Sopheon Accolade®

Portfolio Management - Optimization Without Resources Training Guide

Version: 16.0

About Sopheon Accolade®

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Contents

About the Accolade Education Program

This module is part of the Sopheon Accolade Education Program (AEP). The AEP modules are designed to help Accolade users perform the tasks in their company's business process using the Accolade application. The content in the modules is meant to be used side-by-side with the application, and is part of the overall documentation suite provided for Accolade.

The benefits of using Accolade as part of your company's innovation development process include the following:

- Reduced cycle time by displaying clear structure and visibility.
- Reduced rework through timely, properly sequenced completion of all key tasks and milestones.
- Assured positive user experience through properly developed product requirements.
- Improved communication by automating collaboration between multifunctional team members.
- Provided decision-making information. Poor projects are stopped or placed on hold so resources can be redirected to more promising and higher value projects and products.
- Provided clear project requirements. Expectations of a project team and project manager at each stage are clearly spelled out.
- Managed business risk. Break resource commitments into increments or stages.
- Established key baseline information and metrics.

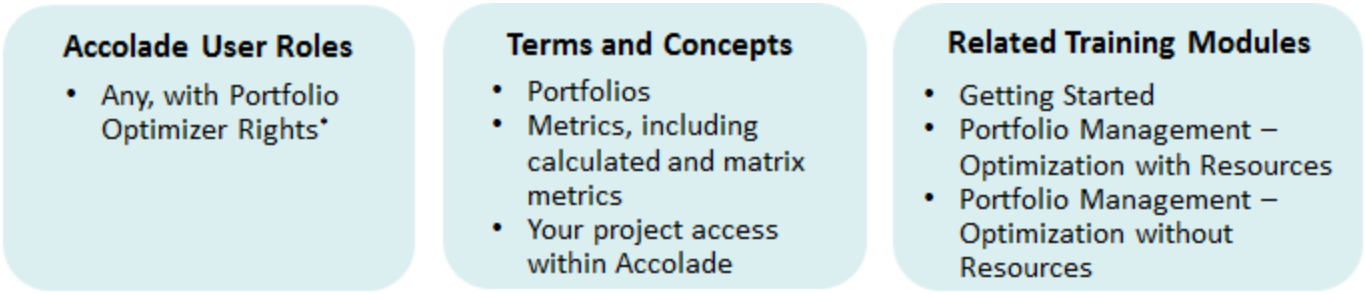
The Accolade documentation suite contains the following additional components:

Document	Contents
Sopheon Accolade What's New in This Release	For each release, review this document for an overview of the new features and changes within the release.
Accolade Online Help	Accessible directly through Accolade, the online Help provides comprehensive how-to and reference information about all aspects of using Accolade.
Sopheon Accolade Administrator's Guide	Provides information for administrative professionals regarding Accolade setup. This information is also provided in the online Help.
Sopheon Accolade Installation Guide	Provides information about the installation of the application and its required databases.
Dashboards for Accolade Installation Guide	Provides installation information for installing the Dashboards for Accolade component.
Quick Reference Cards	A PDF that can be printed double-sided that provides quick tips and navigation information for using Accolade.

Document	Contents
Online Help for Accolade Add-ins	Accolade add-ins, such as Accolade Office Extensions, include their own Sopheon created Help file accessible directly from the application after the add-in is installed. Each Help file describes how to use the features of that particular add-in.

Prerequisites for Using this Module

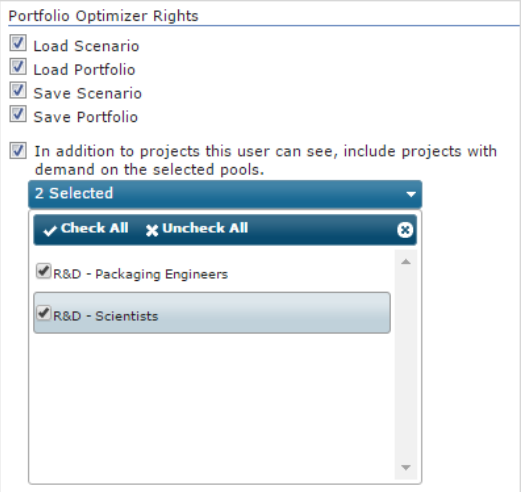
The contents of this assumes you are assigned the Accolade user roles and have a basic understanding of the terms and concepts listed below and how they are used in your installation. In addition, the content in the related training modules listed below may be helpful before reviewing the contents of this module.



*All user users can have Load Scenario, Load Portfolio, and Save Scenario rights.
Only Process Managers with Manage Process rights can have Save Portfolio rights.

User Roles and Rights

Each user with an Accolade account is also assigned a set of rights to Portfolio Optimizer. Your rights determine if you can load and save scenarios and/or portfolio data within Portfolio Optimizer. In addition, your Portfolio Optimizer rights determine which resource pools are available for you to see in Portfolio Optimizer.



Web Browser Requirements

Launching Portfolio Optimizer directly from the **Project** menu or the Portfolio page within a project in Accolade is supported from the following web browsers:

- Google Chrome, with Google's ClickOnce extension installed.
- Microsoft Edge
- Microsoft Internet Explorer

Note: See the *Sopheon Accolade v16.0 Software and Hardware Requirements* document for the current browser requirements.

Ensure that the **Block Unsupported Browsers** parameter is set to **0** in the Sopheon Administration Console.

The first time each user selects the **Project > Portfolio Optimization** option within Accolade, the application downloads and installs on their computer. Once installed, a web browser is not required to run Portfolio Optimizer. You can start it directly from the Windows **Start** menu.

Why Portfolio Optimization is Useful

Do you wonder if your company is funding the correct innovation and new product development efforts to meet your business objectives? Portfolio Optimizer helps you manage your product portfolio to make the right decisions about where to invest valuable assets including time, money, and resources, helping to ensure the overall success of your investments.

Using Portfolio Optimizer, you can build "what if" scenarios to visualize into common challenges and questions, including but not limited to the following:

- Have we set the appropriate priority for projects based on market demand and other factors?
- How does it change our time to market to add a new feature late in the production process?
- Are resources allocated to the projects that meet our business objectives?
- What does it cost to accelerate the efforts on certain projects?
- What does it cost in time to shift resources temporarily?

- Where are we lacking resources to complete projects?
- Do we have resource bottlenecks that are easy to resolve with minor rescheduling?

Managing and optimizing your portfolio is where your innovation plan and the execution of that plan come together. Use Portfolio Optimizer to help in that management process to ensure your greatest success.

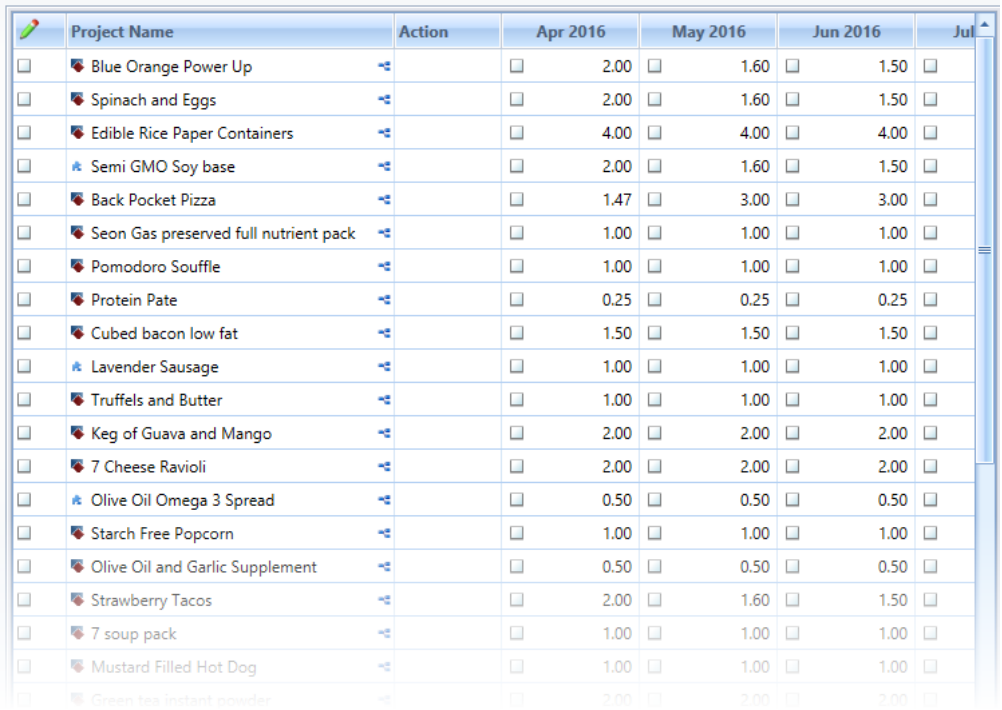
Portfolio Optimizer uses the same metric data available in Accolade so you can select to compare factors that are most important to you, using data you are familiar with, and decrease the time it takes to make decisions. When used with Accolade's Resource Planning functionality, Portfolio Optimizer can provide you a visual representation of your company's overall resource usage, allowing you to identify and manage resource bottlenecks, reschedule projects, and prioritize projects to make the best use of your available resources.

Portfolio Optimizer at a Glance

The Portfolio Optimizer application contains the main project grid and one or more panes to display information about the projects in the portfolio, the portfolio itself, resource demand information, and any charts you create for visualization of the loaded data.

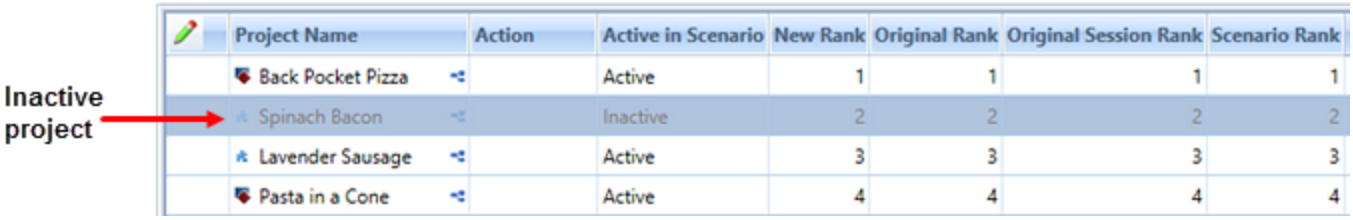
Project Grid

The project grid is the main portion of the Portfolio Optimizer window, and is where you complete most of your work. The grid displays the list of projects available in the portfolio or scenario you choose to load into the application. For each project, the grid displays one or more metric columns, project information columns, and resource columns. The filters and display settings you have selected determine what columns display in the grid.



Project Name	Action	Apr 2016	May 2016	Jun 2016	Jul
Blue Orange Power Up		2.00	1.60	1.50	
Spinach and Eggs		2.00	1.60	1.50	
Edible Rice Paper Containers		4.00	4.00	4.00	
Semi GMO Soy base		2.00	1.60	1.50	
Back Pocket Pizza		1.47	3.00	3.00	
Seon Gas preserved full nutrient pack		1.00	1.00	1.00	
Pomodoro Souffle		1.00	1.00	1.00	
Protein Pate		0.25	0.25	0.25	
Cubed bacon low fat		1.50	1.50	1.50	
Lavender Sausage		1.00	1.00	1.00	
Truffels and Butter		1.00	1.00	1.00	
Keg of Guava and Mango		2.00	2.00	2.00	
7 Cheese Ravioli		2.00	2.00	2.00	
Olive Oil Omega 3 Spread		0.50	0.50	0.50	
Starch Free Popcorn		1.00	1.00	1.00	
Olive Oil and Garlic Supplement		0.50	0.50	0.50	
Strawberry Tacos		2.00	1.60	1.50	
7 soup pack		1.00	1.00	1.00	
Mustard Filled Hot Dog		1.00	1.00	1.00	
Green tea instant powder		2.00	2.00	2.00	

Projects that are excluded from calculations, on hold, closed, or killed, display shaded in blue in the project grid.



Project Name	Action	Active in Scenario	New Rank	Original Rank	Original Session Rank	Scenario Rank
Back Pocket Pizza		Active	1	1	1	1
Spinach Bacon		Inactive	2	2	2	2
Lavender Sausage		Active	3	3	3	3
Pasta in a Cone		Active	4	4	4	4

Inactive projects are also identified by the value **Inactive** in the **Active in Scenario** column.

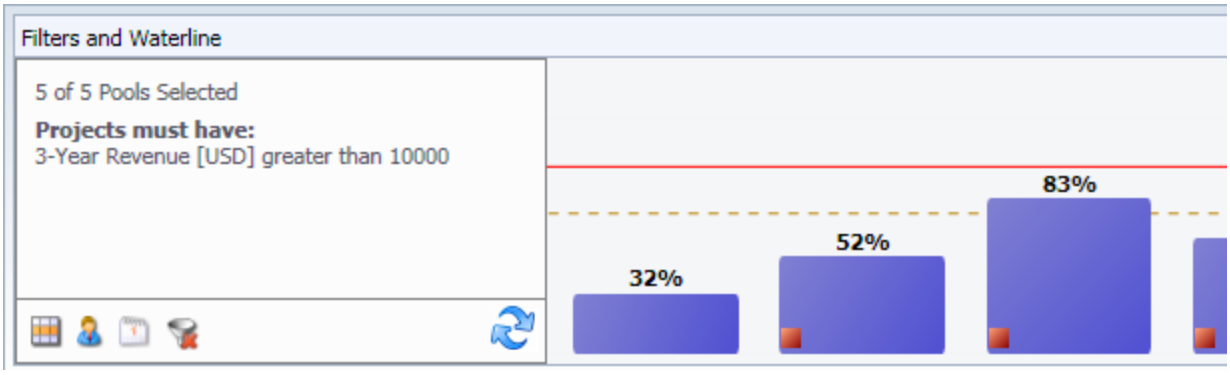
To hide all the inactive projects, add the **Active in Scenario** column to the grid and then filter on **Active** in the column. See "Selecting the Columns to Display in the Project Grid" on page 21 and "Applying Filters to Refine the Projects Displayed" on page 19.

Panes

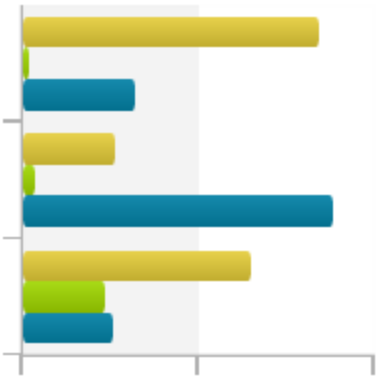
In addition to the project grid, the Portfolio Optimizer window contains several panes that you can choose to dock to different location in the main window, undock so and pull them outside the main window, or hide them. Click a pane's edge to drag it to a new size, as necessary.

The following panes display with the default portfolio or scenario layout. Not all panes apply if you are using Portfolio Optimizer to optimize without resource data.

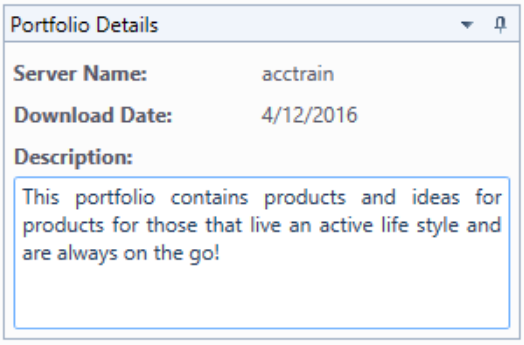
- **Filters and Waterline** - Displays the list of filters that are currently applied to the project grid, buttons to access filter options and refresh resource calculations, resource demand graphics, the 100% resource capacity waterline (sold red), and the warning threshold that shows the defined level of concern for resource capacity (dotted gold). This pane cannot be undocked from its current position.



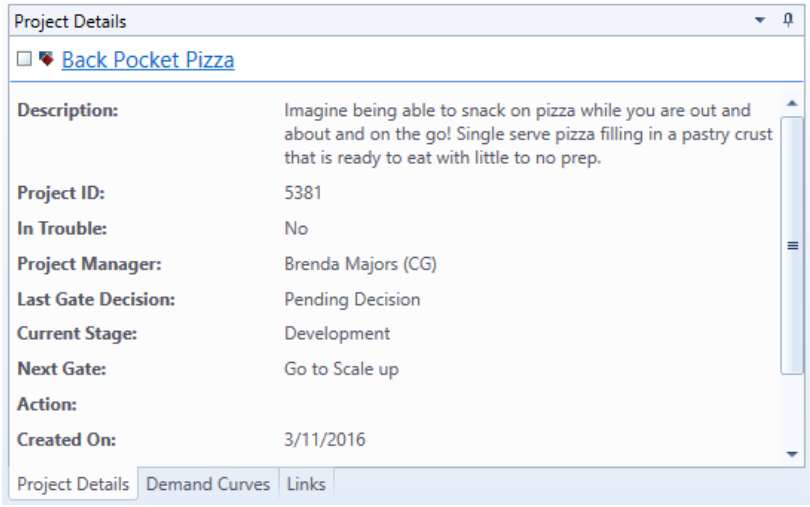
- **Charts** - One or more panes that contains a chart, such as a pie chart or bubble chart. One chart pane exists by default; however, you can add additional charts, creating additional chart panes. See "Adding Chart Panes" on page 46.



- **Portfolio Details** - Displays information about the portfolio. Use this pane to enter or update a portfolio description that is saved with the portfolio when you save as a scenario.



