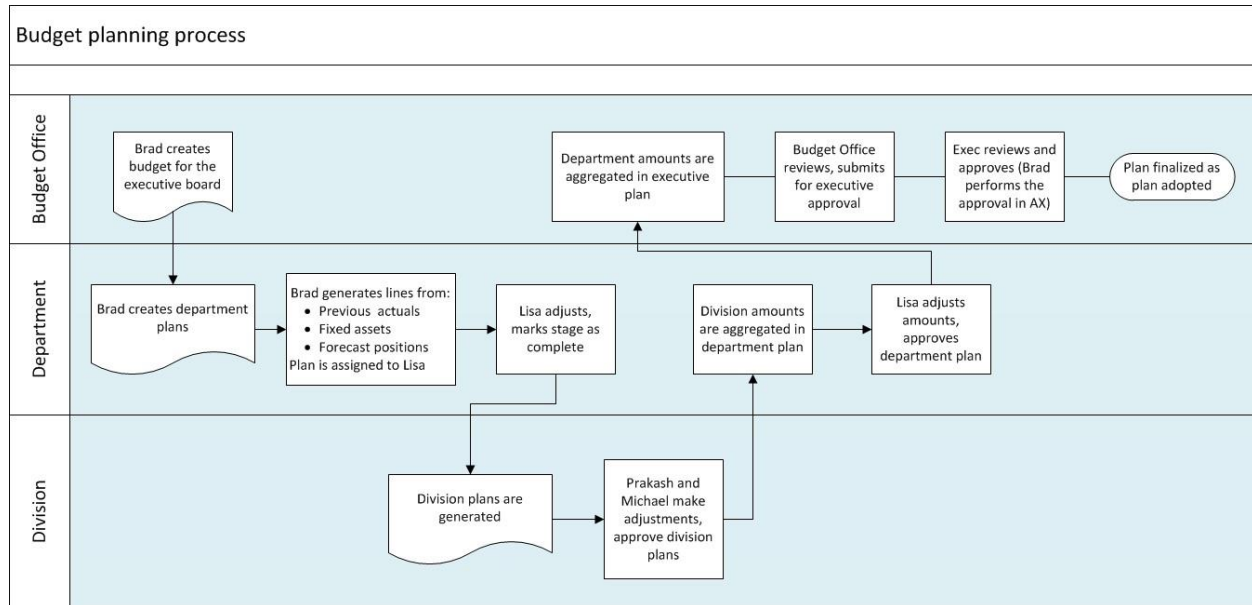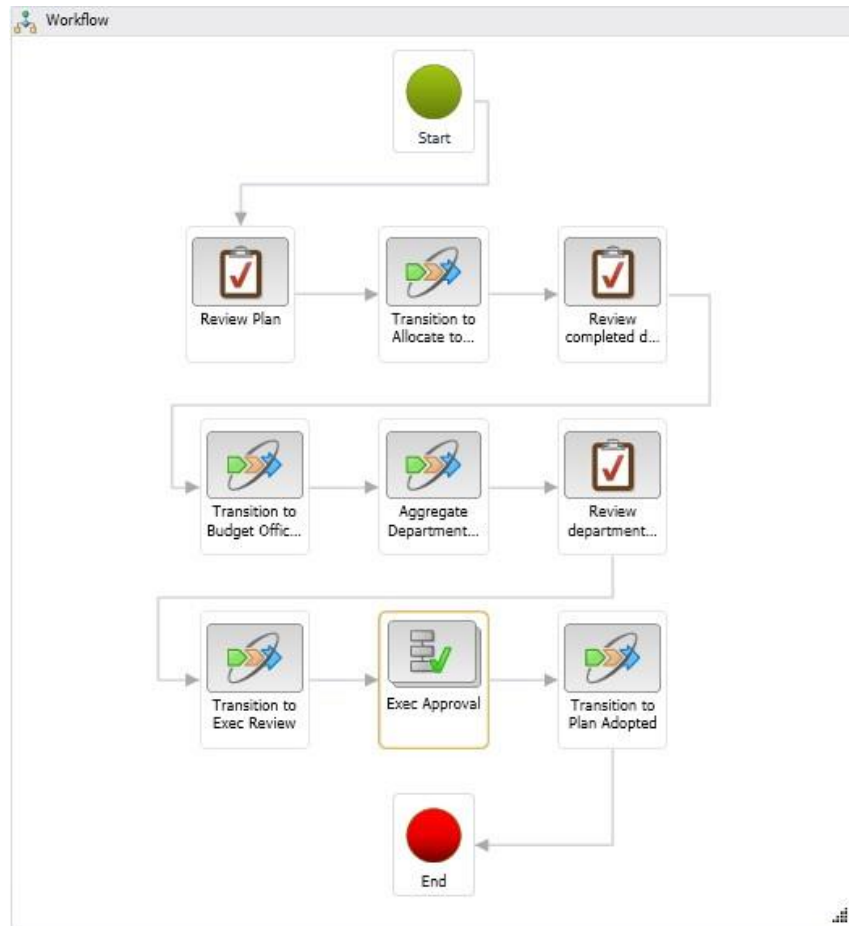

Members of the finance team begin the budget planning by defining the process itself: establishing the time period for which the budget will apply, determining the departments that will participate and their responsibilities (entry and approval processes), and defining the data sets that will be examined – the budgeting scenarios.

Next, Brad creates the base budget documents within the budget planning system for the departments. During this same time, the Human Resources department is preparing its forecast position budgets, using input from the departments. Brad imports actuals data from the ledger, forecast position budgets, and the expected fixed asset depreciation expense into the budget plans.

The manager of each department sets target budget amounts for each of his or her divisions, using last year's actual amounts as a basis. He or she then assigns these amounts to the divisions, whose managers must further allocate them