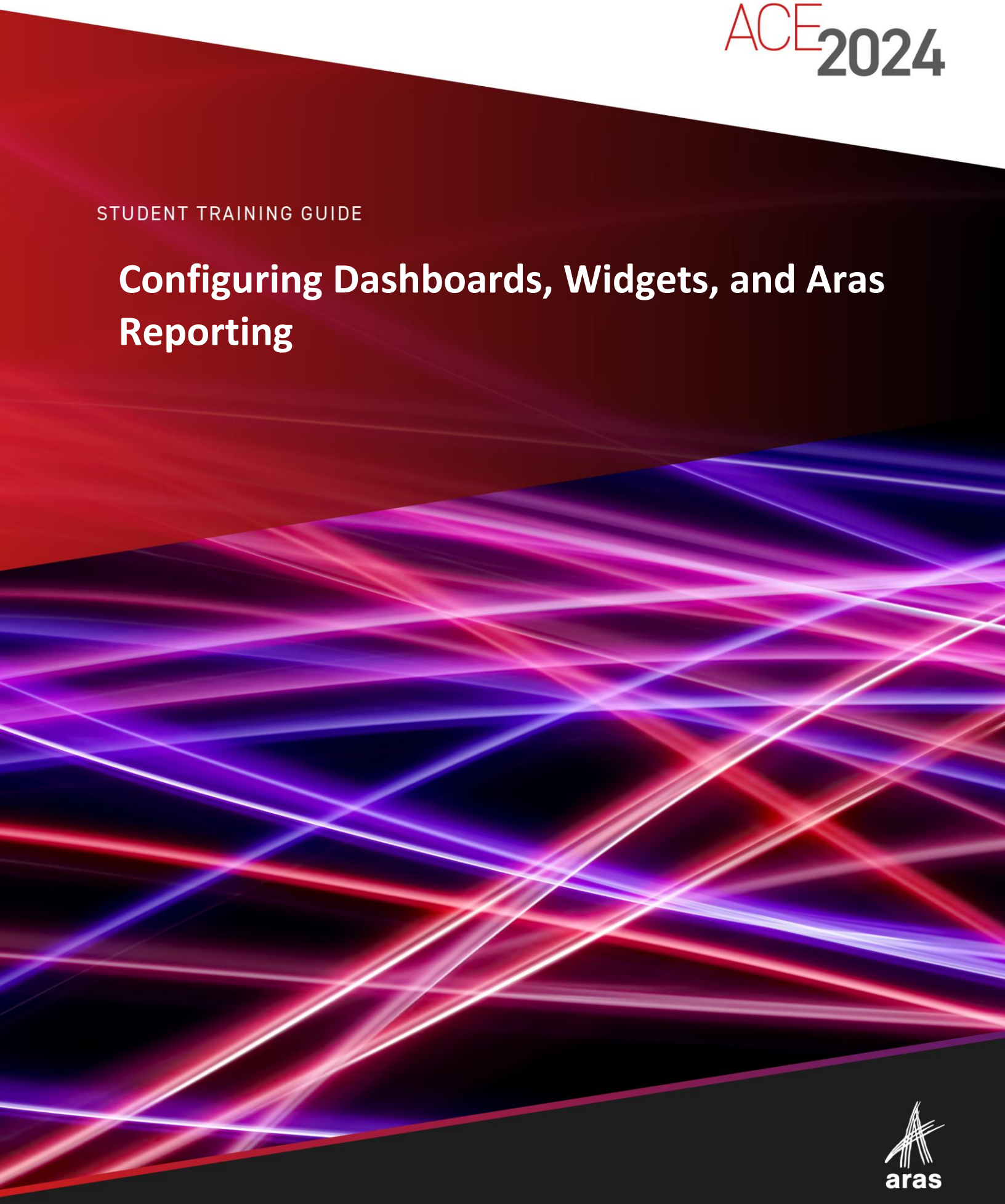
ACE 2024

STUDENT TRAINING GUIDE

Configuring Dashboards, Widgets, and Aras Reporting



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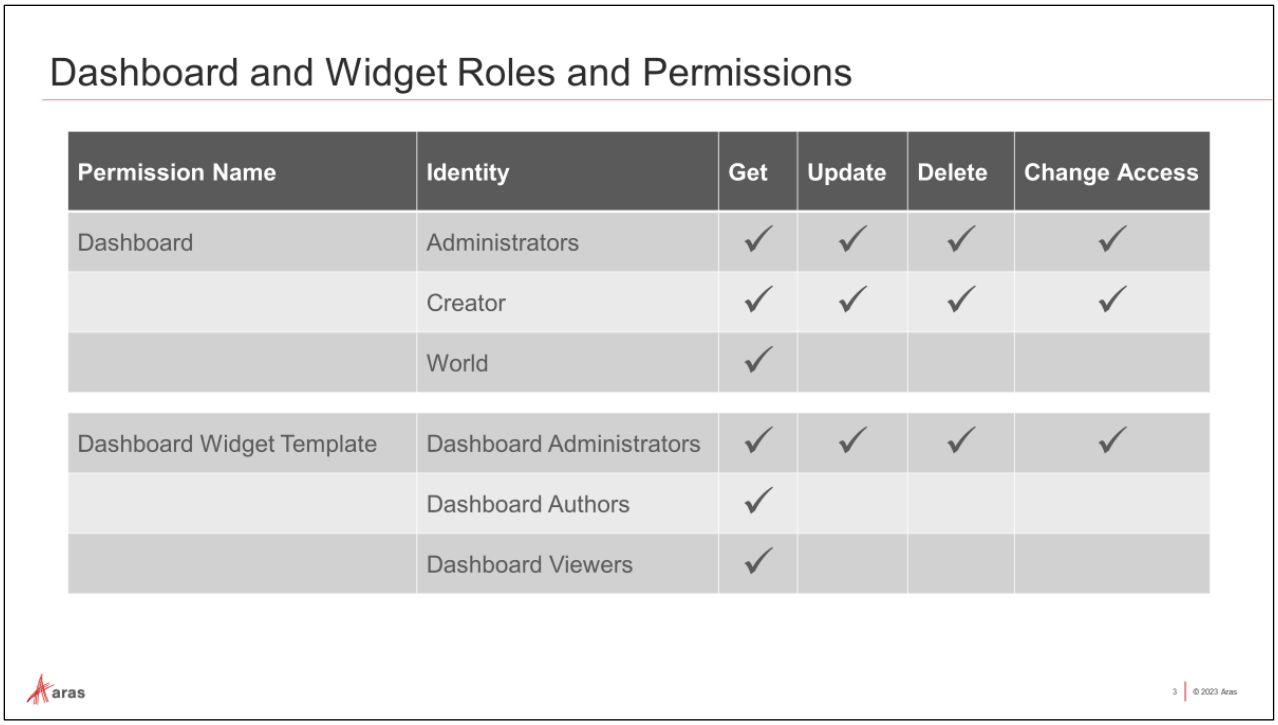
Configuring Dashboards, Widgets, and Aras Reporting