- **Project Details** - Displays project, demand, and project link information for the currently selected project in the project grid.



To hide or unhide a pane:

1. Do one of the following:
   - Right-click in a pane's title bar, or the pane's name if the pane has been hidden, to display a drop-down menu. Select **Auto hide**.
   - If the pane is docked and not hidden, click to collapse the pane into a tab.

   To display a hidden pane, hover the mouse of the pane's name in table to display it. Once displayed, click to dock it to the main window.

To rearrange the panes in the Portfolio Optimizer window:

1. Do any of the following:
   - **Float a docked pane outside of the main window** - Click the title bar and drag the pane away from its docked position.
   - **Dock a pane** - Right-click the pane's title and select **Dockable**. Drag the pane towards the edge of the Portfolio Optimizer window where you want to dock the pane.

     When a guide icon appears, drag the pane until your pointer is over the arrow that indicates where you want to drop the pane.

     Part of the main window highlights to show the drop location. If the guide icon is over another pane, the highlighted area is above, below, on the left, or on the right of the other pane. Drop the pane in the location to dock it there.
   - **Dock a hidden pane** - Right-click the pane's name and click Auto hide. You can now drag the pane as described above.
   - **Add a pane as a tab in another pane** - Click a pane's title and drag the pane over the pane (docked or floating) you want to add it to. When the guide icon displays, drop the pane on the icon's center square.

     Panes added as tabs to another pane are not hidden with the original pane. The added pane remains behind and you can hide it separately.
   - **Remove a pane that is a tab in another pane** - Click the tab's name and drag it away from the pane it was a part of to add it as its own pane.

Load and View Portfolios and Scenarios Overview

To begin, load the data you want to work with from Accolade to the Portfolio Optimizer.

Choose from the following types of data:

- **Portfolio Data** - The current, live data for projects in Accolade. You can select to load a single portfolio and the number of hierarchical levels within the portfolio to load, or your complete, default portfolio, which includes all the projects to which you have access. Loading portfolio data pulls a copy of the real-time data from the Accolade database into Portfolio Optimizer.
- **Scenario Data** - A saved copy, like a snapshot, of portfolio data. Scenarios you have created and saved are available for selection, as well as scenarios that others have created and made public. If this is the first time you have used Portfolio Optimizer, it is possible that no scenarios are available to load. If no scenarios exist, load the portfolio data and save it as a scenario.

Once loaded into Portfolio Optimizer, you can make changes to the data and save the changes to a scenario. When you are ready to update the data in Accolade, commit the changes to the server.

Loading Portfolio Data

When you load current projects from the server, you can load a single project portfolio or your complete, default portfolio, selecting at what level within the portfolio hierarchy you want to load. A project portfolio includes the projects linked using the Child Relationship link type to the project that contains the portfolio.

You must have Load Portfolio rights to Portfolio Optimizer to load portfolio data.

Your default portfolio includes all the projects that you have access to, based on the following criteria:

- You are a Process Manager with Manage Process rights in the project. You can also select to load all the projects that you have security access to within Accolade. This allows users who are not Process Managers to load and work with data within Portfolio Optimizer.
- You have rights to access projects containing specific resources.

Portfolio Optimizer does not include closed projects or projects whose next gate decision is set to **Kill**.

Note: You may be asked to select a location when you access Accolade Portfolio Optimizer. Restrictions are put in place to ensure your company's intellectual property is not in danger based on the laws and regulations in various countries, therefore your selection can restrict your access to projects to only those allowed to be viewed from that location. It is possible that you have access to information in one location that you do not have access to in another location.

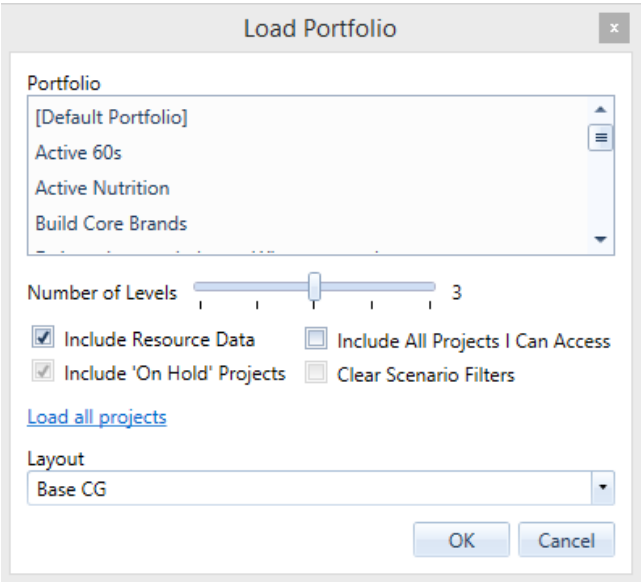
The procedure below describes how to load portfolio data from within the Portfolio Optimizer application. You can also load a single project's portfolio data from within a project in Accolade. From the project's Portfolio page, click **Open in Portfolio Optimizer**.

> Only one portfolio or scenario can be loaded in an instance of Portfolio Optimizer at a time, however you can open more than one instance of Portfolio Optimizer. For example, if you have a portfolio loaded and want to open a scenario for reference, you can open the scenario in a second instance of Portfolio Optimizer. To open a second instance, leave Portfolio Optimizer running and start it again from Accolade (**Project > Portfolio Optimizer**).

To load portfolio data into Portfolio Optimizer:

1. Ensure you are connected to the correct server.
2. From the **File** menu, select **Load from Server > Portfolio**.
3. In the **Portfolio** list, select whether to load the default portfolio, or a single project's portfolio.
4. For single project portfolios, select the level within the portfolio hierarchy you want to load.

   For example, to ensure the loaded portfolio contains the children, grandchildren, and great grandchildren of the parent project (root), select **3** to load all three levels.

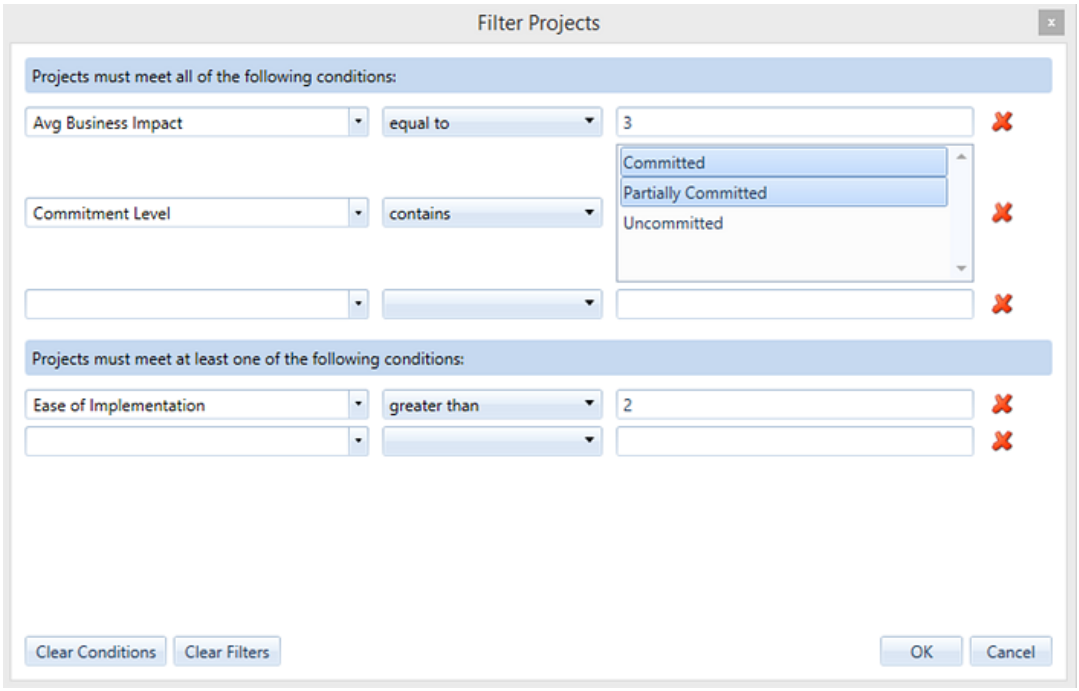


5. Select the data to include:
    - **Resources** - Includes or excludes resource data for the projects included in the portfolio. When loading the default portfolio, resource demands are only loaded if the resource pool is set as an assigned pool. If a pool that once was an assigned pool is no longer an assigned pool, the demands for that pool do not display in Portfolio Optimizer.
    - **Projects Set to Hold** - Includes or excludes Include projects whose last gate decision is set to **Hold**.
    - **All Projects I Can Access** - Select this option to include all projects to which you have access. If you make changes to projects that you do not have Manage Process rights to, you *cannot* commit those changes back to Accolade when you save the portfolio. If you are not a Process Manager, you must select this option for any projects to load.

      Important! Selecting this option can result in a large amount of data loaded into Portfolio Optimizer. It is strongly recommended that you use the **Load All Projects** option to filter the set of projects that is included.

      If you select the **Include All Projects I Can Access** check box when you loaded data, add the **Can Commit** column to the project grid to see which projects you can save changes to in Accolade.

    - **Scenario Filters** - If you are reloading a portfolio, select the Clear scenario filters check box to remove any filters that were created when viewing the portfolio in Portfolio Optimizer. Leave the check box clear to keep any selected filters.
    - **Filtered Set of Projects** - Click **Load All Projects** and select the criteria a project must meet to be included in the data loaded into Portfolio Optimizer. Select to limit projects by metric settings, access groups, and process models. Limiting the number of projects limits the data that is loaded from the portfolio, and can improve the overall load time. Use this option if you typically view the portfolio with filters applied.



If you are reloading a portfolio and want to change the criteria for projects, click **Load only projects where** to remove or add additional filter criteria, or click to clear all selected project filters.

6. In the **Layout** list, select the window configuration to apply after the portfolio is loaded:
   - **None** - The default layout. No layout is selected.
   - **Current** - Available when reloading a portfolio. Applies the layout of the currently loaded portfolio or scenario that you are closing. It includes any changes you may have made to the layout you applied to the portfolio or scenario.
   - **A Named Layout** - A layout that you have created, or that another user has created and made public.

   You can apply a different layout after the portfolio loads. See "Applying and Saving Layouts" on page 24.
7. Click **OK** to load the data.

Loading Scenario Data

Scenarios are a saved copy of the Accolade default portfolio, or a copy of single project's portfolio. Create and save scenarios to play with data and create "What Ifs" to optimize a portfolio prior to changing any data in the live database.

You must have **Load Scenario** rights to load scenario data.

Note: You may be asked to select a location when you access Accolade Portfolio Optimizer. Restrictions are put in place to ensure your company's intellectual property is not in

danger based on the laws and regulations in various countries, therefore your selection can restrict your access to projects to only those allowed to be viewed from that location. It is possible that you have access to information in one location that you do not have access to in another location.

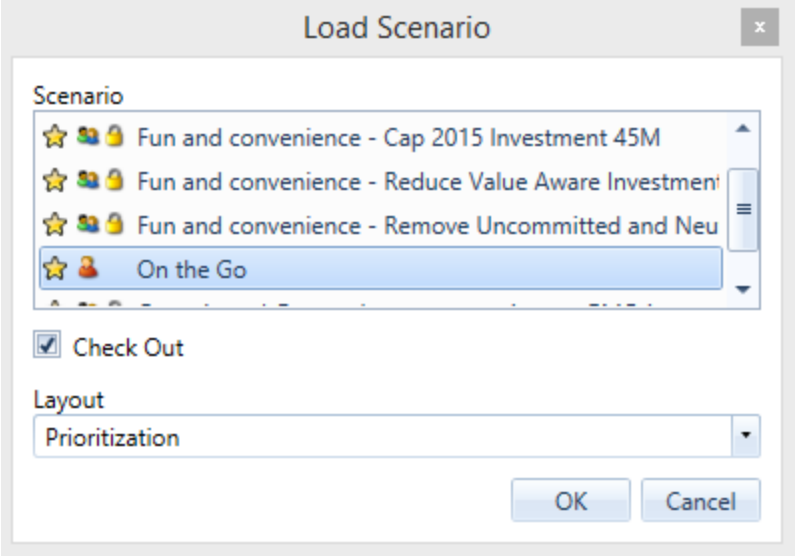
As a Portfolio Optimizer user, you can create and save a scenario for your use, for the use of selected users, or to share with all Portfolio Optimizer users. When loading data, the icons next to each scenario name indicates whether the scenario is public or private.

-  - Identifies private scenarios that only you and the selected scenario editors can load. The icon's tooltip shows the creator and first editor. If the original creator has been removed from the scenario's list of editors, the tooltip shows the first two editors.
-  - Identifies shared scenarios that all Portfolio Optimizer users with Load Scenario rights can load. The icon's tooltip shows the creator and first editor. If the original creator has been removed from the scenario's editors, the tooltip shows the first two editors.
-  - Indicates that someone else has the scenario checked out. You can load a locked scenario and save it with a different name, but you cannot save it with the same name. The icon's tooltip shows who has the scenario checked out.

Only one portfolio or scenario can be loaded in an instance of Portfolio Optimizer at a time, however you can open more than one instance of Portfolio Optimizer. For example, if you have a portfolio loaded and want to open a scenario for reference, you can open the scenario in a second instance of Portfolio Optimizer. To open a second instance, leave Portfolio Optimizer running and start it again from Accolade (**Project > Portfolio Optimizer**).

To load a scenario in Portfolio Optimizer:

1. Ensure you are connected to the correct server.
2. From the **File** menu, select **Load from Server > Scenario**.
3. In the **Scenarios** list, select the scenario to load.



4. If you want to modify the scenario and save it using the same name, select the **Check Out** check box to lock the scenario.

   Other users can load a locked scenario, but must save any changes to a new scenario.

   If you open a scenario without checking it out, you must reload the scenario and select the **Check Out** check box.

5. In the **Layout** list, select the window configuration to apply after the scenario is loaded:

   - **Scenario Default** - The layout that was in place with the scenario was saved. If the scenario does not have a layout associated with it, it loads with the default layout and displays sort order and any project filtering based on the saved scenario.
   - **A Named Layout** - A layout that you have created, or that another user has created and made public.

   You can apply a different layout after the scenario loads.

6. Click **OK** to load the data.

Notes:

- To see the entire list of scenario editors, load the scenario, and then select **File > Save to Server > Scenario**. In the Save Scenario dialog box, the current editors of the scenario are selected in the **Editors** list.
- If a project, resource pool, resource, or a metric was deleted from Accolade since a scenario was saved, those objects are also removed from the scenario and not included in the loaded data.

Try out what you have learned!

- Load your default portfolio.
- Save that portfolio as a scenario, that includes your name in the title.
- Reload your saved scenario.

Refine the Data Displayed Overview

As you work in Portfolio Optimizer, you may find that you do not need to see all the data available for a set of projects. Use filters, column selections, sorting, and layouts to refine the view into a portfolio or scenario. Each provides a way to narrow the information for only what you need as you work to update project data or to create simulations using scenarios.

Applying Filters to Refine the Projects Displayed

While working in Portfolio Optimizer, apply filters to refine the list of projects available in the project grid to narrow your focus to a select group of projects. Filters can be removed at any time to show all the projects available.

Important! If the portfolio was loaded with a filtered set of projects, the data loaded did not include projects that did not meet the filter criteria. To display those projects, reload the portfolio with the filter settings cleared.

Filtering projects does not delete the projects or remove them from the scenario. It changes how or whether they are displayed within the project grid. Filtered projects remain in the scenario and are included in operations such as re-ranking, merging, and optimization.

To apply a filter to refine the projects displayed:

1. Load a portfolio or a scenario.
2. Do one of the following:
   - Click  in the **Filters and Waterline** pane.
   - From **View** menu, select **Filters > Projects**.
3. Define the conditions that a project must meet for inclusion in the project grid.

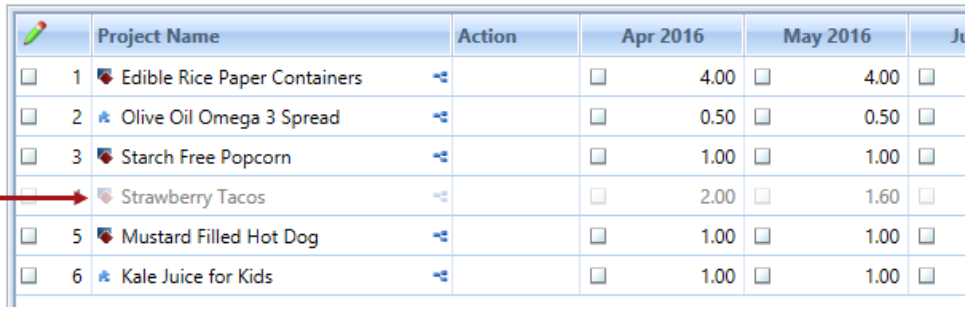
   If all the conditions must be met (AND conditions), define the conditions in the top portion of the dialog box. If the project needs to meet only one condition within a group (OR conditions), define the conditions in the bottom portion of the dialog box. Filters can include a combination.

- In the left list, select the data column to filter projects by. The list of columns contains metrics, project links, security list levels, and project information.
- In the middle list, select the logical relationship between the value contained in the data column and the values you enter or select.
- In the right list, enter or select the values that you want to compare to the values entered in the project.