to the accounts in their areas and also to the periods throughout the budget year. Each division manager must also prepare a scenario with a 15 percent reduction in the amount, and another with a five percent increase. These amounts are then reviewed by the department manager, who consolidates them and presents a proposed budget amount for further approval.

The budget office next reviews the submissions, ensuring accuracy. In some cases, the budget office may ask for supporting explanations and documentation, and in others, it may ask for changes to the amounts. After this review is completed, the budget amounts are consolidated for review by the executive office. This review is primarily at a high level, but some figures are drilled down into for more clarity. Adjustments are made, and Brad approves the budget.
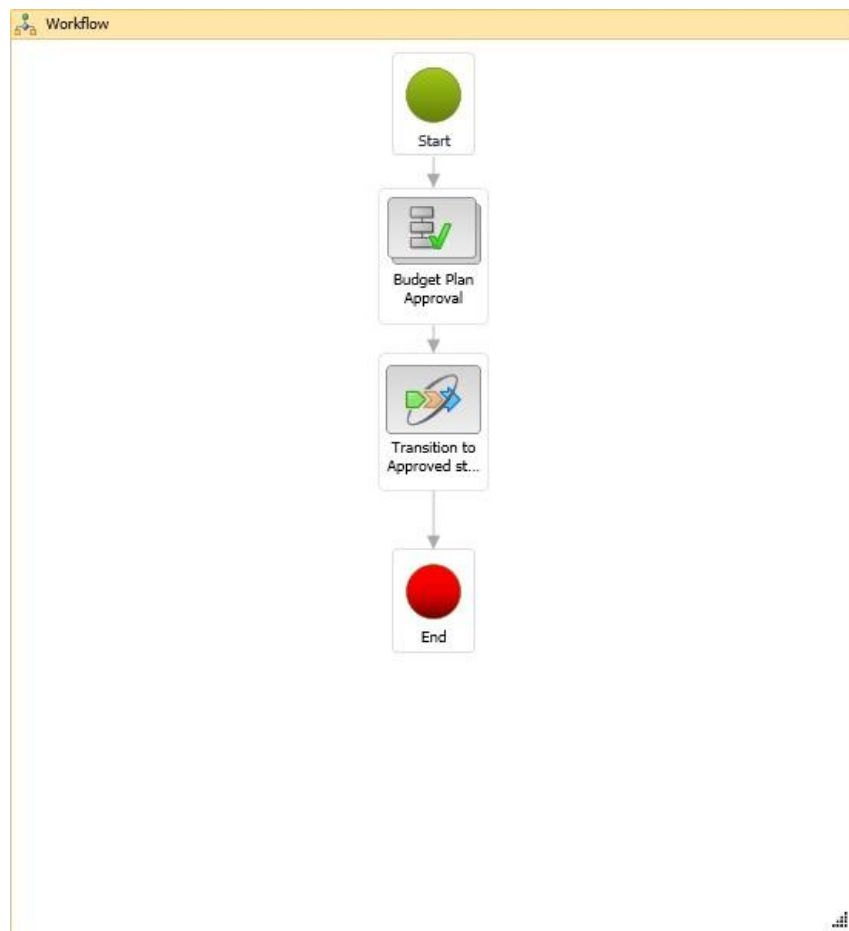
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This budget planning process is supported by the following budgeting workflows. **Finance office workflow**