Overview

In this session, you will learn how to create Dashboards within Aras Innovator to provide configurable views that can be populated with Interactive Widgets for displaying and navigating data. You will also learn how to create a new Report and view it in a Dashboard. A knowledge of Query Definitions and Tree Grid Views is advised.

Objectives

- Create a Dashboard with a Private Permission
- Create a Widget Template using a Default Favorite Search
- Create a Report
- Define Report Properties
- Configure Report Table
- Visualize Reports in Aras Innovator Dashboards



Dashboard and Widget Roles and Permissions

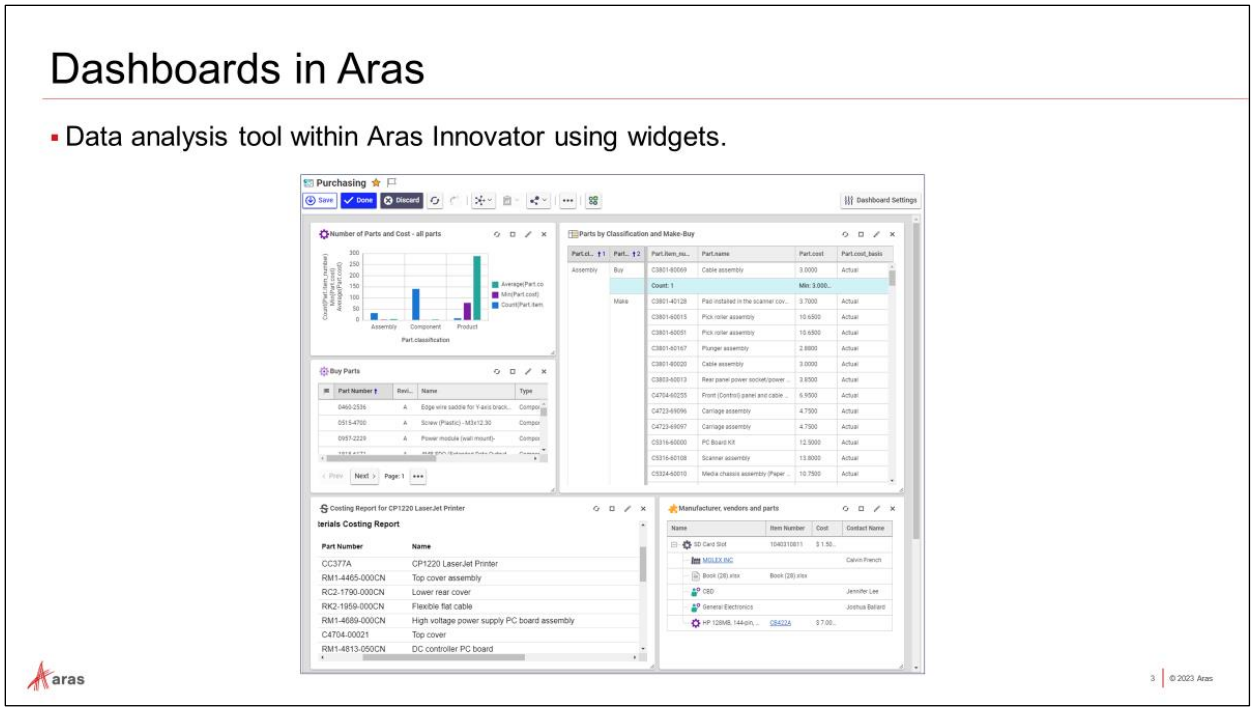
A low-code platform capability provides dashboards with interactive widgets for viewing and displaying data. Users can easily add the widgets they want to see, choose the data displayed, and design the layout using drag & drop. Administrators can create reusable widget templates to help users get started. There are two Permissions sets available: Dashboard and Dashboard Widget.

Dashboard Administrators	Configure all Dashboard Features, as well as create, edit, and delete Dashboards and Widget Templates. Dashboard User permissions are managed by Dashboard Administrators.
Dashboard Authors	Create and edit Dashboards, create private permissions, and view Dashboards that they create but have View Only permission on Widget Templates.
Dashboard Viewer	View Only permission on Dashboards and Widgets.

Note: Users not assigned to one of these three identities do not have access to Dashboards, unless a private permission for specific Dashboards has been created that overrides the default permission model.

Try it … Explore the cui_Dashboard permissions

2. Log in as an administrator (username: admin / password: innovator).
3. Open **cui_Dashboard** ItemType.
4. Analyze the content of 'Can Add' tab.
5. Under Permissions tab, open the **cui_Dashboard** default Permission.
6. Close the **cui_Dashboard** ItemType and related **cui_Dashboard** Permission.