4. Repeat step 3 to add as many filter conditions as you need.
5. Select whether to hide the filtered projects completely from the project grid or to include the projects that do not meet the criteria, but display them grayed out.

EXAMPLE Example

A project that does not meet the filter conditions, with the **Dim filtered projects** option selected.



		Project Name	Action	Apr 2016	May 2016	Ju
☐	1	Edible Rice Paper Containers		4.00	4.00	
☐	2	Olive Oil Omega 3 Spread		0.50	0.50	
☐	3	Starch Free Popcorn		1.00	1.00	
☐	4	Strawberry Tacos		2.00	1.60	
☐	5	Mustard Filled Hot Dog		1.00	1.00	
☐	6	Kale Juice for Kids		1.00	1.00	

6. If you select to hide the filtered projects from the project grid, you can also select the **Exclude hidden projects from calculations** check box to exclude the projects from the resource availability and charting calculations.

   You can also select to exclude a single project from calculations.

   To filter projects based on a blank value, use a set of two double quotes (""). For example, to filter projects that have passed the final gate, use "" to filter on the **CurrentStage** column value. This filter type applies to non-list items only.

7. Click **Apply** to see the results in the project grid or **OK** to apply the changes and return to the main window.

Notes:

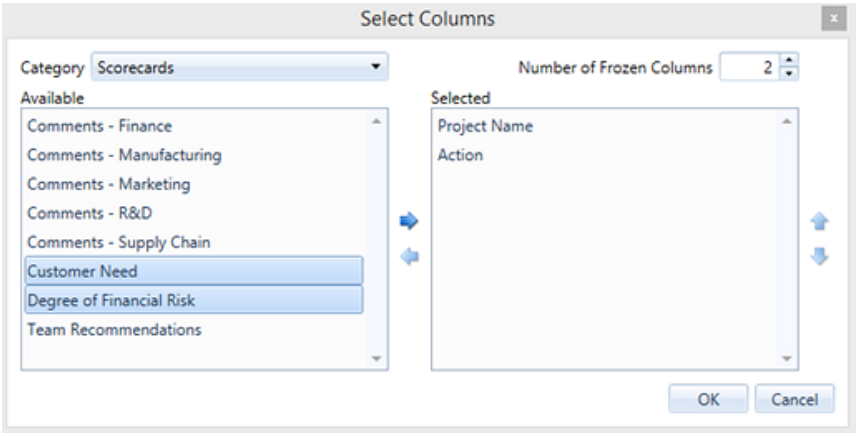
- To delete a single condition, click next to the condition to delete. To delete all conditions, click **Clear Conditions**.
- List metrics display only options selected in projects in the portfolio or scenario loaded in Portfolio Optimizer. Depending on whether projects have been added to or removed from the portfolio, you could see different items in a list metric at different times.
- Only metrics configured to be Available to Portfolio Optimizer are available to select as a filter column. The metrics are not required to be configured as a filter metric.

Selecting the Columns to Display in the Project Grid

After loading a portfolio or scenario, you can select columns of metrics, gate dates, security list items, project links, or project information, such as Team Leader, to the project grid to help analyze, prioritize, or reallocate resources for your projects, or to enter and update project data.

For example, you can add a metric column showing estimated NPV to the grid to help you quickly identify projects that you want to move higher, or lower, in priority.

To select the columns to display in the project grid:



1. Load a portfolio or a scenario.
2. Do one of the following:
   - From **View** menu, select **Columns**
   - Right-click the header row in the project grid and choose **Select Columns**.
3. In the **Category** field, select a project metadata category, such as **Project Gate Dates**, or select a metric category to refine the list of columns available to add.

   To view the entire list of columns available to add, select **All**.

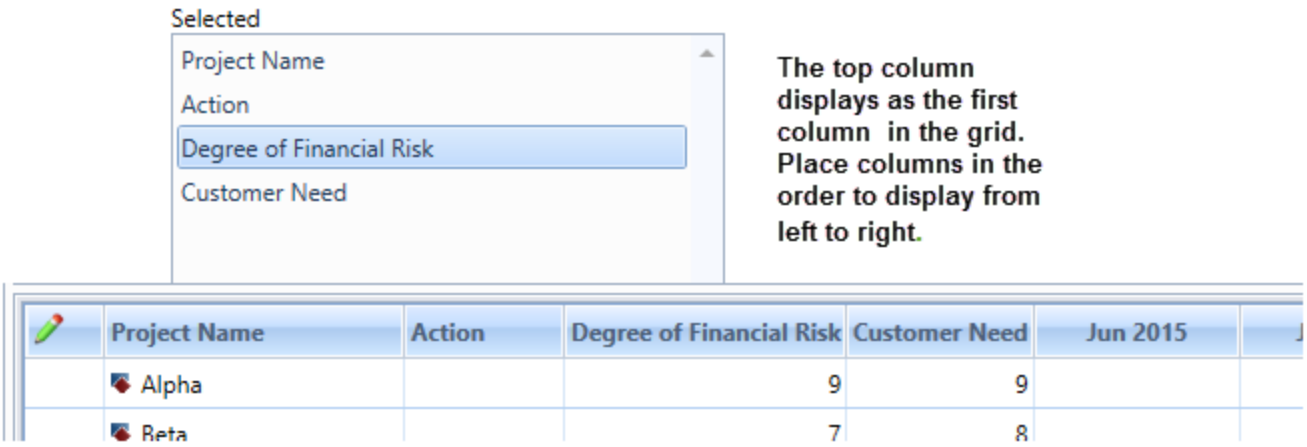
4. In the **Available** list, select the columns you want to add to the project grid and click to move the columns to the **Selected** list.

   To remove columns from the project grid, select the columns in the **Selected** list and click to move the columns to the **Available** list.

   If you selected the **Include All Projects I Can Access** check box when you loaded data, add the **Can Commit** column to the project grid to see which projects you can save changes to in Accolade.

5. In the **Number of Frozen Columns** field, enter the number of columns on the left side of the project grid that should remain in place when scrolling to the right.
6. Click **OK** to apply your selections.

To change the column order in the project grid:



1. Do one of the following:
   - From **View** menu, select **Columns**
   - Right-click the header row in the project grid and choose **Select Columns**.
2. In the **Selected** list, select a column name and click or to move it.

   The columns display in the order they are listed from left to right in the project grid.

Project Information Columns

The following list contains a description of project information columns whose contents might not be clear from the column name.

- **Action** - A record of the actions that have been performed on this project since the portfolio was loaded. Actions include ranking, rescheduling demand, changing gate decisions, and closing projects.

- **Active in Scenario** - Indicates which projects are currently active and which are not. Inactive projects are those that are set to exclude from calculations, on hold, closed, or killed.
- **New Rank** - The current rank of this project in the scenario. Shows the rank in relation to all projects in the scenario, both hidden and visible. On initial load, this rank information is the same as the Original Rank column. This rank can contain gaps in the number sequence if projects are filtered or hidden from the view.
- **Original Rank** - The initial rank of this project when the portfolio was loaded. Shows the rank in relation to all projects in the scenario, both hidden and visible. This rank can contain gaps in the number sequence if projects are filtered or hidden from the view.
- **Original Session Rank** - Displays the same initial relative order of the New Rank column (before Layout sorting is applied), but with no gaps in the rank sequence as projects are filtered or hidden view. The relative order does not change unless a scenario is reloaded.
- **Scenario Rank** - Displays the ranks of visible projects in a consecutive sequence that matches the sort order of the grid. The ranks of hidden projects are not included in this column, so there are no gaps in the rank sequence.

Notes:

- To remove a data column from the grid, right click the heading of the column you want to remove and click **Remove Column**.
- Only metrics that are set to **Available to Portfolio Optimizer** are available for viewing and editing in Portfolio Optimizer.

Sorting Project Rows

Sort the projects in the loaded scenario or portfolio using values available in the columns currently displayed in the project grid.

If ranking is enabled (**Edit > Enable Ranking**), you can change the project rank and force projects to occupy their rows in rank order using the sort order. Re-ranking the portfolio by sorting enables you to quickly rank project priority by metric values or by a combination of metrics and project information. Disabling ranking allows you to sort projects without affecting their rank order. Sorting that ranks the portfolio is overwritten with the current ranking data from the Accolade server. See "Re-ranking Projects" on page 27.

To sort the projects in the project grid:

1. Load a portfolio or a scenario.
2. Filter the project selection and select the project information to display.
3. Do one of the following:
   - From the **Edit** menu, select **Sort**.
   - Right-click the header row in the project grid and select **Sort**.

4. From the **First By** list, select the column you want to sort by, then select **Ascending** or **Descending**.

   As needed, create one or two secondary sorts using the **Then By** lists.

5. Click **Apply** to see the results in the project grid or **OK** to apply the changes and return to the main window.

Notes:

- To undo a sort, select **Edit > Undo**.
- Project sorting is saved if you create a layout with the settings applied. See "Applying and Saving Layouts" on page 24.

Applying and Saving Layouts

Apply a saved window configuration, or layout, to the portfolio or scenario that you have open. Each layout is a different configuration of Portfolio Optimizer, including a specific group of charts, a selected resource view, the selected group of metrics, the applied filters, and the position of the panes within the Portfolio Optimizer window.

You can also save your current configuration as a layout for your personal use, or to share and make available for other Portfolio Optimizer users.

The following items are saved as part of a layout:

- Charts and their configuration in the Charts pane
- Arrangement of docked panes
- Configuration of then project grid, such as Total row display, the current zoom settings, and project filtering conditions
- Selected metric columns
- Resource settings, including the selected resource view
- Ranking settings
- Sorting conditions

The following items are not saved as part of a layout:

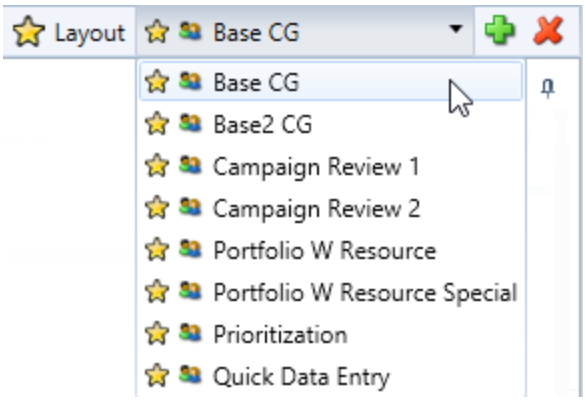
- Display options
- Resource Warning Threshold level
- Project data, such as metric values and resource values

For the layouts that you use the most, click  to set the layout as a favorite layout. Favorite layouts are indicated with  in the layout and are grouped at the top of layout selection lists in alphabetical order. To remove the favorite setting from a displayed layout, click  next to the layout name to clear the indication.

Saved scenarios also include the layout that was in place when the scenario was saved. If you load a scenario with a saved layout associated with it, the scenario loads with the layout. If the scenario does not have a layout associated with it, it loads with the Default layout and displays sort order and any project filtering based on the saved scenario. You can select to apply a different layout at any time while working in the scenario.

To apply a layout after data is loaded into Portfolio Optimizer:

1. In the right side of the menu bar, expand the **Layout** list.



2. Select a layout from the list to apply it.

To save a layout:

1. In the right side of the menu bar, click next to the layout list.
2. In the Layout Name field, enter a name to identify the primary use and characteristics of the layout.
3. To make the saved layout available to other users, select the **Share with other users** check box.

   To save the layout for your personal use, leave the check box unselected.
4. Click **OK** to save the layout.

Notes:

- To delete a layout, select the layout from the layout list and click next to the list. You can delete layouts that you have not shared. You can delete a shared layout if you have **Save Scenario** or **Save Portfolio** rights to Portfolio Optimizer
- If you apply a layout, and then modify it, and save the scenario without also saving the layout, the layout of the saved scenario differs from the named version of the layout in the Layout list that you applied to the scenario originally.

Exercises - Refining the Data Displayed

Try out what you have learned! In the scenario you loaded, do the following:

- Filter projects to display only those projects with a Launch Date that is at least 6 months from today.

If your server does not contain Launch Date as a metric, select another metric to filter projects on.

- Show the following columns in the grid: Project Name, Action, Access Group, Start Date, Launch Date, and Team.
- Move the project that is in the top of the list to below the second project in the list.
- Move and collapse panes and save a layout that contains your name as part of the layout name. Share that layout with one or more co-workers.

Ranking Overview

If you have loaded resource data into Portfolio Optimizer, ranking projects shows the effect on resource availability if you prioritize the needs of one project over those of another. Ranking with resource data provides a way to assess the effect of different schemes of resource assignment.

If resource data has not been loaded into Portfolio Optimizer, you can base project rank on metric values instead. When re-ranking projects using metrics, the rank can simply show the project's changed priority again the other projects in the portfolio.

Portfolio Optimizer maintains two ranking values for each project:

- The rank within a project portfolio.
- The rank within the overall default portfolio.

When you load a project portfolio, ranking changes that are saved affect only project rank within *that* project portfolio. When you load the default portfolio, ranking changes affect project rank in relation to all projects in the default portfolio. Changing one of these ranking value types for a project does not change the other type. For example, moving a project up in your default portfolio leaves its rank unchanged in its project portfolio.

Note: Rank values in your default portfolio are not displayed anywhere, but the rank value is applied system wide. It is rank in relation to all the projects in the system. However, ranking changes are still only made in relation to the other projects in the same portfolio, your default portfolio. To change the interrelationship of system ranks of projects in different portfolios, a user with Manage Process rights to all of the projects must open them in the same portfolio.

The ranking type that matters most to you depends on whether you work primarily in individual project portfolios or in the default portfolio.

Considerations When Ranking Projects

Changing the rank of one or more projects in a portfolio can result in changing the rank of other projects that you did not intentionally re-rank. For example, given the following projects and ranks:

Project A = 1
Project B = 2
Project C = 3
Project D = 4

If you rank Project C above Project A, Project A and Project B are re-ranked down. If you rank Project A below Project D, Projects B and Project C, and Project D are re-ranked up. These changes affect the projects whether they are hidden or shown in the project grid.

To re-rank a subset of your projects without changing the rank of the other projects, you can remove specified projects from the loaded portfolio or scenario without removing them from the Accolade database. See "Removing Projects from Scenarios" on page 33.

To guarantee that one user cannot change the system rank value of projects in another user's default portfolio depends on the correct assignment of Process Managers to access groups in Accolade. Each project should only be able to be ranked by one user at a given corporate level. However, if two Process Managers have rights to access the same project, the project displays in both managers' default portfolios. When either manager changes the portfolio rank, it also changes the project's system rank in the other Process Manager's portfolio. For example, each manager of a group or division would manage only those projects in their own group, without any overlap. But there could be another manager at a higher level who would reconcile the rankings of all the divisions to create the overall corporate ranking of each project.

Re-ranking Projects

When ranking is enabled moving a project up or down in the grid changes its rank in priority for resource allocation. Changing a project's rank shows what the effect on resource availability would be if you prioritized the needs of one project over those of another.

If there are projects in a portfolio that you do not have Manage Process rights to, it may interfere with your ability to update Accolade with any ranking changes. However, you can save the re-ranked portfolio as a scenario and send it to a colleague who has Manage Process rights to all the projects in the portfolio.

Changing a project's rank does not change how resources are actually assigned in Accolade.

If resource data has not been loaded into Portfolio Optimizer, you can base project rank on metric values instead. When re-ranking projects using metrics, the rank can simply show the project's changed priority again the other projects in the portfolio.

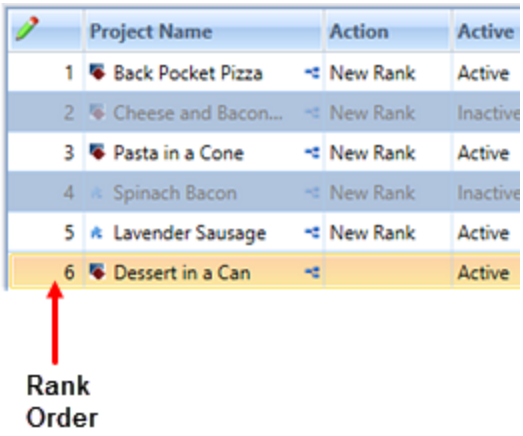
Changes to rank are only saved to the portfolio or scenario that you have loaded. That is, if you load your default portfolio, your changes are applied in the default portfolio, but not within any project portfolios within that portfolio, and vice versa. Changing project rank does not change the actual resource requests to assignments or vice versa in Accolade.

To establish a new rank using sorting, see "Sorting Project Rows" on page 23

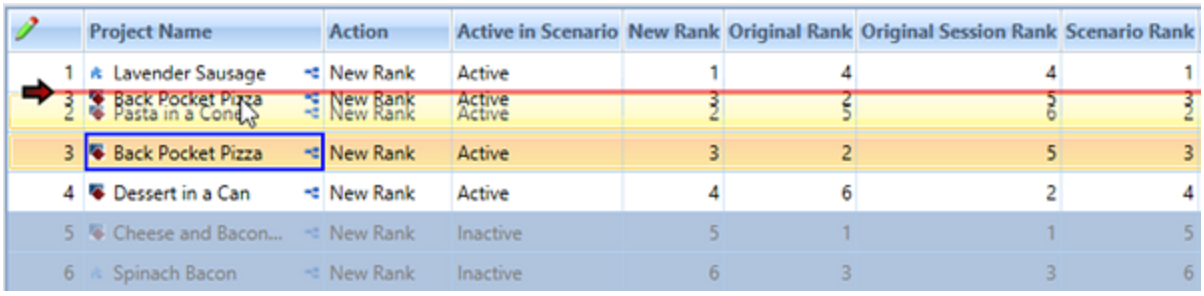
To drag and drop projects to establish a new rank:

1. Load a portfolio or a scenario.
2. From the **Edit** menu, select **Enable Ranking**.

   When ranking is enabled, the rank numbers display in the far left column in the grid and projects are re-sorted into rank order if they were not in rank order before enabling ranking.