Department workflow

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Division workflow

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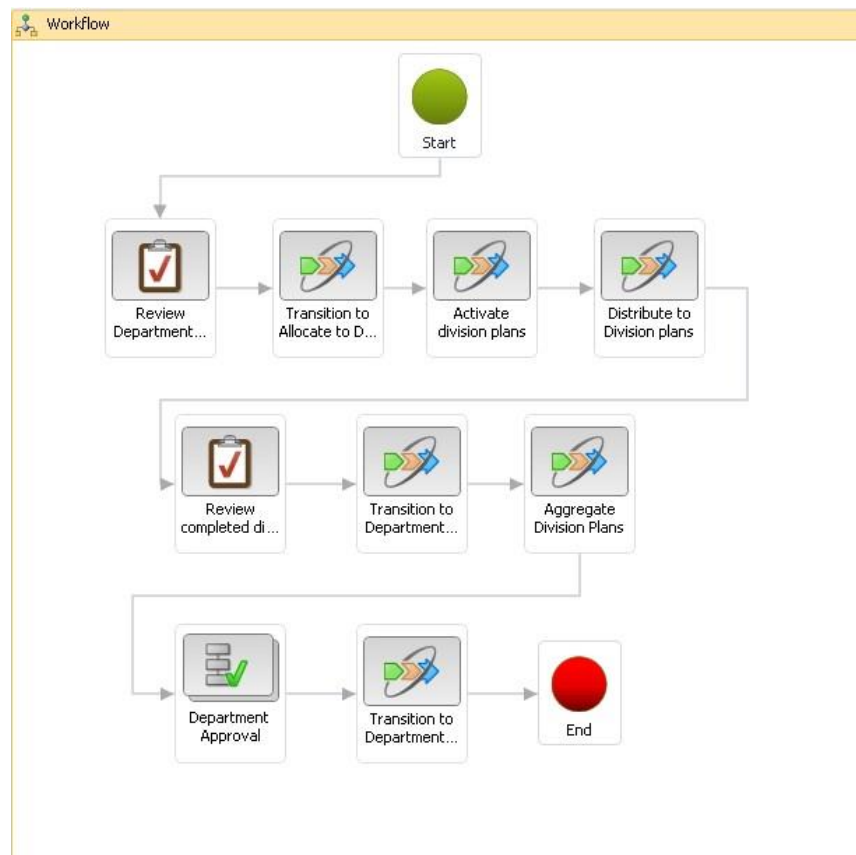
Budget planning processes

After you complete the budget planning configuration, a budget planning process can be set up and activated. At that point, budget plans can be created.

When you set up a budget planning process, you associate it with a budget cycle and a ledger. You then select the Word justification template for the budget planning process and also the directory that stores the attachments that are associated with the budget plans prepared in this process.

(**Budgeting** > **Setup** > **Budget planning** > **Budget planning process**)

When you select the budget planning organization hierarchy, all the responsibility centers for the organization appear in the **Budget planning process** form. You then assign a budget planning workflow to each responsibility center. The budgeting workflow ID associated with the budget planning workflow appears in the **Workflow ID** field.

Tip: The **Assign workflow** button can be used to select the organization unit type, such as department, and to assign the same workflow to all organization units of that type. Individual updates can then be made to select other workflows for specific organization units.

On the **Budget planning stage rules and templates** FastTab, use the follow three check boxes to create the rules for a specific budget planning stage:

• Select the **Associate budget plans** check box to allow the creation of associated budget plans during the stage.

• Select the **Add lines** check box to allow the addition of budget plan lines during the stage.

- Select the **Modify lines** check box to allow the modification of budget plan lines during the stage.

For each stage, you can also specify the Excel template that is used with Office Add-ins. See the [Excel worksheets](#) section of the paper for information about how a different worksheet can be used for each stage in a workflow.

Note: Changes to the templates associated with the stages can be made during an active budget planning process; however, any budget plans with worksheets open the instance of the worksheet by using the template that was defined when the worksheet was created. In this case, 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 the prior stages that the budget plan has transitioned through. We highly recommend that a complete test of the configuration occur before the budget planning process starts with users.

Optionally, on the **Budget plan priority constraints** FastTab, you can specify the budget plan priorities that can be assigned to budget plans in the budget planning process.

After the budget planning process is set up and activated, budget plans can be created and assigned to the budget planning process.

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