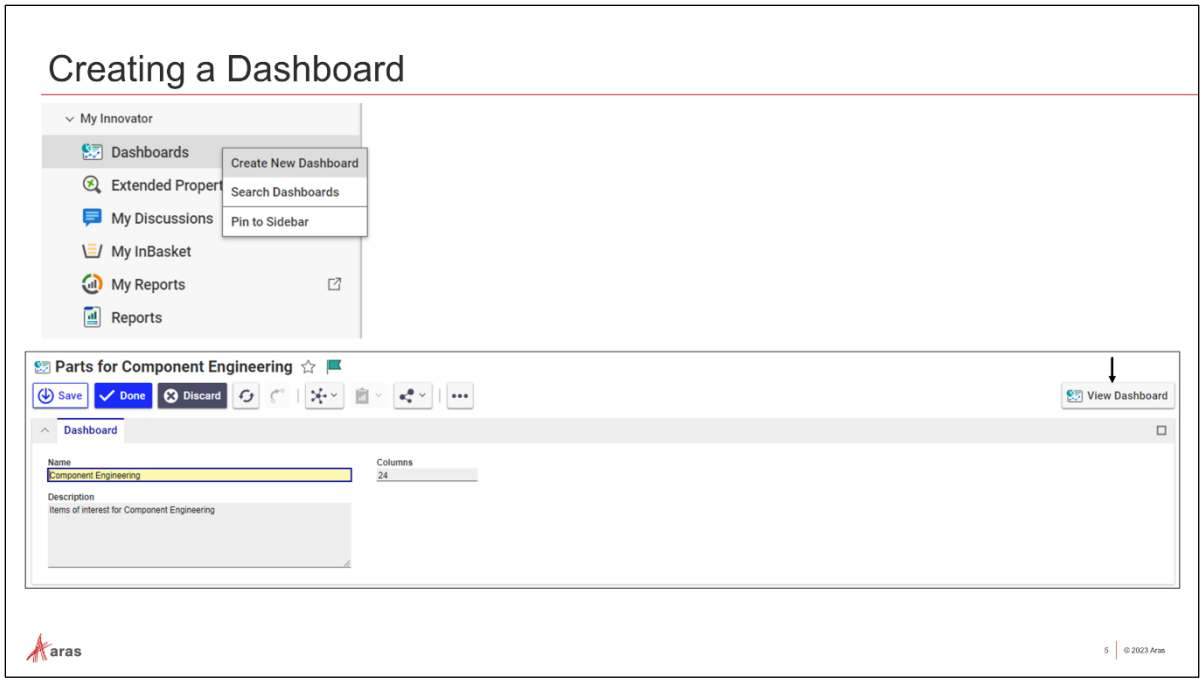


Dashboards in Aras

Dashboards are used to display Aras data in either real time or with a data snapshot. Each dashboard contains several interactive Widgets that can be of different types, including data grids, charts, reports.

The Dashboards have specific permissions to grant capacity of data analysis to specific groups in your company. Several Dashboards can be created for different purposes, see some examples below:

- Engineering:
  - Engineering Change Reports (New vs Closed, Pipeline, Days To Complete)
  - Parts And Assemblies (Released, Ready To Release)
  - OCM-User Adoption (Users Registered, Trained, Active, Not Active)
- Purchasing:
  - Costs rollup
  - Late Deliveries
  - Orders Not Placed
- Enterprise Master data management:
  - Part Global Attribute Mismatch (Desc, Rev, UOM, State)
  - BOM Accuracy (Parents Missing Children, Children Missing Parents, Qty)



Creating a Dashboard

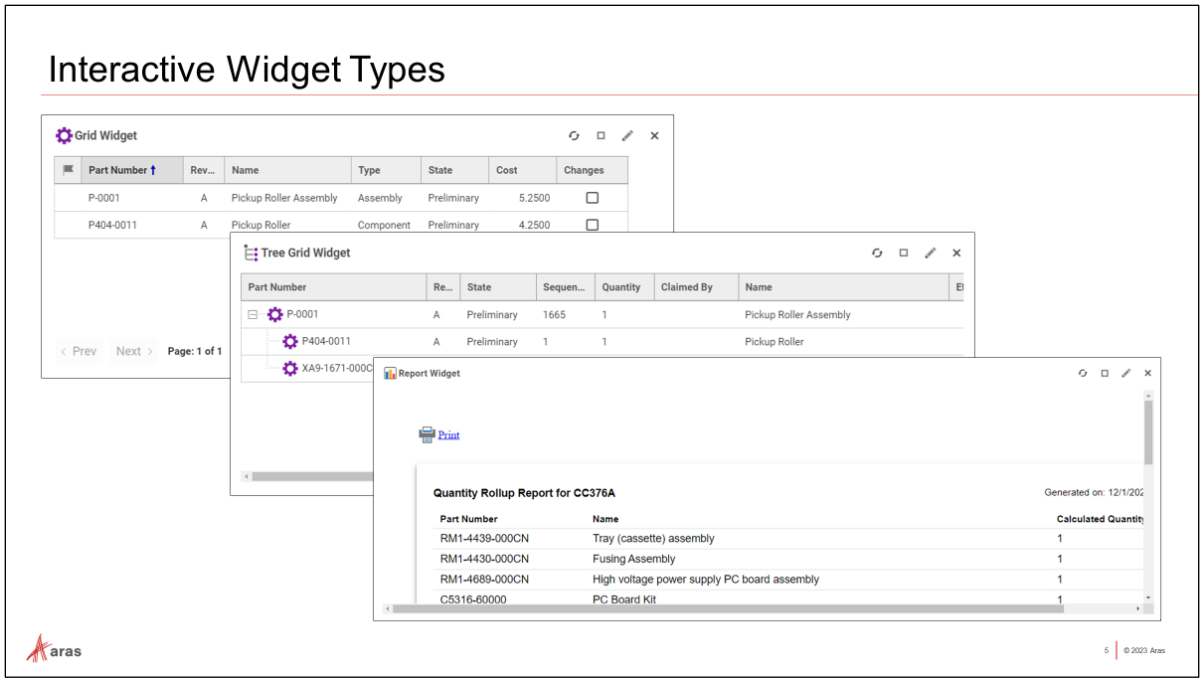
Aras Dashboards contain Interactive Widgets to monitor and analyze data within Aras Innovator. Users can customize the widgets to adjust visual settings. Users can configure Dashboard Settings, View Dashboard content, and edit Widget Settings from a Dashboard Item.