3. Do one of the following to move the project in the project grid:
   - Click the project name and drag the project up or down. Drop it in the new location. Do not drop the projects while the grid is scrolling.



   - Select multiple projects to move them at the same time. Click a row and press and hold **Ctrl** and select multiple projects in the grid; or click a row and press and hold **Shift** to select a block of adjacent rows. Selected rows are highlighted in yellow. Click the project name of one of the selected projects and drag the group up or down. Drop the group in the new location. The selected projects become an adjacent block when you drop them in the new location. Do not drop the projects while the grid is scrolling.

- Right-click a project name and select **Move to Top** or **Move to Bottom** to move the project to the top or the bottom of the list.

4. Save the scenario to save your updates to the scenario, or save the portfolio to save the changes in Accolade.

Tracking Ranking Changes

Using the ranking columns available in the project grid, you can track which projects have been ranked, their new position, original position, and rank within the scenario.

To track ranking changes in the project grid:

1. Load a portfolio or a scenario.
2. Do one of the following:
   - From **View** menu, select **Columns**
   - Right-click the header row in the project grid and choose **Select Columns**.
3. In the **Category** field, select **Project Information** and add the following columns:
   - **Action** - Displays **New Rank** if the project rank has changed.
   - **New Rank** - Displays the project's current rank.
   - **Original Rank** - Displays the project's rank when the portfolio was loaded.

   The following columns may also be useful:
   - **Original Session Rank** - Displays the same initial relative order of the **New Rank** column, but with no gaps in the rank sequence as projects are filtered or hidden from view. The relative order does not change unless a scenario is reloaded.
   - **Scenario Rank** - Displays the rank of visible projects in a consecutive sequence that matches the sort order in the project grid. Hidden projects are not included in this column, so there are no gaps in the rank sequence

   When ranking is enabled, current rank is always shown in the leftmost column of the grid.
4. Click **OK** to apply your selections.
5. Save the scenario to save your updates to the scenario, or save the portfolio to save the changes in Accolade.

Notes:

- If you use filtering to hide projects then re-rank the visible projects, the hidden projects might also be re-ranked. For example when a visible project is dragged above a hidden project.
- In Accolade, a project's rank within a portfolio is displayed as **Rank Order** in the Portfolio page in the portfolio project.
- If two projects in a portfolio have the same rank Accolade, you cannot re-rank them in Portfolio Optimizer. Assign one project a different rank in the Portfolio page in the portfolio project in Accolade.

Exercises - Re-Ranking Projects

Try out what you have learned! In the scenario you loaded, do the following:

- Add the Action, New Rank, and Original Rank columns to the table.
- Enable ranking and re-rank the project at the top of the priority list to the bottom.

Change and Optimize Scenarios Overview

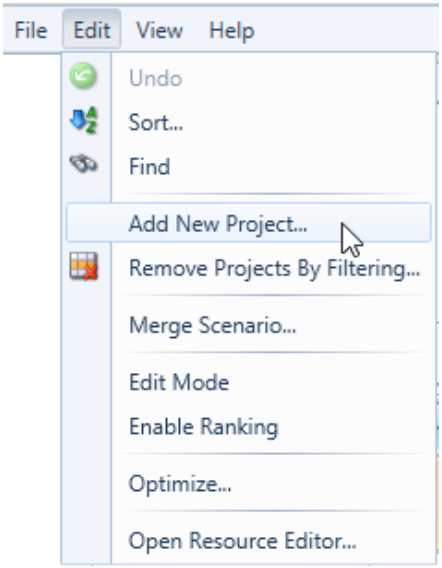
When you load a portfolio, save it to create a scenario. You can modify the scenario to include additional projects, remove projects, pause projects, and move time frames and resources to play out difference simulations, without changing any project data in Accolade. You can also merge one scenario with another scenario to combine the characteristics of each, or use the optimization engine to have Portfolio Optimizer provide you with the best possible resource and project setup based on the data of your choosing.

Adding Projects to Scenarios

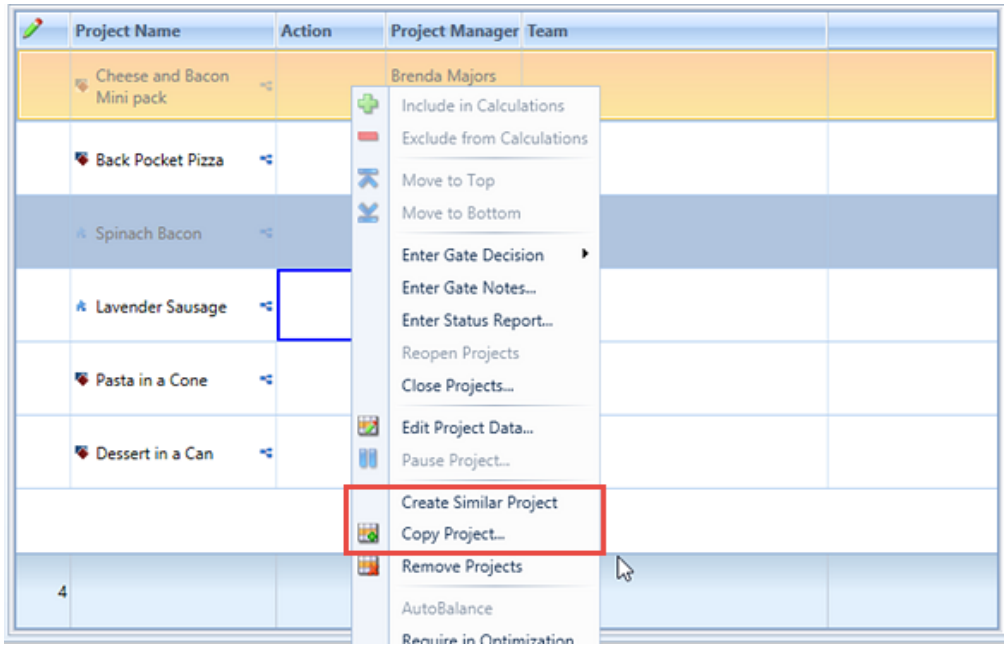
Add new projects to a scenario as you are modeling situations based on Accolade data. New projects added to a scenario are created as new projects in Accolade when the portfolio is saved to Accolade if you are a Process Manager with Add Project rights.

To add a project to a scenario:

1. Do one of the following:
   - **To add a new, blank project** - From the **Edit** menu, select **Add New Project**.
   - **To add a new project using an existing project's values as a base** - Right-click the project in the project grid to use as a base and select **Create Similar Project**.



To make a copy of an existing project, right click the project in the project grid and select **Copy Project**. Enter a display name for the project and click **OK**.



2. Complete the following information about the project. If you chose to add a new project from an existing project, the information below, defaults to the original project's values.

Field	Description
ID	Enter an ID that displays in the project details and in reports. This is also referred to as the project code. The ID is intended for reporting and to help identify and locate a project, for example through Search. The ID can include any characters or symbols, including spaces and characters from non-English alphabets. The process model configuration, or a system parameter, determines if you can enter a project ID when creating a project. The configuration may be defined to generate the ID based on a metric value or sequentially as a projects are created.
Project Name	Enter a name, up to 64 characters long, that identifies the project. Provide a name that clearly indicates the project's purpose. The process model configuration determines if you can enter a project name when creating a project. The configuration may be defined to generate the name based on a metric value.
Model	Select the model that includes the appropriate process for the project. For example, if a project is in its very early discovery stages, select a model that includes a Scoping or Discovery stage as stage 1 in the process. If the project is low risk, or a small internal initiative, consider selecting a more condensed model that combines stages for development and testing efforts.

Field	Description
Description	*(Optional)* Enter a description of the purpose or nature of project.
Project Manager	*(Optional)* Click **Select**, select the leader for this project, and click **Set User**. If you create a project without designating a Project Manager, you can select one later. If a default manager is set at the model level, you cannot select a manager when creating the project. However, you can change who is assigned to the project after the project is created.
Next Gate	If you want the project to start on a gate other than the first, select the gate. This list only displays if enabled by a system parameter.
Access Group	Select the group that determines which users have access to this project. Your management rights allow you to create projects in access groups where you can see an asterisk (*) next to the name.
Security Lists	If security lists are enabled, select check boxes in each list to specify which users have access to this project. If you add a project that you do not have security list access to and then save the scenario, you will not see the project when you reopen the scenario.
Start Date and **End Date**	Enter the project's default start and end date. These settings may not be available, depending on the process model settings.
Metrics	If there are metrics set that require a value on project creation, enter the appropriate metric values. Metric availability depends on the settings in the process model.

3. Click **Create** to add the project.

Pausing Projects in Scenarios

As you are working on scenarios, you can choose to suspend work on a project for a period of time, which shifts the project's demand, gate, and end dates to after the pause period.

Paused projects are saved as paused when you save the scenario. A pause can only be saved as such to the scenario. However, the resulting changes to demand and capacity values are saved to Accolade when saving the portfolio.

Clearing a pause adds the original demands back into the period of the pause (like Undo) if all of the demands are added from demand curves. Demands that are added to projects manually are not returned to the paused period if you clear the pause. They remain in the periods after the pause that they were moved to.

To pause a project:

1. Load a portfolio or a scenario.
2. Filter the project selection, as necessary.
3. Right-click the project in the project grid and select **Pause Project**.
4. Select the date range in which work on the project is suspended.

   The project restarts at the end of the day entered in the **To** field so that it is going the next day.

5. Click **Apply** to apply the changes to the project grid without closing the dialog box, or click **OK** to apply your changes and return to the project grid.

   Paused projects display with a purple bar in the time period column in which the pause applies.

6. Save the scenario to save your updates to the scenario, or save the portfolio to save the changes to the demand and capacity in Accolade.

To clear a pause period for a project:

1. Load a portfolio or a scenario.
2. Filter the project selection, as necessary.
3. Right-click the project in the project grid and select **Pause Project**.
4. Click **Clear Pause**.
5. Click **Apply** to apply the changes to the project grid without closing the dialog box, or click **OK** to apply your changes and return to the project grid.
6. Save the scenario to save your updates to the scenario, or save the portfolio to save the changes to the demand and capacity in Accolade.

Notes:

- If you change gate dates in a project after applying a project pause, the pause is ignored. If you still want to pause the project after changing gate dates, re-apply the pause. Undoing a pause does not reset modified gate dates to their previous values.
- If you apply a demand curve after pausing a project, the demand that falls in the paused period moves to after the pause.

Removing Projects from Scenarios

Remove projects from a scenario so you can perform other actions on the scenario, such as ranking, without changing the projects that are removed. Removing projects from the scenario differs from filtering the projects from the project grid, which only hides the projects from the view. Filtered projects remain in the scenario and are included in operations such as re-ranking, merging, and optimization.

Removing projects does not remove them from the portfolio on the server.

Important! You cannot add removed projects back into the scenario. You must reload the portfolio that contains the removed projects and recreate the scenario. If you remove projects using filtering, you can reload the portfolio and select **Clear scenario filters**.

To remove projects from a scenario:

1. Load a portfolio or a scenario.
2. Do one of the following:

- **To remove selected projects** - Select the projects to remove, right-click and select **Remove Projects**.
- **To remove projects based on filters** - From the **Edit** menu, select **Remove Projects By Filtering**. Continue with step 3 below.

3. Define the conditions that a project must meet to be kept in the scenario. Any projects that do not meet the selected criteria are removed.

   If all the conditions must be met (AND conditions), define the conditions in the top portion of the dialog box. If the project needs to meet only one condition within a group (OR conditions), define the conditions in the bottom portion of the dialog box. Filters can include a combination.

   - In the left list, select the data column to filter projects by. The list of columns contains metrics, project links, security list levels, and project information.
   - In the middle list, select the logical relationship between the value contained in the data column and the values you enter or select.
   - In the right list, enter or select the values that you want to compare to the values entered in the project.
4. Repeat step 3 to add as many filter conditions as you need.
5. Click **OK** to apply the changes and return to the main window.

Notes:

- To delete a single condition, click  next to the condition to delete. To delete all conditions, click **Clear Conditions**.
- To filter projects based on a blank value, use a set of two double quotes (""). For example, to filter projects that have passed the final gate, use "" to filter on the **CurrentStage** column value. This filter type applies to non-list items only.

Merging Scenarios

Merge projects from another scenario into the currently loaded scenario to combine scenario data. Projects that are merged are added to the loaded scenario with all of their data, completely replacing the version in the loaded scenario. If the project exists in both scenarios, and the project has been modified since the scenario was created, you have the opportunity to review the data in both versions and decide whether to merge the project.

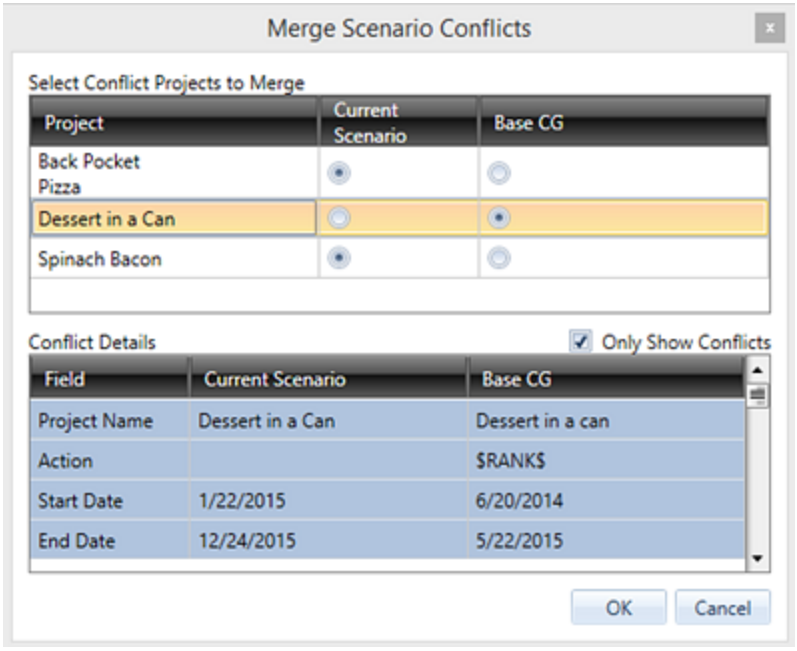
You can merge two scenarios if the following are true:

- The scenario is a public scenario or you are and editor assigned to the scenario.
- Another user does not have the scenario checked out.

To merge two scenarios into one:

1. Load and check out the scenario you want to merge data to.
2. From the **Edit** menu, select **Merge Scenario**.
3. From the **Scenario** list, select the scenario you want to merge into the loaded scenario.
4. Select the **Delete After Merge** check box to delete the selected scenario after the merge is complete.
5. Click **OK**.
6. If the Merge Scenario Conflicts dialog box displays, select the name of a project whose conflicts you want to review.

   Select the **Only Show Conflicts** check box to view only the fields whose data actually differs in the two versions of the selected project.



   Projects are considered in conflict if the data has been changed in both versions; however, the details are only shown when resolving conflicts if the data is different in the two versions. A project is listed with no conflict details if both projects have changed since the scenario was updated, but all fields have the same values in both versions.

   If there are projects that you do not have rights to see in the source scenario, they are merged into the open scenario, even if there are conflicts, and are not included in the list of projects with conflicts.

7. For each project listed, select the version of the project to include in the merged scenario.
8. Click **OK** to merge the scenarios.

Notes:

- If matrices exist in the projects, the entire matrix is merged. You are not able to select which cells within the matrix to merge.
- New projects added to the loaded scenario are added with ranks lower than those of the existing projects.

Optimizing Scenarios

Use the built-in optimization engine to determine which projects produce the maximum or minimum value based on a selected the metric available within the project. Optimize an entire portfolio, or a subset of projects within a portfolio or scenario to continue to build "what-if" simulations to ensure efforts and spending are being made on the most important projects.

You can save an optimized scenario; however, optimization does not create any changes in the projects in Accolade.

To optimize a scenario:

1. Load a portfolio or a scenario.
2. To optimize a subset of projects, do one of the following to select the projects included in the optimization. To optimize the entire portfolio or scenario, continue with the next step without filtering or individual project selection.
   - Filter the projects to display only the group to optimize. Select the **Hide filtered projects** and **Exclude hidden projects from calculations** options to ensure the filtered projects are not included in the optimization.
   - Right-click one or more selected projects in the project grid and select **Require in Optimization** to ensure the projects are included in the optimization, or **Exclude from Calculations** to remove the project from the optimization.

   When optimizing a project portfolio, the parent project is not included in the optimization. The optimal group is a sub-set of the child projects. In optimization of a default portfolio with parent and child projects, the optimization rolls up metrics from the children to the parent project and includes or excludes each parent project together with its children as a group on the basis of the rollup values. If you exclude a parent project from the optimization, its children are treated as individual projects, with no rollup.
3. From the **Edit** menu, select **Optimize**.
4. In the top section of the Optimization dialog, select the criteria a project must meet to be included in the optimized set of projects.

   Select the constrained metric or project data column in the left column, its relationship between the value in the project and the value you specify, and whether a metric's value is to be summed or averaged. Finally, enter a value to compare to the sum or average of the metric values in the projects.

   Create up to three constraints that must be satisfied in the optimal set of projects.

5. In the bottom section of the Optimization dialog, select whether to minimize or maximize the selected piece of data.
6. Click **OK** to begin the optimization.

   During the optimization of a large number of projects, if the optimizer window shows the **Latest Optimum Value** unchanging while the optimization continues, click **Cancel** to view the best result the optimizer can achieve with the current constraints and data.

   When the optimization finishes, the projects in the optimal set are shown without a line drawn through the project name.

Notes:

- To optimize on the demand for a specific resource pool, filter the grid to include only a single, critical resource pool, and add a constraint on the **Demand Total** column.
- You cannot use the same metric in more than one constraint or in both a constraint and the target.
- Only number metrics with a value in one of the displayed projects is available for selection as a constraint or target metric.
- If you run a second optimization immediately after the first, Portfolio Optimizer only includes the projects in the optimal set found in the first optimization. Projects shown with a line through the project name are not considered in the second optimization.

Total Revenue vs Total Investment Optimization Example

Use the optimization engine within Portfolio Optimizer to provide the best project lineup based on the metrics and values of your choice.

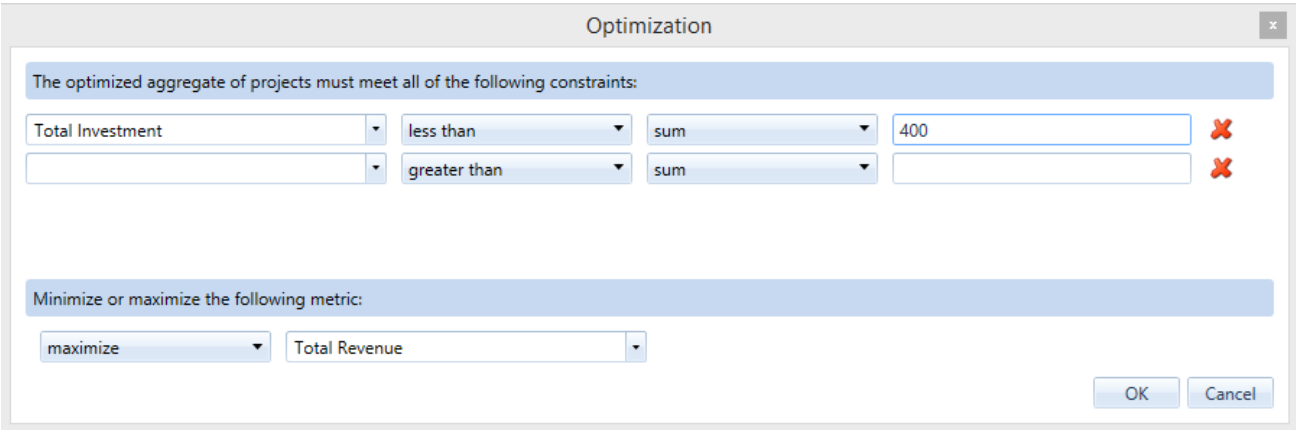
This section provides an example about how to use optimization to determine which projects a portfolio manager should work to earn the most amount of revenue with the least investment.

Consider the following small portfolio that contains metrics for Total Revenue, Total Investment, and Total FTE Cost, among others.

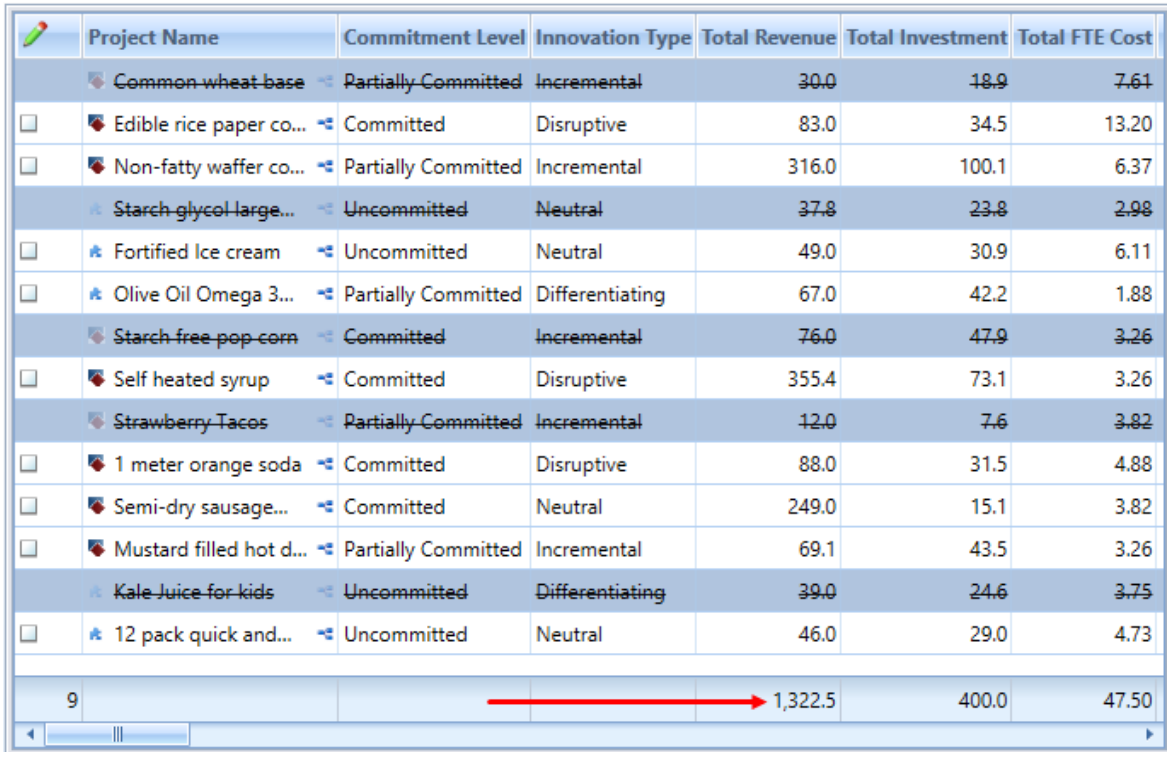
Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
Common wheat base	Partially Committed	Incremental	30.0	18.9	7.61
Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
Starch glycol large...	Uncommitted	Neutral	37.8	23.8	2.98
Fortified Ice cream	Uncommitted	Neutral	49.0	30.9	6.11
Olive Oil Omega 3...	Partially Committed	Differentiating	67.0	42.2	1.88
Starch free pop corn	Committed	Incremental	76.0	47.9	3.26
Self heated syrup	Committed	Disruptive	355.4	73.1	3.26
Strawberry Tacos	Partially Committed	Incremental	12.0	7.6	3.82
1 meter orange soda	Committed	Disruptive	88.0	31.5	4.88
Semi-dry sausage...	Committed	Neutral	249.0	15.1	3.82
Mustard filled hot d...	Partially Committed	Incremental	69.1	43.5	3.26
Kale Juice for kids	Uncommitted	Differentiating	39.0	24.6	3.75
12 pack quick and...	Uncommitted	Neutral	46.0	29.0	4.73
14			1,517.3	522.7	68.92

The portfolio contains a total of 14 projects with a total revenue just over $1.5 million, and investment in those projects of $522,000. The portfolio manager only has $400,000 to invest and needs to determine the combination of projects that provide the highest possible revenue with a total investment of $400,000.

To help determine which projects could be cut from the portfolio, run an optimization that restricts the sum of the Total Investment of all projects in the portfolio to $400,000, while maximizing on the Total Revenue (**Edit > Optimize**).



Portfolio Optimizer returns the optimized portfolio, indicating which projects could be canceled or put on hold to achieve the most revenue, while reducing costs.



	Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
	~~Common wheat base~~	~~Partially Committed~~	~~Incremental~~	~~30.0~~	~~18.9~~	~~7.61~~
☐	Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
☐	Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
	~~Starch glycol large...~~	~~Uncommitted~~	~~Neutral~~	~~37.8~~	~~23.8~~	~~2.98~~
☐	Fortified Ice cream	Uncommitted	Neutral	49.0	30.9	6.11
☐	Olive Oil Omega 3...	Partially Committed	Differentiating	67.0	42.2	1.88
	~~Starch free pop corn~~	~~Committed~~	~~Incremental~~	~~76.0~~	~~47.9~~	~~3.26~~
☐	Self heated syrup	Committed	Disruptive	355.4	73.1	3.26
	~~Strawberry Tacos~~	~~Partially Committed~~	~~Incremental~~	~~12.0~~	~~7.6~~	~~3.82~~
☐	1 meter orange soda	Committed	Disruptive	88.0	31.5	4.88
☐	Semi-dry sausage...	Committed	Neutral	249.0	15.1	3.82
☐	Mustard filled hot d...	Partially Committed	Incremental	69.1	43.5	3.26
	~~Kale Juice for kids~~	~~Uncommitted~~	~~Differentiating~~	~~39.0~~	~~24.6~~	~~3.75~~
☐	12 pack quick and...	Uncommitted	Neutral	46.0	29.0	4.73
9				1,322.5	400.0	47.50

Perhaps the portfolio manager needs to reduce the total number of employees dedicated to the work in the portfolio. In the above example, the full portfolio has a total full time employee (FTE) cost of 68.92 employees, but the portfolio manager only has 60 FTEs. From the portfolio, run the optimization again, setting a constraint on Total FTE Cost of less than 60, while maximizing on the Total Revenue.

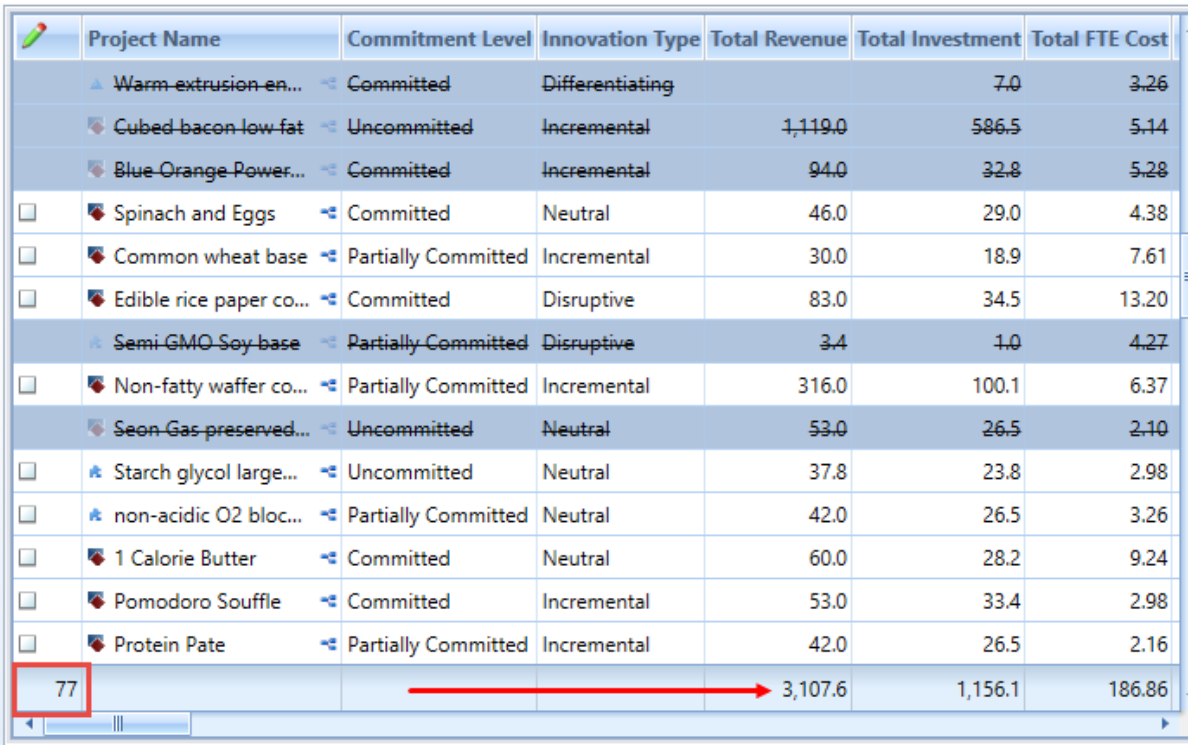
The optimization indicates that only two projects from the portfolio need to be canceled or placed on hold to meet a target of less than 60 FTEs, with a total revenue decrease of only $42,000.

Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
~~Common wheat base~~	~~Partially Committed~~	~~Incremental~~	~~30.0~~	~~18.9~~	~~7.61~~
Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
Starch glycol large...	Uncommitted	Neutral	37.8	23.8	2.98
Fortified Ice cream	Uncommitted	Neutral	49.0	30.9	6.11
Olive Oil Omega 3...	Partially Committed	Differentiating	67.0	42.2	1.88
Starch free pop corn	Committed	Incremental	76.0	47.9	3.26
Self heated syrup	Committed	Disruptive	355.4	73.1	3.26
~~Strawberry Tacos~~	~~Partially Committed~~	~~Incremental~~	~~12.0~~	~~7.6~~	~~3.82~~
1 meter orange soda	Committed	Disruptive	88.0	31.5	4.88
Semi-dry sausage...	Committed	Neutral	249.0	15.1	3.82
Mustard filled hot d...	Partially Committed	Incremental	69.1	43.5	3.26
Kale Juice for kids	Uncommitted	Differentiating	39.0	24.6	3.75
12 pack quick and...	Uncommitted	Neutral	46.0	29.0	4.73
12			1,475.3	496.2	57.49

The benefit of running optimizations becomes clearer in larger portfolios. Consider the following portfolio with 102 projects:

Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
Warm extrusion en...	Committed	Differentiating		7.0	3.26
Cubed bacon low fat	Uncommitted	Incremental	1,119.0	586.5	5.14
Blue Orange Power...	Committed	Incremental	94.0	32.8	5.28
Spinach and Eggs	Committed	Neutral	46.0	29.0	4.38
Common wheat base	Partially Committed	Incremental	30.0	18.9	7.61
Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
Semi GMO Soy base	Partially Committed	Disruptive	3.4	1.0	4.27
Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
Seon Gas preserved...	Uncommitted	Neutral	53.0	26.5	2.10
Starch glycol large...	Uncommitted	Neutral	37.8	23.8	2.98
non-acidic O2 bloc...	Partially Committed	Neutral	42.0	26.5	3.26
1 Calorie Butter	Committed	Neutral	60.0	28.2	9.24
Pomodoro Souffle	Committed	Incremental	53.0	33.4	2.98
Protein Pate	Partially Committed	Incremental	42.0	26.5	2.16
102			12,600.9	2,204.0	268.32

If the portfolio manager needs to decide which projects to continue to work in this portfolio, the manual process of doing so becomes more difficult. If faced with having to cut the Total Investment in this portfolio by approximately $750,000, instead of picking and choosing projects, the portfolio manager runs the optimization that restricts the Total Investment to less than $1,454,000 and maximizes the Total Revenue.



Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
~~Warm extrusion en...~~	~~Committed~~	~~Differentiating~~		~~7.0~~	~~3.26~~
~~Cubed bacon low fat~~	~~Uncommitted~~	~~Incremental~~	~~1,119.0~~	~~586.5~~	~~5.14~~
~~Blue Orange Power...~~	~~Committed~~	~~Incremental~~	~~94.0~~	~~32.8~~	~~5.28~~
Spinach and Eggs	Committed	Neutral	46.0	29.0	4.38
Common wheat base	Partially Committed	Incremental	30.0	18.9	7.61
Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
~~Semi GMO Soy base~~	~~Partially Committed~~	~~Disruptive~~	~~3.4~~	~~1.0~~	~~4.27~~
Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
~~Seon Gas preserved...~~	~~Uncommitted~~	~~Neutral~~	~~53.0~~	~~26.5~~	~~2.10~~
Starch glycol large...	Uncommitted	Neutral	37.8	23.8	2.98
non-acidic O2 bloc...	Partially Committed	Neutral	42.0	26.5	3.26
1 Calorie Butter	Committed	Neutral	60.0	28.2	9.24
Pomodoro Souffle	Committed	Incremental	53.0	33.4	2.98
Protein Pate	Partially Committed	Incremental	42.0	26.5	2.16
77			3,107.6	1,156.1	186.86

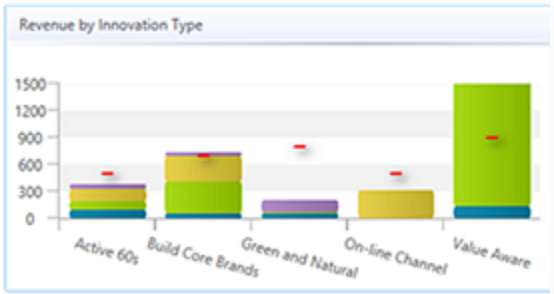
The optimization suggests the 25 projects that could be removed from the portfolio, and also includes the impact on the total portfolio revenue if those projects were canceled or placed on hold.

The portfolio manager could also run the optimization to constrain by less than $1,454,000, and constrain the Total FTE Cost to 250, while still maximizing revenue.