Try it … Create a Dashboard

1. Navigate in the TOC to My Innovator > Dashboards.
2. Right-click and select Create a new Dashboard.
3. Enter the following:

Name	Component Engineering
Description	Items of interest for Component Engineering

4. Click Save.



Interactive Widget Types

An Interactive Widget Template provides details such as widget name, label, type, and icon. The Widget Templates define the properties that control a widget's content and behavior. A Dashboard User can enter these properties manually or a Dashboard Administrator can predefine them. Interactive Widget Types determine the appearance and functionality of an Interactive Widget. The following Widget types can be used:

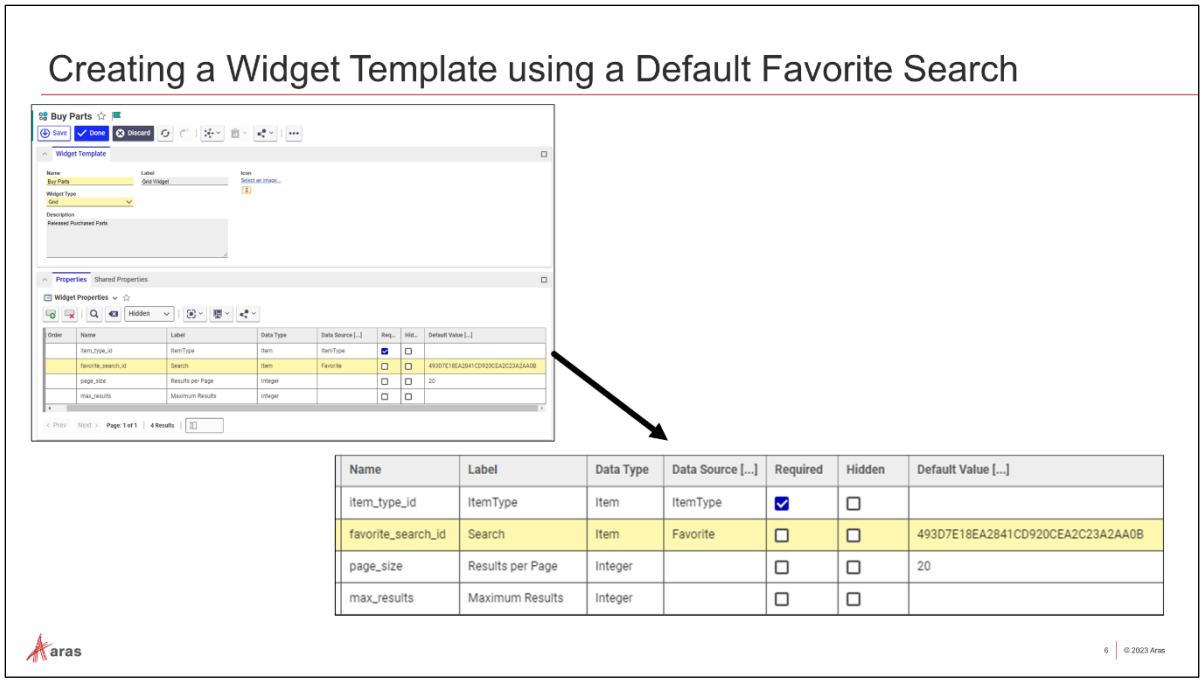
- **Grid Widget:** Displays search results. It is used to display data from the ItemType with related Items.
- **Tree Grid Widget:** Displays existing Tree Grid Views associated with the Query Definition within Aras Innovator such as BOM Structures, CAD Structures, and Project Lists.
- **Report Widget:** Displays existing reports within Aras Innovator.

Widget Settings

Widget Settings allow user to customize the functionality of the Interactive Widget. Users can specify which content should appear in the Interactive Widget within the Widget Settings.

Label	Widget Name. This is an optional field.
Icon	Widget Icon. This is an optional field.
Width & Height	Width and Height of the Widget. This is an optional field.
ItemType	Widget ItemType. This is a required field.
Search	Widget Favorite Search. This is an optional field.
Tree Grid View	Display Tree Grid View Definition. This is a required field.
Context Item	Root item of the Tree Grid View. This is a required field.
Report	Display Widget Report. This is a required field.
Results per Page	Number of rows to be displayed per page in the grid. This is an optional field.
Maximum Results	Maximum number of items to populate the widget grid (across all pages). This is an optional field.

NOTE: The fields shown will vary depending on the Widget selected.



Create a Widget Template using a Default Favorite Search

Aras Dashboards contain Interactive Widgets to monitor and analyze data within Aras Innovator. Users can customize the widgets to adjust visual settings. Users can configure Dashboard Settings, View Dashboard content, and edit Widget Settings from a Dashboard Item.

Try it … Create a Widget Template using a Default Favorite Search

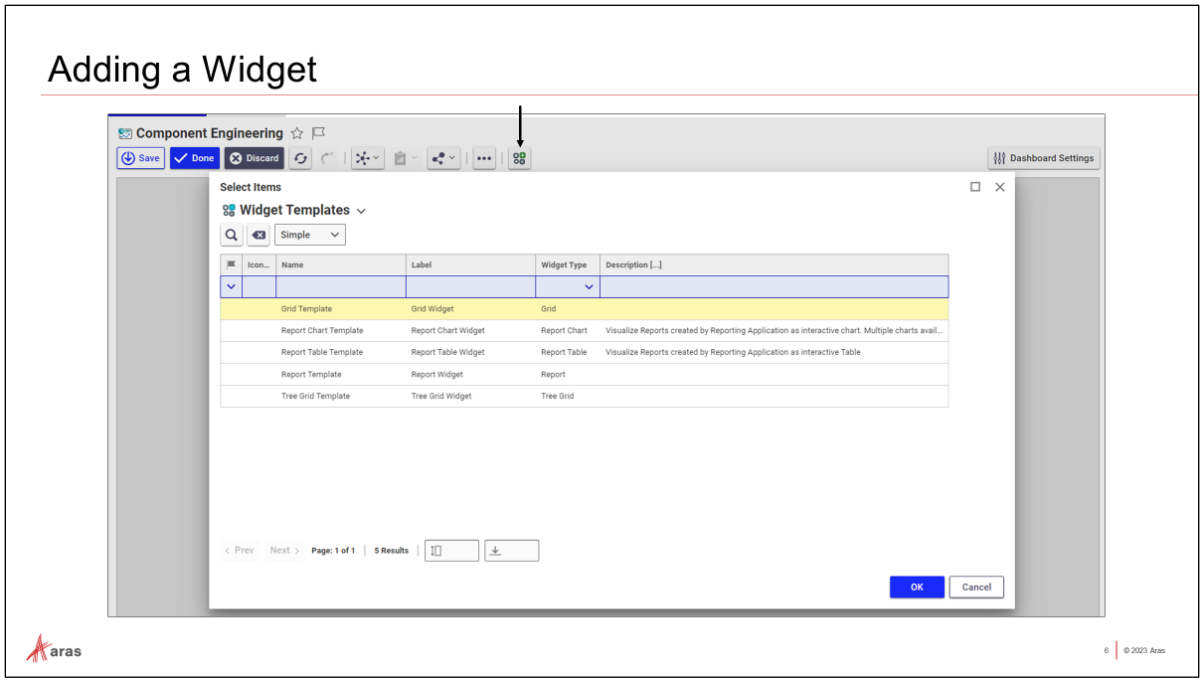
1. Navigate in the TOC to Administration > Configuration > Widget Templates.
2. Right-click and select Search Widget Templates.
3. Set Widget Type to Grid and click Search.
4. Select Grid Template, right-click > …More > Save As.
5. In the Properties tab, enter the following:

Name	Buy Parts
Description	Released Purchased Parts

6. Select an image for an icon.
7. Enter the following Default Values and check Hidden:

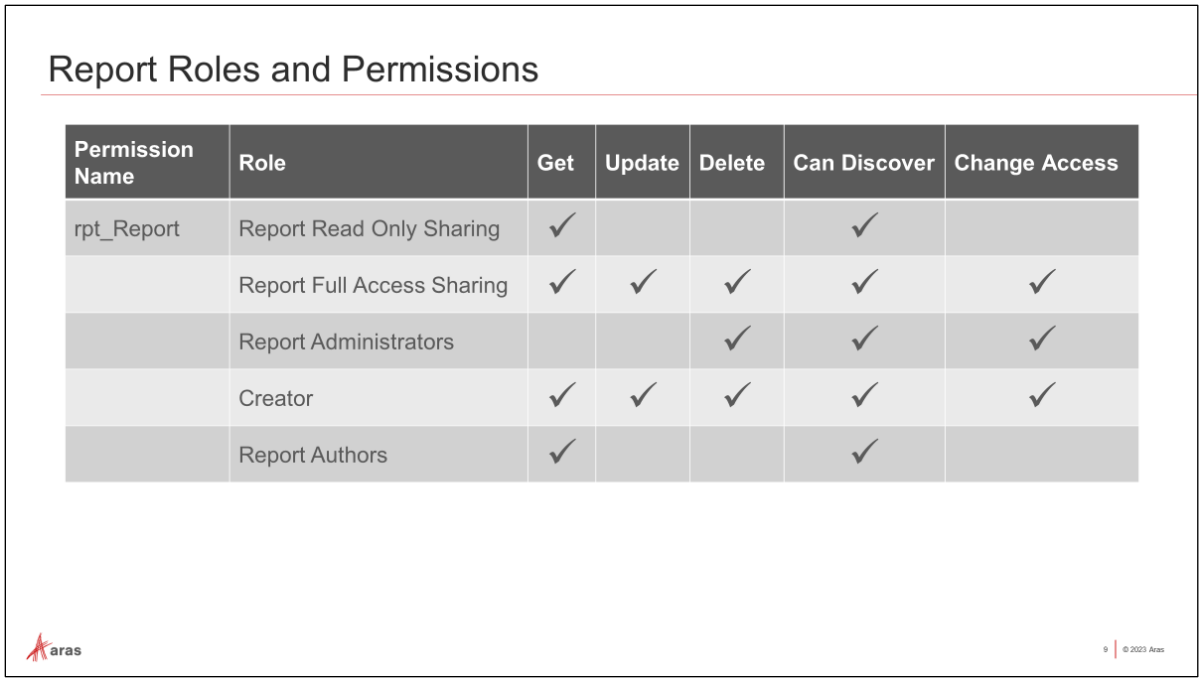
item_type_id	Part
favorite_search_id	Buy Parts

8. Click Done.



Try it … Adding a Widget

1. Return to the Component Engineering Dashboard.
2. While in the Edit mode, click the View Dashboard button.
3. Click the Add Widget button to launch the Select Widget Templates dialog. Select *Buy Parts* and click OK.
4. Click the Add Widget button again and select Tree Grid Template and click OK.
5. Click the pencil button (Edit), select *PE_BomStructure* for the Tree Grid View.
6. Click the search button in the Context Item field and enter *MP2942* in the related_id field.
7. Select the assembly and click OK.
8. Rename the Widget Label *MP2942 Body Assembly* and click OK.
9. Click More > Permissions > Create Private and add *Component Engineering* with Get, Update, and Can Discover permissions. Click Done.
10. Click Done on the Dashboard.