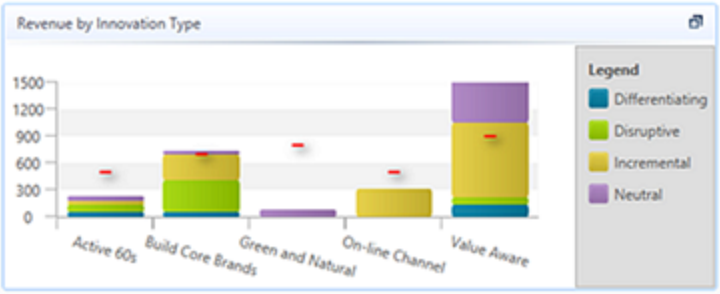
Project Name	Commitment Level	Innovation Type	Total Revenue	Total Investment	Total FTE Cost
~~Warm extrusion en...~~	~~Committed~~	~~Differentiating~~		~~7.0~~	~~3.26~~
~~Cubed bacon low fat~~	~~Uncommitted~~	~~Incremental~~	~~1,119.0~~	~~586.5~~	~~5.14~~
~~Blue Orange Power...~~	~~Committed~~	~~Incremental~~	~~94.0~~	~~32.8~~	~~5.28~~
Spinach and Eggs	Committed	Neutral	46.0	29.0	4.38
Common wheat base	Partially Committed	Incremental	30.0	18.9	7.61
Edible rice paper co...	Committed	Disruptive	83.0	34.5	13.20
~~Semi GMO Soy base~~	~~Partially Committed~~	~~Disruptive~~	~~3.4~~	~~1.0~~	~~4.27~~
Non-fatty waffer co...	Partially Committed	Incremental	316.0	100.1	6.37
~~Seon Gas preserved...~~	~~Uncommitted~~	~~Neutral~~	~~53.0~~	~~26.5~~	~~2.10~~
Starch glycol large...	Uncommitted	Neutral	37.8	23.8	2.98
non-acidic O2 bloc...	Partially Committed	Neutral	42.0	26.5	3.26
1 Calorie Butter	Committed	Neutral	60.0	28.2	9.24
Pomodoro Souffle	Committed	Incremental	53.0	33.4	2.98
Protein Pate	Partially Committed	Incremental	42.0	26.5	2.16
60			3,107.6	1,149.1	183.71

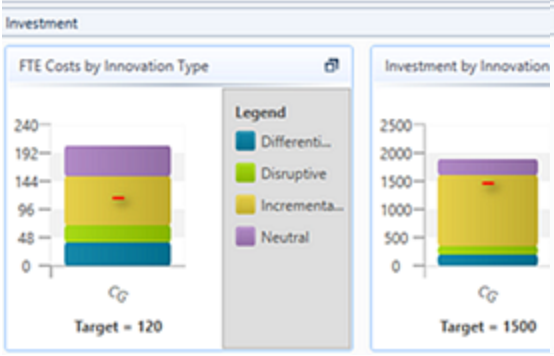
Use the charts feature to build charts and graphs to help assess the impact of an optimization on strategic goals and initiatives.

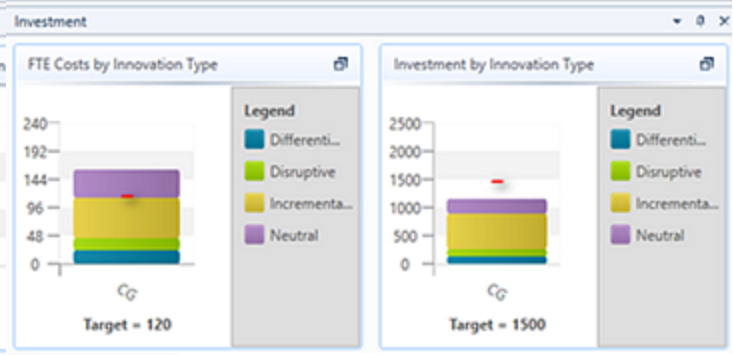
Portfolio Insight Before Optimization



Reduced investment by $750,000, maximized on Total Revenue







Strategic Alignment Optimization Example

Use the optimization engine within Portfolio Optimizer to provide the best project lineup based on the metrics and values of your choice.

This section provides an example about how to use optimization to determine the active projects in a portfolio meet the strategic goals for the company.

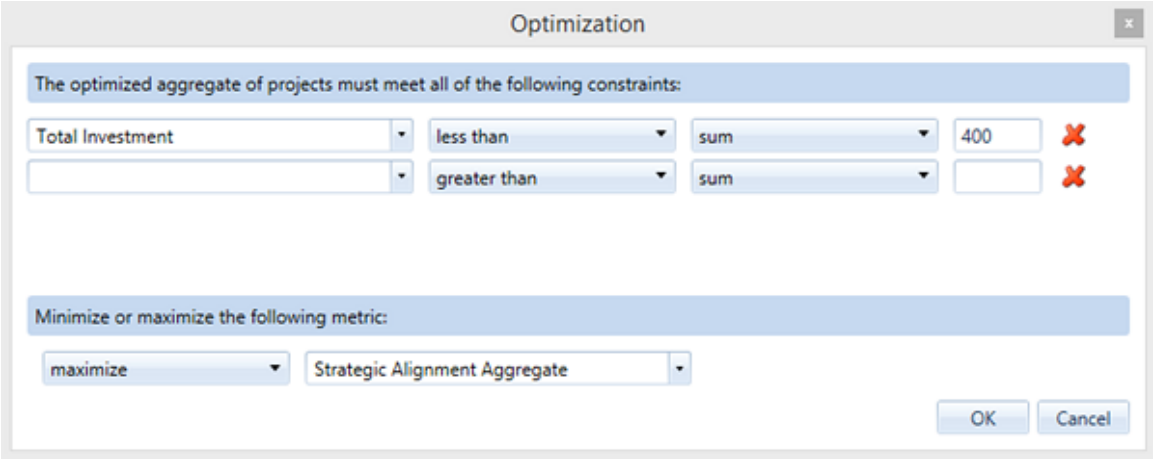
Consider the following small portfolio that contains metrics for scoring a product's attractiveness to the market, the supply chain feasibility, and the technical ability to create the product, among others. These metrics are used to rate a project from 1 to 9, 1 being the least attractive or feasible, and 9 rating highest, for each metric.

	Project Name	Market Attractiveness Score1	Supply Chain Feasibility	Technical Feasibility Score1	Total Investment
	Blue Orange Power...	3.00	4.00	5.00	32.8
	Spinach and Eggs	5.00	5.00	4.00	29.0
	Edible Rice Paper C...	2.00	7.00	8.00	34.5
	Cheese and Bacon...	4.00	4.00	1.00	34.5
	Back Pocket Pizza	9.00	9.00	9.00	252.9
	Seon Gas preserved...	8.00	5.00	3.00	26.5
	Pomodoro Souffle	5.00	8.00	5.00	33.4
	Protein Pate	8.00	4.00	5.00	26.5
	Cubed bacon low fat	9.00	9.00	9.00	586.5
	Truffels and Butter	4.00	5.00	7.00	32.1
	Keg of Guava and...	7.00	8.00	5.00	34.7
	7 Cheese Ravioli	2.00	5.00	9.00	29.0
	Starch Free Popcorn	9.00	5.00	3.00	47.9
	Olive Oil and Garlic...	7.00	5.00	3.00	20.2
	Strawberry Tacos	8.00	5.00	2.00	7.6
	7 soup pack	2.00	5.00	8.00	26.7
24		139.00	128.00	121.00	1,839.7

The portfolio contains a total of 24 projects, with a total investment of approximately $1,840,000. The projects in this portfolio also contain a Strategic Alignment Aggregate metric, which sums the total score of the strategic metrics. For example the strategic alignment score for the Spinach and Eggs project in the example above is 14. This calculated metric provides an overall rating of how a project aligns into the company's strategy.

The portfolio manager only has $400,000 to invest in the portfolio and needs to determine the best combination of projects for that investment that still meets the company's strategic goals around creating products that are attractive to the marketplace, and are easy to produce. Run an optimization

that restricts the sum of the Total Investment of all projects in the portfolio to $400,000, while maximizing on the Strategic Alignment Aggregate score.

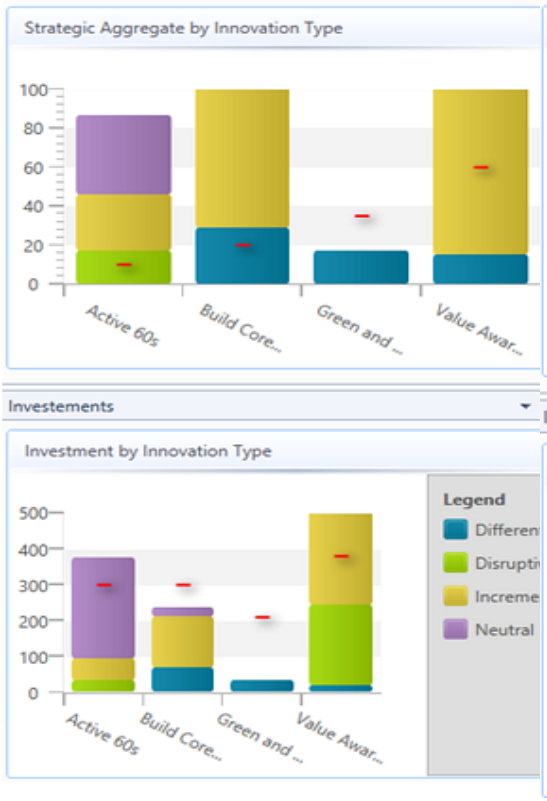


Portfolio Optimizer returns the optimized portfolio, indicating which projects in the portfolio are not the best match for the strategic goals if costs had to be reduced.

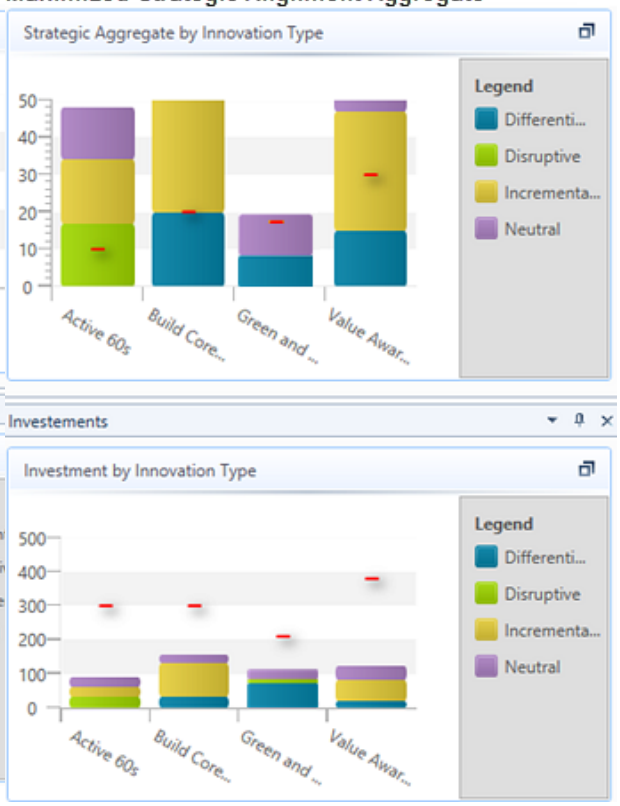
	Project Name	Market Attractiveness Score1	Supply Chain Feasibility	Technical Feasibility Score1	Total Investment
	~~Blue Orange Power...~~	~~3.00~~	~~4.00~~	~~5.00~~	~~32.8~~
	Spinach and Eggs	5.00	5.00	4.00	29.0
	Edible Rice Paper C...	2.00	7.00	8.00	34.5
	~~Cheese and Bacon...~~	~~4.00~~	~~4.00~~	~~1.00~~	~~34.5~~
	~~Back Pocket Pizza~~	~~9.00~~	~~9.00~~	~~9.00~~	~~252.9~~
	Seon Gas preserved...	8.00	5.00	3.00	26.5
	Pomodoro Souffle	5.00	8.00	5.00	33.4
	Protein Pate	8.00	4.00	5.00	26.5
	~~Cubed bacon low fat~~	~~9.00~~	~~9.00~~	~~9.00~~	~~586.5~~
	Truffels and Butter	4.00	5.00	7.00	32.1
	Keg of Guava and...	7.00	8.00	5.00	34.7
	7 Cheese Ravioli	2.00	5.00	9.00	29.0
	~~Starch Free Popcorn~~	~~9.00~~	~~5.00~~	~~3.00~~	~~47.9~~
	Olive Oil and Garlic...	7.00	5.00	3.00	20.2
	Strawberry Tacos	8.00	5.00	2.00	7.6
	7 soup pack	2.00	5.00	8.00	26.7
15		85.00	79.00	80.00	398.3

Use the charts feature to build charts and graphs to help assess the impact of the optimization on strategic goals and initiatives.

Portfolio Insight Before Optimization



Maximized Strategic Alignment Aggregate



Exercises - Optimizing Scenarios

Try out what you have learned! In the scenario you loaded, do the following:

- Show resource columns in the project grid.
- Add resource demands to projects using resource editor.
- Automatically balance the resource demand with the resource availability, to see its affect.
- Remove a project from the scenario, so it is not included in calculations.
- Optimize the scenario with a constraint on a revenue metric and a budget metric, while maximizing on financial reward.

(Your training environment may not contain these specific metrics. If not, pick metrics that make sense for your configuration.)

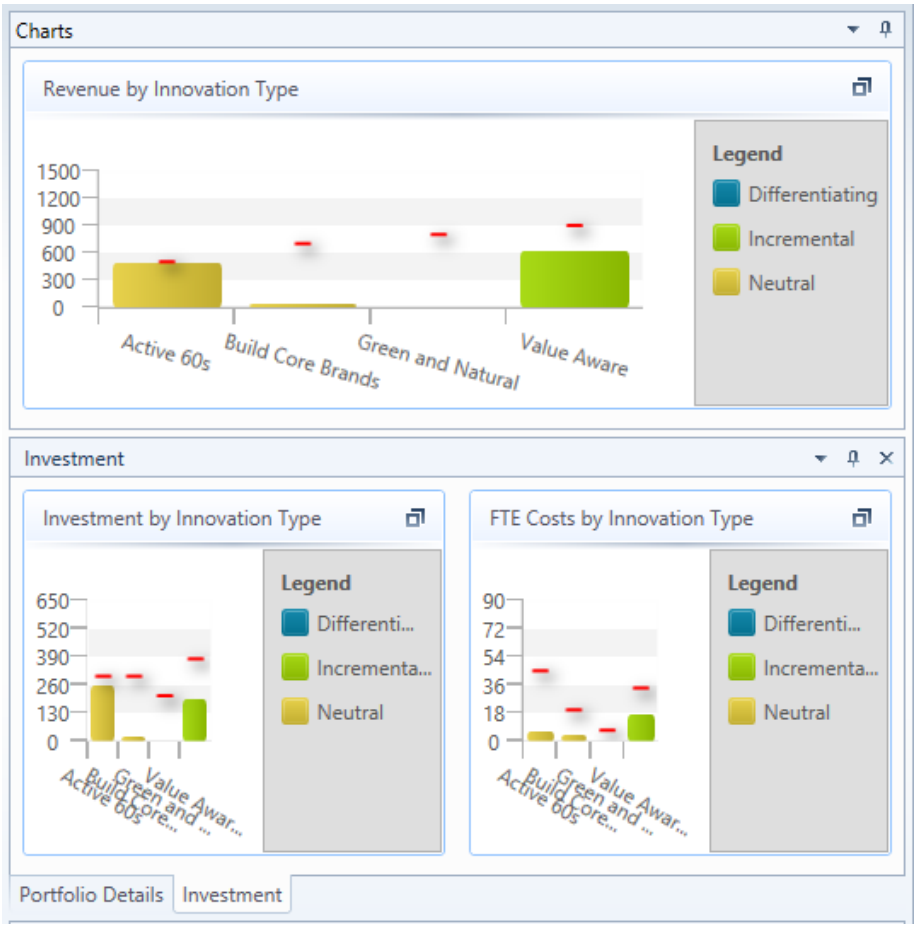
Charts Overview

Use a variety of chart types to include a graphic representation of data within a loaded portfolio or project.

After you create a chart, you can re-open the Chart Layout and modify the settings, including selecting a different chart type to show the same data in a different kind of chart.

Adding Chart Panes

Add one or more charts to create graphical representation of the projects currently display in the project grid. The default Portfolio Optimizer layout contains one chart pane, in which you can create and display one or more charts of project metrics and project information. You can add additional charting panes to display more than one chart at a time.



To add additional chart panes:

1. From the **View** menu, select **Add Chart Pane**.
2. In the **Pane Name** field, enter a name for the pane that describes the contents in it.

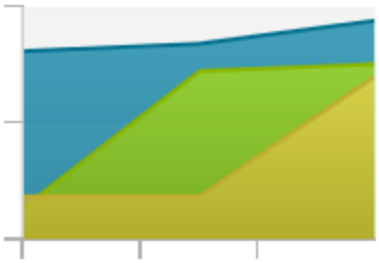
   For example, Investment to include charts regarding investments and resource costs by type.
3. Click **OK** to add the pane.

Notes:

- To rename a chart pane, click in the chart pane's title and make changes, as necessary. You can change the name of chart panes that you have added. Other panes that are part of the loaded layout cannot be changed.
- To delete an added chart pane, right click and select **Remove Chart**. The default Charts pane cannot be deleted.

Creating Area Charts

Create and display one or more charts in the original Charts pane, or add additional chart panes to create multiple charts.



Note: Select data in the order indicated by the numbered labels within the Chart Layout. The choices you make in one area can determine which choices are available in other areas.

To create an area chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents. Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout.**

Field	Description
Chart Type	Select **Area**.

3. In the **Horizontal (X-axis) Shows** section, do one of the following to select what the chart's area represents:
   - Select the top option and select one data point to display each of its values as an area on the X-axis in the chart.
   - Select the lower option and select one or more numeric data points to display each data point as an area on the X-axis in the chart.
4. In the **A Color Represents** section, do one of the following to select what an area's color represents:
   - Select **Not Applicable** to display all the areas in the same color.
   - Select the middle option and select one data point to represent each of its values as a different-colored area. A legend is automatically generated.
   - Select the bottom option and select one or more numeric data points to represent each data point as a different colored area. A legend is automatically generated.
5. From the **Area Size** list, select the numeric data point whose values are shown as area height on the Y-axis.

   If you have already selected numeric data, that choice determines which values are used, and this list is disabled.
6. In the **Area and Axis Labels** section, complete the following to include labels within the chart:

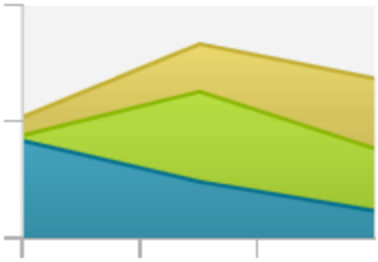
Field	Description
Horizontal (X-Axis)	Enter a label for the items arranged along the horizontal axis.
Vertical (Y-Axis)	Enter a label for the values measured along the vertical axis.
Show Area Values	Select this option to display numeric area values in the chart.
Number Format	Enter or select a code to determine how values are formatted. See "Custom Format for Numbers in Charts" on page 61.

To customize the axis labels, click **Chart Settings**.

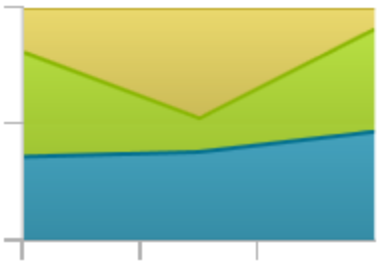
Labels and Axis	Description
For All Labels	In the **Labels Truncate At** field, enter the number of characters at which to truncate long labels to keep them from shifting other labels to the side. Use this option when changing the label angle is not sufficient. Truncating two or more labels to a length where the labels become identical causes Portfolio Optimizer to combine the data in the chart.

Labels and Axis	Description
Horizontal (X-Axis)	In the **Label Angle** field, enter an angle in degrees to display the item labels on the X-axis at a slant, rather than parallel to the axis. For example: • 0 deg - Text baseline is parallel to the X-axis. • 30 deg - Text slants downward left to right. This is the default setting. • 90 deg - Text displays vertically. • 315 deg - Text slants upward, left to right
Vertical (Y-Axis)	• **Range** - Select the **Custom** option to format the scale on the Y-axis. Enter a minimum and maximum value to define the start and end points of the scale unless the chart is stacked to 100%, in which case the numbers should remain 0 and 100 respectively. Enter a value for the number of primary tick marks between the minimum and maximum. • **Label Format** - Enter or select the format of the numbers in the Y-axis scale. For example, entering **#** forces values on the Y-axis scale to display as whole numbers. • **Label Angle** - Enter an angle in degrees to display the scale values at a slant. See the examples provided in the **Horizontal (X-Axis)** described above.

7. In the **Chart Style** section, select the type of area chart to create:
   - **To show areas in a single layer** - Clear both options in this section.
   - **To stack areas from bottom to top** - Select **Stacked Areas**. Areas are shown as stacked regions of different colors rather than having their colors superimposed over each other. Colors are identified in the legend.



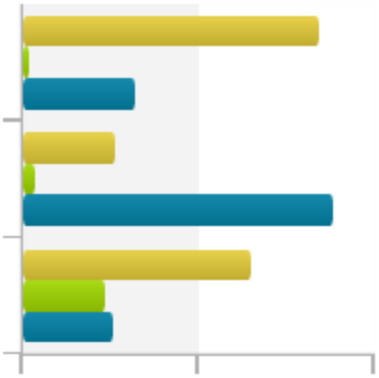
   - **To stack areas to fill the entire chart space** - Select **Stacked Areas** and **Stacked to 100%**. The total value of each area is represented as part of 100% rather than as a specific numeric value.



8. Click **OK** to create the chart.

Creating Bar Charts

Create and display one or more charts in the original Charts pane, or add additional chart panes to create multiple charts.



Note: Select data in the order indicated by the numbered labels within the Chart Layout. The choices you make in one area can determine which choices are available in other areas.

To create a bar chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents. Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout.**
Chart Type	Select **Bar**.

3. In the **Vertical (Y-axis) Shows** section, do one of the following to select what the chart's bars and bar groups represent:
   - Select the top option and select one data point to display each of its values as bars or bar groups on the on the Y-axis in the chart.
   - Select the lower option and select one or more numeric data points to display each data point as a bar or bar groups on the Y-axis in the chart.
4. In the **A Color Represents** section, do one of the following to select what a bar's color represents:
   - Select **Not Applicable** to display each data point or value as a single bar rather than as a bar group. All bars are the same color.
   - Select the middle option and select one data point to represent each of its values as a different colored bar in each bar group. A legend is automatically generated.
   - Select the bottom option and select one or more numeric data points to represent each data point as a different colored bar in each bar group. A legend is automatically generated. If you selected a numeric column for the Y-axis, this option is disabled.
5. In the **Bar Length** list, select the numeric data point whose values are shown as bar length.

   If you have already selected numeric data, that choice determines which values are used, and this list is disabled.
6. In the **Bar and Axis Labels** section, complete the following to include labels within the chart:

Field	Description
Horizontal (X-Axis)	Enter a label for the items arranged along the horizontal axis.
Vertical (Y-Axis)	Enter a label for the values measured along the vertical axis.
Show Bar Values	Select this option to display numeric values for each bar in the chart.
Number Format	Enter or select a code to determine how values are formatted. See "Custom Format for Numbers in Charts" on page 61.

To customize the axis labels, click **Chart Settings**.

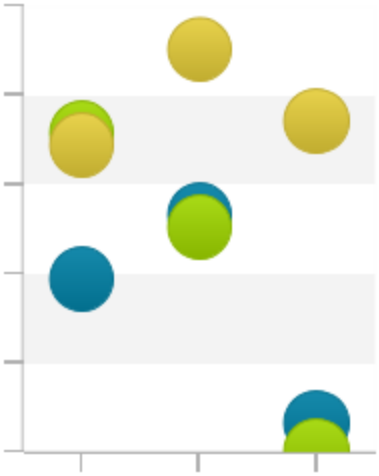
Labels and Axis	Description
For All Labels	In the **Labels Truncate At** field, enter the number of characters at which to truncate long labels to keep them from shifting other labels to the side. Use this option when changing the label angle is not sufficient. Truncating two or more labels to a length where the labels become identical causes Portfolio Optimizer to combine the data in the chart.
Vertical (Y-Axis)	In the **Label Angle** field, enter an angle in degrees to display the item labels on the Y-axis at a slant, rather than parallel to the axis. For example:

Labels and Axis	Description
	• 0 deg - Text baseline is perpendicular to the Y-axis. • 30 deg - Text slants downward left to right. This is the default setting. • 90 deg - Text displays vertically. • 315 deg - Text slants upward, left to right
Horizontal (X-Axis)	• **Range** - Select the **Custom** option to format the scale on the X-axis. Enter a minimum and maximum value to define the start and end points of the scale. Enter a value for the number of primary tick marks between the minimum and maximum. • **Label Format** - Enter or select the format of the numbers in the X-axis scale. For example, entering **#** forces values on the X-axis scale to display whole numbers. • **Label Angle** - Enter an angle in degrees to display the scale values at a custom angle. See the examples provided in the **Vertical (Y-Axis)** described above.

7. Click **OK** to create the chart.

Creating Bubble Charts

Create and display one or more charts in the original Charts pane, or add additional chart panes to create multiple charts.



To create a bubble chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents. Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout**.
Chart Type	Select **Bubble**.

3. From the **Vertical (Y-axis)** list, select the numeric data point whose values determine the bubble's position on the Y-axis.
4. From the **Horizontal (X-Axis)** list, select the numeric data point whose values determine the bubble's position on the X-axis.
5. From the **A Bubble Represents** list, select the data point whose values determine the bubble's position on the X-axis.
6. In the **Bubble Size** section, select the bottom option and select one data point that determines the size of each bubble in the cart.

   To represent all values with the same size bubble, select the **All the Same Size** option.
7. In the **Bubble Color** section, select the bottom option and select one data point to associate each of its values with a different bubble color. A legend is automatically generated.

   To represent all values with the same color, select the **All the Same Color** option.
8. In the **Chart Labels** section, complete the following to include labels within the chart:

Field	Description
Horizontal (X-Axis)	Enter a label for the items arranged along the horizontal axis.
Vertical (Y-Axis)	Enter a label for the values measured along the vertical axis.
Show Bubble Labels	Select this option to display labels next to each bubble in the chart.

To customize the chart labels, click **Chart Settings**.

Labels and Axis	Description
For All Labels	In the **Labels Truncate At** field, enter the number of characters at which to truncate long labels to keep them from shifting other labels to the side. Use this option when changing the label angle is not sufficient. Truncating two or more labels to a length where the labels become identical causes Portfolio Optimizer to combine the data in the chart.
Horizontal (X-Axis)	• **Range** - Select the **Custom** option to format the scale on the X-axis. Enter a minimum and maximum value to define the start and end points of the scale unless the chart is stacked to

Labels and Axis	Description

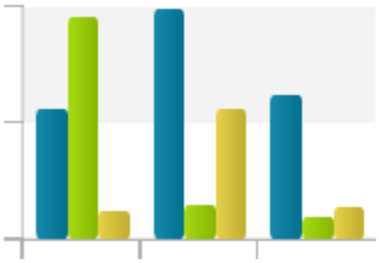
	100%, in which case the numbers should remain 0 and 100 respectively. Enter a value for the number of primary tick marks between the minimum and maximum.
	• **Label Format** - Enter or select the format of the numbers in the Y-axis scale. For example, entering "#" forces values on the Y-axis scale to display whole numbers.
	• **Label Angle** - Enter an angle in degrees to display the scale values at a custom angle.
	  • 0 deg - Text baseline is parallel to the X-axis.
	  • 30 deg - Text slants downward left to right. This is the default setting.
	  • 90 deg - Text displays vertically.
	  • 315 deg - Text slants upward, left to right

Vertical (Y-Axis)	• **Range** - Select the **Custom** option to format the scale on the Y-axis. Enter a minimum and maximum value to define the start and end points of the scale. Enter a value for the number of primary tick marks between the minimum and maximum. • **Label Format** - Enter or select the format of the numbers in the Y-axis scale. For example, entering **#** forces values on the Y-axis scale to display whole numbers. • **Label Angle** - Enter an angle in degrees to display the scale values at a custom angle. See the examples provided in the **Horizontal (X-Axis)** described above.

9. Click **OK** to create the chart.

Creating Column Charts

Create and display one or more charts in the original Charts pane, or add additional chart panes to create multiple charts.



Note: Select data in the order indicated by the numbered labels within the Chart Layout. The choices you make in one area can determine which choices are available in other areas.

To create a column chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents. Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout.**
Chart Type	Select **Column**.

3. In the **Horizontal (X-axis) Shows** section, do one of the following to select what the chart's columns or column groups represent:
   - Select the top option and select one data point to display each of its values as a column or column group on the X-axis in the chart.
   - Select the lower option and select one or more numeric data points to display each data column as a column or column group on the X-axis in the chart.
4. In the **A Color Represents** section, do one of the following to select what a column's color represents:
   - Select **Not Applicable** to display each data point or value as a single chart column rather than as a column group. All columns are the same color.
   - Select the middle option and select one data point to represent each of its values as a different colored column in each column group. A legend is automatically generated.
   - Select the bottom option and select one or more numeric data columns to represent each data point as a different colored column in each column group. A legend is automatically generated. If you selected a numeric column for the X-axis, this option is disabled.
5. In the **Column Height** list, select the numeric data column whose values are shown as column height.

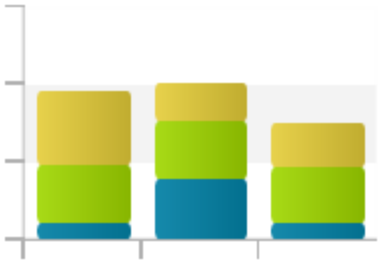
   If you have already selected numeric data, that choice determines which values are used, and this list is disabled.
6. In the **Column and Axis Labels** section, complete the following to include labels within the chart:

Field	Description
Horizontal (X-Axis)	Enter a label for the items arranged along the horizontal axis.
Vertical (Y-Axis)	Enter a label for the values measured along the vertical axis.
Show Column Values	Select this option to display each column's numeric value on or above the column.
Number Format	Enter or select a code to determine how values are formatted. See "Custom Format for Numbers in Charts" on page 61.

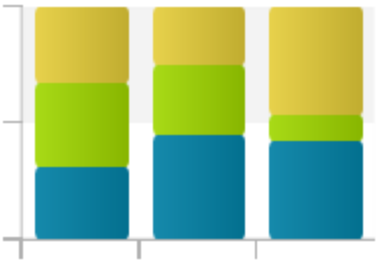
To customize the axis labels, click **Chart Settings**.

Labels and Axis	Description
For All Labels	In the **Labels Truncate At** field, enter the number of characters at which to truncate long labels to keep them from shifting other labels to the side. Use this option when changing the label angle is not sufficient. Truncating two or more labels to a length where the labels become identical causes Portfolio Optimizer to combine the data in the chart.
Horizontal (X-Axis)	In the **Label Angle** field, enter an angle in degrees to display the item labels on the X-axis at a slant, rather than parallel to the axis. For example: • 0 deg - Text baseline is parallel to the X-axis. • 30 deg - Text slants downward left to right. This is the default setting. • 90 deg - Text displays vertically. • 315 deg - Text slants upward, left to right
Vertical (Y-Axis)	• **Range** - Select the **Custom** option to format the scale on the Y-axis. Enter a minimum and maximum value to define the start and end points of the scale unless the chart is stacked to 100%, in which case the numbers should remain 0 and 100 respectively. Enter a value for the number of primary tick marks between the minimum and maximum. • **Label Format** - Enter or select the format of the numbers in the Y-axis scale. For example, entering **#** forces values on the Y-axis scale to display as whole numbers. • **Label Angle** - Enter an angle in degrees to display the scale values at a slant. See the examples provided in the **Horizontal (X-Axis)** described above.

7. In the **Chart Style** section, select whether to include column groups or stacked columns:
   - **To use column groups** - Clear both options in this section.
   - **To create a single column for a group** - Select **Stacked Columns**. Columns are shown as stacked segments of different colors. Colors are identified in the legend.



- **To create a single column for a group up to 100%** - Select **Stacked Columns** and **Stacked to 100%**. The total value of each column is represented as part of 100% rather than as a specific numeric value.



8. Click **OK** to create the chart.

Creating Pie Charts

Create and display one or more charts in the original Charts pane, or add additional chart panes to create multiple charts.

Note: Select data in the order indicated by the numbered labels within the Chart Layout. The choices you make in one area can determine which choices are available in other areas.

To create a pie chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents.

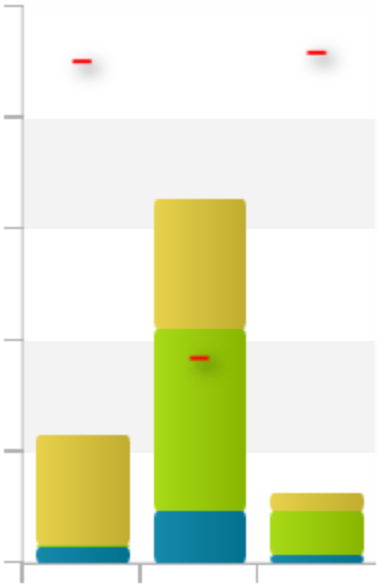
Field	Description
	Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout**.
Chart Type	Select **Pie**.

3. In the **Slice Size** list, select the numeric data point whose values determine the size of the pie slices.
4. In the **A Slice Represents** section, select the data point whose values determine what each slice of pie represents.
5. In the **Slice Labels** section, select an option to display for the slice size numbers:
   - **Values** - As numbers specifying the appropriate units.
   - **Percentages** - As percentages of the entire pie.
   - **Neither** - Displays the pie with no numbers for the size of a slice.

   If you select to include values or percentage, enter or select a code to determine how values are formatted. See "Custom Format for Numbers in Charts" on page 61.
6. Click **OK** to create the chart.

Creating Strategic Bucket Charts

A strategic bucket is a specific aspect of a project or portfolio for which your company has decided to set a numeric value (typically monetary) as either a limit or goal. Your company might be able to categorize projects by product categories, such as product lines, they could be market segments, such as by region or demographic, or by types of technology. The segments you define are specific to your business. The categorization of projects, such as it market segment or technology type is called a strategic dimension. Each dimension includes a strategic bucket. For example, if the strategic dimension is market, the strategic buckets might be US, Europe and Africa; or 20s, 40s, and 60s, to target a specific age demographic.