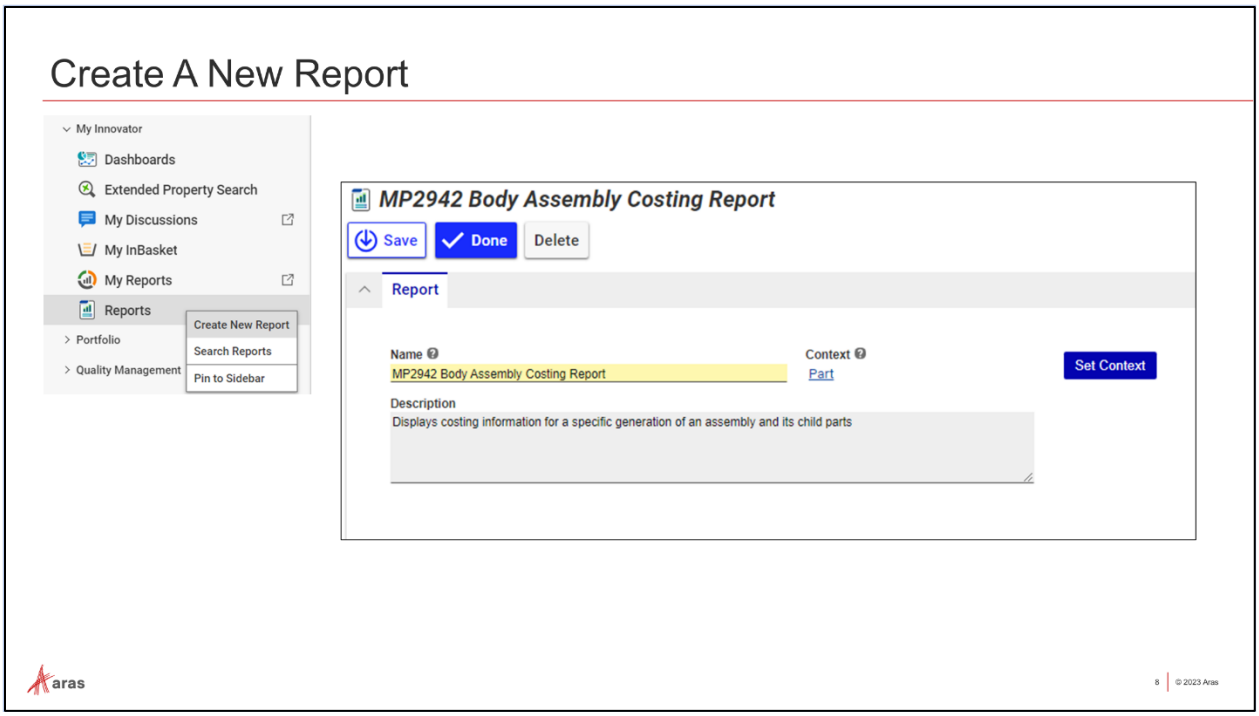
Report Roles and Permissions

Aras Reporting introduces three types of users:

- Report Authors – can create New Reports
- Report Consumers – can discover and can Preview (run) Reports to which they have access
- Report Administrators - can manage Report Items

The Permissions are configured as defined in the table above.

Note: Users not assigned to one of these three identities do not have access to Reports, unless a private permission for specific Reports has been created that overrides the default permission model.



Creating a new Report

Aras Innovator applications accumulate massive amounts of critical data throughout the lifecycle of a product. Engineers and managers need comprehensive capabilities to track and monitor various aspects of such data for reporting, ad hoc reporting, analysis, and decision-making. Aras Reporting enables users to easily access Aras Innovator data directly and quickly transform data into useful and readily understood information.

A Report and its relationships define both how data must be queried and manipulated to visualize information. It describes what and how a Dataset should be created.

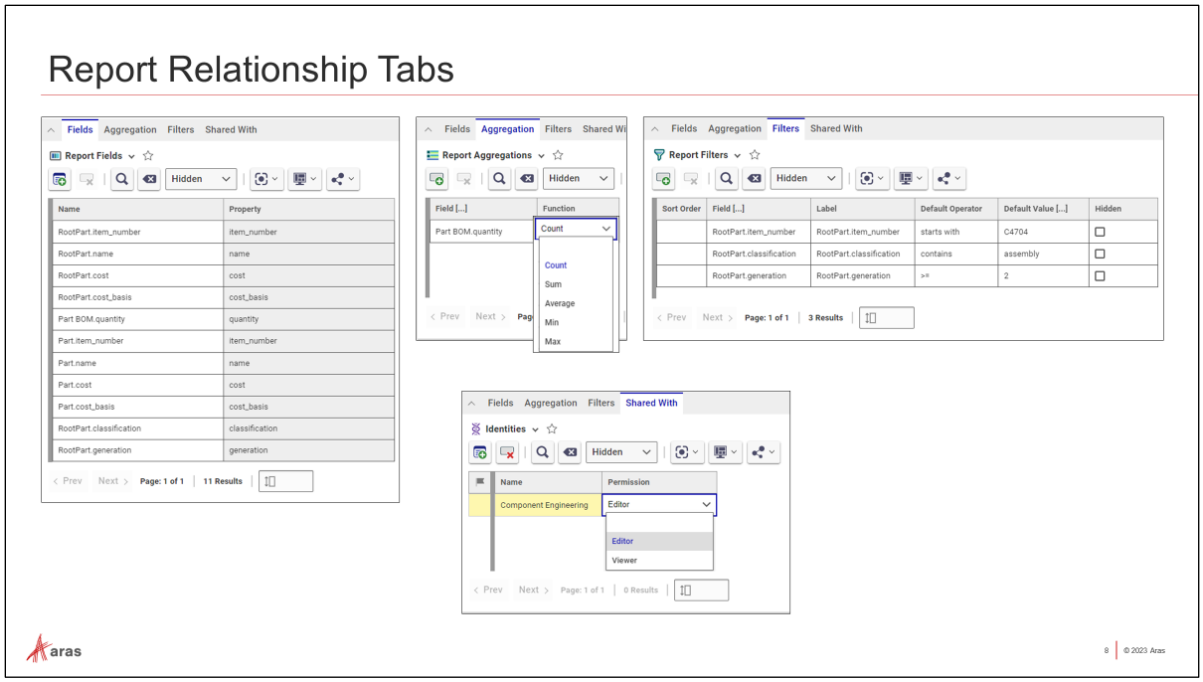
Try it … Create a Report

1. Navigate in the TOC to My Innovator > Reports.
2. Right-click and select Create a new Report.
3. Enter the following:

Name	MP2942 Body Assembly Costing Report
Description	Displays costing information for a specific generation of an assembly and its child parts

4. Click Set Context > Design and select Parts. Click OK.
5. Select *PE_CostingReport* Query Definition and click OK.
6. Click Save.

   The Query will load in the Report definition and an initial set of Report Fields will populate in the Fields relationship tab.



Report Relationship Tabs

The Report definition window is divided into a series of tabs. Each tab has a specific purpose during the design of the report.