A strategic bucket chart displays the target or limit value and shows the items in each bucket in relation to the target/limit for the bucket, whether they achieved it or exceeded it.

Ensure that the necessary elements are created in Accolade prior to loading data for charting in Portfolio Optimizer.

- **Metrics** - Each strategic bucket chart shows the values accumulated by the buckets of a single strategic dimension. To identify which strategic bucket a project belongs to, there must be a metric for the charted dimension in which each project manager or team leader can select or enter the appropriate strategic bucket for that project. Each strategic bucket exists as a value available in the metric.
- **Required Reference Tables** - In addition to the metric, there must be a reference table, made **Available to Portfolio Optimizer** that lists the strategic buckets in the charted dimension and also lists the values that are shown on the chart as goals or limits. Thus, there must be at least two columns in the reference table: one of bucket names, and one of numbers, but there can be more columns. You might have several value columns containing goals for several different metrics. Each pairing of buckets with a different metric would be shown in a different strategic bucket chart.

  When you create the strategic bucket chart in Portfolio Optimizer, you specify which reference table contains the strategic buckets to chart and which metric contains the values (buckets) listed in the table. Each strategic bucket item in the reference table must be identical to the metric item it corresponds to, i.e. identical text. Since there are limitations on the format and length of entries in the leftmost column of a reference table, you can enter appropriately truncated names in that column, and enter the correct names (with spaces and more than 16 characters if needed) that are identical to the metric list items in the second column of the table. The goal/limit values would be in the third column.

This requirement also means that if strategic bucket names are entered in string type metrics, rather than in list type metrics, charts may not be accurate if the strategic bucket names were entered incorrectly in the projects.

To create a strategic bucket chart:

1. Right-click in a chart pane and select **Add Chart**.
2. Complete the following to identify the chart and its type:

Field	Description
Chart Title	Enter a title that describes what the chart represents. Use the **Chart Comments** field in the lower portion of the dialog box to provide additional information and notes about the chart contents. Comments are viewable when users right-click a chart and select **Chart Layout.**
Chart Type	Select **Strategic Bucket**.

3. In the **Strategic Buckets** section select the reference table that contains the strategic buckets and the columns within that table that contain the strategic bucket names and the target or limit values.
4. From the **Strategic Bucket Metric** list, select the metric that contains the strategic buckets to map in this chart.
5. From the **Block Height** list select the metric that contains the values measured in the buckets.
6. From the **A Block Represents** list, select the column that contains the items represented by the segments (blocks) of each strategic bucket.
7. In the **Block Color** section, do one of the following:
   - Select **All the Same Color** to display each column in the chart the same color.
   - Select the bottom option and select a metadata or a metric to represent each data point as a different color within the column. A legend is automatically generated.
8. In the **Arrange Blocks By** section, do one of the following:
   - Select **None** to arrange blocks at random.
   - Select the bottom option and select a column to use those values to sort the blocks. Select Ascending or Descending to specify the direction of sort.
9. In the **Block and Axis Labels** section, complete the following to include labels within the chart:

Field	Description
Horizontal (X-Axis)	Enter a label for the items arranged along the horizontal axis.
Vertical (Y-Axis)	Enter a label for the values measured along the vertical axis.
Show Column Values	Select this option to display each column's numeric value on or above the column.

To customize the axis labels, click **Chart Settings**.

Labels and Axis	Description
For All Labels	In the **Labels Truncate At** field, enter the number of characters at which to truncate long labels to keep them from shifting other labels to the side. Use this option when changing the label angle is not sufficient. Truncating two or more labels to a length where the labels become identical causes Portfolio Optimizer to combine the data in the chart.
Horizontal (X-Axis)	In the **Label Angle** field, enter an angle in degrees to display the item labels on the X-axis at a slant, rather than parallel to the axis. For example: • 0 deg - Text baseline is parallel to the X-axis. • 30 deg - Text slants downward left to right. This is the default setting. • 90 deg - Text displays vertically. • 315 deg - Text slants upward, left to right
Vertical (Y-Axis)	• **Range** - Select the **Custom** option to format the scale on the Y-axis. Enter a minimum and maximum value to define the start and end points of the scale unless the chart is stacked to 100%, in which case the numbers should remain 0 and 100 respectively. Enter a value for the number of primary tick marks between the minimum and maximum. • **Label Format** - Enter or select the format of the numbers in the Y-axis scale. For example, entering **#** forces values on the Y-axis scale to display as whole numbers. • **Label Angle** - Enter an angle in degrees to display the scale values at a slant. See the examples provided in the **Horizontal (X-Axis)** described above.

10. Click **OK** to create the chart.

Custom Format for Numbers in Charts

Create a custom number format in the Number Format field when creating a chart to change how numeric values displays in the chart. A custom number format creates masks or patterns that show how numbers display. If a chart contains a number that differs from the pattern, the value displays according to the pattern.

Use the following rules and guidelines to build a custom number format.

	Characters, Notes, and Examples
To display significant digits but not insignificant zeroes.	**Character:** # **For example:** #.## displays the following:

	Characters, Notes, and Examples
	6.357 as 6.36 125.3 as 125.3 125.300 as 125.3 0.678 as .69
To display insignificant zeroes if a number has fewer digits than there are zeroes in the format.	**Character:** 0 **For example:** 00.000 displays the following: .62 as 00.620 6.03 as 06.030 125.72000 as 125. 720
To place the location of the thousands separator	**Character:** , (comma) **For example:** #,### displays the following: 1234 as 1,234 1234.56 as 1,235 1,234 as 1,234 Enter a comma as the thousands separator even if you are working in a region that uses a different symbol. Each user's computer displays the symbol appropriate to their selected region.
To add standard text to the number format	**Character:** 'text'" Enclose the text in single quotation marks. Precede the currency value with a variety of currency symbols or add text. **For example:#.00 'dollars'** displays **17** as **17.00 dollars**.
To add supported single characters	**Characters:** $ + ( ) : ^ ' { } < > = - / ! & ~ (and the space character) Add these characters before or after the number format *without* using double quotes. **For example:** $#,###.## displays 1234.56 as $1,234.56.
To add a single characters	**Character:** \ Insert single characters, with some exceptions, preceding the character with a backslash (\). *Excluded* characters include date and time formatting characters (d, t, h, m, etc.), numeric formatting characters described above (#, 0, comma, period, etc.) and string formatting characters (@, &, <, >, and !).

Building a Number Format with Multiple Sections

A number format can have up to three sections, separated by semi-colons.

- A one section format applies to all values. For example, **$#,###.##** displays positive and negative values the same way.
- In a two-section format, the first section is for positive values and zeroes, and the second section is for negative values. For example, **$#,###.##; ($#,###.##)** displays 16.50 as $16.50 and -16.50 as ($16.50).
- In a three-section format, the first section applies to positive values, the second to negative values, and the third to zeros. For example: **$#,###.##;($#,###.##);0.00** displays zero as 0.00. In order to prevent a zero from appearing, place a single # in the third section.

Exercises - Creating Charts

Try out what you have learned! In the scenario you loaded, do the following:

- Add a column chart to the default chart pane that contains the Total Revenue Target as the horizontal axis in the chart.

Save and Commit Changes Overview

Saving data ensures that the changes you have made to a scenario are saved and available the next time you, or someone else loads the scenario. When you are ready to update the project information in Accolade with the changes made in Portfolio Optimizer, save the portfolio or the scenario to server.

Saving Scenarios

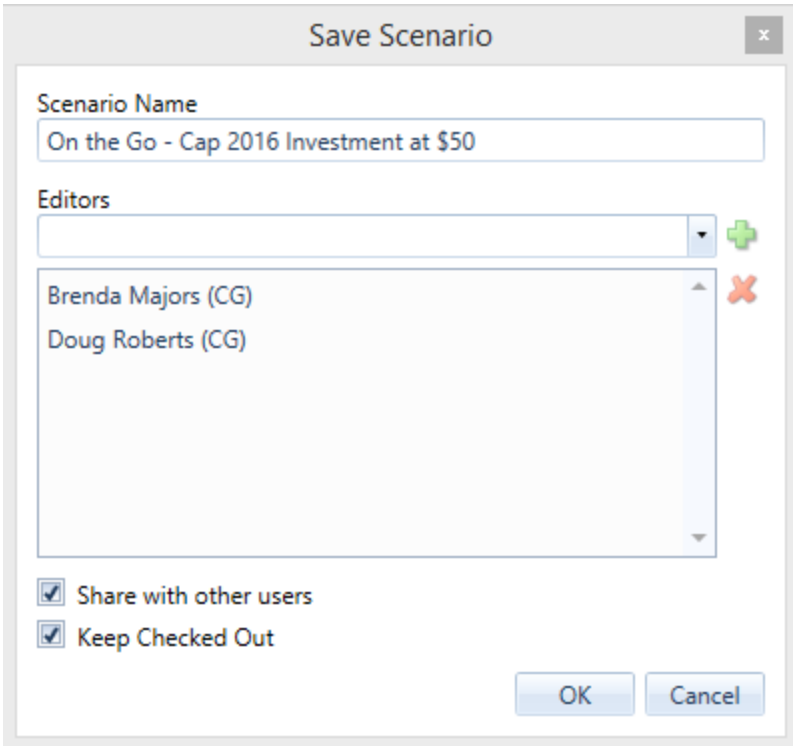
Scenarios are saved copies of the data that is currently displayed in Portfolio Optimizer. Create and save as many scenarios as needed to simulate various situations. The data within a scenario does not change the data within the Accolade database until you choose to commit the changes to the Accolade server.

You must have Save Scenario rights to Portfolio Optimizer to save a scenario.

You do not have to save as the same type of data you loaded. For example, if you load a portfolio and want to simulate a situation without committing changes, save the loaded data as a scenario. Saving a scenario with a unique name creates the scenario in the scenarios database.

To save a scenario:

1. From the **File** menu, select **Save to Server > Scenario**.



2. In the **Scenario Name** field, provide a name that identifies the use and the data provided in the scenario.

   For example, include the portfolio name and a brief explanation of the data modeled in the scenario, such as, **On the Go - Cap 2016 Investment at $50 Million**.

3. In the **Editors** field, select a user that can modify or delete the scenario and click  to add their name to the list.

   Only users with Save Scenario rights to Portfolio Optimizer are available for selection as scenario editors.

   Repeat this step to add additional editors, as needed. To delete an editor, select their name in the list and click  .

4. Select the **Share with other users** check box to make this scenario available to other users with Load Scenario rights to Portfolio Optimizer.

   To create a version of scenario that other Portfolio Optimizer users can see but cannot edit, select the Share with other users check box, but do not add other users as editors. Users must save the scenario with a different name to save any changes.

5. Select the **Keep Checked Out** check box If you have additional changes to make to the scenario after saving it.

   While checked out, you are the only user who can save changes to the scenario. Other users are not given the option to check out the scenario until you select to check it back it in. To check the scenario in, click this option when you save the scenario.

6. Click **OK** to save the scenario.

Notes:

- To delete a scenario, select **File > Delete Scenarios**. Only the scenario creator or assigned editors can delete the scenario. Delete a scenario does not change the portfolio data contained in the scenario.
- To create a private scenario that only you have access to, do not select any editors, and clear the **Share with other users** check box.

Saving Portfolio Updates to Accolade

When you are ready to update the project and resource data that is loaded in Portfolio Optimizer back to the projects in Accolade, save the currently loaded data to the Accolade projects.

Save changes to Accolade to update project data.

Important! Saving updates from Portfolio Optimizer to Accolade updates the data in the Accolade database and overwrites any resource planning or project data that exists in the database. The changes cannot be undone.

You can save changes to the following Accolade data:

- Projects that you have Manage Process rights to. If you have made changes to projects that you do not have Manage Process right to, changes are not made to those projects. If you have made project ranking updates, no ranking changes are saved to Accolade, even for the projects that you *do* have Manage Process rights to.
- The scheduling of some projects, even when you do not have Manage Process rights.
- Changes to resource capacity if you have the Resource Capacity Planner user role.

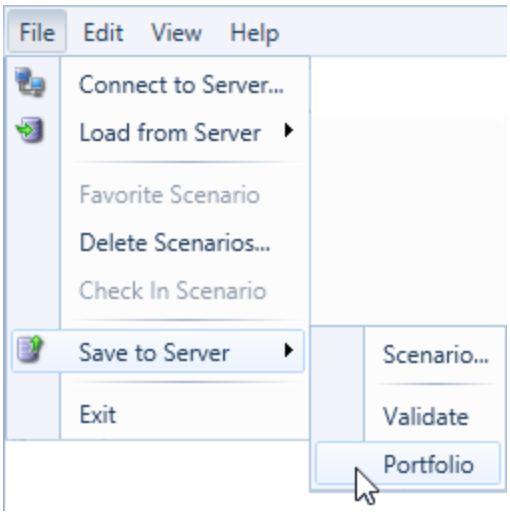
You must have **Save Portfolio** rights to Portfolio Optimizer to save updates to Accolade.

You do not have to save as the same type of data you loaded. For example, if you load a scenario and want to save the changes made to the project data to the projects in Accolade, save the loaded data as the portfolio.

You can perform the same validation on the data loaded to Portfolio Optimizer that is run when you select to save the changes to Accolade. Validating before you save allows you to fix any problems before you try to update the portfolio. From the **File** menu, select **Save to Server > Validate**. If errors are found, expand the Projects or Pools list in the Validate dialog box and expand an individual project or pool to view its errors. If no errors are found, the progress bar disappears and the Validate dialog box does not display.

To save portfolio updates to Accolade:

1. From the **File** menu, select **Save to Server > Portfolio**.



2. When prompted, click **Yes** to save the changes and update the project data in Accolade.

Notes:

- If a column is added to a matrix after you loaded data to Portfolio Optimizer, the column is blank in projects that contain the matrix. If there is a mismatch in columns due to configuration changes to a matrix after you loaded data to Portfolio Optimizer, the data for that row in the matrix is not saved to Accolade.
- Any resource changes to time periods that are now in the past are not saved to Accolade.
- If any change in a project, other than ranking changes, fails to save, none of the project's data is saved.

Troubleshooting in Portfolio Optimizer

There are metrics missing in Portfolio Optimizer that I see in Accolade

For a metric to display in Portfolio Optimizer, the configuration of a metric must be set to **Available to Portfolio Optimizer**. If a metric is set to **Show in Portfolio Optimizer**, it is visible and fully available in the application. If it is set to **Reporting Only**, the metric is available in charting in Portfolio Optimizer, but is not available to select as a column in the project grid.

Calculated metrics that are available to Portfolio Optimizer also require the following:

- If it references metrics, those metrics must also be set to **Available to Portfolio Optimizer**.
- At least one project in a Portfolio Optimizer scenario to generate a value for the calculation.
- If the expression uses the ReferenceTable or MatrixCellValue functions, the respective reference table or matrix must also be set to **Available to Portfolio Optimizer** for the metric calculation to work in Portfolio Optimizer.

Work with your Accolade Administrator or Process Designer to configure metrics, as needed.

Projects in the project grid are disabled

A project in the project grid can display as disabled either because the project is on hold, or because the project has been filtered to not be included in Portfolio Optimizer.

- **To determine if a project is on hold** - Select the project name in the grid. In the Project Details pane, click the project link to display the project in Accolade. Select the Details icon and verify the status in the **Most Recent Decision** field.
- **To determine whether a project is disabled due to filtering** - From the **View** menu, select **Filters > Projects**. Either evaluate the filters to determine if they apply to the project; or remove all filters to see if the project is enabled.

Projects in the project grid have lines through them

A project in the project grid can display with a line through the project row for the following reasons:

- The project was removed from resource availability and charting calculations.
- The project was forced out of an upcoming scenario optimization.
- The project was removed from the optimal set of projects through an optimization.

A purple bar displays in a time period for a project in project grid

A purple bar in a time period cell in the project grid indicates that project has been paused for all or a portion of that time period.

I cannot scroll to the left or right in the project grid

If you make too many columns frozen, the frozen columns fill the window entirely, and you are be unable to scroll horizontally. Reduce the number of frozen columns or drag columns narrower until the scrolling region becomes visible.

I cannot make edits to values in the project grid

The grid is in read-only mode. Click  in the top left corner of the grid to place it in edit mode.

[?] displays instead of a number in a cell in the project grid

There is a resource demand with no capacity in the project. Use Resource Editor to view the capacity assigned to pools and time periods to ensure the demand for the project can be met. If viewing by time period, there is at least one project that has demand on a resource pool with no capacity. If viewing by resource pool, at least one project has demand on the pool in that time period.

A demand bar in the Filters and Waterlines pane is blank and displays [?]

There is a resource demand with no capacity in the column. If viewing by time period, there is at least one project that has demand on a resource pool with no capacity. If viewing by resource pool, at least one project has demand on the pool in that time period.

Some projects in the project grid display shaded in blue

The project is set as Inactive in the Active in Scenario column. A project is considered inactive if it is excluded from calculation, on hold, closed, or killed.

Some projects in the project grid display with blue text

The project is set as required when running an optimization.

Charts in my layout display "Error" instead of any data

The chart is referencing data that is no longer available in the portfolio or scenario. Double-click the pane the chart displays in to review the error and then modify the chart configuration.

My charts do not display a legend

A legend is added to a chart automatically when the chart contains multiple colors to represent data. Scroll to the bottom of the chart, or enlarge the chart pane to display the legend.

Sopheon Corporation

6870 West 52nd Avenue, Suite 215

Arvada, CO 80002