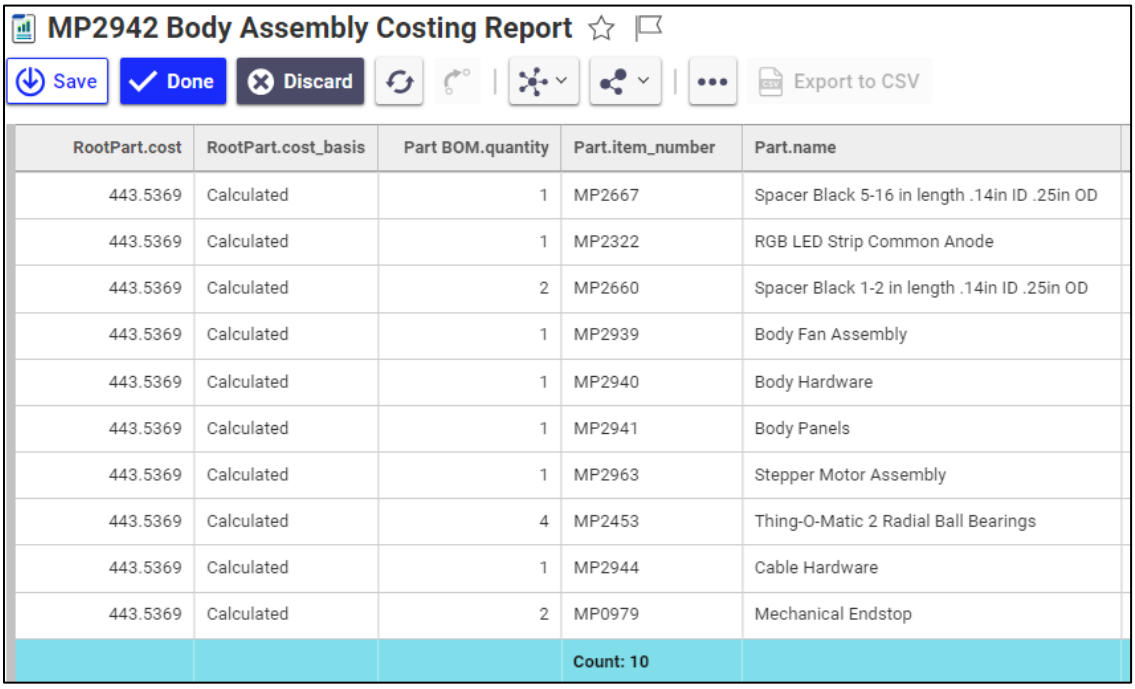
Tab	Description
Fields	Properties defined as part of the query. Navigate the query structure to Add or Remove properties to the fields list.
Aggregation	Define multiple Subtotal calculations by adding Report Aggregations result in available in Total add Subtotals and Measures in in Report Charts. **Note:** A Field can be added multiple times to define multiple calculations on the aggregated values.
Filters	Represents conditions for Report Dataset based on Field values.
Shared With	Reports can be shared to specific identities assigning the role of either Editor or Viewer. In case a user is assigned to multiple group/role Identities, the higher role rights will take precedence. **Note:** Report Sharing uses Aras Innovator Team permissions. Teams are created and removed on the fly when sharing is configured or updated. These system Teams must *not* be edited or deleted manually.
Editor	Corresponds to the *Full Access Sharing* role. These Identities can Preview (run), update and delete the Report.
Viewer	Corresponds to the *Read Only Sharing* role. These Identities can only discover and can Preview (run) the Report.

Try it … Define Field, Aggregation, and Filters Relationships for a Report

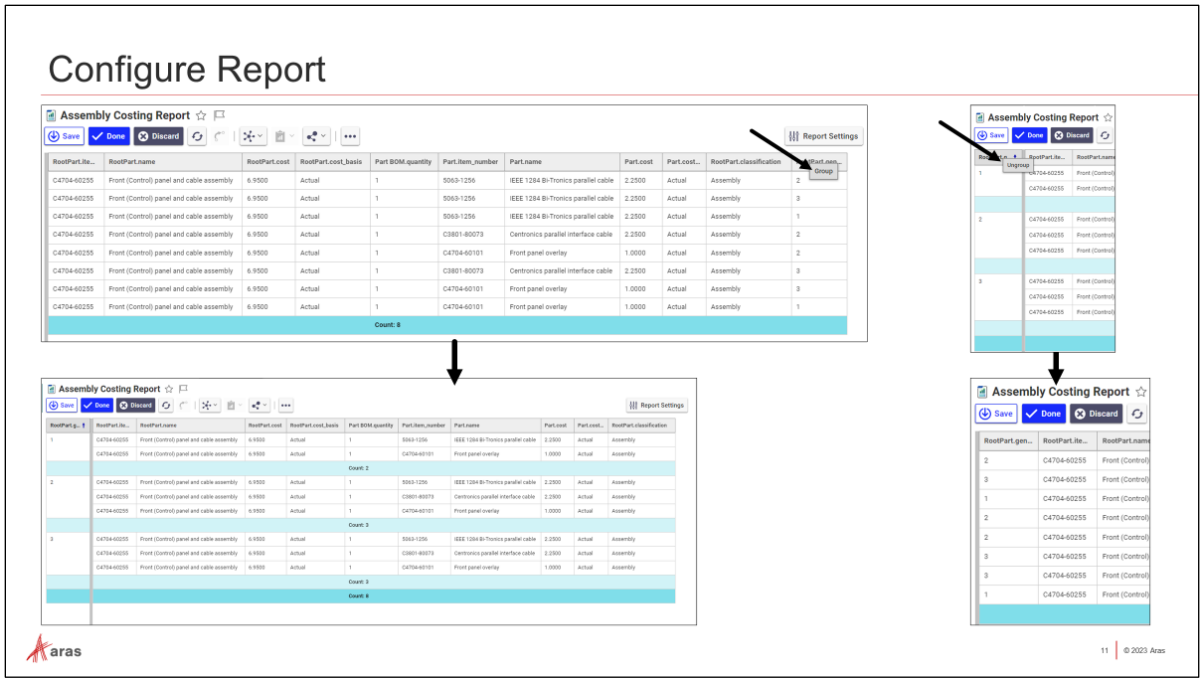
1. On the Fields tab, select and remove the: *Part BOM.sort_order* property.
2. Add the following properties: *RootPart.classification* and *RootPart.generation* by clicking the Add Report Field button, select RootPart under Select Properties and then multiple-select **Type**, **generation**, and **is_current** from the list on the right.
3. Click OK.
4. On the Aggregation tab, click the New Report Aggregation button and set Field[…] to *Part.item_number* and the Function to *Count*.
5. Click Save.
6. On the Filters tab, click New Filter Report button and add the following parameters:

Field […]	Default Operator	Default Value […]
RootPart.item_number	starts with	*MP2942*
RootPart.classification	*contains*	*Assembly*
RootPart.is_current	starts with	*1*

7. Click Save.
8. Select Preview to see the Report.



RootPart.cost	RootPart.cost_basis	Part BOM.quantity	Part.item_number	Part.name
443.5369	Calculated	1	MP2667	Spacer Black 5-16 in length .14in ID .25in OD
443.5369	Calculated	1	MP2322	RGB LED Strip Common Anode
443.5369	Calculated	2	MP2660	Spacer Black 1-2 in length .14in ID .25in OD
443.5369	Calculated	1	MP2939	Body Fan Assembly
443.5369	Calculated	1	MP2940	Body Hardware
443.5369	Calculated	1	MP2941	Body Panels
443.5369	Calculated	1	MP2963	Stepper Motor Assembly
443.5369	Calculated	4	MP2453	Thing-O-Matic 2 Radial Ball Bearings
443.5369	Calculated	1	MP2944	Cable Hardware
443.5369	Calculated	2	MP0979	Mechanical Endstop
			Count: 10	



Configure Report

Group data to organize it so that the data is displayed in useful categories.

Try it … Group Rows in a Report

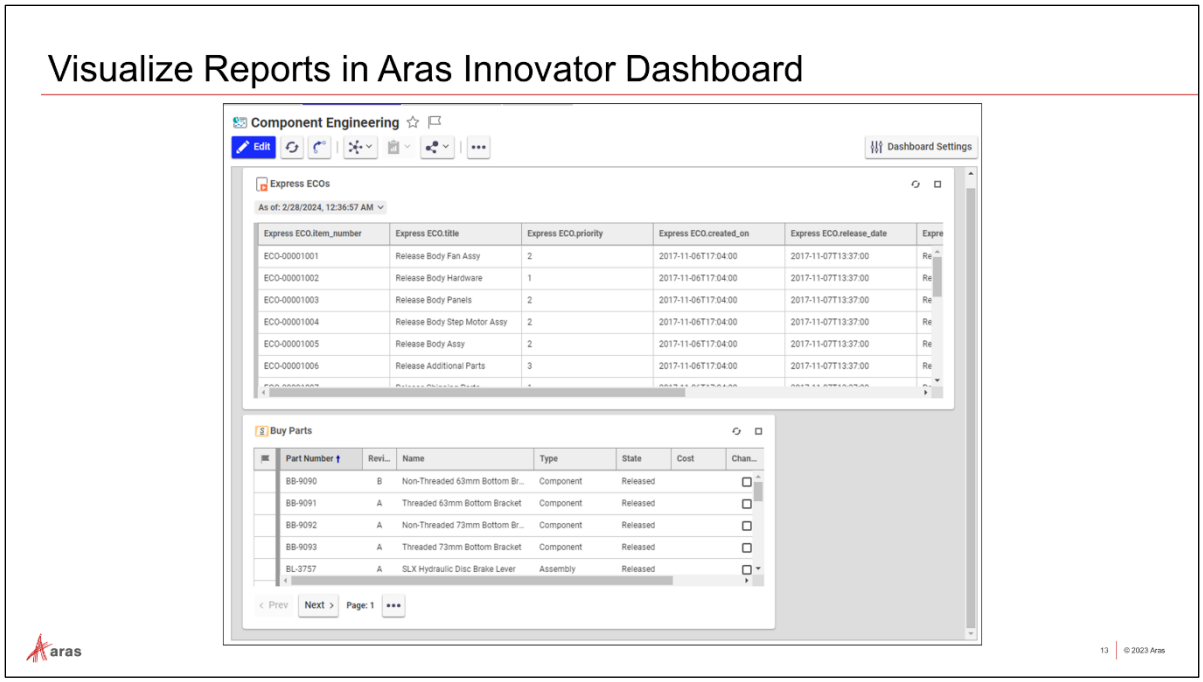
1. Right click on a column header for the Report Field and select the Group action.
   Notice that the column is moved to the left and Subtotals are displayed for each Group. Subtotals are calculated based on defined Aggregations.
2. Click Done.

To Ungroup a column, right click on the grouped Column header and select Ungroup action while in Edit mode.

Ordering Columns

Columns order can be adjusted by dragging and dropping a column in the new position.

Note: Groups cannot be reordered. To reorder Groups users, ungroup them and add them back in the correct order. The Data column cannot be dropped in the Groups area.



Visualize Reports in Aras Innovator Dashboard

When users are ready to share Aras Innovator data with colleagues, Dashboards can be used to allow users to curate data from reports using charts, tables, and metrics. Aras Reporting adds two new Widget Templates in Dashboards:

- **Report Table Widget Template:** Use a table to show a set of report data in column form.
- **Report Chart Widget Templates:** Use a chart to show data graphically. Users can choose from a variety of chart types:
    - Bar Chart
    - Column Chart
    - Donut Chart
    - Line Chart
    - Pie Chart
    - Stacked Bar Chart
    - Stacked Column Chart

Try it … Visualize a Report in a Dashboard

1. Click Edit on the *Component Engineering Dashboard* that we created earlier.
2. Click the Add Widget button, filter for and select the *Report Table* Widget Template.
3. Click the pencil button (Edit), enter *All ECOs* in the Report field, rename the Widget, and click OK.
4. Click *Generate current results* in the new widget.
5. Click Done on the Dashboard.

Summary

In this unit, you learned how to create and share new Dashboards and Reports.

You should now be able to:

- Create a Dashboard with a Private Permission
- Create a Widget Template using a Default Favorite Search
- Create a Report
- Define Report Properties
- Configure a Report Table
- Visualize Reports in Aras Innovator Dashboards